
Reports on the Audit of Federal Award Programs in Accordance with OMB Uniform Guidance

**The Pennsylvania State University
Fiscal Year Ended June 30, 2021**

University Park, Pennsylvania

**THE PENNSYLVANIA STATE UNIVERSITY
REPORTS ON THE AUDIT OF FEDERAL AWARD PROGRAMS
IN ACCORDANCE WITH OMB UNIFORM GUIDANCE
FISCAL YEAR ENDED JUNE 30, 2021**

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Joseph J. Doncsecz
Associate Vice President for Finance
and Corporate Controller

The Pennsylvania State University
408 Old Main
University Park, PA 16802-1505

July 14, 2022

Federal Audit Clearinghouse
1201 E. 10th Street
Jeffersonville, IN 47132

To Whom It May Concern:

The Pennsylvania State University's financial, internal control and compliance reports for the fiscal year ended June 30, 2021 are presented on the accompanying pages. The reports have been issued in accordance with the Office of Management and Budget (OMB) Title 2 U.S. Code of Federal Regulations (CFR) Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*. Also enclosed is The Pennsylvania State University's schedule of findings and questioned costs.

Sincerely,

Joseph J. Doncsecz
Associate Vice President for Finance and Corporate Controller

JJD/kjm

Enclosures

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Audited Financial Statements

The Pennsylvania State University
Fiscal Year Ended June 30, 2021



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INDEPENDENT AUDITORS' REPORT

To the Board of Trustees of The Pennsylvania State University
University Park, Pennsylvania

Report on the Financial Statements

We have audited the accompanying consolidated financial statements of The Pennsylvania State University and its subsidiaries (the "University"), which comprise the consolidated statements of financial position as of June 30, 2021, and the related consolidated statements of activities and cash flows for the year then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated 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 consolidated financial statements are free from material misstatement.

The consolidated financial statements of the University include various subsidiaries as outlined in Note 1 to the consolidated financial statements. The financial statements of Penn State Health, including subsidiaries Nittany Health, Inc.; Saint Joseph's Medical Group; Saint Joseph's Regional Health Network; Penn State Community Medical Group; Central PA Health Network; Penn State Health Hampden Medical Center; Penn State Health Lancaster Medical Center; Penn State Health Life Lion, LLC; Holy Spirit Medical Center and The Corporation for Penn State subsidiaries, including The Pennsylvania State University Philanthropic Fund and Ben Franklin Technology Center of Central & Northern PA; which were audited by us; and the financial statements of Nittany Insurance Company, which was audited by other auditors, were not audited in accordance with *Government Auditing Standards*.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the University's preparation and fair presentation of the consolidated 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 University'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 consolidated 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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of the University as of June 30, 2021, and the changes in its consolidated net assets and its consolidated cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 2 to the consolidated financial statements, the University has changed its method of accounting for leases, effective July 1, 2020, due to the adoption of Accounting Standard Codification Topic 842, *Leases*. Our opinion is not modified with respect to this matter.

Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated December 17, 2021 on our consideration of the University's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts, and 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 University's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with the Government Auditing Standards in considering the University's internal control over financial reporting and compliance.

Deloitte & Touche LLP

December 17, 2021

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENT OF FINANCIAL POSITION
ASSETS
JUNE 30, 2021
(in thousands)

Current assets:

Cash and cash equivalents	\$ 1,839,705
Short-term investments	1,211,525
Deposits held by bond trustees	48,520
Deposits held for others	45,690
Accounts receivable, net of allowances	663,850
Contributions receivable, net	44,112
Loans to students, net of allowances	5,501
Inventories	72,604
Prepaid expenses and other assets	196,046
Total current assets	<u>4,127,553</u>

Noncurrent assets:

Contributions receivable, net	162,534
Loans to students, net of allowances	37,411
Total investment in plant, net	6,619,801
Beneficial interest in perpetual trusts	29,931
Investments	8,553,375
Operating lease right-of-use assets	146,215
Other assets	201,914
Total noncurrent assets	<u>15,751,181</u>

Total assets	<u><u>\$19,878,734</u></u>
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See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENT OF FINANCIAL POSITION
LIABILITIES AND NET ASSETS
JUNE 30, 2021
(in thousands)

Current liabilities:

Accounts payable and other accrued expenses	\$ 1,032,727
Deferred revenue	170,078
Long-term debt	208,659
Present value of annuities payable	7,238
Accrued postretirement benefits	53,755
Refundable United States Government student loans	5,613
Operating lease liabilities	24,373
Total current liabilities	<u>1,502,443</u>

Noncurrent liabilities:

Deposits held in custody for others	25,667
Deferred revenue	581
Long-term debt	3,300,119
Present value of annuities payable	57,679
Accrued postretirement benefits	2,006,929
Refundable United States Government student loans	28,261
Operating lease liabilities	123,681
Other liabilities	426,703
Total noncurrent liabilities	<u>5,969,620</u>

Total liabilities	<u>7,472,063</u>
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Net assets:

Without donor restrictions -	
Designated for specific purposes	4,678,123
Net investment in plant	3,615,323
Total without donor restrictions - The Pennsylvania State University	<u>8,293,446</u>
Noncontrolling interest	322,165
Total without donor restrictions	<u>8,615,611</u>
With donor restrictions	3,791,060
Total net assets	<u>12,406,671</u>

Total liabilities and net assets	<u>\$19,878,734</u>
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See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENT OF ACTIVITIES
FOR THE YEAR ENDED JUNE 30, 2021
(in thousands)

	Without Donor Restrictions	With Donor Restrictions	Total
Operating revenues and other support:			
Tuition and fees, net of discounts of \$227,627	\$ 1,796,041	\$ -	\$ 1,796,041
Commonwealth of Pennsylvania -			
Appropriations	323,792	-	323,792
Special contracts	83,211	-	83,211
Department of General Services projects	12,665	-	12,665
United States Government grants and contracts	532,652	-	532,652
Private grants and contracts	115,194	-	115,194
Gifts and pledges	76,720	30,863	107,583
Endowment spending	132,693	-	132,693
Other investment income	177,534	556	178,090
Sales and services of educational activities	99,721	-	99,721
Recovery of indirect costs	204,204	-	204,204
Auxiliary enterprises	237,303	-	237,303
Health System revenue	3,423,994	-	3,423,994
Other sources	28,485	-	28,485
Net assets released from restrictions	24,924	(24,924)	-
Total operating revenues and other support	7,269,133	6,495	7,275,628
Operating expenses:			
Educational and general -			
Academic and student services	1,966,267	-	1,966,267
Research	913,234	-	913,234
Public service	163,354	-	163,354
Institutional support	196,680	-	196,680
Total educational and general	3,239,535	-	3,239,535
Auxiliary enterprises	428,460	-	428,460
Health System expense	3,131,273	-	3,131,273
Total operating expenses	6,799,268	-	6,799,268
Increase in net assets from operating activities	469,865	6,495	476,360
Nonoperating activities:			
Gifts and pledges	-	117,146	117,146
Current year investment returns	794,185	853,842	1,648,027
Endowment appreciation utilized	(113,608)	-	(113,608)
Changes in funds held by others in perpetuity	-	5,421	5,421
Write-offs and disposals of assets	(11,261)	-	(11,261)
Nonperiodic change in postretirement benefit plan	337,961	-	337,961
Other components of net periodic postretirement benefit cost	(62,033)	-	(62,033)
Actuarial adjustment on annuities payable	-	(16,155)	(16,155)
Increase in net assets from nonoperating activities	945,244	960,254	1,905,498
Increase in net assets - The Pennsylvania State University	1,415,109	966,749	2,381,858
Noncontrolling interest:			
Excess of revenues over expenses	63,039	-	63,039
Increase in net assets - noncontrolling interest	63,039	-	63,039
Increase in total net assets	1,478,148	966,749	2,444,897
Net assets at the beginning of the year - as previously stated	6,999,969	2,824,311	9,824,280
Correction of errors - see Note 2	137,494	-	137,494
Net assets at the beginning of the year - as restated	7,137,463	2,824,311	9,961,774
Net assets at the end of the year	\$ 8,615,611	\$ 3,791,060	\$ 12,406,671

See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED JUNE 30, 2021
(in thousands)

Cash flows from operating activities:

Increase in net assets	\$ 2,444,897
Adjustments to reconcile change in net assets to net cash provided by operating activities -	
Actuarial adjustment on annuities payable	16,155
Contributions restricted for long-term investment	(125,498)
Interest and dividends restricted for long-term investment	(39,852)
Net realized and unrealized gains on long-term investments	(1,918,202)
Depreciation and amortization expense	438,950
Noncash lease expense	774
Inherent contributions from acquisition - Health System	(123,591)
Write-offs and disposals of assets	11,261
Contributions of land, buildings and equipment	(7,286)
Provision for bad debts	9,048
Decrease in deposits held for others	29,865
Increase in receivables	(115,025)
Increase in inventories	(13,675)
Increase in prepaid expenses and other assets	(26,797)
Increase in accounts payable and other accrued expenses	263,569
Increase in deferred revenue	9,678
Decrease in accrued postretirement benefits	(284,130)
Net cash provided by operating activities	<u>570,141</u>

Cash flows from investing activities:

Purchase of land, buildings and equipment	(951,545)
Decrease in deposits held by bond trustees	103,995
Repayments and advances on student loans	(8,094)
Collections on student loans	7,102
Purchase of investments	(4,244,476)
Proceeds from sale of investments	3,927,664
Net cash used in investing activities	<u>(1,165,354)</u>

Cash flows from financing activities:

Contributions restricted for long-term investment	125,498
Interest and dividends restricted for long-term investment	39,852
Payments of annuity obligations	(7,803)
Proceeds from long-term debt	177,666
Principal payments on long-term debt	(195,346)
Proceeds related to government student loan funds, net of collection costs	781
Net cash provided by financing activities	<u>140,648</u>

Net decrease in cash and cash equivalents and restricted cash and cash equivalents (454,565)

Cash and cash equivalents and restricted cash and cash equivalents at the beginning of the year 2,359,553

Cash and cash equivalents and restricted cash and cash equivalents at the end of the year \$ 1,904,988

Supplemental disclosures of cash flow information (Notes 2 and 9)

See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2021

1. THE UNIVERSITY AND RELATED ENTITIES

The Pennsylvania State University (“University”), which was created as an instrumentality of the Commonwealth of Pennsylvania (“Commonwealth” or “Pennsylvania”), is organized as a non-profit corporation under the laws of the Commonwealth. As Pennsylvania’s land grant university, the University is committed to improving the lives of the people of Pennsylvania, the nation and the world through its integrated, tri-part mission of high-quality teaching, research and outreach.

Basis of Presentation

The financial statements of the University include, on a consolidated basis, the consolidated financial statements of Penn State Health (“Health System”), a Pennsylvania non-profit corporation, and its wholly owned subsidiaries (see Note 13 for additional information), and the financial statements of The Corporation for Penn State and its subsidiaries (“Corporation”). The Corporation is a non-profit member corporation organized in 1985 for the exclusive purpose of benefiting and promoting the interests of the University, the Corporation’s sole member. The Corporation’s financial statements consist primarily of the assets and revenues of The Pennsylvania College of Technology (“Penn College”), a wholly owned subsidiary of the Corporation. All transactions among the University, the Health System, and the Corporation have been eliminated.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The University’s consolidated financial statements are prepared on the accrual basis of accounting in conformity with accounting principles generally accepted in the United States of America (GAAP). The Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) is the source of authoritative GAAP.

The University’s consolidated financial statements include statements of financial position, activities and cash flows. In accordance with FASB ASC requirements, net assets and the changes in net assets are classified as with donor restrictions or without donor restrictions.

Net assets with donor restrictions are net assets subject to donor-imposed restrictions, either in perpetuity or for a specified time or purpose. Net assets with perpetual restrictions consist primarily of the historical amounts of endowed gifts. Additionally, contributions receivable and remainder interests which are required by donors to be retained in perpetuity are included at their estimated net present values. Net assets restricted by time or purpose consist of contributions receivable and remainder interests that are not required to be held in perpetuity. In addition, endowment appreciation and net unrealized losses on donor-restricted endowment funds for which historical cost exceeds market value are included.

Net assets without donor restrictions are net assets not subject to donor-imposed restrictions. These net assets may be designated for specific purposes at the discretion of management or may otherwise be limited by contractual agreements with outside parties. Revenue from donor-restricted sources is reclassified as revenue without donor restrictions when the circumstances of the restriction have been fulfilled. Donor-restricted revenues whose restrictions are met within the same fiscal year are reported as revenue without donor restrictions. All expenses from operations are reported as a reduction of net assets without donor restrictions since the use of restricted contributions in accordance with donors’ stipulations results in the release of the restriction.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts on the financial statements and the disclosure of investments, fair value measurements, postretirement benefits, and contingencies and commitments. Actual results could differ from those estimates.

Correction of Previously Reported Consolidated Financial Statements

In preparing its fiscal 2021 consolidated financial statements, the University identified a cumulative out of period error related to certain unconditional gifts that were erroneously recognized as grant (conditional gift) revenue. In accordance with ASC 958-605, since unconditional gifts are recognized as revenue upon receipt, accounts receivable should not have been recognized on amounts spent in excess of the original gift, and revenue should not have been deferred. The cumulative error was the result of certain individual gifts that were not accounted for correctly upon the receipt of the funds and accumulated over an extended period of time. As a result of this accumulation, previously reported accounts receivable and deferred revenue were overstated by approximately \$40.3 million and \$113.2 million, respectively, as of June 30, 2020, and cumulative previously reported gift revenue was understated by \$72.9 million. To correct this error, the University restated previously reported beginning net assets without donor restriction as of July 1, 2020 by \$72.9 million.

In addition, during the fiscal year ended June 30, 2021, the University unwound the application of an accounting convention that had been employed for an extended period of time whereby summer semester tuition funds that are typically collected in April of each year, had been deferred at fiscal year-end and recognized in the subsequent fiscal year. That is, all of the funds were recognized as revenue in the subsequent fiscal year irrespective as to what period within that semester the tuition related, rather than recognized ratably over the entire summer semester (May through August). The rollover impact of deferring the funds from one fiscal year to the next has historically been immaterial to the University's financial statements. In order to unwind this accounting convention, the University restated previously reported beginning net assets without donor restrictions as of July 1, 2020 by \$64.6 million to reflect the recognition of deferred tuition applicable to the portion of fiscal year 2020 summer semester that occurred and was earned prior to June 30, 2020.

The impact from the correction of the foregoing errors on the University's net assets at the beginning of the year – July 1, 2020 is, as follows:

<i>(in thousands of dollars)</i>	<u>Without donor restrictions</u>	<u>With donor restrictions</u>	<u>Total</u>
Net assets at the beginning of the year – as previously stated	\$ 6,999,969	\$ 2,824,311	\$ 9,824,280
Correction of cumulative gift error	72,882	-	72,882
Unwind of accounting convention	64,612	-	64,612
Net assets at the beginning of the year – as restated	<u>\$ 7,137,463</u>	<u>\$ 2,824,311</u>	<u>\$ 9,961,774</u>

Revenue Recognition*Tuition*

Tuition revenue is recognized over the course of each semester (summer, fall, spring) as instruction is provided to students. Tuition is due from students by the beginning of each applicable semester. Overdue payments are reflected in accounts receivable as the University has an unconditional right to payment.

Tuition receipts of \$64.5 million, included in the adjusted deferred revenue balance at June 30, 2020, were recognized during the year ended June 30, 2021. Institutional financial aid provided by the University for tuition and fees is reflected as a reduction of tuition and fee revenue. As tuition contracts have a duration of one year or less, the University has elected to apply the optional exemption prescribed by ASC 606-10-50-14 and, as such, has not disclosed the aggregate transaction price allocated to unsatisfied performance obligations or the time at which the revenue associated with these unsatisfied performance obligations is expected to be recognized. At June 30, unsatisfied performance obligations under tuition contracts relate solely to summer

semester instruction to be provided in July and August of the subsequent year. Transaction prices for tuition and fees are determined and allocated based on the applicable published tuition and fees schedules.

Grants and Contracts

Grants and contracts revenue is recognized over time as the eligible grant activities are conducted. Grants and contracts deemed to be exchange transactions fall under the scope of ASC Topic 606, Revenue from Contracts with Customers. The performance obligation for each grant or contract is deemed to be the research or program work itself. Work completed under grants and contracts does not result in assets that can be sold to other customers and the University is entitled to payment for the work completed to date. Grants and contracts that are deemed to be contributions fall under the scope of ASC Topic 958, Not-for-Profit Entities. These are deemed to be conditional contributions, as eligible expenditures must be incurred in order to have a right of release of funding from the sponsor. Most grants and contracts are cost reimbursement basis, and incurred expenditures are periodically billed to the customer for reimbursement.

Grants and contracts receipts of \$36.0 million, included in the adjusted deferred revenue at June 30, 2020, were recognized during the year ended June 30, 2021. The University has entered into numerous grants and contracts, with periods of performance ending at various dates from July 1, 2021 through December 31, 2050. The estimated performance obligations remaining under these grants and contracts as of June 30, 2021 total \$1,090.1 million. Transaction prices for grants and contracts are determined and allocated based on the budgets included in the respective award agreements.

Sales and Services of Educational Activities and Auxiliary Enterprises

Revenues from sales and services of educational activities and auxiliary enterprises consist primarily of health services, housing and food services, intercollegiate athletics, campus operations, and hospitality services. Performance obligations associated with these contracts consist of the provision of goods or services, and significant judgment is involved to determine whether the performance obligations are satisfied over time or at a point in time. Typically, revenue associated with semester-based contracts, such as housing and food services, is recognized over the course of the semester as services are provided. For other contracts, such as health services, athletic ticket sales, hotel room charges, and other campus operations, revenue is recognized at a point in time, when the good or service is provided. Contracts included in sales and services of educational activities and auxiliary enterprises are typically one year or less in length. As such, receipts included in deferred revenue at June 30, 2020 were recognized during the year ended June 30, 2021. In addition, the University has elected to apply the optional exemption prescribed by ASC 606-10-50-14 and, as such, has not disclosed the aggregate transaction price allocated to unsatisfied performance obligations or the time at which the revenue associated with these unsatisfied performance obligations is expected to be recognized. At June 30, unsatisfied performance obligations under sales and services of educational activities and auxiliary enterprises relate primarily to summer semester housing and food services to be provided in July and August of the subsequent year, as well as athletic events held during the fall semester. Transaction prices for sales and services of educational activities and auxiliary enterprises are typically straightforward and explicitly stated in the contract.

Health System

The Health System reports net patient service revenue at the amounts that reflect the consideration to which the Health System expects to be entitled in exchange for providing patient care. These amounts are due from patients, third-party payors (including managed care and government programs) and others, and they include explicit and implicit price concessions, as well as variable consideration for retroactive revenue adjustments due to settlement of audits, reviews, and investigations. Generally, the Health System bills patients and third-party payors several days after the services are performed or shortly after discharge. Revenues are recognized as performance obligations are satisfied.

Performance obligations are determined based on the nature of the services provided by the Health System. Revenue for performance obligations satisfied over time is recognized based on actual charges incurred in relation to total expected (or actual) charges. The Health System believes that this method provides a faithful depiction of the transfer of services over the term of the performance obligation based on the inputs needed to satisfy the obligation. Generally, performance obligations satisfied over time relate to patients in the Health System receiving inpatient acute care services. The Health System measures the performance obligation from admission into the Health System to the point when it is no longer required to provide services to that patient,

which is generally at the time of discharge. Revenue for performance obligations satisfied at a point in time is recognized when goods or services are provided, and the Health System does not believe it is required to provide additional goods or services to the patient.

Because all of its performance obligations relate to contracts with a duration of less than one year, the Health System has elected to apply the optional exemption provided in ASC 606-10-50-14(a) and, therefore, is not required to disclose the aggregate amount of the transaction price allocated to performance obligations that are unsatisfied or partially unsatisfied at the end of the reporting period. The unsatisfied or partially unsatisfied performance obligations referred to above are primarily related to inpatient acute care services at the end of the reporting period. The performance obligations for these contracts are generally completed when the patients are discharged, which generally occurs within days or weeks of the end of the reporting period.

The Health System has elected the practical expedient provided by ASC 340-40-25-4 and all incremental customer contract acquisition costs are expensed as they are incurred, as the amortization period of the asset that the Health System otherwise would have recognized is one year or less in duration.

The Health System utilizes the portfolio approach practical expedient in ASC 606 for contracts related to net patient service revenue. The Health System accounts for contracts within each portfolio as a collective group, rather than individual contracts, based on the payment pattern expected in each portfolio category and the similar nature and characteristics of the patients within each portfolio. As a result, the Health System has concluded that revenue for a given portfolio would not be materially different than if accounting for revenue on a contract by contract basis.

Generally, patients who are covered by third party payors are responsible for patient responsibility balances, including deductibles and coinsurance, which vary in amount. The Health System estimates the transaction price for patients with deductibles and coinsurance based on historical experience and current market conditions. The initial estimate of the transactions price is determined by reducing the standard charge by any contractual amounts, discounts, and implicit price concessions (routine uncollectible amounts). Subsequent changes to the estimate of the transaction price are generally recorded as adjustments to patient service revenue in the period of the change. Adjustments arising from a change in transaction price were not material in 2021.

The Health System has agreements with third party payors that provide for payments at amounts different from its established charges. Inpatient acute care services rendered are paid at prospectively determined rates per discharge in accordance with the Federal Prospective Payment System (PPS) for Medicare and generally at negotiated or otherwise predetermined amounts. Inpatient, nonacute, and outpatient services are paid at various rates under different arrangements with third party payors, commercial insurance carriers, and health maintenance organizations. The basis for payment under these agreements includes prospectively determined discounts from the Health System's established charges, fee schedules, and per diem rates for certain services.

Law and regulations governing the Medicare and Medicaid programs are extremely complex and subject to interpretation. As a result, there is at least a reasonable possibility that recorded estimates will change by a material amount in the near term. During 2021, a decrease of \$6.0 million was recognized reflecting the difference in actual versus estimated reimbursement and the change in certain estimates related to prior years' patient service revenue.

The subsidiaries of the Health System provide care to patients who meet certain criteria under its charity care policy without charge or at amounts less than established rates. The Health System does not pursue collection of amounts determined to qualify as charity care; these amounts are not reported as net patient service revenue. The amounts of direct and indirect costs for services and supplies furnished under the Health System's charity care policy totaled approximately \$36.5 million for the year ended June 30, 2021 and was based on a ratio of the Health System's operational costs to its gross charges. The amount of charges foregone for services and supplies furnished under the Health System's charity policy totaled approximately \$73.4 million during 2021.

Overall

The University has elected to use the practical expedient prescribed by ASC 606-10-32-18, in which the promised amount of consideration need not be adjusted for the effects of a significant financing component if

the period between when promised goods or services are transferred to a customer and when the customer pays for the goods or services is expected to be one year or less at contract inception.

Contributions

Unconditional promises to give are recognized as revenues and receivables in the year made and consist of written or oral promises to contribute to the University in the future. Contributions receivable are recorded as donor-restricted revenue, either due to purpose restrictions and/or the implicit time restriction inherent in the future date at which the contribution is to be received. The amounts are present valued based on timing of expected collections.

Fair Value of Financial Instruments

The University has provided fair value estimates for certain financial instruments. Fair value information presented in the financial statements is based on information available at June 30, 2021. The carrying amounts of cash and cash equivalents, accounts receivable and accounts payable and other accrued expenses approximate fair value because of the terms and relatively short maturity of these financial instruments. The carrying values of the University's loans to students are also reasonable estimates of their fair value, as the total outstanding loans to students as of June 30, 2021 have been made at the rates available to students for similar loans at such times. Investments are reported at fair value as disclosed in Note 4. The fair value of the University's bonds payable is disclosed in Note 8. See Note 6 for further discussion of fair value measurements.

Cash Flows

The following items are included as supplemental disclosure to the statement of cash flows for the year ended June 30, 2021:

(in thousands of dollars)

Supplemental reconciliation data:

Cash and cash equivalents as shown in the statement of financial position	\$ 1,839,705
Restricted cash and cash equivalents included in deposits held by bond trustees	30,598
Restricted cash and cash equivalents included in deposits held for others	<u>34,685</u>
Total cash and cash equivalents and restricted cash and cash equivalents as shown in the statement of cash flows	<u>\$ 1,904,988</u>

Other supplemental data:

Interest paid	\$ 108,656
Penn College:	
Deposit with bond escrow agent	(58,851)
Proceeds from 2021 bond issuance	52,665
Net original issue premium/underwriter's discount – 2021 bonds	6,186
Costs of 2021 bond issuance	\$ (777)

Capitalized costs accrued related to construction are \$87.7 million as of June 30, 2021. Taxes paid for 2021 are considered immaterial. Cash and cash equivalents include certain investments in highly liquid instruments with remaining maturities of 90 days or less, except for such assets held by the University's investment managers as part of their long-term investment strategies. Short-term investments include other current investments held for general operating purposes with maturities greater than 3 months but less than 12 months.

Accounts Receivable

Accounts receivable at June 30, 2021 consists of the following:

<i>(in thousands of dollars)</i>	
Grants and contracts, net of allowance of \$2,132	\$ 160,777
Patient accounts receivable	395,887
Student receivables, net of allowance of \$15,701	51,571
Other, net of allowance of \$7,761	<u>55,615</u>
Total accounts receivable, net	<u>\$ 663,850</u>

The University maintains allowances for doubtful accounts to reflect management's best estimate of probable losses inherent in receivable balances. Management determines the allowances for doubtful accounts based on known factors, historical experience, and other currently available evidence. Receivables are written off when management determines they will not be collected.

Loans to Students

Loans to students are disbursed to qualified students based on need and include loans granted by the University from institutional resources and under federal government loan programs. Students enter a grace period upon ceasing at least half-time enrollment status. The grace period varies depending on the type of loan. Upon expiration of the grace period, interest begins to accrue, and repayment begins one month thereafter. Repayments of these loans are made directly to the University. Loans to students are uncollateralized and carry default risk.

Funds advanced by the federal government of \$33.9 million at June 30, 2021 are ultimately refundable to the government and are classified as liabilities in the consolidated statement of financial position. The federal liability related to the Perkins loan program will be reduced through the return of funds as required by the Department of Education.

Loans to students consisted of the following at June 30, 2021:

<i>(in thousands of dollars)</i>	
Loans to students:	
Federal government loan programs:	
Perkins loan program	\$ 26,252
Health Professions Student Loans and Loans for Disadvantaged Students	<u>1</u>
Federal government loan programs	26,253
Institutional loan programs	<u>19,709</u>
	45,962
Less allowance for doubtful accounts:	
Balance, beginning of year	(3,064)
Provision for doubtful accounts	<u>14</u>
Balance, end of year	<u>(3,050)</u>
Loans to students, net	<u>\$ 42,912</u>

Allowances for doubtful accounts are established based on prior collection experience and current economic factors which, in management's judgment, could influence the ability of loan recipients to repay the amounts according to the terms of the loan. Further, the University does not evaluate credit quality of student loans receivable after the initial approval of the loan. Loans to students are considered past due when payment is not received by the due date, and interest continues to accrue until the loan is paid in full or written off. When loans to students are deemed uncollectible, an allowance for doubtful accounts is established.

The University considers the age of the amounts outstanding in determining the collectability of loans to students. The aging of the loans to students based on days delinquent and the related allowance for doubtful accounts at June 30, 2021 are as follows:

	<i>(in thousands of dollars)</i>				
	45 days <u>or less</u>	<u>46-75 days</u>	76-105 <u>days</u>	Over <u>105 days</u>	<u>Total</u>
Loans to students:					
Federal government loan programs	\$ 20,833	\$ 26	\$ 27	\$ 5,367	\$ 26,253
Institutional loan programs	<u>17,080</u>	<u>21</u>	<u>20</u>	<u>2,588</u>	<u>19,709</u>
Total loans to students	<u>\$ 37,913</u>	<u>\$ 47</u>	<u>\$ 47</u>	<u>\$ 7,955</u>	<u>45,962</u>
Allowance for doubtful accounts:					
Federal government loan programs					(543)
Institutional loan programs					<u>(2,507)</u>
Total allowance for doubtful accounts					<u>(3,050)</u>
Total loans to students, net					<u>\$ 42,912</u>

Inventories

Inventories are stated at the lower of cost or net realizable value on the first-in, first-out basis.

Investments

The University's noncurrent investments represent the University's endowment and other investments held for general operating purposes. The University's investments are reported at fair value in the accompanying financial statements with gains and losses included in the consolidated statement of activities. The University believes that the estimated fair value is a reasonable estimate of market value as of June 30, 2021. The fair value estimations include assumptions and methods that were reviewed by University management. The estimated fair value amounts for public securities held by the University with readily determinable fair values have been based on information as supplied by the various financial institutions that act as trustees or custodians for the University.

Because the fair market value of certain investments is not readily available, the estimated fair value is subject to uncertainty and, therefore, may differ from the value that would have been used had a ready market existed, and such differences could be material. The fair values on these private investments are determined based upon financial information provided by the investment manager.

The University authorizes certain investment managers to purchase derivative securities to attain a desired market position; and the University may directly invest in derivative securities to attain a desired market position. The University does not trade or issue derivative financial instruments other than through the investment management practices noted above. The University records derivative securities at fair value with gains and losses reflected in the consolidated statement of activities.

Beneficial Interest in Perpetual Trusts

The University is the beneficiary of certain perpetual trusts held and administered by outside trustees. The fair value of these trust assets has been recorded as net assets with donor restrictions and related beneficial interest in perpetual trusts in the consolidated financial statements.

Investment in Plant

Total investment in plant as of June 30, 2021 is comprised of the following:

<i>(in thousands of dollars)</i>	
Land	\$ 169,965
Buildings	8,275,067
Improvements other than buildings	725,067
Equipment	1,950,794
Assets under construction	<u>1,008,180</u>
Total plant	12,129,073
Less accumulated depreciation	<u>(5,509,272)</u>
Total investment in plant, net	<u>\$ 6,619,801</u>

The value of land, buildings, and equipment is recorded at cost or, if received as gifts, at fair value at date of gift commitment. The University does not capitalize the cost of library books. Depreciation is computed over the estimated useful lives of the assets using the straight-line method. Useful lives range from 4 to 50 years for buildings, 10 to 20 years for improvements other than buildings, and 1 to 20 years for equipment. Depreciation expense was \$435.7 million for the fiscal year ended June 30, 2021. The University has certain building and equipment lease agreements in effect which are considered finance leases that are included as long-term debt in the statement of financial position. Buildings and equipment held under finance leases are amortized on a straight-line basis over the shorter of the lease terms or the estimated useful lives of the assets. Total investment in plant associated with these leases was \$46.7 million at June 30, 2021.

Leases

The University determines if an arrangement is or contains a lease at inception of the contract. The right-of-use (ROU) assets represent the right to use the underlying assets for the lease term and the lease liabilities represent the obligation to make lease payments arising from the leases. ROU assets are recognized at commencement date based on the present value of lease payments over the lease term, adjusted for any initial direct costs incurred and lease incentives received, with the subsequent measurement based on lease classification. The lease liability is initially measured as the present value of unpaid lease payments and is subsequently measured using the effective interest method. The value of an option to extend or terminate a lease is reflected to the extent it is reasonably certain the University will exercise that option. The University has used the incremental borrowing rate when measuring its leases as the rate implicit in the lease is not readily determinable. The University's incremental borrowing rate is determined based on comparisons to Indicative Composite Observable Reported Execution (CORE) Yields for various maturities. The CORE is a yield curve that represents an aggregation of daily trade data reported to the Municipal Securities Rulemaking Board. It is a simple average yield of fixed-rate, non-Alternative Minimum Tax, tax-exempt, coupon-bearing municipal bond trades. ASC 842 defines a short-term lease as a lease with a term of twelve months or less that does not include a purchase option that is reasonably certain of being exercised ("short-term leases"). The University has elected, for all asset classes, the short-term lease recognition exemption provided in the standard that eliminates the requirement to recognize on the statement of financial position any short-term leases. The lease expense for these short-term leases is recognized on a straight-line basis over the lease term within operating expenses in the consolidated statement of activities and is not considered material to the consolidated financial statements. Finance lease ROU assets are included in total investment in plant, net, with the related liabilities included in current and noncurrent long-term debt in the consolidated statement of financial position. Operating lease ROU assets and related current and long-term liabilities are separately presented in the consolidated statement of financial position. Expenses for operating leases, amortization of assets held under finance leases, and finance lease interest expense are recognized within operating expenses in the consolidated statement of activities.

The University has elected, for all asset classes, the practical expedient to not separate lease and nonlease components. Certain of the University's lease agreements include payments based on actual maintenance, taxes, insurance, and utilities. Other agreements include rental payments adjusted periodically for inflation. These are deemed to be variable lease payments and are recognized in operating expenses as incurred but are not included in the ROU asset or liability balances. These variable lease payments are not considered

material to the consolidated financial statements. The University's lease agreements do not contain any material residual value guarantees, restrictions, or covenants.

Accounts Payable and Other Accrued Expenses

Accounts payable and other accrued expenses at June 30, 2021 consist of the following:

<i>(in thousands of dollars)</i>	
Accounts payable (non-Health System)	\$ 213,235
Health System accounts payable and other accrued expenses	507,550
Health System Medicare APP	117,054
Accrued payroll and other related liabilities	161,111
Accrued interest	30,459
Student deposits	<u>3,318</u>
Total accounts payable and other accrued expenses	<u>\$ 1,032,727</u>

Impairment of Long-Lived Assets

Long-lived assets, which include investment in plant and definite-lived intangible assets, are assessed for impairment whenever events or changes in circumstances indicate the carrying amount of the asset may not be recoverable. An impairment loss is recognized in change in net assets in the period that the impairment occurs.

Asset Retirement Obligations

The University has recognized liabilities for asset retirement obligations. The University has identified asbestos abatement and the decommissioning of the Breazeale Nuclear Reactor as conditional asset retirement obligations. These obligations are reported as part of other noncurrent liabilities within the consolidated statement of financial position. The following table details the change in liabilities:

<i>(in thousands of dollars)</i>	
Balance as of June 30, 2020	\$ 95,430
Adjustment to liability	7,321
Accretion expense	3,876
Liabilities settled	<u>(3,702)</u>
Balance as of June 30, 2021	<u>\$ 102,925</u>

Annuities Payable

Annuities payable consist of annuity payments currently due and the actuarial amount of annuities payable. The actuarial amount of annuities payable is the present value of the aggregate liability for annuity payments over the expected lives of the beneficiaries.

Net Assets

Net assets consist of the following at June 30, 2021:

(in thousands of dollars)

Net assets without donor restrictions:	
Designated for specific purposes:	
Health System	\$ 1,627,785
Designated for plant activities	1,524,081
Funds functioning as endowments	1,263,825
Operating general funds carryforward	1,018,758
Unit managed non-general funds	256,689
Designated for scholarships	131,195
Designated for postretirement benefits	(370,630)
Designated for pension prefunding	(1,025,633)
Other designated net assets	<u>252,053</u>
Total designated for specific purposes	<u>4,678,123</u>
Net investment in plant	<u>3,615,323</u>
Non-controlling interest	<u>322,165</u>
Total net assets without donor restrictions	<u>\$ 8,615,611</u>
Net assets with donor restrictions:	
Endowment funds	\$ 3,373,624
Future contributions	228,797
Split-interest agreements	125,432
Contributions for property, plant and equipment	43,893
Student loan funds	<u>19,314</u>
Total net assets with donor restrictions	<u>\$ 3,791,060</u>
Total net assets	<u>\$ 12,406,671</u>

Net assets without donor restrictions that are designated for specific purposes have been designated at the discretion of management.

Income Taxes

The University files U.S. federal and state tax returns. The statute of limitations on the University's federal returns generally remains open for three years following the year they are filed. In accordance with ASC Topic 740, Income Taxes, the University continues to evaluate tax positions and has determined there is no material impact on the University financial statements.

Recent Accounting Pronouncements

In February 2016, the FASB issued Accounting Standards Update (ASU) 2016-02, "Leases." This update, and the subsequent other ASUs impacting ASC Topic 842, requires substantial changes to lease accounting to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The main difference between previous GAAP and this guidance is the recognition of assets associated with a lessee's right to use an asset and corresponding lease liabilities associated with a lessee's obligation for those leases classified as operating under previous GAAP. This update was effective for the University beginning July 1, 2020. The provisions of this update were applied using the optional modified retrospective transition method provided in ASU 2018-11 that resulted in the adoption date of the new standard being the application date. The University elected the transition package of three practical expedients, which eliminates the need to reassess prior conclusions about lease identification, lease classifications, and initial direct costs when transitioning to the new standard. The University did not elect the use-of-hindsight practical expedient, and therefore will continue to utilize remaining lease terms as determined under the legacy ASC Topic 840 lease guidance. The University will use its

incremental borrowing rate as the discount rate as determined at the effective date of the requirements and as based on the remaining term of the lease at that point. When transitioning to the new lease accounting standard, the University calculated the ROU asset and lease liability on the basis of the remaining ASC Topic 840 minimum rental payments and lease term as of the effective date of the standard, with the ROU asset further adjusted by any unamortized lease incentives, prepaid rent, and straight-line rent accrual as of the effective date. As of July 1, 2020, the University recognized an operating lease ROU asset and an operating lease liability of approximately \$148.0 million, respectively. The standard had a material impact on the University's consolidated statement of financial position; however, it did not have an impact on the consolidated statement of activities or the consolidated statement of cash flows, and there was no adjustment to beginning net assets.

In August 2018, the FASB issued ASU 2018-13, *"Fair Value Measurement; Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement."* This update modifies the disclosure requirements on fair value measurements in Topic 820, Fair Value Measurement and was effective for the University beginning July 1, 2020. The adoption of this guidance did not have a material impact on the consolidated financial statements.

In January 2020, the FASB issued ASU 2020-01, *"Investments – Equity Securities (Topic 321), Investments – Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815); Clarifying the Interactions between Topic 321, Topic 323, and Topic 815."* This update clarifies the interaction of the accounting for equity securities under Topic 321 and investments accounted for under the equity method of accounting in Topic 323 and the accounting for certain forward contracts and purchased options accounted for under Topic 815. This update is effective for the University beginning July 1, 2022 with early adoption permitted. The University is currently evaluating the impact this guidance may have on its consolidated financial statements.

In September 2020, the FASB issued ASU 2020-07, *"Not-for-Profit Entities; Presentation and Disclosure by Not-for-Profit Entities for Contributed Nonfinancial Assets."* This update requires a not-for-profit entity to present contributed nonfinancial assets as a separate line item in the statement of activities, apart from contributions of cash and other financial assets. In addition, not-for-profit entities are required to disclose additional qualitative and quantitative information related to nonfinancial assets. This update is effective for the University beginning July 1, 2021 with early adoption permitted. The University is currently evaluating the impact this guidance may have on its consolidated financial statements.

Coronavirus Pandemic

In March 2020, the World Health Organization declared the novel coronavirus ("COVID-19") a pandemic. The COVID-19 pandemic has negatively affected national, state, and local economies and global financial markets, and the higher education landscape in general. The pandemic may continue to adversely affect operations and financial condition, including, among other things, (i) the ability of the University to conduct its operations and/or the cost of operations, (ii) governmental and non-governmental funding, and (iii) financial markets impacting investments valuation and interest rates.

The federal government has taken several actions to provide financial assistance during this pandemic. Congress set aside approximately \$76.6 billion between the Coronavirus Aid, Relief and Economic Security Act (CARES), Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA), and the American Rescue Plan (ARP) allotted to the Educational Stabilization Fund through the Higher Education Emergency Relief Fund (HEERF).

Under CARES and CRRSAA, the University received an allocation of \$55.0 million for emergency aid to students and \$85.0 million for institutional needs. The University distributed student emergency grants of \$30.8 million during 2021 with the disbursement of funds presented within academic and student services expense and the associated revenue captured in United States Government grants and contracts in the consolidated statement of activities. Revenues of \$85.0 million were also recognized as United States Government grants and contracts in the consolidated statement of activities in 2021 related to the institutional portion of the allotted funds. The institutional funds were used to offset lost tuition revenues, refunds for housing and dining services, and COVID testing costs. Both CARES and CRRSAA funding were fully utilized at June 30, 2021.

Under ARP, the University was allotted \$76.2 million for direct emergency aid to students and \$73.8 million for institutional purposes. At June 30, 2021, the University has not drawn on the ARP funds and, therefore, no revenue has been recorded.

As allowed by the CARES Act, at June 30, 2021, the University has deferred payment of \$68.0 million for the employer portion of Social Security payroll tax, which is included in accounts payable and other accrued expenses and other liabilities in the consolidated statement of financial position. Fifty percent of the deferred tax credit must be paid by December 31, 2021 with the remainder by December 31, 2022.

The CARES Act revised the Medicare accelerated payment program ("Medicare APP"). For the year ended June 30, 2020, the Health System received approximately \$160.3 million of Medicare APP funding under this program which is recorded as accounts payable and other accrued expenses in the consolidated statement of financial position. The Health System has not received additional Medicare APP funding during the year ended June 30, 2021. On October 1, 2020, the Continuing Appropriations Act, 2021 and Other Extensions Act ("Act") was passed, which revised the Medicare APP repayment terms and interest rate for amounts received between the passage of the CARES Act and the end of the COVID-19 public health emergency. The Act delays the beginning of the recoupment of the advance payments to twelve months after the receipt of Medicare APP funds and extends the full repayment term to twenty-nine months. In addition, the Act caps recoupments at 25% for the last eleven months of repayment and 50% for the following six months. The interest is capped at 4% for amounts that remain outstanding at the end of the revised recoupment period. Through the acquisition of Holy Spirit Medical Center and Spirit Physicians, Inc., an additional \$27.9 million was recorded as a contract liability during 2021. Recoupment of Medicare APP funds were approximately \$23.0 million for the year ended June 20, 2021. As of June 20, 2021, Medicare APP funds of \$117.1 million are recorded in accounts payable and other accrued expenses within the consolidated statement of financial position. As of June 30, 2021, Medicare APP funds of \$48.2 million are recorded in other liabilities within the consolidated statement of financial position.

Also, during the year ended June 30, 2021, the Health System received approximately \$77.9 million from the Public Health and Social Services Emergency Fund ("Provider Relief Fund") of which \$87.1 million (including \$9.1 million received and deferred at June 30, 2020) has been recognized in Health System revenue within the consolidated statement of activities. Providers who have been allocated a Provider Relief Fund payment must sign an attestation confirming receipt of the funds and agreeing to certain terms and conditions of payment. Amounts recognized in Health System revenue within the consolidated statement of activities are subject to uncertainty as new or revised guidance is released regarding the treatment of the funds. In September 2021, the Health System completed the submission to the Department of Health and Human Services through the on-line portal for Provider Relief Funds received between April 10, 2020 through June 30, 2020. Final approval of the submission has not been received.

The University is unable to quantify the impact that the COVID-19 pandemic will have on continuing financial results during fiscal year 2022, as the impact of COVID-19 will depend on future developments, including the duration of the outbreak and the related advisories and restrictions. The University continues to monitor the course of the pandemic and is prepared to take additional measures to protect the health of the University community and promote the continuity of its academic mission.

3. LIQUIDITY AND AVAILABILITY OF FINANCIAL ASSETS

The University regularly monitors liquidity required to meet its operating needs and other contractual commitments, while also striving to maximize the investment of its available funds. For purposes of analyzing resources available to meet general expenditures over a 12-month period, the University considers all expenditures related to its ongoing mission-related activities as well as the conduct of services undertaken to support those activities to be general expenditures.

Student loans receivable are not considered to be available to meet general expenditures because principal and interest on these loans are used solely to make new loans.

In addition to financial assets available to meet general expenditures over the next 12 months, the University operates with a balanced budget and anticipates collecting sufficient revenue to cover general expenditures not covered by donor-restricted resources. Refer to the statement of cash flows, which identifies the sources and

uses of the University's cash and shows positive cash generated by operations for the year ended June 30, 2021.

The University has various sources of liquidity at its disposal, including cash and cash equivalents and fixed income and equity securities.

The University has designated a portion of its resources without donor restrictions for endowment and other purposes. These funds are invested for long-term appreciation and current income but remain available and may be spent at the discretion of management.

The following reflects the University's financial assets as of June 30, 2021, reduced by amounts not available for general use within one year. Certain long-term investments could be liquidated if needed based on the terms of their agreements.

<i>(in thousands of dollars)</i>	
Total assets	\$ 19,878,734
Less:	
Inventories	(72,604)
Prepaid expenses and other assets	(196,046)
Total investment in plant, net	(6,619,801)
Beneficial interest in perpetual trusts	(29,931)
Operating lease right-of-use assets	(146,215)
Other assets	<u>(201,914)</u>
Total financial assets	12,612,223
Less:	
Noncurrent investments	(8,553,375)
Contractual or donor-imposed restrictions:	
Deposits held by bond trustees	(48,520)
Deposits held for others	(45,690)
Receivables subject to time restrictions	(40,714)
Receivables subject to donor-imposed restrictions	(143,715)
Loans to students, net	<u>(42,912)</u>
Financial assets available to meet cash needs for general expenditures within one year	<u>\$ 3,737,297</u>

4. INVESTMENTS

Investments by major category as of June 30, 2021 are summarized as follows:

<i>(in thousands of dollars)</i>	
Fixed income	\$ 3,782,575
Equity investments	4,823,628
Real assets	469,251
Opportunistic	<u>689,446</u>
Total	<u>\$ 9,764,900</u>

Fixed income investments are comprised of public and private fixed income strategies, which include government and corporate debt, mortgage-backed, and other asset-backed related debt. Equity investments include public and private strategies across global, U.S., developed non-U.S., and emerging markets. Real asset investments include public and private strategies utilizing both equity and debt structures that are focused on producing a positive real return during an inflationary environment. Real asset strategies include real estate, natural resources, and commodities. Opportunistic investments include public and private strategies utilizing both equity and debt structures that are expected to achieve absolute returns over longer periods of time and do not classify well into the other three investment types.

Equity index and treasury note futures contracts comprise the University's beneficially held derivative instruments as of June 30, 2021 and are included in the fair value of the University's investments. These contracts are fully cash collateralized and marked to market daily. Futures contracts have minimal credit risk because the counterparties are the exchanges themselves and are employed as a low-cost investment vehicle with daily liquidity which allows the University to maintain desired market exposure considering irregular cash flows. Derivative securities were immaterial as of June 30, 2021.

The following schedules summarize the investment return and its classification in the consolidated statement of activities for the year ended June 30, 2021:

<i>(in thousands of dollars)</i>	<u>Without donor restrictions</u>	<u>With donor restrictions</u>	<u>Total</u>
Investment income	\$ 196,619	\$ 14,492	\$ 211,111
Net realized gains, including endowment spending	144,522	100,527	245,049
Net unrealized gains	<u>649,663</u>	<u>739,379</u>	<u>1,389,042</u>
Total returns	<u>\$ 990,804</u>	<u>\$ 854,398</u>	<u>\$ 1,845,202</u>

5. ENDOWMENT NET ASSETS

The University's endowment includes both donor-restricted endowment funds and funds designated to function as endowments. As required by GAAP, net assets associated with endowment funds, including funds designated to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

The ASC Not-for-Profit Entities Presentation of Financial Statements Subtopic (ASC Subtopic 958-205) provides guidance on the net asset classification of donor-restricted endowment funds for not-for-profit organizations subject to an enacted version of the Uniform Prudent Management of Institutional Funds Act (UPMIFA) and improves disclosure about an organization's endowment funds regardless of whether the organization is subject to UPMIFA. The Commonwealth of Pennsylvania has not adopted UPMIFA but rather has enacted Pennsylvania Act 141 ("PA Act 141"). PA Act 141 permits an organization's trustees to define income as a stipulated percentage of endowment assets (between 2% and 7% of the fair value of the assets averaged over a period of at least three preceding years) without regard to actual interest, dividend, or realized and unrealized gains.

The University has interpreted PA Act 141 to permit the University to spend the earnings of its endowment based on a total return approach, without regard to the fair value of the original gift. As a result of this interpretation, the University classifies as net assets with donor restrictions the original value of gifts donated to the permanent endowment, the original value of subsequent gifts to the permanent endowment, and accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund. Also included in net assets with donor restrictions are gains and losses attributable to permanent endowments and deficiencies associated with funds where the value of the fund has fallen below the original value of the gift. Funds functioning as endowments are established at the direction of University management and are classified as net assets without donor restrictions due to the lack of external donor restrictions. Also included in net assets without donor restrictions are gains and losses attributable to funds functioning as endowments.

From time to time, due to unfavorable market fluctuations, the fair value of some assets associated with individual donor-restricted endowment funds may fall below the level that donors require to be retained as a perpetual fund, while other assets are unaffected to the same extent and maintain or exceed the level required. Such deficiencies are reported as net assets with donor restrictions. As of June 30, 2021, funds with an original gift value of \$6.2 million were "underwater" by \$2.2 million. Subsequent investment gains will be used to restore the balance up to the fair market value of the original gift.

Endowment net asset composition by type of fund as of June 30, 2021:

<i>(in thousands of dollars)</i>	<u>Without donor restrictions</u>	<u>With donor restrictions</u>	<u>Total</u>
Donor-restricted endowment funds	\$ -	\$ 3,335,969	\$ 3,335,969
Funds functioning as Endowments	<u>1,259,586</u>	<u>-</u>	<u>1,259,586</u>
Total net assets	<u>\$ 1,259,586</u>	<u>\$ 3,335,969</u>	<u>\$ 4,595,555</u>

Changes in endowment net assets for the years ended June 30, 2021:

<i>(in thousands of dollars)</i>	<u>Without donor restrictions</u>	<u>With donor restrictions</u>	<u>Total</u>
Endowment net assets, beginning of the year	\$ 922,801	\$ 2,424,281	\$ 3,347,082
Endowment return, net	436,605	812,502	1,249,107
Contributions	-	99,186	99,186
Endowment spending	(132,693)	-	(132,693)
Transfers to create funds functioning as endowments	<u>32,873</u>	<u>-</u>	<u>32,873</u>
Endowment net assets, end of the year	<u>\$ 1,259,586</u>	<u>\$ 3,335,969</u>	<u>\$ 4,595,555</u>

Not included above are the endowment net assets of subsidiaries of \$42.1 million as of June 30, 2021.

The University has adopted investment and spending policies for endowment assets that attempt to provide a relatively predictable stream of funding to programs supported by its endowment while seeking to maintain, over time, the purchasing power of the endowment assets. The overall management objective for the University's pooled endowment funds is to preserve or grow the real (inflation-adjusted) purchasing power of the assets through a prudent long-term investment strategy. This objective would be achieved on a total return basis. Under these policies, as approved by the Board of Trustees and the Penn State Investment Council, the primary investment objective of the University's pooled endowment is to attain a real total return (net of investment management fees) that at least equals a total annual effective spending rate of 5.25% (program spending of 4.5% plus administrative costs of 0.75%) over the long term. To satisfy its long-term rate-of-return objectives, the University relies on a total return strategy in which investment returns are achieved through both capital appreciation (realized and unrealized) and current yield (interest and dividends). The University targets diversified asset allocation that places a greater emphasis on equity-based investments to achieve its long-term return objectives within prudent risk constraints. The endowment assets of the University are invested in a broad range of equities and fixed income securities, thereby limiting the market risk exposure in any one institution or individual investment. The University has a policy of appropriating for distribution each year a certain percentage (4.5% for 2021) of its pooled endowment fund's average fair market value over the prior five years preceding the fiscal year in which the distribution is planned. Accordingly, over the long term, the University expects the current spending policy to allow its endowment to provide generous current spending while preserving "intergenerational equity". This is consistent with the University's objective to maintain the purchasing power of the endowment assets held in perpetuity as well as to provide additional real growth through new gifts and investment returns.

6. FAIR VALUE MEASUREMENTS

The University utilizes the following fair value hierarchy, which prioritizes into three broad levels the inputs to valuation techniques used to measure fair value:

Level 1 – Quoted prices (unadjusted) for identical assets or liabilities in active markets as of the measurement date. Such instruments valued at Level 1 primarily consist of securities that are directly held and actively traded in public markets.

Level 2 – Inputs other than unadjusted quoted prices that are observable for the asset or liability, directly or indirectly, including quoted prices for similar assets or liabilities in active markets, inputs other than quoted prices that are observable for the asset or liability, and inputs that are derived from observable market data by correlation or other means.

Level 3 – Unobservable inputs that cannot be corroborated by observable market data.

In instances in which the inputs used to measure fair value fall into different levels of the fair value hierarchy, the fair value measurement has been determined based on the lowest level input that is significant to the fair value measurement in its entirety. The University's assessment of significance of a particular item to the fair value measurement in its entirety requires judgment, including consideration of inputs specific to the asset.

The following table presents information as of June 30, 2021 about the University's financial assets and liabilities, as categorized by level of the fair value hierarchy according to the lowest level of inputs significant to each measurement or net asset value (NAV) per share:

<i>(in thousands of dollars)</i>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>NAV</u>	<u>Total</u>
Assets:					
Long-term Investment Pool:					
Fixed income					
Public separate accounts	\$ 174	\$ 577,871	\$ -	\$ -	\$ 578,045
Public funds	127,368	-	-	-	127,368
Private funds	-	-	-	398,281	398,281
Equity investments					
Public separate accounts	669,086	-	-	-	669,086
Private separate accounts	-	-	1,308	-	1,308
Public funds	109,826	-	-	-	109,826
Private funds	-	-	-	3,650,925	3,650,925
Real assets					
Public funds	86,762	-	-	-	86,762
Private funds	-	-	-	380,894	380,894
Opportunistic					
Private funds	-	-	-	481,889	481,889
Total	<u>\$ 993,216</u>	<u>\$ 577,871</u>	<u>\$ 1,308</u>	<u>\$ 4,911,989</u>	<u>\$ 6,484,384</u>
Operating Investments:					
Fixed income					
Public separate accounts	\$ 4,962	\$ 2,221,167	\$ -	\$ -	\$ 2,226,129
Public funds	310,045	-	-	-	310,045
Private funds	-	-	-	142,707	142,707
Equity investments					
Public separate accounts	25,437	5	-	-	25,442
Private separate accounts	-	-	1	420	421
Public funds	292,129	-	-	-	292,129
Private funds	-	-	4,783	69,708	74,491
Real assets					
Private separate accounts	-	-	7	-	7
Public funds	1,473	-	-	-	1,473
Private funds	-	-	-	115	115
Opportunistic					
Private funds	-	-	-	207,557	207,557
Total	<u>\$ 634,046</u>	<u>\$ 2,221,172</u>	<u>\$ 4,791</u>	<u>\$ 420,507</u>	<u>\$ 3,280,516</u>

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>NAV</u>	<u>Total</u>
Deposits held by bond trustees:					
Fixed income					
Public funds	\$ 17,922	\$ -	\$ -	\$ -	\$ 17,922
U.S. dollar cash	-	-	-	-	30,598
Total	<u>\$ 17,922</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 48,520</u>
Beneficial interest in perpetual trusts					
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 29,931</u>	<u>\$ -</u>	<u>\$ 29,931</u>
<u>Liabilities:</u>					
Present value of annuities payable					
	\$ -	\$ -	\$ 64,917	\$ -	\$ 64,917

Public separate accounts hold public fixed income and equity investments owned directly by the University. Private separate accounts hold private fixed income and equity investments owned directly by the University. Public funds are commingled investment structures that are publicly listed and whose valuations are readily available. Private funds comprise commingled investment structures that are not publicly listed and are managed collectively following a prescribed investment strategy.

The Long-Term Investment Pool (LTIP) is a mutual fund-like vehicle used for investing the University's endowment funds, funds functioning as endowments, and other operating funds that are expected to be held long-term. A unit method of accounting for the LTIP is utilized by the University. Each participating fund enters and withdraws from the LTIP based on monthly unit values. As of June 30, 2021, the fair value of endowment funds and funds functioning as endowments within the LTIP totaled \$4,630.9 million. As of June 30, 2021, the fair value of operating funds included in the LTIP totaled \$1,853.5 million.

The following tables present information related to changes in Level 3 for each category of financial assets and liabilities for year ended June 30, 2021:

<i>(in thousands of dollars)</i>	<u>Long-Term Investment Pool</u>	<u>Operating Investments</u>	<u>Beneficial Interest in Perpetual Trusts</u>
<u>Assets:</u>			
Beginning balance	\$ -	\$ 5,132	\$ 24,509
Total realized and unrealized (losses) gains	-	(331)	5,422
Net transfers in (out)	<u>1,308</u>	<u>(10)</u>	<u>-</u>
Ending balance	<u>\$ 1,308</u>	<u>\$ 4,791</u>	<u>\$ 29,931</u>
<u>Liabilities:</u>			
Beginning balance	\$ 56,564		
Actuarial adjustment of liability	8,435		
Gifts	1,160		
Sales	<u>(1,242)</u>		
Ending Balance	<u>\$ 64,917</u>		

During 2021, the ownership structure of some University private assets was reassessed and moved from a private fund NAV classification to private separate account Level 3 classification to reflect direct ownership of the investments.

The following table presents the fair value and redemption frequency for private funds' investments whose fair value is not readily determinable and is estimated using NAV or its equivalent as of June 30, 2021:

<i>(in thousands of dollars)</i>	<u>Ending Value</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency</u>	<u>Redemption Notice Period</u>
Private Funds With Redemption Ability:				
Fixed income investments	\$ 421,442		Monthly	10 days
Equity investments	2,043,168		Daily/Monthly	
Real asset investments	136,802		Quarterly	2-90 days
Opportunistic investments	<u>610,372</u>		Daily/Monthly	Same day
Subtotal	<u>\$ 3,211,784</u>		Daily/Quarterly	0-90 days
Private Funds Without Redemption Ability:				
Fixed income investments	\$ 119,546	\$ 116,250		
Equity investments	1,677,885	439,753		
Real asset investments	244,207	161,880		
Opportunistic investments	<u>79,074</u>	<u>56,100</u>		
Subtotal	<u>\$ 2,120,712</u>	<u>\$ 773,983</u>		
Total	<u>\$ 5,332,496</u>	<u>\$ 773,983</u>		

Private funds with redemption ability include private funds that the University has some discretion as to the timing of withdrawing money from the commingled fund. Redemptions vary from daily to quarterly with required notification of 90 days or less.

Private funds without redemption ability include private funds that the University has no or very little discretion as to the timing of withdrawing money from the commingled fund. Realizations from these funds are received as the underlying investments are liquidated or distributed, typically within 10-15 years after initial commitment.

Unfunded commitments represent remaining commitments of the LTIP's drawdown funds as of June 30, 2021.

7. CONTRIBUTIONS RECEIVABLE

Contributions receivable are summarized as follows as of June 30, 2021:

<i>(in thousands of dollars)</i>	
In one year or less	\$ 45,821
Between one year and five years	85,599
More than five years	<u>122,100</u>
Contributions receivable, gross	253,520
Less allowance	(1,415)
Less discount	<u>(45,459)</u>
Contributions receivable, net	<u>\$ 206,646</u>

Contributions received during the year ended June 30, 2021 are discounted at rates ranging from 0.07% to 1.75%. The discount rates for prior periods ranged from 0.11% to 6.28%.

At June 30, 2021 the University has received bequest intentions of \$714.0 million, and certain other conditional promises to give of \$57.5 million. These intentions and conditional promises to give are not included in the consolidated financial statements.

The following table summarizes the change in contributions receivable, net during the year ended June 30, 2021:

<i>(in thousands of dollars)</i>	
Balance at the beginning of year	\$ 208,587
New pledges	59,821
Collections on pledges	(65,194)
Decrease in allowance	2,410
Decrease in unamortized discounts	1,022
Balance at the end of year	<u>\$ 206,646</u>

8. LONG-TERM DEBT

The various bond issues, notes payable and capital lease obligations that are included in long-term debt in the statement of financial position consist of the following at June 30, 2021:

<i>(in thousands of dollars)</i>	
<u>The Pennsylvania State University Bonds</u>	
Series 2020A	\$ 80,495
Series 2020B	325,390
Series 2020D	1,065,165
Series 2020E	56,850
Series 2019A	105,425
Series 2019B	116,445
Series 2018	62,215
Series 2017A	149,540
Series 2017B	116,905
Series 2016A	111,105
Series 2016B	191,375
Series 2015A	57,560
Series 2015B	92,360
Series 2007B	35,800
 <u>Pennsylvania Higher Educational Facilities Authority</u>	
<u>University Revenue Bonds (issued for The Pennsylvania State University)</u>	
Series 2006	1,610
Series 2004	1,560
Series 2002	535
 <u>Penn State Health Bonds</u>	
Series 2019	200,000
 <u>Cumberland County Municipal Authority Revenue Bonds (issued for Penn State Health)</u>	
Series 2019	222,000
 <u>Lycoming County Authority College Revenue Bonds (issued for Penn College)</u>	
Series 2021A	29,885
Series 2021B	22,780
Series 2016	46,890
Series 2015	2,295
Total bonds payable	3,094,185
Unamortized bond premiums	186,794
Unamortized deferred bond costs	(14,073)

<u>Notes payable, lines of credit and finance leases</u>	
Notes payable	46,843
Lines of credit	150,000
Finance lease obligations	<u>45,029</u>
Total notes payable, lines of credit and capital leases	<u>241,872</u>
Total long-term debt	<u>\$ 3,508,778</u>

<u>Debt issuance</u>	<u>Interest rate mode</u>	<u>Interest rates</u>	<u>Payment ranges and maturity</u> <i>(in thousands of dollars)</i>
The Pennsylvania State University Bonds			
Series 2020A	Fixed	4.00% - 5.00%	\$1,195 to \$3,090 through September 2040 with \$17,980 and \$22,490 due September 2045 and 2050, respectively
Series 2020B	Fixed	1.519% - 2.888%	\$5,895 to \$13,910 through September 2035 with \$67,170 and \$89,310 due September 2040 and 2050, respectively
Series 2020D	Fixed	1.09% - 2.84%	\$25,480 to \$33,545 through September 2035 with \$304,225 and \$328,000 due September 2043 and 2050, respectively
Series 2020E	Fixed	5.00%	\$4,520 to \$7,010 through March 2031
Series 2019A	Fixed	5.00%	\$1,655 to \$6,720 through September 2049
Series 2019B	Fixed	2.05% - 3.50%	\$2,610 to \$3,720 through September 2034 with \$20,455 and \$52,515 due September 2039 and September 2049, respectively
Series 2018	Fixed	2.00% - 5.00%	\$1,075 to \$2,320 through September 2037 with \$16,650 and \$18,255 due September 2043 and September 2048, respectively
Series 2017A	Fixed	2.00% - 5.00%	\$2,760 to \$5,965 through September 2037 with \$34,750 and \$44,620 due September 2042 and September 2047, respectively
Series 2017B	Fixed	2.033% - 3.793%	\$2,790 to \$3,830 through September 2032 with \$21,305 and \$56,595 due September 2037 and September 2047, respectively
Series 2016A	Fixed	5.00%	\$3,110 to \$6,465 through September 2036 with \$37,520 due September 2041
Series 2016B	Fixed	4.00% - 5.00%	\$7,165 to \$22,195 through September 2036
Series 2015A	Fixed	5.00%	\$1,740 to \$3,445 through September 2035 with \$20,000 due September 2040
Series 2015B	Fixed	5.00%	\$4,395 to \$8,435 through September 2035
Series 2007B	Fixed	5.25%	\$4,345 to \$5,955 through August 2027

**Pennsylvania Higher Educational Facilities
Authority University Revenue Bonds**

Series 2006	Fixed	5.125%*	\$1,610 due September 2025
Series 2004	Fixed	5.00%*	\$1,905 due September 2024
Series 2002	Fixed	5.00%*	\$2,435 due March 2022

*Annual interest costs to the University for interest rates greater than 3.00% are subsidized by PHEFA.

Penn State Health Bonds

Series 2019	Fixed	3.806%	\$200,000 due November 2049
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<u>Debt issuance</u>	<u>Interest rate mode</u>	<u>Interest rates</u>	<u>Payment ranges and maturity</u>
Cumberland County Municipal Authority Revenue Bonds			
Series 2019	Fixed	3.00% - 5.00%	\$4,915 to \$9,315 through November 2039 with \$52,355 and \$63,940 due November 2044 and November 2049, respectively
Lycoming County Authority College Revenue Bonds			
Series 2021A	Fixed	5.00%	\$1,720 to \$4,565 through July 2030
Series 2021B	Fixed	0.250% - 3.014%	\$800 to \$1,930 through July 2037
Series 2016	Fixed	2.125% - 5.00%	\$1,545 to \$3,615 through October 2032 with \$19,345 due October 2037
Series 2015	Fixed	2.50% - 5.00%	\$465 to \$610 through January 2025

The Lycoming County Authority Tax-Exempt College Revenue Series A 2021 Bonds were issued by Penn College in April 2021 for the purpose of refunding \$34.7 million of the Authority's College Revenue Bond Series 2011.

The Lycoming County Authority Federally Taxable College Revenue Series B 2021 Bonds were issued by Penn College in April 2021 for the purpose of refunding \$21.0 million of the Authority's College Revenue Bond Series 2012.

The University believes it has complied with all financial debt covenants for the year ended June 30, 2021.

Maturities and sinking fund requirements on bonds payable for each of the next five fiscal years and thereafter are summarized as follows:

<u>Year</u>	<u>Annual Installments</u> <i>(in thousands of dollars)</i>
2022	\$ 83,585
2023	85,720
2024	88,350
2025	91,045
2026	99,570
Thereafter	<u>2,645,915</u>
Total	<u>\$ 3,094,185</u>

The fair value of the University's bonds payable is estimated based on current rates offered for similar issues with similar security, terms and maturities using available market information as supplied by the various financial institutions who act as trustees or custodians for the University. At June 30, 2021, the carrying value and estimated fair value of the University's bonds payable, including issuance premiums and deferred bond costs, are \$3,266.9 million and \$3,430.7 million, respectively. Certain bond issues have associated issuance premiums; these issuance premiums total \$186.8 million at June 30, 2021 and are presented within the statement of financial position as long-term debt. These issuance premiums will be amortized over the term of the respective outstanding bonds. Certain bond issues have associated deferred bond costs; these deferred bond costs total \$14.1 million at June 30, 2021 and are presented within the statement of financial position as a reduction in long-term debt. These deferred bond costs will be amortized over the term of the respective outstanding bonds.

Notes payable and lines of credit

The University has five notes payable included within the consolidated statement of financial position at June 30, 2021 with balances of \$3.6 million, \$4.7 million, \$6.2 million, \$6.4 million, and \$25.9 million. These notes have payments due through June 2024, June 2025, March 2026, August 2039, and September 2040 and bear interest

at 2.60%, 2.85%, 2.80%, 2.65%, and 2.65%, respectively. The current portion of payments due under these notes totals \$4.9 million at June 30, 2021.

In July 2020, the University issued two lines of credit totaling \$250 million to provide support for its liquidity position in the wake of the COVID-19 pandemic. As of June 30, 2021, \$50 million was drawn on these lines of credit which is included within the consolidated statement of financial position. The interest rates on these lines of credit are LIBOR-based with unused fees on the undrawn portions. At June 30, 2021 the interest rates on the lines of credit were 1.23% and 1.50% and the unused fee rates were 0.25%. The expiration date for the two lines of credit is July 31, 2023.

During 2020, the Health System established lines of credit with PNC Bank, Fulton Bank and Huntington Bank in the amounts of \$75 million, \$55 million and \$100 million, respectively. Total drawn amounts of \$105 million on these lines of credit were repaid in full during 2021, and all lines of credit have expired.

In April 2021, the Health System established a revolving line of credit with PNC Bank in the amount of \$230 million, expiring in April 2024. The interest rate on the line of credit is LIBOR-based plus a spread, with a commitment fee on the undrawn portion. As of June 30, 2021, the Health System had drawn \$100 million on the line with such amount reflected in the current portion of long-term debt. The interest rate as of June 30, 2021 was 0.8%.

9. LEASES

The University leases certain equipment and buildings under operating and finance leases expiring at various dates through 2043. Rentals generally include insurance, taxes and maintenance costs.

Future maturities of lease liabilities at June 30, 2021 are as follows:

(in thousands of dollars)

<u>Year</u>	<u>Finance Leases</u>	<u>Operating Leases</u>
2022	\$ 10,070	\$ 31,304
2023	8,739	27,709
2024	6,858	21,817
2025	5,092	19,954
2026	2,400	17,908
Thereafter	<u>23,942</u>	<u>73,818</u>
Total lease payments	57,101	192,510
Less amount representing interest	<u>(12,072)</u>	<u>(44,456)</u>
Total lease obligations	45,029	148,054
Current portion	<u>8,200</u>	<u>24,373</u>
Long-term portion	<u>\$ 36,829</u>	<u>\$ 123,681</u>

Supplemental lease activity for the year ended June 30, 2021 is as follows:

<u>Components of Lease Expense</u>	<i>(in thousands of dollars)</i>
Finance lease expense:	
Amortization of ROU assets	\$ 9,210
Interest on lease liabilities	<u>2,042</u>
Total finance lease expense	<u>11,252</u>
Operating lease expense	<u>44,788</u>
Total lease expense	<u>\$ 56,040</u>

The weighted-average remaining lease term and weighted-average discount rate at June 30, 2021 were as follows:

	Weighted-Average Remaining Lease Term (Years)	Weighted-Average Discount Rate
<u>University:</u>		
Finance leases	12.37	4.00%
Operating leases	5.79	3.52%
<u>Health System:</u>		
Finance leases	6.57	6.55%
Operating leases	10.12	5.00%

Supplemental cash flow information related to leases for the year ended June 30, 2021 is as follows:

(in thousands of dollars)

ROU assets acquired in exchange for finance lease liabilities	\$	7,495
ROU assets acquired in exchange for operating lease liabilities		25,444
Beginning operating lease ROU asset balance		147,991
Beginning operating lease liability balance		147,991
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash outflows from finance leases		2,042
Operating cash outflows from operating leases		23,019
Financing cash outflows from finance leases	\$	10,908

10. FUNCTIONAL AND NATURAL CLASSIFICATION OF EXPENSES

Functional expenses by natural classification as of June 30, 2021 are as follows:

(in thousands of dollars)

	Educational and General	Auxiliary Enterprises	Health System	Total
Salaries and wages	\$ 1,762,358	\$ 122,132	\$ 1,431,531	\$ 3,316,021
Benefits	636,626	61,539	376,882	1,075,047
Depreciation	283,963	37,470	114,241	435,674
Plant operations and maintenance	98,383	11,675	82,963	193,021
Other components of net periodic postretirement benefit cost	62,033	-	-	62,033
Interest	23,058	26,595	5,589	55,242
Supplies, services, and other	435,147	169,049	1,120,067	1,724,263
Total	<u>\$ 3,301,568</u>	<u>\$ 428,460</u>	<u>\$ 3,131,273</u>	<u>\$ 6,861,301</u>

Education and general is comprised of academic and student services (which consists of instruction, academic support and student services), research, public service and institutional support. The costs of plant operations and maintenance, depreciation, and interest have been allocated across all functional expense categories to reflect the full cost of those activities. Plant operations and maintenance and depreciation expense are allocated based on the total proportionate expenses of each functional classification. Interest expense is allocated based on the proportionate share of total debt-financed construction.

11. RETIREMENT BENEFITS

The University provides retirement benefits for substantially all regular employees, primarily through either contributory defined benefit plans administered by the Commonwealth of Pennsylvania State Employees' Retirement System (SERS) and The Public School Employees' Retirement System (PSERS) or defined contribution plans administered by the Teachers Insurance and Annuity Association (TIAA). The University is billed for its share of the estimated actuarial cost of the defined benefit plans (\$34.5 million, net of applied setoff

credits of \$93.3 million, for the year ended June 30, 2021). The Health System provides retirement benefits for substantially all employees through one of three defined contribution plans administered by Empower Retirement. The University's total cost for retirement benefits, included in expenses, is \$213.0 million for the year ended June 30, 2021.

The SERS is the administrator of a cost-sharing, multi-employer retirement system established by the Commonwealth of Pennsylvania to provide pension benefits for employees of state government and certain independent agencies. As provided by statute, the SERS Board of Trustees has exclusive control and management responsibility of the funds and full power to invest the funds. The SERS funding policy provides for periodic member contributions at statutory rates and employer contributions at actuarially determined rates (expressed as a percentage of annual gross pay) that are sufficient to accumulate assets to pay benefits when due. In April 2020, the University entered into an agreement with SERS to prefund \$1,061.0 million of the University's unfunded actuarial accrued liability in exchange for credits against future contributions. The University's contributions to this plan for the year ended June 30, 2021 were \$31.0 million (net of applied setoff credits of \$93.3 million) and represent approximately 5.8% of total contributions to the plan based on projections for fiscal year 2021. The plan is funded at less than 65% with the funded ratio of the plan at 59.4% as of December 31, 2020.

12. POSTRETIREMENT BENEFITS

The University sponsors a retiree medical plan covering eligible retirees and eligible dependents. This program includes a Preferred Provider Organization (PPO) plan (both a traditional and a qualified high deductible option) for retirees and their dependents who are not eligible for Medicare, and a Medicare Advantage PPO plan. In addition, the University provides certain retiree life insurance benefits to eligible retirees as described below.

Employees who were hired prior to January 1, 2010 are eligible for medical coverage after they retire if either of the following requirements are satisfied:

- they are at least age 60 and have at least 15 years of continuous regular full-time employment and participation in a University-sponsored medical plan immediately preceding the retirement date
- regardless of age, if they have at least 25 years of regular full-time service. The last 10 of those 25 years of University service must be continuous and they must participate in a University-sponsored medical plan during the last 10 years immediately preceding the retirement date.

Effective January 1, 2016, any non-union employee who retires on or before December 31, 2020 will receive a \$5,000 term life insurance policy benefit at no cost to the employee. If a non-union employee retires after December 31, 2020, no life insurance benefit is provided. For certain union employees, a \$5,000 term life insurance policy is provided at no cost to the employee regardless of their retirement date.

The retiree PPO medical plan is a self-funded program, and all medical claims and other expenses are paid from net assets without donor restrictions of the University. The Medicare Advantage PPO plan and life insurance program are fully insured. The retirees pay varying amounts for coverage under the medical plan.

For those employees who were hired after December 31, 2009, the University will contribute funds each month on their behalf to a Retirement Healthcare Savings Plan. This plan is designed to help pay for qualified medical and health-related expenses in retirement, including the purchase of a health insurance policy.

Retirees will be eligible to access their Retirement Healthcare Savings Plan account when they are no longer actively employed at Penn State and have satisfied either of the following requirements:

- completed 25 years of continuous full-time service and are age 60 or older
- completed a minimum of 15 years of continuous full-time service and are age 65 or older.

Included in net assets without donor restrictions at June 30, 2021 is an unrecognized actuarial loss of \$108.9 million that has not yet been recognized in net periodic postretirement cost.

The following sets forth the plan's benefit obligation, plan assets and funded status reconciled with the amounts recognized in the University's consolidated statement of financial position at June 30, 2021:

Change in benefit obligation:	
<i>(in thousands of dollars)</i>	
Benefit obligation at beginning of year	\$ 2,344,814
Service cost	37,137
Interest cost	61,951
Actuarial gain	(399,022)
Benefits paid	(45,338)
Plan assumptions	<u>61,142</u>
Benefit obligation at end of year	<u>\$ 2,060,684</u>
Change in plan assets:	
<i>(in thousands of dollars)</i>	
Fair value of plan assets at beginning of year	\$ -
Employer contributions	45,338
Benefits paid	<u>(45,338)</u>
Fair value of plan assets at end of year	<u>\$ -</u>
Funded status	\$ (2,060,684)
Unrecognized prior service cost (benefit)	-
Unrecognized net actuarial loss	<u>-</u>
Accrued postretirement benefit expense	<u>\$ (2,060,684)</u>

Net periodic postretirement cost includes the following components for the year ended June 30, 2021:

Operating expenses:	
Service cost	\$ 37,137
Nonoperating activities:	
Interest cost	61,951
Amortization of prior service cost	(906)
Amortization of unrecognized net loss	<u>987</u>
Net periodic postretirement cost	<u>\$ 99,169</u>

The assumed healthcare cost trend rate used in measuring the accumulated postretirement benefit obligation was 6.70% for the year ended June 30, 2021, reduced each year to an ultimate level of 5.00%. The postretirement benefit obligation discount rate was 3.23% for the year ended June 30, 2021. During 2021, the plan had favorable claims experience compared to assumptions in addition to positive results related to the change in the mortality table improvement scale.

If the healthcare cost trend rate assumptions were increased by 1%, the accumulated postretirement benefit obligation would be increased by \$402.4 million as of June 30, 2021. The effect of this change on the sum of the service cost and interest cost components of the net periodic postretirement benefit cost would be an increase of \$23.8 million as of June 30, 2021. If the healthcare cost trend rate assumptions were decreased by 1%, the accumulated postretirement benefit obligation would be decreased by \$316.3 million as of June 30, 2021. The effect of this change on the sum of the service cost and interest cost components of the net periodic postretirement benefit cost would be a decrease of \$18.0 million as of June 30, 2021.

Gains and losses in excess of 10% of the accumulated postretirement benefit obligation are amortized over the average future service to assumed retirement of active participants.

Postretirement benefits expected to be paid for the years ended June 30 are as follows:

	<i>(in thousands of dollars)</i>
2022	\$ 53,755
2023	58,628
2024	64,117
2025	69,537
2026	74,480
2027-31	437,095

13. PENN STATE HEALTH

Penn State Health was organized exclusively for the charitable, educational, and scientific purposes as defined and limited by Section 501(c)(3) of the Internal Revenue Code of 1986. The Health System's purpose is to promote, support and further the charitable, educational, and scientific purposes of the University. The Health System is controlled by the University with a 20% minority ownership by Highmark Health. The Health System recorded non-controlling interest, excess of revenues over expenses, related to this minority interest. The total non-controlling interest related to Highmark Health is recorded in net assets without donor restrictions within the consolidated statement of financial position with a value at June 30, 2021 of \$319.8 million.

The wholly owned subsidiaries of the Health System include the Milton S. Hershey Medical Center (MSHMC), Saint Joseph's Regional Health Network and Medical Group (SJRHN/SJMG), Penn State Community Medical Group (PSCMG), Holy Spirit Medical Center (HSMC), Nittany Health, Inc. ("Nittany"), Central PA Health Network (CIN), Penn State Health Hampden Medical Center ("Hampden"), Penn State Health Lancaster Medical Center (LPADC) and Penn State Health Life Lion, LLC (PSHLL).

The Health System has three, not-for-profit, acute care hospitals. MSHMC is a 639-licensed bed academic medical center located in Hershey, Pennsylvania. The hospital is a Level 1 Regional Trauma Center. Additionally, MSHMC operates an ambulatory surgical center, which provides endoscopy procedures to the Centre County Region. SJRHN is a 204-licensed bed hospital in the Berks County Region. SJRHN owns Saint Joseph Health Services, LLC ("SJHS, LLC") which is a for-profit subsidiary. HSMC was acquired on November 1, 2020 and is a 306-licensed bed hospital in Cumberland County. All acute care hospitals provide inpatient, outpatient and emergency services.

The Health System has two acute care hospitals that are under construction. Hampden will be a 108-licensed bed acute care hospital to be located in Cumberland County. Hampden is scheduled to open in Fall of 2021. LPADC will be a 129-licensed bed acute care hospital to be located in Lancaster.

On June 23, 2020, the Health System established Penn State Health Life Lion, LLC. The purpose of PSHLL is to provide emergency medical services into a broader geographic region. On December 1, 2020 PSHLL began operations.

The Health System, through its medical groups, operates a non-acute and ambulatory network with consists of over 94 sites of patient care in nine counties. The Health System, through its affiliates, also operates two-joint venture specialty hospitals, the Penn State Health Rehabilitation Hospital (PSHR) and Pennsylvania Psychiatric Institute (PPI). The Health System has additional jointly owned health care centers, home health care services and ambulatory surgical centers. These include Hershey Outpatient Surgery Center (HOSC), Hershey Endoscopy Center (HEC), Cancer Care Partnership (CCP) and Horizon Healthcare Services ("Horizon"). Nittany owns 72% interest in HOSC and therefore the operations of HOSC are included in the consolidated financial statements of the Health System, with the 28% unowned interest reported as non-controlling interest. This non-controlling interest is recorded in net assets without donor restrictions within the consolidated statement of financial position with a value at June 30, 2021 of \$2.4 million.

During 2021, the Health System received cash contributions related to the Community Health Reinvestment Act from Highmark Health. The cash contributions of \$30.0 million are recorded as Health System revenue on the consolidated statement of activities. Additionally, during 2021, the Health System paid Highmark Health \$226.6 million related to employee benefit expenses and recorded \$658.2 million in net patient revenue related to Highmark Health third party payor contracts. As of June 30, 2021, the Health System has a liability due to Highmark Health in the amount of \$3.1 million. This liability is related to a contractual agreement between the parties and is included in accounts payable and other accrued expenses in the consolidated statement of financial position.

14. CONTINGENCIES AND COMMITMENTS

Contractual Obligations

The University has contractual obligations for the construction of new buildings and for additions to existing buildings in the amount of \$1,620.7 million, of which \$1,214.0 million has been paid or accrued as of June 30, 2021. The contract costs are being financed from available resources and from borrowings.

Letters of Credit

The University has available letters of credit in the amount of \$39.7 million as of June 30, 2021. These letters of credit are used primarily to comply with minimum state and federal regulatory laws that govern various University activities. The fair value of these letters of credit approximates contract values based on the nature of the fee arrangements with the issuing banks.

Guarantees

The University has a contract with a third party whereby the third party acts as an agent of the University in connection with procurement of electricity. The University guarantees the payment of the obligations of the third party incurred on behalf of the University to counterparties.

Self-Insurance

The University has a coordinated program of commercial and self-insurance for medical malpractice claims for the Health System through the use of a qualified trust and a domestic captive insurance company in combination with a self-insured retention layer and is supplementing this program through participation in the Pennsylvania Medical Care Availability and Reduction of Error Fund ("MCARE Fund"), in accordance with Pennsylvania law. An estimate of the present value, discounted at 2% for the year ended June 30, 2021, of the medical malpractice claims liability in the amount of \$162.5 million is recorded as of June 30, 2021.

The subsidiaries of the Health System are self-insured for all medical malpractice claims asserted on or after July 1, 2001, for all amounts that are below the coverage of excess insurance policies and not included in the insurance coverage of the MCARE Fund. Under the self-insurance program, the Health System is required to maintain a malpractice trust fund in an amount at least equal to the expected loss of known claims. The balance of this trust fund was \$33.6 million at June 30, 2021. The Health System intends to fund any claims due during the next year from cash flows from operations.

With approval from the Pennsylvania Department of Labor and Industry (PA-DLI), the University elected to self-insure potential obligations applicable to Pennsylvania workers' compensation. Claims under the program are contractually administered by a third-party administrator. The University purchased insurance coverage from a commercial insurer for claims in excess of \$600,000 per incident. An estimate of the self-insured workers' compensation claims liability in the amount of \$7.3 million, discounted at 0.87%, is recorded as of June 30, 2021. The University has established a trust fund, in the amount of \$14.5 million at June 30, 2021, as required by PA-DLI, to collateralize and to provide for the payment of claims under this self-insurance program. The Health System is self-insured for workers' compensation claims and has purchased excess policies through commercial insurers which cover individual claims in excess of \$750,000 per incident for workers' compensation claims.

The University and the Health System are self-insured for certain health care benefits provided to employees. The University and the Health System have purchased excess insurance policies which cover employee health benefit claims in excess of \$600,000 per employee per year. The University and the Health System provide for reported claims and claims incurred but not reported.

Litigation and Contingencies

Various legal proceedings have arisen in the normal course of conducting University business. The outcome of such litigation is not expected to have a material effect on the financial position of the University.

Based on its operation of the Health System (see Note 13), the University, like the rest of the healthcare industry, is subject to numerous laws and regulations of federal, state and local governments. Compliance with these laws and regulations can be subject to government review and interpretation, as well as regulatory actions. Government activity has continued with respect to investigations and allegations concerning possible violations of fraud and abuse statutes and regulations by healthcare providers. Although the University believes it has done its best to comply with these numerous regulations, such government reviews could result in significant repayments of previously billed and collected revenues from patient services.

15. SUBSEQUENT EVENTS

The University has evaluated subsequent events through December 17, 2021, the date on which the consolidated financial statements were issued. It did not identify any subsequent events to be disclosed other than those below or previously noted.

In July 2021, the University paid off all outstanding amounts on its two lines of credit and the related loan documents were fully terminated.

In November 2021, the Health System issued the Lancaster County Hospital Authority Revenue Bonds (Penn State Health), Series 2021 in the amount of \$288.8 million for the purpose of financing the construction of the Penn State Health Lancaster Medical Center.

THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2021

ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93	575	Child Care and Development Block Grant	CCDF/477	\$ 376,547	\$ 376,547	N	Berks County Intermediate Unit	BCIU 7-4100070188-20/21	\$ -	\$ 376,547
11	307	COVID-19 - Economic Adjustment Assistance	Economic Development	\$ 133,479	\$ 133,479	Y			\$ -	\$ 133,479
10	025	Plant and Animal Disease, Pest Control, and Animal Care	N/A	\$ 1,327,668	\$ -	Y			\$ -	\$ 739,342
10	164	Wholesale Farmers and Alternative Market Development	N/A	\$ 29,689	\$ -	N	Kentucky, University of	3200003310-21-002	\$ -	\$ 29,689
10	170	Specialty Crop Block Grant Program - Farm Bill	N/A	\$ 609,521	\$ -	N	COP Department of Agriculture	C940000024	\$ -	\$ 2,763
10	170	Specialty Crop Block Grant Program - Farm Bill	N/A	\$ 609,521	\$ -	N	COP Department of Agriculture	C9400000531	\$ -	\$ 30,786
10	174	Acer Access Development Program	N/A	\$ 3,521	\$ -	N	Ohio State University	60073858 PO RF01605589	\$ -	\$ 3,521
10	175	Farmers Market and Local Food Promotion Program	N/A	\$ 21,875	\$ -	Y			\$ -	\$ 21,875
10	176	Dairy Business Innovation Initiatives	N/A	\$ 8,436	\$ -	N	University of Tennessee	9500096725	\$ -	\$ 8,436
10	202	Cooperative Forestry Research	N/A	\$ 1,118,617	\$ -	Y			\$ -	\$ 271
10	203	Payments to Agricultural Experiment Stations under the Hatch Act	N/A	\$ 8,378,108	\$ -	Y			\$ -	\$ 13,748
10	215	Sustainable Agriculture Research and Education	N/A	\$ 388,771	\$ -	N	Vermont, University of	ONE19-339-33243	\$ -	\$ 9,951
10	215	Sustainable Agriculture Research and Education	N/A	\$ 388,771	\$ -	N	Vermont, University of	SNE19-11-34268	\$ -	\$ 8,580
10	215	Sustainable Agriculture Research and Education	N/A	\$ 388,771	\$ -	N	Vermont, University of	SNE20-011-PA-35383	\$ -	\$ 21,231
10	303	Integrated Programs	N/A	\$ 1,084,513	\$ -	Y			\$ -	\$ 81,372
10	304	Homeland Security Agricultural	N/A	\$ 17,292	\$ -	N	Michigan State University	RC106556AB	\$ -	\$ 7,447
10	310	Agriculture and Food Research Initiative (AFRI)	N/A	\$ 9,790,837	\$ -	Y			\$ -	\$ 58,568
10	311	Beginning Farmer and Rancher Development Program	N/A	\$ 272,211	\$ -	Y			\$ -	\$ 44,760
10	311	Beginning Farmer and Rancher Development Program	N/A	\$ 272,211	\$ -	Y			\$ 47,411	\$ 208,479
10	328	National Food Safety Training, Education, Extension, Outreach, and Technical Ass	N/A	\$ 16,809	\$ -	N	Vermont, University of	33399SUB52793	\$ -	\$ 16,809
10	329	Crop Protection and Pest Management Competitive Grants Program	N/A	\$ 469,851	\$ -	Y			\$ -	\$ 250,724
10	336	Veterinary Services Grant Program	N/A	\$ 31,183	\$ -	Y			\$ -	\$ 31,183
10	351	Rural Business Development Grant	N/A	\$ 13,362	\$ -	Y			\$ -	\$ 13,362
10	460	Risk Management Education Partnerships	N/A	\$ (417)	\$ -	Y			\$ -	\$ (417)
10	500	Cooperative Extension Service	N/A	\$ 4,132,290	\$ -	N	Delaware, University of	236607	\$ -	\$ 1,207
10	500	Cooperative Extension Service	N/A	\$ 4,132,290	\$ -	N	Delaware, University of	58999	\$ -	\$ 4,683
10	500	Cooperative Extension Service	N/A	\$ 4,132,290	\$ -	N	University of Delaware Center for Composite Materials	52984	\$ -	\$ 2,382
10	500	Cooperative Extension Service	N/A	\$ 4,132,290	\$ -	N	University of Delaware Center for Composite Materials	56965	\$ -	\$ 12,355
10	500	Cooperative Extension Service	N/A	\$ 4,132,290	\$ -	Y			\$ 54,302	\$ 139,971
10	511	Smith-Lever Funding (Various Programs)	N/A	\$ 9,933,756	\$ -	Y			\$ -	\$ 9,933,756
10	514	Expanded Food and Nutrition Education Program	N/A	\$ 1,967,525	\$ -	Y			\$ -	\$ 1,967,525
10	515	Renewable Resources Extension Act and National Focus Fund Projects	N/A	\$ 37,567	\$ -	Y			\$ -	\$ 37,567
10	558	Child and Adult Care Food Program	N/A	\$ 33,423	\$ -	N	COP: Department of Education	#N/A	\$ -	\$ 33,423
10	674	Wood Utilization Assistance	N/A	\$ 31,569	\$ -	Y			\$ -	\$ 31,569
10	675	Urban and Community Forestry Program	N/A	\$ 355,080	\$ -	Y			\$ -	\$ 355,080
10	678	Forest Stewardship Program	N/A	\$ 148,524	\$ -	Y			\$ -	\$ 148,524
10	902	Soil and Water Conservation	N/A	\$ 87,161	\$ -	N	Minnesota, University of	H007415102	\$ -	\$ 482
10	902	Soil and Water Conservation	N/A	\$ 87,161	\$ -	N	National Fish and Wildlife Foundation	0407.19.066280	\$ -	\$ 27,998
10	912	Environmental Quality Incentives Program	N/A	\$ 29,174	\$ -	N	North Jersey RC&D	238145	\$ -	\$ 792
10	912	Environmental Quality Incentives Program	N/A	\$ 29,174	\$ -	Y			\$ -	\$ 7,278
10	U01	4300621447 U.S. Department of Agriculture Other	N/A	\$ 452,142	\$ -	N	COP: Department of Education	4300621447	\$ -	\$ 36,515
10	U01	4300621470 U.S. Department of Agriculture Other	N/A	\$ 452,142	\$ -	N	COP: Department of Education	4300621470	\$ -	\$ 228,544
10	U01	4300637992 U.S. Department of Agriculture Other	N/A	\$ 452,142	\$ -	N	COP: Department of Education	4300637992	\$ -	\$ 66,280
10	U01	4300644404 U.S. Department of Agriculture Other	N/A	\$ 452,142	\$ -	N	COP: Department of Education	4300644404	\$ 5,690	\$ 30,972
10	U01	4300661125 U.S. Department of Agriculture Other	N/A	\$ 452,142	\$ -	N	COP: Department of Education	4300661125	\$ -	\$ 19,828
10	U01	4300669828 U.S. Department of Agriculture Other	N/A	\$ 452,142	\$ -	N	COP: Department of Education	4300669828	\$ -	\$ 4,811
10	U01	4300687744 U.S. Department of Agriculture Other	N/A	\$ 452,142	\$ -	N	COP: Department of Conservation and Natural Resources	4300687744	\$ -	\$ 6,547
10	U01	44-027-0246000376 U.S. Department of Agriculture Other	N/A	\$ 452,142	\$ -	Y			\$ -	\$ 36,330
10	U01	44187248 U.S. Department of Agriculture Other	N/A	\$ 452,142	\$ -	N	COP Department of Agriculture	44187248	\$ -	\$ 15,157
10	U01	C9400000523 U.S. Department of Agriculture Other	N/A	\$ 452,142	\$ -	N	COP Department of Agriculture	C9400000523	\$ -	\$ 7,158
11	020	Cluster Grants	N/A	\$ 317,012	\$ -	Y			\$ -	\$ 317,012
11	303	Economic Development Technical Assistance	N/A	\$ 110,975	\$ -	Y			\$ -	\$ 110,975
11	619	Arrangements for Interdisciplinary Research Infrastructure	N/A	\$ 129,944	\$ -	N	University of Delaware Center for Composite Materials	PC2.2-157 PO 56066	\$ -	\$ 30,531
11	U01	YA132318CN0007 U.S. Department of Commerce Other	N/A	\$ 15,879	\$ -	Y			\$ -	\$ 15,879
12	351	Scientific Research - Combating Weapons of Mass Destruction	N/A	\$ 2,479,659	\$ -	N	Minnesota, University of	H006536504	\$ -	\$ 65,145

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2021**

ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	630	Basic, Applied, and Advanced Research in Science and Engineering	N/A	\$ 4,924,842	\$ -	N	Army Educational Outreach Program	239084	\$ -	\$ 6,705
12	910	Research and Technology Development	N/A	\$ 4,788,037	\$ -	Y			\$ 217,358	\$ 698,608
12	910	COVID-19 - Research and Technology Development	N/A	\$ 4,788,037	\$ -	Y			\$ -	\$ 64,120
12	U01	2521-2 U.S. Department of Defense Other	N/A	\$ 41,984	\$ -	N	Intelligent Automation, Inc.	2521-2	\$ -	\$ 40,599
12	U01	P010255378 U.S. Department of Defense Other	N/A	\$ 41,984	\$ -	N	Leidos, Inc.	P010255378	\$ -	\$ 1,385
15	945	Cooperative Research and Training Programs – Resources of the National Park Syst	N/A	\$ 288,432	\$ -	Y			\$ -	\$ 1,377
16	560	National Institute of Justice Research, Evaluation, and Development Project Gran	N/A	\$ 1,831,380	\$ -	Y			\$ -	\$ 961,424
16	575	Crime Victim Assistance	N/A	\$ 1,061,531	\$ -	N	COP: Commission on Crime and Delinquency	2018/2019-VF-01-33287	\$ -	\$ 116,311
16	575	Crime Victim Assistance	N/A	\$ 1,061,531	\$ -	N	COP: Commission on Crime and Delinquency	28932	\$ -	\$ 808,129
16	582	Crime Victim Assistance/Discretionary Grants	N/A	\$ 28,296	\$ -	Y			\$ -	\$ 28,296
16	726	Juvenile Mentoring Program	N/A	\$ 64,938	\$ -	N	National 4-H Council	232647	\$ -	\$ 38,022
16	726	Juvenile Mentoring Program	N/A	\$ 64,938	\$ -	N	National 4-H Council	234022	\$ -	\$ 26,916
16	738	Edward Byrne Memorial Justice Assistance Grant Program	N/A	\$ 214,447	\$ -	N	COP: Commission on Crime and Delinquency	4300684743	\$ -	\$ 24,882
16	U01	221343 U.S. Department of Justice Other	N/A	\$ (598)	\$ -	N	National 4-H Council	221343	\$ -	\$ (598)
17	245	Trade Adjustment Assistance	N/A	\$ 864,819	\$ -	N	COP: Department of Labor & Industry	#N/A	\$ -	\$ 864,819
17	600	Mine Health and Safety Grants	N/A	\$ 351,320	\$ -	N	COP: Department of Environmental Protection	4300647207	\$ -	\$ 241,543
17	600	Mine Health and Safety Grants	N/A	\$ 351,320	\$ -	N	COP: Department of Environmental Protection	4300689928	\$ -	\$ 109,777
17	603	Brookwood-Sago Grant	N/A	\$ 44,393	\$ -	Y			\$ -	\$ 44,393
19	010	Academic Exchange Programs - Hubert H. Humphrey Fellowship Program	N/A	\$ 239,058	\$ -	N	Institute of International Education	3000194490	\$ -	\$ 239,003
19	010	Academic Exchange Programs - Hubert H. Humphrey Fellowship Program	N/A	\$ 239,058	\$ -	N	Institute of International Education	HHH1901000_PSU_7.1.19	\$ -	\$ 55
19	040	Public Diplomacy Programs	N/A	\$ 18,421	\$ -	N	American Councils	SRS50020GR0057	\$ -	\$ 786
19	040	Public Diplomacy Programs	N/A	\$ 18,421	\$ -	Y			\$ -	\$ 1,251
19	900	AEECA/ESF PD Programs	N/A	\$ 16,635	\$ -	N	University of Alaska Fairbanks	UA 21-0077	\$ -	\$ 16,635
20	106	Airport Improvement Program	N/A	\$ 6,969,078	\$ -	Y			\$ -	\$ 4,931,838
20	106	COVID-19 - Airport Improvement Program	N/A	\$ 6,969,078	\$ -	Y			\$ -	\$ 2,037,240
21	019	COVID-19 - Coronavirus Relief Fund	N/A	\$ 424,899	\$ -	N	COP: Dep. Community & Economic Develop.	C000074555	\$ -	\$ 396,871
21	019	COVID-19 - Coronavirus Relief Fund	N/A	\$ 424,899	\$ -	N	COP: Department of Education	161-19-0140	\$ -	\$ 28,028
23	002	Appalachian Area Development	N/A	\$ 67,852	\$ -	Y			\$ 54,752	\$ 67,852
23	U01	226272 Appalachian Regional Commission (ARC) Other	N/A	\$ 285,346	\$ -	N	Clearfield County Commissioners	226272	\$ -	\$ 285,346
39	U01	GS-21F-025CA General Services Administration Other	N/A	\$ 161,002	\$ -	Y			\$ -	\$ 161,002
45	312	National Leadership Grants	N/A	\$ 150	\$ -	Y			\$ -	\$ 150
45	313	Laura Bush 21st Century Librarian Program	N/A	\$ 8,867	\$ -	Y			\$ -	\$ 8,867
45	U01	PC-15-8-067 ADMENDMENT 007 National Endowment for the Arts and Humanities Other	N/A	\$ 2,380	\$ -	Y			\$ -	\$ 2,380
47	041	Engineering	N/A	\$ 11,494,677	\$ -	N	H Quest Vanguard Inc.	224519	\$ -	\$ 80,241
47	041	Engineering	N/A	\$ 11,494,677	\$ -	Y			\$ -	\$ 75,400
47	050	Geosciences	N/A	\$ 6,586,000	\$ -	Y			\$ -	\$ 11,989
47	076	Education and Human Resources	N/A	\$ 9,260,617	\$ -	Y			\$ -	\$ 20,879
47	U01	4300552615 National Science Foundation Other	N/A	\$ (6,583)	\$ -	Y			\$ -	\$ (6,583)
59	037	Small Business Development Centers	N/A	\$ 338,049	\$ -	N	Kutztown University of Pennsylvania	SBA20210407	\$ -	\$ 68,486
59	037	COVID-19 - Small Business Development Centers	N/A	\$ 338,049	\$ -	N	Kutztown University of Pennsylvania	SBACARES20200507	\$ -	\$ 269,563
64	U01	NONE U.S. Department of Veterans Affairs Other	N/A	\$ 950	\$ -	Y			\$ -	\$ 950
66	436	Surveys, Studies, Investigations, Demonstrations, and Training Grants and Cooper	N/A	\$ 13,822	\$ -	N	Rural Community Assistance Partnership	237971	\$ -	\$ 432
66	436	Surveys, Studies, Investigations, Demonstrations, and Training Grants and Cooper	N/A	\$ 13,822	\$ -	N	Rural Community Assistance Partnership	83938801	\$ -	\$ 7,146
66	466	Chesapeake Bay Program	N/A	\$ 351,694	\$ -	N	Conservation Foundation of Lancaster County	209578	\$ -	\$ 96,536

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**THE PENNSYLVANIA STATE UNIVERSITY
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FOR THE YEAR ENDED JUNE 30, 2021**

ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
66	466	Chesapeake Bay Program	N/A	\$ 351,694	\$ -	N	National Fish and Wildlife Foundation	0602.15.049722	\$ 27,105	\$ 37,192
66	466	Chesapeake Bay Program	N/A	\$ 351,694	\$ -	N	National Fish and Wildlife Foundation	0602.19.065295	\$ 633	\$ 11,200
66	466	Chesapeake Bay Program	N/A	\$ 351,694	\$ -	N	Pennsylvania Association for Sustainable Agriculture	235709	\$ -	\$ 17,215
66	708	Pollution Prevention Grants Program	N/A	\$ 196,373	\$ -	Y			\$ -	\$ 196,373
66	716	Research, Development, Monitoring, Public Education, Outreach, Training, Demonst	N/A	\$ 13,639	\$ -	N	eXtension Foundation	SA-2020-54	\$ -	\$ 4,600
66	716	Research, Development, Monitoring, Public Education, Outreach, Training, Demonst	N/A	\$ 13,639	\$ -	N	eXtension Foundation	SA-2021-46	\$ -	\$ 9,039
66	U01 189860	Environmental Protection Agency Other	N/A	\$ 25,224	\$ -	N	Sustainable Chesapeake	189860	\$ -	\$ 6,960
66	U01 206395	Environmental Protection Agency Other	N/A	\$ 25,224	\$ -	N	Sustainable Chesapeake	206395	\$ -	\$ 18,264
81	049	Office of Science Financial Assistance Program	N/A	\$ 14,649,171	\$ -	N	Altex Technologies Corporation	DE-SC0013823 PSU-002	\$ -	\$ 51,574
81	049	Office of Science Financial Assistance Program	N/A	\$ 14,649,171	\$ -	Y			\$ -	\$ 80,351
81	U01 4300661182	U.S. Department of Energy Other	N/A	\$ 537,556	\$ -	N	COP: Department of Environmental Protection	4300661182	\$ -	\$ 325,000
81	U01 4300678653	U.S. Department of Energy Other	N/A	\$ 537,556	\$ -	N	COP: Department of Environmental Protection	4300678653	\$ -	\$ 38,452
81	U01 4300695358	U.S. Department of Energy Other	N/A	\$ 537,556	\$ -	N	COP: Department of Environmental Protection	4300695358	\$ -	\$ 24,365
81	U01 89243319CFE000032	U.S. Department of Energy Other	N/A	\$ 537,556	\$ -	Y			\$ -	\$ 72,811
81	U01 P010221754 TASK ORDER 6	U.S. Department of Energy Other	N/A	\$ 537,556	\$ -	N	Leidos, Inc.	P010221754 TASK ORDER 6	\$ -	\$ 76,928
84	002	Adult Education - Basic Grants to States	N/A	\$ 633,583	\$ -	N	COP: Department of Education	064-20-0025	\$ -	\$ 1,580
84	002	Adult Education - Basic Grants to States	N/A	\$ 633,583	\$ -	N	COP: Department of Education	099-20-0002	\$ 14,983	\$ 15,232
84	002	Adult Education - Basic Grants to States	N/A	\$ 633,583	\$ -	N	COP: Department of Education	099-21-0002	\$ 15,015	\$ 165,398
84	002	Adult Education - Basic Grants to States	N/A	\$ 633,583	\$ -	N	COP: Department of Education	FA-064-21-0025A	\$ -	\$ 243,159
84	002	Adult Education - Basic Grants to States	N/A	\$ 633,583	\$ -	N	COP:Bureau of Postsecondary & Adult Education	099-21-0005	\$ -	\$ 208,214
84	048	Career and Technical Education -- Basic Grants to States	N/A	\$ 137,191	\$ -	N	COP: Department of Education	FA-119-21-0004	\$ -	\$ 137,191
84	103	TRIO Staff Training Program	N/A	\$ 209,315	\$ -	Y			\$ -	\$ 59,996
84	126	Rehabilitation Services Vocational Rehabilitation Grants to States	N/A	\$ 775,924	\$ -	N	COP: Office of Vocational Rehabilitation		\$ 0	\$ 775,924
84	129	Rehabilitation Long-Term Training	N/A	\$ 122,885	\$ -	Y			\$ -	\$ 122,885
84	325	Special Education - Personnel Development to Improve Services and Results for Ch	N/A	\$ 529,395	\$ -	Y			\$ -	\$ 529,395
84	365	English Language Acquisition State Grants	N/A	\$ 309,985	\$ -	Y			\$ 45,570	\$ 309,985
84	367	Supporting Effective Instruction State Grants	N/A	\$ 56,885	\$ -	N	COP: Department of Education	4100084649	\$ -	\$ 56,885
84	425	COVID-19, 84.425C	N/A	\$ 118,283,833	\$ -	N	COP: Department of Education	250-20-0029	\$ -	\$ 12,108
84	425	COVID-19, 84.425C	N/A	\$ 118,283,833	\$ -	N	COP: Department of Education	S425C200013	\$ -	\$ 1,905,384
84	425	COVID-19, 84.425E	N/A	\$ 118,283,833	\$ -	Y			\$ -	\$ 30,752,872
84	425	COVID-19, 84.425F	N/A	\$ 118,283,833	\$ -	Y			\$ -	\$ 84,967,674
84	425	COVID-19, 84.425L	N/A	\$ 118,283,833	\$ -	Y			\$ -	\$ 36,421
84	425	COVID-19, 84.425M	N/A	\$ 118,283,833	\$ -	Y			\$ -	\$ 609,374
84	U01 234593	U.S. Department of Education Other	N/A	\$ 24,061	\$ -	N	COP: Office of Vocational Rehabilitation	234593	\$ -	\$ 16,580
84	U01 4000023573	U.S. Department of Education Other	N/A	\$ 24,061	\$ -	N	COP: Office of Vocational Rehabilitation	4000023573	\$ -	\$ 7,481
93	070	Environmental Public Health and Emergency Response	N/A	\$ 33,064	\$ -	N	COP: Department of Health	4300682265	\$ -	\$ 33,064
93	107	Area Health Education Centers	N/A	\$ 963,600	\$ -	Y			\$ 628,901	\$ 845,357
93	236	Grants to States to Support Oral Health Workforce Activities	N/A	\$ 9,999	\$ -	N	PA Coalition for Oral Health	214728	\$ -	\$ 9,999
93	241	State Rural Hospital Flexibility Program	N/A	\$ 320,770	\$ -	Y			\$ -	\$ 320,770
93	243	Substance Abuse and Mental Health Services Projects of Regional and National Sig	N/A	\$ 2,172,966	\$ -	N	Cen-Clear Child Services, Inc.	233453	\$ -	\$ 54,744
93	262	Occupational Safety and Health Program	N/A	\$ 163,270	\$ -	N	Mary Imogene Bassett Hospital	5 U540H007542-20PS4	\$ -	\$ 1,658
93	262	Occupational Safety and Health Program	N/A	\$ 163,270	\$ -	N	Mary Imogene Bassett Hospital	5 U540H007542-20PS5	\$ -	\$ 22,014
93	563	Child Support Enforcement	N/A	\$ 2,984,831	\$ -	N	COP: Department of Human Services	4000018811	\$ -	\$ 1,441,918

See notes to schedule of expenditures of federal awards.

THE PENNSYLVANIA STATE UNIVERSITY
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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93	563	Child Support Enforcement	N/A	\$ 2,984,831	\$ -	N	COP: Department of Human Services	4000024443	\$ -	\$ 1,542,913
93	788	Block Grants for Prevention and Treatment of Substance Abuse	N/A	\$ 1,442,073	\$ -	N	COP: Commission on Crime and Delinquency	33795	\$ -	\$ 262,513
93	788	Opioid STR	N/A	\$ 1,442,073	\$ -	N	COP: Department of Health	4100085796	\$ 121,042	\$ 250,154
93	889	National Bioterrorism Hospital Preparedness Program	N/A	\$ 490,595	\$ -	N	COP: Department of Health	0	\$ -	\$ 290,595
93	889	COVID-19 - National Bioterrorism Hospital Preparedness Program	N/A	\$ 490,595	\$ -	N	COP: Department of Health	0	\$ -	\$ 200,000
93	913	Grants to States for Operation of State Offices of Rural Health	N/A	\$ 184,435	\$ -	Y			\$ -	\$ 184,435
93	959	Block Grants for Prevention and Treatment of Substance Abuse	N/A	\$ 420,876	\$ -	N	COP: Commission on Crime and Delinquency	28798	\$ -	\$ 75,005
93	959	Block Grants for Prevention and Treatment of Substance Abuse	N/A	\$ 420,876	\$ -	N	COP: Commission on Crime and Delinquency	33795	\$ -	\$ 115,095
93	959	Block Grants for Prevention and Treatment of Substance Abuse	N/A	\$ 420,876	\$ -	N	COP: Department of Drug and Alcohol Program	4300588345	\$ -	\$ 22,360
93	968	Funding in Support of the Pennsylvania Rural Health Model	N/A	\$ 1,561,346	\$ -	N	COP: Department of Health	4300642684	\$ 1,444,768	\$ 1,561,346
93	969	PPHF Geriatric Education Centers	N/A	\$ 852,130	\$ -	Y			\$ 240,944	\$ 763,426
93	969	COVID-19 - PPHF Geriatric Education Centers	N/A	\$ 852,130	\$ -	Y			\$ 46,595	\$ 88,704
93	U01	233513	U.S. Department of Health and Human Services Other	\$ 123,865	\$ -	N	University of Chicago	233513	\$ -	\$ 600
93	U01	4300618801	U.S. Department of Health and Human Services Other	\$ 123,865	\$ -	N	COP: Department of Health	4300618801	\$ (6,112)	\$ (6,112)
93	U01	75D30119C05128	U.S. Department of Health and Human Services Other	\$ 123,865	\$ -	Y			\$ -	\$ 83,322
93	U01	P0019419	U.S. Department of Health and Human Services Other	\$ 123,865	\$ -	N	New Mexico Institute of Mining and Technology	P0019419	\$ -	\$ 46,055
97	036	COVID-19	COVID-19 - Disaster Grants - Public Assistance (Presidentially Declared Disasters)	\$ 445,204	\$ -	N	COP: Emergency Management Agency	#N/A	\$ -	\$ 445,204
99	U01	7352259	USG Awards Classified Contracts Other	\$ 138,126	\$ -	N	Lawrence Berkeley National Laboratory	7352259	\$ -	\$ 10,415
99	U01	SBA20200208	USG Awards Classified Contracts Other	\$ 138,126	\$ -	N	Kutztown University of Pennsylvania	SBA20200208	\$ -	\$ 127,711
10	001	Agricultural Research Basic and Applied Research	Research and Development	\$ 1,688,133	\$ 621,816,479	N	Geisinger Clinic	646515PSU01	\$ -	\$ 55,594
10	001	Agricultural Research Basic and Applied Research	Research and Development	\$ 1,688,133	\$ 621,816,479	N	University of Arkansas	UA AES 05665-02	\$ -	\$ 109,330
10	001	Agricultural Research Basic and Applied Research	Research and Development	\$ 1,688,133	\$ 621,816,479	Y			\$ -	\$ 1,432,160
10	001	Agricultural Research Basic and Applied Research	Research and Development	\$ 1,688,133	\$ 621,816,479	Y			\$ 4,909	\$ 91,049
10	025	Plant and Animal Disease, Pest Control, and Animal Care	Research and Development	\$ 1,327,668	\$ 621,816,479	N	COP Department of Agriculture	44209099	\$ -	\$ 117,154
10	025	Plant and Animal Disease, Pest Control, and Animal Care	Research and Development	\$ 1,327,668	\$ 621,816,479	N	Georgia, University of	SUB00002241	\$ -	\$ 11,214
10	025	Plant and Animal Disease, Pest Control, and Animal Care	Research and Development	\$ 1,327,668	\$ 621,816,479	Y			\$ -	\$ 459,958
10	170	Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 609,521	\$ 621,816,479	N	COP Department of Agriculture	44176527	\$ -	\$ 2,075
10	170	Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 609,521	\$ 621,816,479	N	COP Department of Agriculture	44187029	\$ 193,816	\$ 232,955
10	170	Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 609,521	\$ 621,816,479	N	COP Department of Agriculture	44187030	\$ 109,453	\$ 222,886
10	170	Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 609,521	\$ 621,816,479	N	COP Department of Agriculture	44187249	\$ -	\$ 87
10	170	Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 609,521	\$ 621,816,479	N	COP Department of Agriculture	C940000031	\$ -	\$ 27,848
10	170	Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 609,521	\$ 621,816,479	N	COP Department of Agriculture	C940000037	\$ -	\$ 4,868
10	170	Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 609,521	\$ 621,816,479	N	COP Department of Agriculture	C9400000525	\$ -	\$ 4,422
10	170	Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 609,521	\$ 621,816,479	N	COP Department of Agriculture	C9400000530	\$ -	\$ 4,949
10	170	Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 609,521	\$ 621,816,479	N	Pennsylvania Co-Operative Potato Growers, Inc.	219908	\$ -	\$ 14,901
10	170	Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 609,521	\$ 621,816,479	N	University of Florida	SUB00002346 P0175090	\$ -	\$ 5,065
10	170	Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 609,521	\$ 621,816,479	N	University of New Hampshire	L0071	\$ -	\$ 4,974
10	170	Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 609,521	\$ 621,816,479	N	Washington State University	137512 G004233	\$ -	\$ 50,942
10	200	Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,028,313	\$ 621,816,479	N	Rutgers-The State University of New Jersey	1233-NER19IS-FLEISCHER	\$ -	\$ 259
10	200	Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,028,313	\$ 621,816,479	N	University of Maine	UMS1240	\$ -	\$ 37,315
10	200	Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,028,313	\$ 621,816,479	N	University of Maryland Eastern Shore	IR4SZ5208280FLEISCHERP ENN	\$ -	\$ 9,996
10	200	Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,028,313	\$ 621,816,479	N	University of Maryland Eastern Shore	IR4SZ5208280PETERPENN	\$ -	\$ 15,000
10	200	Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,028,313	\$ 621,816,479	Y			\$ -	\$ 965,743
10	202	Cooperative Forestry Research	Research and Development	\$ 1,118,617	\$ 621,816,479	Y			\$ -	\$ 404,629
10	202	Cooperative Forestry Research	Research and Development	\$ 1,118,617	\$ 621,816,479	Y			\$ 12,827	\$ 713,717
10	203	Payments to Agricultural Experiment Stations under the Hatch Act	Research and Development	\$ 8,378,108	\$ 621,816,479	Y			\$ -	\$ 8,364,360
10	207	Animal Health and Disease Research	Research and Development	\$ 22,403	\$ 621,816,479	Y			\$ -	\$ 22,403
10	210	Higher Education – Graduate Fellowships Grant Program	Research and Development	\$ 152,857	\$ 621,816,479	Y			\$ -	\$ 152,857
10	215	Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Cornell University	88502-11226	\$ -	\$ 26,335

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	University of Maryland	60324-Q1643202	\$ -	\$ 9,556
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE18-165-32231	\$ -	\$ 9,211
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE18-180-32231	\$ -	\$ 5,983
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE18-186-32231	\$ -	\$ 1,207
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE19-195-33243	\$ -	\$ 9,615
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE19-199-33243	\$ -	\$ 4,690
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE19-202-33243	\$ -	\$ 14,555
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE19-214-33243	\$ -	\$ 7,647
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE19-215-33243	\$ -	\$ 5,148
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE19-216-33243	\$ -	\$ 6,302
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE19-222-33243	\$ -	\$ 233
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE19-225-33243	\$ -	\$ 9,562
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE20-227-34268	\$ -	\$ 798
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE20-232-34268	\$ -	\$ 4,156
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE20-237-34268	\$ -	\$ 4,384
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE20-239-34268	\$ -	\$ 4,156
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	GNE20-243-34268	\$ -	\$ 2,603
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	LNE17-356-32231	\$ -	\$ 11,943
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	LNE18-367-32231	\$ 22,030	\$ 60,925
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	LNE19-378-33243	\$ -	\$ 29,897
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	LNE19-380-33243	\$ 721	\$ 53,825
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	LNE19-389R-33243	\$ 2,448	\$ 43,394
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	LNE20-404-34268	\$ 832	\$ 12,996
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	ONE19-340-33243	\$ -	\$ 6,904
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 388,771	\$ 621,816,479	N	Vermont, University of	ONE19-352-33243	\$ 1,839	\$ 2,984
10 217		Higher Education - Institution Challenge Grants Program	Research and Development	\$ 35,555	\$ 621,816,479	N	Purdue University	F0003792902017	\$ -	\$ 11,254
10 217		Higher Education - Institution Challenge Grants Program	Research and Development	\$ 35,555	\$ 621,816,479	Y			\$ -	\$ 24,301
10 250		Agriculture and Rural Economic Research, Cooperative Agreements and Collaborati	Research and Development	\$ 13,425	\$ 621,816,479	Y			\$ -	\$ 13,425
10 253		Consumer Data and Nutrition Research	Research and Development	\$ 42,525	\$ 621,816,479	Y			\$ -	\$ 42,525
10 303		Integrated Programs	Research and Development	\$ 1,084,513	\$ 621,816,479	Y			\$ -	\$ 738,412
10 303		Integrated Programs	Research and Development	\$ 1,084,513	\$ 621,816,479	Y			\$ 23,836	\$ 264,729
10 304		Homeland Security Agricultural	Research and Development	\$ 17,292	\$ 621,816,479	N	Cornell University	80289-10768	\$ -	\$ 9,845
10 307		Organic Agriculture Research and Extension Initiative	Research and Development	\$ 858,450	\$ 621,816,479	N	Cornell University	90033-20656	\$ -	\$ 11,584
10 307		Organic Agriculture Research and Extension Initiative	Research and Development	\$ 858,450	\$ 621,816,479	Y			\$ -	\$ 267,971
10 307		Organic Agriculture Research and Extension Initiative	Research and Development	\$ 858,450	\$ 621,816,479	Y			\$ 205,534	\$ 578,895
10 309		Specialty Crop Research Initiative	Research and Development	\$ 2,278,051	\$ 621,816,479	N	Cornell University	92884-20620	\$ -	\$ 9,993
10 309		Specialty Crop Research Initiative	Research and Development	\$ 2,278,051	\$ 621,816,479	N	North Carolina State University	2016-1498-10	\$ -	\$ 25,357
10 309		Specialty Crop Research Initiative	Research and Development	\$ 2,278,051	\$ 621,816,479	N	North Carolina State University	2017-0398-15	\$ -	\$ 119,424
10 309		Specialty Crop Research Initiative	Research and Development	\$ 2,278,051	\$ 621,816,479	N	Rutgers-The State University of New Jersey	0702-PP2018-PATCH	\$ -	\$ 125,389
10 309		Specialty Crop Research Initiative	Research and Development	\$ 2,278,051	\$ 621,816,479	N	Texas A&M University	M1900058	\$ -	\$ 45,376
10 309		Specialty Crop Research Initiative	Research and Development	\$ 2,278,051	\$ 621,816,479	N	Texas A&M University	M2002891	\$ -	\$ 20,746
10 309		Specialty Crop Research Initiative	Research and Development	\$ 2,278,051	\$ 621,816,479	N	Washington State University	133321-G004106	\$ -	\$ 18,722
10 309		Specialty Crop Research Initiative	Research and Development	\$ 2,278,051	\$ 621,816,479	Y			\$ 694,597	\$ 1,913,044
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Alabama A&M University	A18-0315-S001	\$ -	\$ 8,845
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Colorado School of Mines	401541-5802	\$ -	\$ 63,268
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Connecticut, University of	413623	\$ -	\$ 22,948
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Cornell University	84041-11058	\$ -	\$ 90,684
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Iowa State University	022496C	\$ -	\$ 154,603
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Minnesota, University of	H008728802	\$ -	\$ 37,700
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	North Carolina State University	2019-1507-17	\$ -	\$ 89,931
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	North Carolina State University	2020-0062-02	\$ -	\$ 64,156
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Ohio State University	60066131 PO RF01572582	\$ -	\$ 9,245
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Ohio State University	60070643	\$ -	\$ (356)
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Pennsylvania, University of	573729	\$ 7,120	\$ 14,239
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Piedmont Conservation Council, Inc.	220973	\$ -	\$ 15,798
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Purdue University	F0016275102008	\$ -	\$ 5,343
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Purdue University	F0016275102011	\$ -	\$ 17,118
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Purdue University	F1000224802008	\$ -	\$ 40,543
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Sam Houston State University	22120A	\$ -	\$ 39,744

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	University of California at Davis	A18-1616-S004	\$ -	\$ 39,821
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	University of California at Davis	A21-0187-S003	\$ -	\$ 13,377
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	University of New Hampshire	17-056	\$ -	\$ 24,891
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	422571-19079	\$ -	\$ 5,664
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	422682-19079	\$ -	\$ 89,845
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	N	West Virginia University	20-182-PSU PO MM000316801	\$ -	\$ 80,801
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	Y			\$ -	\$ 4,245,072
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 9,790,837	\$ 621,816,479	Y			\$ 1,894,314	\$ 4,558,989
10 311		Beginning Farmer and Rancher Development Program	Research and Development	\$ 272,211	\$ 621,816,479	Y			\$ -	\$ 18,972
10 320		Sun Grant Program	Research and Development	\$ 5,981	\$ 621,816,479	N	South Dakota State University	3TD386	\$ -	\$ 2,321
10 320		Sun Grant Program	Research and Development	\$ 5,981	\$ 621,816,479	N	University of Tennessee	9500098679	\$ -	\$ 3,660
10 329		Crop Protection and Pest Management Competitive Grants Program	Research and Development	\$ 469,851	\$ 621,816,479	Y			\$ -	\$ 40,788
10 329		Crop Protection and Pest Management Competitive Grants Program	Research and Development	\$ 469,851	\$ 621,816,479	Y			\$ 26,693	\$ 178,339
10 500		Cooperative Extension Service	Research and Development	\$ 4,132,290	\$ 621,816,479	N	Minnesota, University of	A007363501	\$ 134,450	\$ 287,300
10 500		Cooperative Extension Service	Research and Development	\$ 4,132,290	\$ 621,816,479	N	Nebraska, University of	35-5420-2004-003	\$ -	\$ 2,822
10 500		Cooperative Extension Service	Research and Development	\$ 4,132,290	\$ 621,816,479	Y			\$ -	\$ 3,681,570
10 519		Equipment Grants Program (EGP)	Research and Development	\$ 119,999	\$ 621,816,479	Y			\$ -	\$ 119,999
10 680		Forest Health Protection	Research and Development	\$ 136,352	\$ 621,816,479	Y			\$ -	\$ 136,352
10 699		Partnership Agreements	Research and Development	\$ 262	\$ 621,816,479	Y			\$ -	\$ 262
10 707		Research Joint Venture and Cost Reimbursable Agreements	Research and Development	\$ 5,803	\$ 621,816,479	Y			\$ -	\$ 5,803
10 777		Norman E. Borlaug International Agricultural Science and Technology Fellowship	Research and Development	\$ 13,494	\$ 621,816,479	Y			\$ -	\$ 13,494
10 902		Soil and Water Conservation	Research and Development	\$ 87,161	\$ 621,816,479	N	Capital Resource Conservation and Development (RC&D) Area Council	223760	\$ -	\$ 26,489
10 902		Soil and Water Conservation	Research and Development	\$ 87,161	\$ 621,816,479	N	Indiana University of Pennsylvania	RI-1718-A275.001	\$ -	\$ 31,219
10 902		Soil and Water Conservation	Research and Development	\$ 87,161	\$ 621,816,479	N	Rhode Island, University of	0006652/111717 PSU	\$ -	\$ 973
10 912		Environmental Quality Incentives Program	Research and Development	\$ 29,174	\$ 621,816,479	Y			\$ -	\$ 21,104
10 932		Regional Conservation Partnership Program	Research and Development	\$ 14,438	\$ 621,816,479	Y	Environmental Defense Fund	235978	\$ -	\$ 14,438
10 960		Technical Agricultural Assistance	Research and Development	\$ 62,759	\$ 621,816,479	Y			\$ -	\$ 62,759
10 RD 0000000154		U.S. Department of Agriculture Research and Development	Research and Development	\$ 357,881	\$ 621,816,479	N	University of Wisconsin-Madison	0000000154	\$ -	\$ 77,812
10 RD 018000.340888.05		U.S. Department of Agriculture Research and Development	Research and Development	\$ 357,881	\$ 621,816,479	N	Mississippi State University	018000.340888.05	\$ -	\$ 14,966
10 RD 094525-17306		U.S. Department of Agriculture Research and Development	Research and Development	\$ 357,881	\$ 621,816,479	N	University of Illinois	094525-17306	\$ -	\$ 208,346
10 RD 17-JV-11272167-048		U.S. Department of Agriculture Research and Development	Research and Development	\$ 357,881	\$ 621,816,479	Y			\$ -	\$ 12,564
10 RD 19-07-PSU		U.S. Department of Agriculture Research and Development	Research and Development	\$ 357,881	\$ 621,816,479	N	Christmas Tree Promotion Board	19-07-PSU	\$ -	\$ 3,126
10 RD 19-JV-11272167-035		U.S. Department of Agriculture Research and Development	Research and Development	\$ 357,881	\$ 621,816,479	Y			\$ -	\$ 20,865
10 RD 3201480820		U.S. Department of Agriculture Research and Development	Research and Development	\$ 357,881	\$ 621,816,479	N	Children's Hospital of Philadelphia	3201480820	\$ -	\$ 4,088
10 RD C9400000527		U.S. Department of Agriculture Research and Development	Research and Development	\$ 357,881	\$ 621,816,479	N	COP Department of Agriculture	C9400000527	\$ -	\$ 6,444
10 RD C9400000528		U.S. Department of Agriculture Research and Development	Research and Development	\$ 357,881	\$ 621,816,479	N	COP Department of Agriculture	C9400000528	\$ -	\$ 9,671
10 RD HHSF223201610124C		U.S. Department of Agriculture Research and Development	Research and Development	\$ 357,881	\$ 621,816,479	Y			\$ -	\$ (1)
11 417		Sea Grant Support	Research and Development	\$ 993,181	\$ 621,816,479	N	Minnesota, University of	D007941106	\$ -	\$ 11,040
11 417		Sea Grant Support	Research and Development	\$ 993,181	\$ 621,816,479	N	Purdue University	F0008309702056	\$ -	\$ 23,056
11 417		Sea Grant Support	Research and Development	\$ 993,181	\$ 621,816,479	N	University of Illinois	097126-17812	\$ -	\$ 2,944
11 417		Sea Grant Support	Research and Development	\$ 993,181	\$ 621,816,479	Y			\$ -	\$ 73,583
11 417		Sea Grant Support	Research and Development	\$ 993,181	\$ 621,816,479	Y			\$ 266,359	\$ 859,182
11 417		U.S. Department of Interior Research and Development	Research and Development	\$ 993,181	\$ 621,816,479	N	COP: Fish & Boat Commission	1434-03HQRU1548	\$ -	\$ 23,376
11 419		Coastal Zone Management Administration Awards	Research and Development	\$ 54,800	\$ 621,816,479	N	COP: Department of Environmental Protection	4100084165	\$ -	\$ 54,800
11 431		Climate and Atmospheric Research	Research and Development	\$ 570,697	\$ 621,816,479	N	RAND Corporation	9920170020	\$ -	\$ 263,832
11 431		Climate and Atmospheric Research	Research and Development	\$ 570,697	\$ 621,816,479	N	RAND Corporation	SCON-00000037	\$ -	\$ 50,001
11 431		Climate and Atmospheric Research	Research and Development	\$ 570,697	\$ 621,816,479	N	The Regents of the University of Michigan	SUBK00012213 PO 3005773548	\$ -	\$ 6,281
11 431		Climate and Atmospheric Research	Research and Development	\$ 570,697	\$ 621,816,479	Y			\$ -	\$ 167,559
11 431		Climate and Atmospheric Research	Research and Development	\$ 570,697	\$ 621,816,479	Y			\$ 17,460	\$ 83,024
11 432		National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes	Research and Development	\$ 137,688	\$ 621,816,479	N	The Regents of the University of Michigan	3004628721	\$ -	\$ 137,688
11 457		Chesapeake Bay Studies	Research and Development	\$ 35,259	\$ 621,816,479	Y			\$ -	\$ 35,259
11 459		Weather and Air Quality Research	Research and Development	\$ 337,421	\$ 621,816,479	N	Mississippi, University of	20-10-013	\$ -	\$ 41,866
11 459		Weather and Air Quality Research	Research and Development	\$ 337,421	\$ 621,816,479	Y			\$ -	\$ 295,555
11 468		Applied Meteorological Research	Research and Development	\$ 17,977	\$ 621,816,479	Y			\$ -	\$ 17,977

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
11 478		Center for Sponsored Coastal Ocean Research Coastal Ocean Program	Research and Development	\$ 35,177	\$ 621,816,479	N	Virginia Institute of Marine Science	720362-712683	\$ -	\$ 35,177
11 481		Educational Partnership Program	Research and Development	\$ 210,344	\$ 621,816,479	N	Howard University	0008971-1000067102	\$ -	\$ 52,532
11 481		Educational Partnership Program	Research and Development	\$ 210,344	\$ 621,816,479	N	Howard University	0008971-1000088506	\$ -	\$ 157,812
11 482		Coral Reef Conservation Program	Research and Development	\$ 22,473	\$ 621,816,479	Y			\$ -	\$ 22,473
11 609		Measurement and Engineering Research and Standards	Research and Development	\$ 885,758	\$ 621,816,479	Y			\$ -	\$ 885,758
11 619		Arrangements for Interdisciplinary Research Infrastructure	Research and Development	\$ 129,944	\$ 621,816,479	N	Delaware, University of	PC2.2-131	\$ -	\$ 99,413
11 RD	1060145-406189	U.S. Department of Commerce Research and Development	Research and Development	\$ 172,387	\$ 621,816,479	N	Carnegie Mellon University	1060145-406189	\$ -	\$ 35,094
11 RD	1333MJ19PNRMA0093	U.S. Department of Commerce Research and Development	Research and Development	\$ 172,387	\$ 621,816,479	Y			\$ -	\$ 1,285
11 RD	1333MJ20PNRMA0176	U.S. Department of Commerce Research and Development	Research and Development	\$ 172,387	\$ 621,816,479	Y			\$ -	\$ 7,980
11 RD	INTERNAL SUB AWARD	U.S. Department of Commerce Research and Development	Research and Development	\$ 172,387	\$ 621,816,479	Y			\$ -	\$ 25,000
11 RD	MOA-2018-050-11539	U.S. Department of Commerce Research and Development	Research and Development	\$ 172,387	\$ 621,816,479	Y			\$ -	\$ 19,889
11 RD	S2020-142	U.S. Department of Commerce Research and Development	Research and Development	\$ 172,387	\$ 621,816,479	N	Synoptic Data	S2020-142	\$ -	\$ 83,139
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	Connecticut, University of	384369	\$ -	\$ 109,748
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	Connecticut, University of	384386	\$ -	\$ 124,736
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	Minnesota, University of	A005988203	\$ -	\$ 46,535
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	North Carolina State University	2015-1959-04	\$ -	\$ 290,776
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	Oregon, University of	234640B	\$ -	\$ 83,783
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	Purdue University	13000647-004	\$ -	\$ 49,681
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	Purdue University	40001859-027	\$ -	\$ 220,816
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	RSL Fiber Systems	28648	\$ -	\$ 7,363
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	University of Illinois	099963-17891	\$ -	\$ 235,362
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	University of Southern California	141252736	\$ -	\$ 49,949
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	Vanderbilt University	UNIV60071	\$ -	\$ 104,332
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	450453-19079	\$ -	\$ 93,786
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	450485-19079	\$ -	\$ 45,075
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	N	Washington, University of	UWSC11269 PO 41707	\$ -	\$ 75,936
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	Y			\$ -	\$ 6,712,233
12 300		Basic and Applied Scientific Research	Research and Development	\$ 10,926,451	\$ 621,816,479	Y			\$ 1,350,905	\$ 2,676,340
12 330		Science, Technology, Engineering & Mathematics (STEM) Education, Outreach and Wo	Research and Development	\$ 22,000	\$ 621,816,479	Y			\$ -	\$ 22,000
12 351		Scientific Research - Combating Weapons of Mass Destruction	Research and Development	\$ 2,479,659	\$ 621,816,479	N	University of Iowa	W001070675 PO 1001957788	\$ -	\$ 42
12 351		Scientific Research - Combating Weapons of Mass Destruction	Research and Development	\$ 2,479,659	\$ 621,816,479	N	University of Texas at Austin	UTA20-000747	\$ -	\$ 21,843
12 351		Scientific Research - Combating Weapons of Mass Destruction	Research and Development	\$ 2,479,659	\$ 621,816,479	Y			\$ -	\$ 414,879
12 351		Scientific Research - Combating Weapons of Mass Destruction	Research and Development	\$ 2,479,659	\$ 621,816,479	Y			\$ 503,321	\$ 1,977,750
12 420		Military Medical Research and Development	Research and Development	\$ 1,920,626	\$ 621,816,479	N	Drexel University	940009	\$ -	\$ 35,733
12 420		Military Medical Research and Development	Research and Development	\$ 1,920,626	\$ 621,816,479	N	Iowa State University	019123A	\$ -	\$ 144,040
12 420		Military Medical Research and Development	Research and Development	\$ 1,920,626	\$ 621,816,479	N	Microbiotix, Inc.	PSEFTU2019	\$ -	\$ 156,710
12 420		Military Medical Research and Development	Research and Development	\$ 1,920,626	\$ 621,816,479	Y			\$ -	\$ 1,403,287
12 420		Military Medical Research and Development	Research and Development	\$ 1,920,626	\$ 621,816,479	Y			\$ 69,729	\$ 180,856
12 431		Basic Scientific Research	Research and Development	\$ 5,044,077	\$ 621,816,479	N	Carnegie Mellon University	1130236-420700	\$ -	\$ 17,259
12 431		Basic Scientific Research	Research and Development	\$ 5,044,077	\$ 621,816,479	N	George Mason University	E2030473	\$ -	\$ 113,912
12 431		Basic Scientific Research	Research and Development	\$ 5,044,077	\$ 621,816,479	N	North Carolina State University	2016-1652-04	\$ -	\$ 117,563
12 431		Basic Scientific Research	Research and Development	\$ 5,044,077	\$ 621,816,479	N	Purdue University	13000802-017	\$ -	\$ 186,549
12 431		Basic Scientific Research	Research and Development	\$ 5,044,077	\$ 621,816,479	N	University of Wisconsin-Madison	776K160	\$ -	\$ 68,541
12 431		Basic Scientific Research	Research and Development	\$ 5,044,077	\$ 621,816,479	Y			\$ -	\$ 1,947,886
12 431		Basic Scientific Research	Research and Development	\$ 5,044,077	\$ 621,816,479	Y			\$ 351,918	\$ 2,097,045
12 431	COVID-19	COVID-19 - Basic Scientific Research	Research and Development	\$ 5,044,077	\$ 621,816,479	N	Worcester Polytechnic Institute	10748GR	\$ -	\$ 160,308
12 431	COVID-19	COVID-19 - Basic Scientific Research	Research and Development	\$ 5,044,077	\$ 621,816,479	Y			\$ -	\$ 335,014
12 556		Competitive Grants: Promoting K-12 Student Achievement at Military-Connected Sch	Research and Development	\$ 534,578	\$ 621,816,479	Y			\$ -	\$ 534,578
12 599		Congressionally Directed Assistance	Research and Development	\$ 140,844	\$ 621,816,479	Y			\$ -	\$ 140,844
12 630		Basic, Applied, and Advanced Research in Science and Engineering	Research and Development	\$ 4,924,842	\$ 621,816,479	N	IBM Watson Research Center	W911NF-16-3-0001 PO 4700185113	\$ -	\$ 108,032
12 630		Basic, Applied, and Advanced Research in Science and Engineering	Research and Development	\$ 4,924,842	\$ 621,816,479	N	IBM Watson Research Center	W911NF-16-3-0001 PO 4700185895	\$ -	\$ 48,759
12 630		Basic, Applied, and Advanced Research in Science and Engineering	Research and Development	\$ 4,924,842	\$ 621,816,479	N	IBM Watson Research Center	W911NF-16-3-0001 PO 4700185897	\$ -	\$ 66,030
12 630		Basic, Applied, and Advanced Research in Science and Engineering	Research and Development	\$ 4,924,842	\$ 621,816,479	N	Texas A&M Engineering Experiment Station	M2000357	\$ -	\$ 118,480

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12 630		Basic, Applied, and Advanced Research in Science and Engineering	Research and Development	\$ 4,924,842	\$ 621,816,479	N	Utah, University of	10028801-PENN-APP	\$ -	\$ 135,649
12 630		Basic, Applied, and Advanced Research in Science and Engineering	Research and Development	\$ 4,924,842	\$ 621,816,479	Y			\$ -	\$ 143,254
12 630		Basic, Applied, and Advanced Research in Science and Engineering	Research and Development	\$ 4,924,842	\$ 621,816,479	Y			\$ 2,997,417	\$ 4,297,933
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	Applied Optimization	2101AMTAPSU01	\$ -	\$ 698
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	Delaware State University	18-075SHEH PO P0123149	\$ -	\$ 29,821
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	Directed Energy Professional Society	980158	\$ -	\$ (7,416)
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	Florida International University	800011034-02	\$ -	\$ 167,670
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	General Electric Co. [MP]	401119780	\$ -	\$ 134,615
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	National Center for Defense Manufacturin g & Machining	22713	\$ -	\$ 1,173
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	National Center for Defense Manufacturin g & Machining	26537	\$ -	\$ 170,019
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	National Center for Defense Manufacturin g & Machining	27453	\$ 12,544	\$ 221,492
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	Purdue University	13000716-052	\$ -	\$ 208,606
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	Purdue University	13000716-060	\$ -	\$ 467,485
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	University of Wisconsin-Madison	0000000220	\$ -	\$ 109,286
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	Utah, University of	10059059-PENN	\$ -	\$ 8,120
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	450519-19079	\$ -	\$ 90,980
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	Youngstown State University	161021	\$ -	\$ (7,735)
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	Youngstown State University	180124	\$ -	\$ (33)
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	Y			\$ -	\$ 3,009,794
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	Y			\$ 489,762	\$ 904,579
12 800	COVID-19	COVID-19 - Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	National Center for Defense Manufacturin g & Machining	980212	\$ 66,701	\$ 156,886
12 800	COVID-19	COVID-19 - Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	National Center for Defense Manufacturin g & Machining	980413	\$ -	\$ 79,436
12 800	COVID-19	COVID-19 - Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	Northwestern University	60053518 PSU	\$ -	\$ 41,381
12 800	COVID-19	COVID-19 - Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	University of California at Merced CAMPUS CASHIERING SERVICES	A21-0047-S001	\$ -	\$ 80,483
12 800	COVID-19	COVID-19 - Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	N	University of Texas at Arlington	2016GC8246	\$ -	\$ 36,906
12 800	COVID-19	COVID-19 - Air Force Defense Research Sciences Program	Research and Development	\$ 6,174,304	\$ 621,816,479	Y			\$ -	\$ 270,058
12 900		Language Grant Program	Research and Development	\$ 78,010	\$ 621,816,479	Y			\$ -	\$ 78,010
12 902		Information Security Grants	Research and Development	\$ 514,501	\$ 621,816,479	Y			\$ -	\$ 514,501
12 910		Research and Technology Development	Research and Development	\$ 4,788,037	\$ 621,816,479	N	Carnegie Mellon University	1141322-418784	\$ -	\$ 1,524,866
12 910		Research and Technology Development	Research and Development	\$ 4,788,037	\$ 621,816,479	N	Georgia Institute of Technology	AWD-102938-G9 PO 5116237	\$ -	\$ 45,953
12 910		Research and Technology Development	Research and Development	\$ 4,788,037	\$ 621,816,479	N	Montana State University	G169-19-W7329	\$ -	\$ 4,664
12 910		Research and Technology Development	Research and Development	\$ 4,788,037	\$ 621,816,479	N	University of Southern California	97310253	\$ -	\$ 18,293
12 910		Research and Technology Development	Research and Development	\$ 4,788,037	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	450391-19079	\$ -	\$ 5,821
12 910		Research and Technology Development	Research and Development	\$ 4,788,037	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	450393-19079	\$ -	\$ 139,155
12 910		Research and Technology Development	Research and Development	\$ 4,788,037	\$ 621,816,479	Y			\$ -	\$ 484,908
12 910		Research and Technology Development	Research and Development	\$ 4,788,037	\$ 621,816,479	Y			\$ 777,061	\$ 1,447,334
12 910	COVID-19	COVID-19 - Research and Technology Development	Research and Development	\$ 4,788,037	\$ 621,816,479	Y			\$ -	\$ 78,210
12 910	COVID-19	COVID-19 - Research and Technology Development	Research and Development	\$ 4,788,037	\$ 621,816,479	Y			\$ 173,738	\$ 276,105
12 RD	03200	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 684
12 RD	0659055	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Mainstream Engineering Corporation	0659055	\$ -	\$ 16,941
12 RD	1099670	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	BAE Systems	1099670	\$ -	\$ 36,635
12 RD	1118992	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Johnson & Johnson Family of Companies [M P]	1118992	\$ -	\$ 62,677
12 RD	117643 TO 153690	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Johns Hopkins University	117643 TO 153690	\$ -	\$ 16,922
12 RD	1254302	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	United Technologies Research Center	1254302	\$ -	\$ 167,638
12 RD	1257406	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Raytheon Company	1257406	\$ -	\$ 236,020
12 RD	137808	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Bettis Atomic Power Laboratory	137808	\$ -	\$ 23,040
12 RD	14-C-0188	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 167

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD 15-G-2529/0004	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (201)
12	RD 15-G-2529/19F2527	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 928,542
12	RD 15-G-2529/19F2540	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 94,829	\$ 1,769,587
12	RD 15-G-2529/20F2520	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 10,843
12	RD 15-G-2529/ORDER 19F2537	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 21,006
12	RD 168340	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	The Johns Hopkins University Applied Physics Laboratory LLC	168340	\$ -	\$ 10,822
12	RD 16-C-0089	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 249,002	\$ 6,233,574
12	RD 18090	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Composite Technology Development Inc.	18090	\$ -	\$ 15,000
12	RD 183737	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	DCS Corporation	183737	\$ -	\$ 62,584
12	RD 1875	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	QuesTek Innovations LLC	1875	\$ -	\$ 23,500
12	RD 18-G-2165/20F1808	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 574,634
12	RD 18-G-2165/ORDER 20F2028	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 272,907	\$ 6,058,828
12	RD 18-G-2165/ORDER 20F2029	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 248,253	\$ 6,314,140
12	RD 1902084PSU01	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Applied Optimization	1902084PSU01	\$ -	\$ 29,448
12	RD 19-07	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	NextGen Aeronautics, Inc.	19-07	\$ -	\$ 14,999
12	RD 190873	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	DCS Corporation	190873	\$ -	\$ 50,377
12	RD 1910086PSU01	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Applied Optimization	1910086PSU01	\$ -	\$ 86,890
12	RD 19-C-0009	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 102,278
12	RD 19-C-0189/C802	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Craft Tech	19-C-0189/C802	\$ -	\$ 38,194
12	RD 19C5321	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 319,831
12	RD 19F2513	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 270,335
12	RD 19P5322	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 94,774
12	RD 2004398477	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Johns Hopkins Bloomberg School of Public Health	2004398477	\$ -	\$ 36,867
12	RD 2008504 PO S281013	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	University of Texas at Dallas	2008504 PO S281013	\$ -	\$ 62,356
12	RD 2012532 TO 007	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Technology International	2012532 TO 007	\$ -	\$ 8,507
12	RD 201283	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	QorTek	201283	\$ -	\$ 14,759
12	RD 2014-309	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Technology International	2014-309	\$ -	\$ 888,666
12	RD 2015460 TO 002	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Technology International	2015460 TO 002	\$ -	\$ 301,012
12	RD 2016-16021000002/006	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 58,100	\$ 563,925
12	RD 2016-16021000002-005	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 148,537
12	RD 2016-1602100002/010	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 8,126	\$ 90,548
12	RD 2018101G001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 2,836,743
12	RD 201826	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	H-Nu Systems LLC	201826	\$ -	\$ 95,300
12	RD 2018-457 TO 002	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Technology International	2018-457 TO 002	\$ -	\$ 353,743
12	RD 2018-825	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Technology International	2018-825	\$ -	\$ 311,103
12	RD 2018-867 TO #CWMD1907-001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Technology International	2018-867 TO #CWMD1907-001	\$ -	\$ 199,568
12	RD 2019-021	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Galois, Inc.	2019-021	\$ -	\$ 327,906
12	RD 2019205G003	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 238,885
12	RD 2019290G001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,485,251
12	RD 2019467 TO 001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Technology International	2019467 TO 001	\$ -	\$ 413,670
12	RD 2019482 TO 003	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Technology International	2019482 TO 003	\$ -	\$ 27,313
12	RD 2019-482-01	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Technology International	2019-482-01	\$ -	\$ 55,017
12	RD 2019-482-02	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Technology International	2019-482-02	\$ -	\$ 78,408
12	RD 2019685 TO 001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Technology International	2019685 TO 001	\$ -	\$ 1,063
12	RD 20200658	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	CFD Research Corporation	20200658	\$ -	\$ 37,189
12	RD 2021-0001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	CatalyzH2O, LLC	2021-0001	\$ -	\$ 23,102
12	RD 208699	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Systema Technologies, Inc.	208699	\$ -	\$ 29,555
12	RD 20-D-0129/0002	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 94,692	\$ 2,428,150
12	RD 20-D-0129/ORDER 0001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 64,168
12	RD 20F2517	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 22,697	\$ 1,231,289
12	RD 20F4753	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 88,185
12	RD 2108-001-02	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Technical Data Analysis, Inc.	2108-001-02	\$ -	\$ 53,517
12	RD 214553	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	QorTek	214553	\$ -	\$ 35,326
12	RD 216084	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Dynamics Research Corporation	216084	\$ -	\$ 18,298
12	RD 21F2560	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 27,353

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	222595	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	spotLESS Materials LLC	222595	\$ - \$ 5,095
12	RD	226884	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Cascade Technologies	226884	\$ - \$ 24,290
12	RD	22941	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Brimrose Technology Corporation	22941	\$ - \$ 4,406
12	RD	230600	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Piasecki Aircraft Corporation	230600	\$ - \$ 304,616
12	RD	232191	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Wasatch Molecular Incorporated	232191	\$ - \$ 52,362
12	RD	233337	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Actuated Medical, Inc.	233337	\$ - \$ 63,051
12	RD	233535	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Innovative Technology Applications Company, LLC	233535	\$ - \$ 51,357
12	RD	234223	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Quantitative Scientific Solutions, LLC	234223	\$ - \$ 13,615
12	RD	235375	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	NanoSonic, Inc.	235375	\$ - \$ 451
12	RD	235380	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ - \$ 4,647
12	RD	236236	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	M-Mech Defense, Inc.	236236	\$ - \$ 159,595
12	RD	236587	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Systems Technology, Inc.	236587	\$ - \$ 44,713
12	RD	237314	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Colorado School of Mines	237314	\$ - \$ 23,731
12	RD	237696	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Cascade Technologies	237696	\$ - \$ 81,017
12	RD	238053	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Yanhai Power Technology, LLC	238053	\$ - \$ 47,671
12	RD	238127	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Nanohmics, Inc.	238127	\$ - \$ 63,119
12	RD	238219	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Lynntech, Inc.	238219	\$ - \$ 30,000
12	RD	238-5404-PSU2	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Azimuth Corporation	238-5404-PSU2	\$ - \$ 5,046
12	RD	238901	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	NanoSonic, Inc.	238901	\$ - \$ 5,845
12	RD	239667	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Bolder Flight Systems, Inc.	239667	\$ - \$ 54,000
12	RD	239972	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	EC Power	239972	\$ - \$ 24,794
12	RD	240400	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Harmony Aerodynamics LLC	240400	\$ - \$ 29,682
12	RD	241436	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	JuggerBot 3D, LLC	241436	\$ - \$ 23,678
12	RD	241488	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Farad Power, Inc	241488	\$ - \$ 2,158
12	RD	242423	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Actuated Medical, Inc.	242423	\$ - \$ 15,928
12	RD	242720 PO 201402	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	QorTek	242720 PO 201402	\$ - \$ 6,530
12	RD	24296	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Sabre Systems, Inc.	24296	\$ - \$ 29,029
12	RD	24548	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Image Acoustics, Inc.	24548	\$ - \$ 152,315
12	RD	250962	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Partner Therapeutics	250962	\$ - \$ 69,902
12	RD	25294 174037	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	KCF Technologies, Inc.	25294 174037	\$ - \$ 112,172
12	RD	2532-1	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Intelligent Automation, Inc.	2532-1	\$ - \$ 67,903
12	RD	25484	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	In-Depth Engineering Corporation	25484	\$ - \$ 27,025
12	RD	25549	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	VRC Metal Systems, LLC	25549	\$ - \$ 2,722
12	RD	2593-1	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Intelligent Automation, Inc.	2593-1	\$ - \$ 29,496
12	RD	26320PSU01	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Applied Optimization	26320PSU01	\$ - \$ 40,121
12	RD	26625	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	HAMR, Industries LLC	26625	\$ - \$ 246,600
12	RD	26973	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Mainstream Engineering Corporation	26973	\$ - \$ 56,574
12	RD	27894	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	D#Angelo Technologies, LLC	27894	\$ - \$ 14,781
12	RD	27918 (N68335-19-C-0558-S)	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	VRC Metal Systems, LLC	27918 (N68335-19-C-0558-S)	\$ - \$ 127
12	RD	27937	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Innovering, LLC	27937	\$ - \$ 23,649
12	RD	28196	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	National Center for Defense Manufacturing & Machining	28196	\$ - \$ 251,329
12	RD	28198	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Mainstream Engineering Corporation	28198	\$ - \$ 8,018
12	RD	34858	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Cooling Technologies, Inc.	34858	\$ - \$ 50,935
12	RD	371	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	AVX Aircraft Company	371	\$ - \$ 183,764
12	RD	3808NVY1SPSUARL	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Luna Innovations, Inc.	3808NVY1SPSUARL	\$ - \$ 38,865
12	RD	4000176164	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Battelle - Oak Ridge National Laboratory	4000176164	\$ - \$ 31,540
12	RD	401105828	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	General Electric Co. [MP]	401105828	\$ - \$ 139,998
12	RD	401733-5801	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Colorado School of Mines	401733-5801	\$ - \$ 176,656
12	RD	4104658663	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Lockheed Martin Rotary and Mission Systems	4104658663	\$ - \$ 720,485
12	RD	41768	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Advanced Cooling Technologies, Inc.	41768	\$ - \$ 23,829
12	RD	5003884741	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Rolls-Royce plc	5003884741	\$ - \$ 75,648
12	RD	7405-1901	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Reaction Systems, Inc.	7405-1901	\$ - \$ 12,407

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD 7500148620	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Northrop Grumman Corporation [MP]	7500148620	\$ -	\$ 80,539
12	RD 911175	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Assurance Technology Corporation	911175	\$ -	\$ 99,812
12	RD 9379	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Excet, Inc.	9379	\$ -	\$ 35,988
12	RD 9705792458	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Siemens Corporate Technology	9705792458	\$ -	\$ 40,876
12	RD 980098	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Mainstream Engineering Corporation	980098	\$ -	\$ 201,289
12	RD 980381	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	SRICO Inc.	980381	\$ -	\$ 32,495
12	RD 980575	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 11,490
12	RD 980734	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Gear Research Institute	980734	\$ -	\$ 19,973
12	RD 980976	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Applied Physical Sciences Corporation	980976	\$ -	\$ 10,476
12	RD 982417	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Mainstream Engineering Corporation	982417	\$ -	\$ 7,477
12	RD 982466	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	CEPEDA Associates, Inc.	982466	\$ -	\$ 3,173
12	RD AF-STTR-SUB-001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Jaunt Air Mobility, LLC.	AF-STTR-SUB-001	\$ -	\$ 45,170
12	RD AR2-0114	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	NanoSonic, Inc.	AR2-0114	\$ -	\$ 92,264
12	RD BTI2021001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Ballydel Technologies, Inc	BTI2021001	\$ -	\$ 6,517
12	RD C200398	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Bechtel Plant Machinery, Inc.	C200398	\$ -	\$ 35,629
12	RD C32788	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Saint-Gobain Crystals	C32788	\$ -	\$ 7,784
12	RD DO 0069	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 5,592
12	RD DO 0112	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 37,292
12	RD DO 0198	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 4,166
12	RD DO 0201	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 2,371
12	RD DO 0227	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (27,037)
12	RD DO 0246	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 6,465
12	RD DO 0284	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 28
12	RD DO 0296	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 40
12	RD DO 0309	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,128
12	RD DO 0344	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (3,630)
12	RD DO 0379	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (1,884)
12	RD DO 0394	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (11,332)
12	RD DO 0422	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (15,928)
12	RD DO 0423	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (502)
12	RD DO 0426	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 123,214
12	RD DO 0428	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (4,437)
12	RD DO 0451	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (2,942)
12	RD DO 0458	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 718,688
12	RD DO 0461	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (5,978)
12	RD DO 0463	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (6,685)
12	RD DO 0470	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (11,256)
12	RD DO 0475	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 15,685
12	RD DO 0481	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 162,657
12	RD DO 0484	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (512)
12	RD DO 0486	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 51,943
12	RD DO 0495	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,210
12	RD DO 0499	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (13,841)
12	RD DO 0505	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 8,223
12	RD DO 0506	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (10,505)
12	RD DO 0509	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (19,554)
12	RD DO 0518	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (1,680)
12	RD DO 0526	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 21,065
12	RD DO 0529	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 461
12	RD DO 0530	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 2,732
12	RD DO 0532	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 590,885
12	RD DO 0533	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 14,128
12	RD DO 0535	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 339
12	RD DO 0541	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (22,038)
12	RD DO 0542	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (3,545)
12	RD DO 0545	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 19,777
12	RD DO 0548	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 21,956
12	RD DO 0549	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (835)
12	RD DO 0553	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 393,422

See notes to schedule of expenditures of federal awards.

THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2021

ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD DO 0556	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 13,188
12	RD DO 0572	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (12,491)
12	RD DO 0583	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 379,698
12	RD EMS BIND (METRC III)	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Johns Hopkins University	EMS BIND (METRC III)	\$ -	\$ 40
12	RD FA8750-19-C-1519	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,462,141
12	RD H98230-16-D-0022/0001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 10,365
12	RD H98230-16-D-0022/0002	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 117,324
12	RD H98230-20-D-0027/0001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 709,584
12	RD H98230-20-D-0027/0003	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 212,794
12	RD H98230-20-D-0027/0004	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 65,882
12	RD H98230-20-D-0027/0005	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 64,483
12	RD HQ0147-16-C-6006	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (49,173)
12	RD HR0011-15-C-0029	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 4,675
12	RD HR0011-20-C-0067	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 194,515	\$ 7,140,120
12	RD IPA LYONS 2014	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 2,806
12	RD IPA NEIGHBORS 21	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 26,185
12	RD IPA PERRAS 2018	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 118,225
12	RD ISEG1802 DO 001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Trident Systems, Inc.	ISEG1802 DO 001	\$ -	\$ 49,392
12	RD ISEG1901 DO 001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Trident Systems, Inc.	ISEG1901 DO 001	\$ -	\$ 271,362
12	RD K002528-00-S01	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Kitware, Inc.	K002528-00-S01	\$ -	\$ 114,108
12	RD M0008816WRPC702	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 61,277
12	RD M00264-18-C-0002	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,084
12	RD MSRC-FY19-04	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Denver Research Institute	MSRC-FY19-04	\$ -	\$ 102,471
12	RD N0001410F0034	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 162,758
12	RD N0001410G0259 DO 0022	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 2,652
12	RD N000141210840	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 9,767
12	RD N0001415F0001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (11,478)
12	RD N0001415F0002	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,196,298
12	RD N0001415G0001 DO 0005	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 15,546
12	RD N000141612790	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (9,850)
12	RD N0001416F3005	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 34
12	RD N000141712129	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 496
12	RD N000141812383	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (1,656)
12	RD N000141812736	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 15,300
12	RD N0001418F1006	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 744,569
12	RD N0001418F2006	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 535,893
12	RD N0001418F7001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 133,006
12	RD N000141912221	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 117,139
12	RD N0001419C1055	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 792,190
12	RD N0001419C2034	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 3,487
12	RD N0001419C2064	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 120,896
12	RD N0001419FM002	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 53,468	\$ 707,672
12	RD N0001419FM008	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 425,978	\$ 3,320,278
12	RD N0001420C1061	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 2,099,060
12	RD N0001420C2002	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 907,733
12	RD N0001420FM001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 686,903
12	RD N0001420FM006	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 625,799
12	RD N0001420FM009	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 25,340	\$ 593,700
12	RD N0001421C2010	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 185,390
12	RD N0002417F8300	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 14,354
12	RD N0002417F8303	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (1,356)
12	RD N0002417F8304	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 2,633
12	RD N0002417F8313	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (943)
12	RD N0002417F8320	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (10,787)

See notes to schedule of expenditures of federal awards.

THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2021

ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD N0002417F8323	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (5,151)
12	RD N0002417F8327	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,876
12	RD N0002417F8328	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (5,989)
12	RD N0002417F8330	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (18,535)
12	RD N0002417F8331	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 61,467
12	RD N0002417F8332	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (14)
12	RD N0002417F8340	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 41,395
12	RD N0002417F8342	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (2,468)
12	RD N0002417F8343	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 5,666
12	RD N0002417F8344	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 5
12	RD N0002417F8350	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (2,523)
12	RD N0002417F8352	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (2,599)
12	RD N0002417F8354	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 173,329
12	RD N0002417F8355	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,181
12	RD N0002417F8359	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (2,233)
12	RD N0002418F8300	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (7,712)
12	RD N0002418F8305	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 3,919
12	RD N0002418F8306	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (21,407)
12	RD N0002418F8307	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 9,912
12	RD N0002418F8308	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 4
12	RD N0002418F8309	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 413,203
12	RD N0002418F8311	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (1,674)
12	RD N0002418F8312	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 3,339
12	RD N0002418F8313	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 6,814
12	RD N0002418F8314	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 98,570
12	RD N0002418F8317	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 41,945
12	RD N0002418F8318	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 92
12	RD N0002418F8321	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 44,596
12	RD N0002418F8322	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (4,732)
12	RD N0002418F8324	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 2,862
12	RD N0002418F8325	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 35,108
12	RD N0002418F8326	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (11,139)
12	RD N0002418F8329	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 12,957
12	RD N0002418F8335	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 12,620
12	RD N0002418F8338	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (11,149)
12	RD N0002418F8343	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 14,279
12	RD N0002418F8344	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 11,410
12	RD N0002418F8345	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (12,957)
12	RD N0002418F8348	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 86,415
12	RD N0002418F8349	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,107
12	RD N0002418F8353	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (4,877)
12	RD N0002418F8354	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 95
12	RD N0002418F8355	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 825
12	RD N0002418F8356	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 81,412
12	RD N0002418F8357	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 8,654
12	RD N0002418F8358	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 139
12	RD N0002418F8363	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 3,452
12	RD N0002418F8365	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 44,279
12	RD N0002418F8366	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 11,606
12	RD N0002418F8408	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 10
12	RD N0002418F8410	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 54,945	\$ 17,317,281
12	RD N0002418F8411	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,932
12	RD N0002418F8412	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 573
12	RD N0002418F8414	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (6)
12	RD N0002418F8416	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,328
12	RD N0002418F8417	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (1,959)
12	RD N0002418F8418	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (50)
12	RD N0002418F8419	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 28,331
12	RD N0002418F8420	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 166,124
12	RD N0002418F8421	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 102,785
12	RD N0002418F8422	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (1,198)
12	RD N0002418F8423	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ (2,389)
12	RD N0002418F8425	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 31,519

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THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2021

ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through Subrecipients	Amount Expended
12	RD	N0002418F8426	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 10,490
12	RD	N0002418F8427	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 520,659
12	RD	N0002418F8429	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 3,773
12	RD	N0002418F8430	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 43,037
12	RD	N0002418F8431	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ (1,132)
12	RD	N0002418F8432	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 258,556
12	RD	N0002418F8433	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 27,948
12	RD	N0002418F8434	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 74,808
12	RD	N0002418F8435	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 76,124
12	RD	N0002418F8436	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 151,944
12	RD	N0002418F8437	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,541
12	RD	N0002418F8438	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 831,203
12	RD	N0002418F8440	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 177,203
12	RD	N0002418F8443	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 11
12	RD	N0002418F8444	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ (20)
12	RD	N0002418F8445	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ 150,062	\$ 5,161,660
12	RD	N0002418F8449	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ (3,975)
12	RD	N0002418F8450	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 727,161
12	RD	N0002418F8451	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 174,660
12	RD	N0002418F8452	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ (1,490)
12	RD	N0002419F8300	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 10
12	RD	N0002419F8301	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 93,433
12	RD	N0002419F8302	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ (3,473)
12	RD	N0002419F8303	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 228,442
12	RD	N0002419F8305	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,126
12	RD	N0002419F8401	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 51,936
12	RD	N0002419F8402	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 888
12	RD	N0002419F8403	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 730
12	RD	N0002419F8404	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,942
12	RD	N0002419F8405	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 740,025
12	RD	N0002419F8406	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 15,836,650
12	RD	N0002419F8407	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 2,145
12	RD	N0002419F8408	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 396,161
12	RD	N0002419F8409	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 29,437
12	RD	N0002419F8411	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 775,470
12	RD	N0002419F8412	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 59,472
12	RD	N0002419F8413	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 3,207
12	RD	N0002419F8414	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 15,706
12	RD	N0002419F8415	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 5,135
12	RD	N0002419F8416	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 494,922
12	RD	N0002419F8417	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 573,448
12	RD	N0002419F8418	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 40,195
12	RD	N0002419F8420	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 401,739
12	RD	N0002419F8421	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 3,128,129
12	RD	N0002419F8422	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 307,664
12	RD	N0002419F8423	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,445
12	RD	N0002419F8424	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 253,454
12	RD	N0002419F8425	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 364,311
12	RD	N0002419F8426	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 34,613
12	RD	N0002419F8427	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 45,940
12	RD	N0002419F8428	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 322
12	RD	N0002419F8429	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 531,808
12	RD	N0002419F8431	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 684
12	RD	N0002419F8432	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 12,858
12	RD	N0002419F8433	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,314,352
12	RD	N0002419F8434	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 64,362
12	RD	N0002419F8435	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 6,022,416
12	RD	N0002419F8437	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,318,211
12	RD	N0002419F8438	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 2,231,045
12	RD	N0002419F8439	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,100,399
12	RD	N0002419F8441	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 136,931
12	RD	N0002419F8442	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 15
12	RD	N0002419F8444	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 106,181

See notes to schedule of expenditures of federal awards.

THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2021

ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through Subrecipients	Amount Expended
12	RD N0002419F8445	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 257,008
12	RD N0002419F8446	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,096,693
12	RD N0002419F8447	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 3,178
12	RD N0002419F8448	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 3,378
12	RD N0002419F8449	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 489,210
12	RD N0002419F8451	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 102,807
12	RD N0002419F8452	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,042,104
12	RD N0002419F8453	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,658
12	RD N0002419F8455	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 588
12	RD N0002419F8456	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 740,289
12	RD N0002419F8457	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 178,649
12	RD N0002419F8458	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 681,096
12	RD N0002419F8460	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 2,317
12	RD N0002419F8461	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 426,616
12	RD N0002419F8462	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 25,640
12	RD N0002419F8463	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 42,816
12	RD N0002419F8464	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,569,093
12	RD N0002419F8466	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 393,113
12	RD N0002419F8467	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 181,519
12	RD N0002419F8469	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 14,702
12	RD N0002419F8471	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 118,223
12	RD N0002419F8472	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 28,907
12	RD N0002419F8473	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 262,028
12	RD N0002419F8474	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 131,042
12	RD N0002419F8475	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,831
12	RD N0002419F8476	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 84,729
12	RD N0002419F8477	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,093,155
12	RD N0002419F8478	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 38,357
12	RD N0002419F8480	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,570
12	RD N0002419F8482	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 94,888
12	RD N0002419F8483	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 135,128
12	RD N0002419F8484	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,086,903
12	RD N0002419F8485	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 650,697
12	RD N0002419F8486	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 210,354
12	RD N0002419F8487	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 793,414
12	RD N0002419F8488	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 179,968
12	RD N0002419F8489	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 60,420
12	RD N0002419F8490	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 167,823
12	RD N0002419F8491	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 278,008
12	RD N0002419F8492	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 627,942
12	RD N0002419F8493	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 19,823
12	RD N0002419F8494	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 2,161
12	RD N0002419F8495	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 603,686
12	RD N0002419F8497	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 385,785
12	RD N0002419F8498	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 105,452
12	RD N0002419F8499	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 82,843
12	RD N0002420F8320	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,058,490
12	RD N0002420F8323	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 340	\$ 18,019
12	RD N0002420F8324	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 178,496
12	RD N0002420F8325	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 75,722
12	RD N0002420F8326	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 592,113
12	RD N0002420F8327	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 3,660,099
12	RD N0002420F8328	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 243,174
12	RD N0002420F8329	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 2,563,708
12	RD N0002420F8331	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 201,792
12	RD N0002420F8333	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 72,506	\$ 2,996,860
12	RD N0002420F8334	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ 531,808	\$ 4,744,725
12	RD N0002420F8335	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 308,280
12	RD N0002420F8337	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 145,845
12	RD N0002420F8340	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 37,747
12	RD N0002420F8341	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 70,667
12	RD N0002420F8342	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 1,849,864
12	RD N0002420F8343	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 7,727,607

See notes to schedule of expenditures of federal awards.

THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N0002420F8344	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 889,521
12	RD	N0002420F8345	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 140,796
12	RD	N0002420F8346	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,002,315
12	RD	N0002420F8350	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 4,055,889
12	RD	N0002420F8351	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,090,588
12	RD	N0002420F8352	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 101,643
12	RD	N0002420F8353	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 157,233
12	RD	N0002420F8354	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 241,527
12	RD	N0002420F8355	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 8,652,460
12	RD	N0002420F8356	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 56,599
12	RD	N0002420F8357	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 110,605
12	RD	N0002420F8360	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 58,723
12	RD	N0002420F8366	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 14,734,107
12	RD	N0002420F8367	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,955,462
12	RD	N0002420F8368	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 859,941
12	RD	N0002420F8369	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 36,203
12	RD	N0002420F8371	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 35,119
12	RD	N0002420F8373	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 181,447
12	RD	N0002420F8374	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 292,102
12	RD	N0002420F8376	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,160,102
12	RD	N0002420F8379	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 63,154
12	RD	N0002420F8380	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 25,678
12	RD	N0002420F8381	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 477,517
12	RD	N0002420F8382	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 2,768
12	RD	N0002420F8383	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 706,903
12	RD	N0002420F8384	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 551,626
12	RD	N0002420F8385	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,184,842
12	RD	N0002420F8386	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 292,220
12	RD	N0002420F8388	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 341,359
12	RD	N0002420F8389	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 2,720,490
12	RD	N0002420F8390	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 261,819
12	RD	N0002420F8391	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 35,807
12	RD	N0002420F8392	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ 295,335	\$ 2,001,814
12	RD	N0002420F8393	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 38,149
12	RD	N0002420F8394	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 18,061
12	RD	N0002420F8395	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 175,461
12	RD	N0002420F8396	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 64,874
12	RD	N0002420F8397	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 745,157
12	RD	N0002420F8398	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ 81,771	\$ 1,476,410
12	RD	N0002420F8399	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 202,733
12	RD	N0002420F8400	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 301,266
12	RD	N0002420F8401	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 50,763
12	RD	N0002420F8402	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 143,841
12	RD	N0002420F8403	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 144,985
12	RD	N0002420F8404	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 226,066
12	RD	N0002420F8405	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ 69,307	\$ 1,396,471
12	RD	N0002420F8406	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 183,690
12	RD	N0002420F8407	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 282,342
12	RD	N0002420F8408	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 766,465
12	RD	N0002420F8409	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,035,366
12	RD	N0002420F8410	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 289,782
12	RD	N0002420F8411	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 552,214
12	RD	N0002420F8412	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 74,696
12	RD	N0002420F8413	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 506,585
12	RD	N0002420F8414	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 182,814
12	RD	N0002420F8415	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ 157,377	\$ 1,122,229
12	RD	N0002420F8416	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,156,778
12	RD	N0002420F8417	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 103,544
12	RD	N0002420F8418	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,107,828
12	RD	N0002420F8419	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 269,218
12	RD	N0002420F8420	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 95,477
12	RD	N0002420F8421	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 251,193
12	RD	N0002420F8422	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 99,269

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N0002420F8424	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 657,730
12	RD	N0002420F8426	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 159,013
12	RD	N0002420F8427	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,692,057
12	RD	N0002420F8428	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ 91,808	\$ 729,610
12	RD	N0002420F8430	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 222,296
12	RD	N0002420F8431	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 165,125
12	RD	N0002420F8433	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 86,146
12	RD	N0002420F8434	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 374,852
12	RD	N0002420F8437	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 123,694
12	RD	N0002421F8300	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 130,848
12	RD	N0002421F8303	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 658,852
12	RD	N0002421F8304	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 132,409
12	RD	N0002421F8305	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 83,280
12	RD	N0002421F8306	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 688,169
12	RD	N0002421F8307	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 612,806
12	RD	N0002421F8308	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 308,391
12	RD	N0002421F8312	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ 23,632	\$ 1,512,458
12	RD	N0002421F8314	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 97,781
12	RD	N0002421F8315	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 135,547
12	RD	N0002421F8316	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 112,267
12	RD	N0002421F8317	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 120,661
12	RD	N0002421F8318	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 8,724
12	RD	N0002421F8319	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 10,359
12	RD	N0002421F8320	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 121,500
12	RD	N0002421F8321	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 6,104
12	RD	N0002421F8322	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 138,675
12	RD	N0002421F8323	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 383,413
12	RD	N0002421F8324	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 76,114
12	RD	N0002421F8325	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 9,998
12	RD	N0002421F8326	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 223,750
12	RD	N0002421F8327	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 201,008
12	RD	N0002421F8328	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,461
12	RD	N0002421F8329	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 10,464
12	RD	N0002421F8330	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 67,312
12	RD	N0002421F8331	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 51,142
12	RD	N0002421F8332	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 45,015
12	RD	N0002421F8333	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,631
12	RD	N0002421F8334	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 44,465
12	RD	N0002421F8335	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,656
12	RD	N0002421F8336	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 42,301
12	RD	N0002421F8337	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 118,268
12	RD	N0002421F8338	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 227,306
12	RD	N0002421F8340	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 30,566
12	RD	N0002421F8341	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 192,295
12	RD	N0002421F8342	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 51,846
12	RD	N0002421F8343	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 49,785
12	RD	N0002421F8344	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 732
12	RD	N0002421F8345	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 20,480
12	RD	N0002421F8347	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 59,386
12	RD	N0002421F8348	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 66,814
12	RD	N0002421F8351	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 22,977
12	RD	N0002421F8352	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 51,491
12	RD	N0002421F8353	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 36,126
12	RD	N0002421F8354	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 78,023
12	RD	N0002421F8355	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 87,407
12	RD	N0002421F8357	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,657
12	RD	N0002421F8361	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 81,206
12	RD	N0002421F8362	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,437
12	RD	N0002421F8363	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 2,527
12	RD	N0002421F8365	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,374
12	RD	N0002421F8366	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 10,035
12	RD	N0002421F8372	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 14,517
12	RD	N0002421F8375	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 16,264

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD N0003021PAIPA AH	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 138,045
12	RD N0017320P7045	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 76,389
12	RD N68335-17-C-0037/1	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Analysis, Design & Diagnostics, Inc.	N68335-17-C-0037/1	\$ -	\$ 8,994
12	RD NV1-0354	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	NanoSonic, Inc.	NV1-0354	\$ -	\$ 15,998
12	RD NV2-0570	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	NanoSonic, Inc.	NV2-0570	\$ -	\$ 27,364
12	RD OF69 DATED 1/31/2020	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 354,493
12	RD OF69 DATED 12/02/2020	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 154,071
12	RD OF69 DATED 8/27/2020	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 227,654
12	RD OF69 DATED 8/28/2020	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 205,323
12	RD ORDER 20F2514	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 297,339
12	RD P010231342	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Leidos	P010231342	\$ -	\$ 66,701
12	RD P010237053	U.S. Department of Defense Other	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Leidos, Inc.	P010237053	\$ -	\$ 175,435
12	RD PO 18046	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Ultramet	PO 18046	\$ -	\$ 11,404
12	RD PO 19006 & PO 28318	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Arrow Tech Associates, Inc.	PO 19006 & PO 28318	\$ -	\$ 126,536
12	RD PO-0018619	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Perspecta, Inc.	PO-0018619	\$ -	\$ 132,808
12	RD PO-0018619 PHASE 2	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Perspecta, Inc.	PO-0018619 PHASE 2	\$ -	\$ 42,098
12	RD PO0018668	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Perspecta, Inc.	PO0018668	\$ -	\$ 23,527
12	RD PO0024766	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Perspecta Engineering Inc.	PO0024766	\$ -	\$ 54,167
12	RD PO10203201	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Leidos, Inc.	PO10203201	\$ -	\$ 27,358
12	RD PSU 190337.000	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Karagozian & Case, Inc.	PSU 190337.000	\$ -	\$ 35,098
12	RD PURCHASE ORDER 21-006	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Continuum Dynamics, Inc.	PURCHASE ORDER 21-006	\$ -	\$ 28,671
12	RD R02953	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Southwest Range Services, LLC	R02953	\$ -	\$ 57,298
12	RD RSC20079	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	University of Dayton Research Institute	RSC20079	\$ -	\$ 2,898
12	RD S160000001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	UES, Inc.	S160000001	\$ -	\$ 49,024
12	RD S163001001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	UES, Inc.	S163001001	\$ -	\$ 21,304
12	RD S174000001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	UES, Inc.	S174000001	\$ -	\$ 32,291
12	RD S184001001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	UES, Inc.	S184001001	\$ -	\$ 19,881
12	RD S-192-000-001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	UES, Inc.	S-192-000-001	\$ -	\$ 2,592
12	RD S21033001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	SURVICE Engineering Company	S21033001	\$ -	\$ 28,775
12	RD S21-095001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	SURVICE Engineering Company, LLC	S21-095001	\$ -	\$ 5,412
12	RD S21401	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Siemens Corporation, Corporate Technology	S21401	\$ -	\$ 1,731
12	RD S901458001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	UES, Inc.	S901458001	\$ -	\$ (19,899)
12	RD S901982BAH	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Booz Allen Hamilton Inc	S901982BAH	\$ -	\$ (3,521)
12	RD SC 10-10226-8006-46	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Physical Sciences Inc.	SC 10-10226-8006-46	\$ -	\$ 8,587
12	RD SC 87878-4270-46	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Physical Sciences Inc.	SC 87878-4270-46	\$ -	\$ 123,833
12	RD SC1519801	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Charles River Analytics, Inc.	SC1519801	\$ -	\$ 46,732
12	RD SC1527501	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Charles River Analytics, Inc.	SC1527501	\$ -	\$ 33,019
12	RD SC1720001	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Charles River Analytics, Inc.	SC1720001	\$ -	\$ 58,837
12	RD SC20-F201-1	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Toyon Research Corporation	SC20-F201-1	\$ -	\$ 52,634
12	RD SUBCONTRACT 2018-038	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Noise Control Engineering, LLC	SUBCONTRACT 2018-038	\$ -	\$ 9,942
12	RD TSI-2666-20-20201708	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Triton Systems, Inc.	TSI-2666-20-20201708	\$ -	\$ 59,934
12	RD U16-002 PO 4104442504 021	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Lockheed Martin Space Systems Company	U16-002 PO 4104442504 021	\$ -	\$ 15,740
12	RD U16-002 PO 4104511686 022	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Lockheed Martin Corporation, Inc. [MP]	U16-002 PO 4104511686 022	\$ -	\$ 8,519
12	RD U16-002 TASK ORDER 024	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Lockheed Martin Space Systems Company	U16-002 TASK ORDER 024	\$ -	\$ 10,859
12	RD U16-002 TO 028 PO	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Lockheed Martin Space Systems Company	U16-002 TO 028 PO	\$ -	\$ 11,433
12	RD 4104787262	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Lockheed Martin Space Systems Company	4104787262	\$ -	\$ 11,433
12	RD UTA14-001124	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	University of Texas at Austin	UTA14-001124	\$ -	\$ 5,193
12	RD W81XWH-17-2-0032	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Johns Hopkins University	W81XWH-17-2-0032	\$ -	\$ 18,814
12	RD W81XWH-17-C-0247	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 3,160
12	RD W912HZ21P0002	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 63,954
12	RD W912PX-19-F-0019	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y			\$ -	\$ 629,904

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SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2021

ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended	
12	RD	W91CRB-17-C-0047	U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 5,194	
12	RD	COVID-19 - N0002420F8375	COVID-19 - U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	Y		\$ -	\$ 1,145,930	
12	RD	COVID-19 - 51620	COVID-19 - U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	SRI International	51620	\$ -	\$ 37,698
12	RD	COVID-19 - S-111-068-001	COVID-19 - U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	UES, Inc.	S-111-068-001	\$ -	\$ 28,102
12	RD	COVID-19 - 1990683-437338	COVID-19 - U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Carnegie Mellon University	1990683-437338	\$ -	\$ 10,487
12	RD	COVID-19 - 1990682-437338	COVID-19 - U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Carnegie Mellon University	1990682-437338	\$ -	\$ 42,775
12	RD	COVID-19 - CW3033969	COVID-19 - U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	IBM Watson Research Center	CW3033969	\$ -	\$ 70,593
12	RD	COVID-19 - PO0022024	COVID-19 - U.S. Department of Defense Research and Development	Research and Development	\$ 245,318,351	\$ 621,816,479	N	Perspecta, Inc.	PO0022024	\$ -	\$ 196,393
14	906		Healthy Homes Technical Studies Grants	Research and Development	\$ 35,082	\$ 621,816,479	N	George Washington University	20-M02	\$ -	\$ 35,082
15	232		Wildland Fire Research and Studies	Research and Development	\$ 20,609	\$ 621,816,479	Y			\$ -	\$ 20,609
15	560		SECURE Water Act – Research Agreements	Research and Development	\$ 9,656	\$ 621,816,479	Y			\$ -	\$ 9,656
15	608		Fish and Wildlife Management Assistance	Research and Development	\$ 52,619	\$ 621,816,479	N	COP: Fish & Boat Commission	4100084026	\$ -	\$ 21,323
15	608		Fish and Wildlife Management Assistance	Research and Development	\$ 52,619	\$ 621,816,479	N	COP: Fish & Boat Commission	4100086809	\$ -	\$ 25,293
15	608		Fish and Wildlife Management Assistance	Research and Development	\$ 52,619	\$ 621,816,479	N	University of Maryland, Center for Environmental Science	SA75282000-G PO#91545	\$ -	\$ 6,003
15	634		State Wildlife Grants	Research and Development	\$ 93,955	\$ 621,816,479	N	COP: Fish & Boat Commission	4100084552	\$ -	\$ 93,955
15	657		Endangered Species Conservation – Recovery Implementation Funds	Research and Development	\$ 31,424	\$ 621,816,479	N	National Fish and Wildlife Foundation	0406.18.061166	\$ -	\$ 31,424
15	662		Great Lakes Restoration	Research and Development	\$ 691,484	\$ 621,816,479	Y			\$ -	\$ 214,730
15	662		Great Lakes Restoration	Research and Development	\$ 691,484	\$ 621,816,479	Y			\$ 143,931	\$ 476,754
15	805		Assistance to State Water Resources Research Institutes	Research and Development	\$ 148,778	\$ 621,816,479	N	University of Illinois	078687-15715 AC867	\$ -	\$ 18,348
15	805		Assistance to State Water Resources Research Institutes	Research and Development	\$ 148,778	\$ 621,816,479	Y			\$ -	\$ 130,430
15	808		U.S. Geological Survey Research and Data Collection	Research and Development	\$ 6,396	\$ 621,816,479	Y			\$ -	\$ 6,396
15	812		Cooperative Research Units	Research and Development	\$ 350,898	\$ 621,816,479	N	North Carolina State University	2020-0369-01	\$ -	\$ 8,241
15	812		Cooperative Research Units	Research and Development	\$ 350,898	\$ 621,816,479	Y			\$ -	\$ 342,657
15	815		National Land Remote Sensing Education Outreach and Research	Research and Development	\$ 3,912	\$ 621,816,479	N	California University of Pennsylvania	1920ES004-S4	\$ -	\$ 3,912
15	945		Cooperative Research and Training Programs – Resources of the National Park Syst	Research and Development	\$ 288,432	\$ 621,816,479	Y			\$ -	\$ 257,055
15	945		Cooperative Research and Training Programs – Resources of the National Park Syst	Research and Development	\$ 288,432	\$ 621,816,479	Y			\$ 5,786	\$ 30,000
15	RD	1434-03HQRU1548	U.S. Department of Interior Research and Development	Research and Development	\$ 293,245	\$ 621,816,479	N	COP: Game Commission	1434-03HQRU1548	\$ -	\$ 273,350
15	RD	236575	U.S. Department of Interior Research and Development	Research and Development	\$ 293,245	\$ 621,816,479	Y			\$ -	\$ 19,895
16	560		National Institute of Justice Research, Evaluation, and Development Project Gran	Research and Development	\$ 1,831,380	\$ 621,816,479	N	Indiana University-Purdue University at Indianapolis	IN-4393820-PSU	\$ -	\$ 57,641
16	560		National Institute of Justice Research, Evaluation, and Development Project Gran	Research and Development	\$ 1,831,380	\$ 621,816,479	N	Iowa State University	021595A	\$ -	\$ 9,533
16	560		National Institute of Justice Research, Evaluation, and Development Project Gran	Research and Development	\$ 1,831,380	\$ 621,816,479	Y			\$ -	\$ 489,972
16	560		National Institute of Justice Research, Evaluation, and Development Project Gran	Research and Development	\$ 1,831,380	\$ 621,816,479	Y			\$ 108,388	\$ 312,810
16	575		Crime Victim Assistance	Research and Development	\$ 1,061,531	\$ 621,816,479	N	COP: Commission on Crime and Delinquency	28904	\$ -	\$ 137,091
16	734		Special Data Collections and Statistical Studies	Research and Development	\$ 40,246	\$ 621,816,479	Y			\$ -	\$ 40,246
16	738		Edward Byrne Memorial Justice Assistance Grant Program	Research and Development	\$ 214,447	\$ 621,816,479	N	COP: Commission on Crime and Delinquency	28733	\$ -	\$ 40,716
16	738		Edward Byrne Memorial Justice Assistance Grant Program	Research and Development	\$ 214,447	\$ 621,816,479	N	COP: Commission on Crime and Delinquency	4300646005	\$ -	\$ 124,717
16	738		Edward Byrne Memorial Justice Assistance Grant Program	Research and Development	\$ 214,447	\$ 621,816,479	N	University of Wisconsin-Madison	0000000459	\$ -	\$ 24,132
16	754		Harold Rogers Prescription Drug Monitoring Program	Research and Development	\$ 68,304	\$ 621,816,479	N	PA Prescription Drug Monitoring Programs	4300682773	\$ -	\$ 68,304
16	RD	2019-VT-BX-0109	U.S. Department of Justice Research and Development	Research and Development	\$ 99,314	\$ 621,816,479	N	YWCA of Greater Pittsburgh	2019-VT-BX-0109	\$ -	\$ 8,456
16	RD	4300595261	U.S. Department of Justice Research and Development	Research and Development	\$ 99,314	\$ 621,816,479	N	COP: Department of Corrections	4300595261	\$ -	\$ 90,858
17	RD	4300671424	U.S. Department of Labor Research and Development	Research and Development	\$ 97,966	\$ 621,816,479	N	COP: Department of Labor & Industry	4300671424	\$ -	\$ 97,382

See notes to schedule of expenditures of federal awards.

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SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
17	RD	TAA-0202-20	U.S. Department of Labor Research and Development							
19	040		Research and Development	\$ 97,966	\$ 621,816,479	N	COP: Department of Labor & Industry	TAA-0202-20	\$ -	\$ 584
19	522		Public Diplomacy Programs	\$ 18,421	\$ 621,816,479	Y			\$ -	\$ 16,384
20	108		Overseas Refugee Assistance Programs for Strategic Global Priorities	\$ 94,990	\$ 621,816,479	Y			\$ 13,821	\$ 94,990
20	109		Aviation Research Grants	\$ 156,475	\$ 621,816,479	Y			\$ -	\$ 156,475
20	109		Air Transportation Centers of Excellence	\$ 1,413,245	\$ 621,816,479	Y			\$ -	\$ 928,047
20	109		Air Transportation Centers of Excellence	\$ 1,413,245	\$ 621,816,479	Y			\$ 174,094	\$ 485,198
20	200		Highway Research and Development Program	\$ 66,368	\$ 621,816,479	N	National Cooperative Highway Research Program	HR 24-49	\$ 16,871	\$ 66,368
20	205		Highway Planning and Construction	\$ 188,082	\$ 621,816,479	N	COP: Department of Transportation	4300615059	\$ -	\$ 69,590
20	205		Highway Planning and Construction	\$ 188,082	\$ 621,816,479	N	COP: Department of Transportation	4300615124	\$ -	\$ 71,260
20	205		Highway Planning and Construction	\$ 188,082	\$ 621,816,479	N	COP: Department of Transportation	4300681534	\$ -	\$ 47,232
20	215		Highway Training and Education	\$ 2,425	\$ 621,816,479	Y			\$ -	\$ 2,425
20	325		Consolidated Rail Infrastructure and Safety Improvements	\$ 99,091	\$ 621,816,479	N	Kansas State University	A20-0537-S001	\$ -	\$ 99,091
20	529		Bus Testing Facility	\$ 3,576,040	\$ 621,816,479	Y			\$ -	\$ 2,076,061
20	529		Bus Testing Facility	\$ 3,576,040	\$ 621,816,479	Y			\$ 78,172	\$ 1,499,979
20	701		University Transportation Centers Program	\$ 2,277,968	\$ 621,816,479	Y			\$ 1,549,565	\$ 2,277,968
20	RD	1142 826418 PO 1194230	U.S. Department of Transportation Research and Development	\$ 457,482	\$ 621,816,479	N	Rutgers-The State University of New Jersey	1142 826418 PO 1194230	\$ -	\$ 39,755
20	RD	16D00016-PSU; DTNH2216D00016	U.S. Department of Transportation Research and Development	\$ 457,482	\$ 621,816,479	N	TransAnalytics, LLC	16D00016-PSU; DTNH2216D00016	\$ -	\$ 48,796
20	RD	19200267-030	U.S. Department of Transportation Research and Development	\$ 457,482	\$ 621,816,479	N	Purdue University	19200267-030	\$ -	\$ 108,578
20	RD	228213	U.S. Department of Transportation Research and Development	\$ 457,482	\$ 621,816,479	N	FBS, Inc. (Feature Based Systems)	228213	\$ -	\$ 114,233
20	RD	693J618C000009	U.S. Department of Transportation Research and Development	\$ 457,482	\$ 621,816,479	Y			\$ 21,421	\$ 104,590
20	RD	981735	U.S. Department of Transportation Research and Development	\$ 457,482	\$ 621,816,479	N	Acrow Corporation of America	981735	\$ -	\$ 15,715
20	RD	RH092-G1	U.S. Department of Transportation Research and Development	\$ 457,482	\$ 621,816,479	N	Georgia Institute of Technology	RH092-G1	\$ -	\$ 25,815
21	RD	239114	U.S. Department of the Treasury Research and Development	\$ 11,278	\$ 621,816,479	N	Clearfield County, PA	239114	\$ -	\$ 11,278
39	RD	2016-OCC7209	General Services Administration Research and Development	\$ 2,319,627	\$ 621,816,479	N	COP: Department of General Services	2016-OCC7209	\$ -	\$ 25,270
39	RD	4300556762	General Services Administration Research and Development	\$ 2,319,627	\$ 621,816,479	N	COP: Department of General Services	4300556762	\$ -	\$ 594,709
39	RD	4300685025	General Services Administration Research and Development	\$ 2,319,627	\$ 621,816,479	N	COP: Department of General Services	4300685025	\$ -	\$ 28,951
39	RD	4400016637	General Services Administration Research and Development	\$ 2,319,627	\$ 621,816,479	N	COP: Department of General Services	4400016637	\$ -	\$ 1,670,697
42	RD	235563	Library of Congress Research and Development	\$ 9,467	\$ 621,816,479	N	Waynesburg University	235563	\$ -	\$ 9,467
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Cornell University	91922-20470	\$ -	\$ 20,211
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	George Washington University	19-S06	\$ -	\$ 43,876
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Georgetown University	AWD7773186-GR205805	\$ -	\$ 49,427
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Georgia, University of	SUB00002227	\$ -	\$ 17,331
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Jet Propulsion Laboratory	1631717	\$ -	\$ 22,486
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Jet Propulsion Laboratory	1631880	\$ -	\$ 3,446
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Jet Propulsion Laboratory	1633061	\$ -	\$ 3,378
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Jet Propulsion Laboratory	1653665	\$ -	\$ 10,949
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Jet Propulsion Laboratory	1657276	\$ -	\$ 91,519
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Montana State University	G102-17-W6067	\$ -	\$ 28,351
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	AR1-22002X	\$ -	\$ 10,673
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	AR1-22006X	\$ -	\$ 20,303
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	AR1-22008X	\$ -	\$ 20,783
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	AR9-20002X	\$ -	\$ 45,759
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO0-21049X	\$ -	\$ 6,417
43	001		Science	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO1-22037X	\$ -	\$ 1,035

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO8-19050B	\$ -	\$ 32,853
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO8-19076X	\$ -	\$ 23,000
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO8-19090B	\$ -	\$ 23,609
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO9-20011X	\$ -	\$ 34,493
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO9-20051A	\$ -	\$ 7,728
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO9-20099X	\$ -	\$ 18,016
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	SV9-89016	\$ -	\$ 35,440
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	SV9-89025	\$ -	\$ 57,197
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Space Telescope Science Institute	HST-AR-16146.008-A	\$ -	\$ 13,367
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Texas A&M University	M2101865	\$ -	\$ 35,226
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Universities Space Research Association	05783-01	\$ -	\$ 31,175
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	University of Rochester	417755 / URFAO: GR511062	\$ -	\$ 7,218
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Villanova University	530013PRSAPSU PO P2100282	\$ -	\$ 24,106
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	N	Yale University	GRI02434 (CON-80001197)	\$ -	\$ 89,736
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	Y			\$ -	\$ 4,762,113
43	001	Science	Research and Development	\$ 9,684,037	\$ 621,816,479	Y			\$ 2,173,154	\$ 4,092,816
43	002	Aeronautics	Research and Development	\$ 702,858	\$ 621,816,479	N	Brown University	00001765	\$ -	\$ 28,323
43	002	Aeronautics	Research and Development	\$ 702,858	\$ 621,816,479	N	Jet Propulsion Laboratory	1607073	\$ -	\$ (689)
43	002	Aeronautics	Research and Development	\$ 702,858	\$ 621,816,479	N	University of Tennessee - Knoxville	A18-0139-S002	\$ -	\$ 368,309
43	002	Aeronautics	Research and Development	\$ 702,858	\$ 621,816,479	Y			\$ -	\$ 306,915
43	007	Space Operations	Research and Development	\$ 38,575	\$ 621,816,479	Y			\$ -	\$ 38,575
43	008	Education	Research and Development	\$ 808,600	\$ 621,816,479	N	Florida International University	000061	\$ -	\$ 89,642
43	008	Education	Research and Development	\$ 808,600	\$ 621,816,479	N	National Institute of Aerospace	C20-201030-PSU	\$ -	\$ 83,048
43	008	Education	Research and Development	\$ 808,600	\$ 621,816,479	N	National Institute of Aerospace	C20-202010-PSU	\$ -	\$ 72,716
43	008	Education	Research and Development	\$ 808,600	\$ 621,816,479	Y			\$ 115,551	\$ 563,194
43	012	Space Technology	Research and Development	\$ 491,295	\$ 621,816,479	N	Michigan Technological University	1607060Z8	\$ -	\$ 114,775
43	012	Space Technology	Research and Development	\$ 491,295	\$ 621,816,479	Y			\$ -	\$ 376,520
43	RD 145170	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	The Johns Hopkins University Applied Physics Laboratory LLC	145170	\$ -	\$ 105,026
43	RD 147577	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	The Johns Hopkins University Applied Physics Laboratory LLC	147577	\$ 11,270	\$ 253,514
43	RD 1547612	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Jet Propulsion Laboratory	1547612	\$ 48,044	\$ 672,572
43	RD 1549273	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Jet Propulsion Laboratory	1549273	\$ -	\$ 52,148
43	RD 1557824	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Colorado, University of	1557824	\$ -	\$ 111,088
43	RD 1559104	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Colorado, University of	1559104	\$ -	\$ 28,485
43	RD 1582972	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Jet Propulsion Laboratory	1582972	\$ -	\$ 45,822
43	RD 1651833	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	JPL Productions	1651833	\$ -	\$ 117,266
43	RD 17-250 PO 18-163	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Continuum Dynamics, Inc.	17-250 PO 18-163	\$ -	\$ 19,769
43	RD 19-192	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Continuum Dynamics, Inc.	19-192	\$ -	\$ 12,402
43	RD 2102404PSU01	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Applied Optimization	2102404PSU01	\$ -	\$ 362

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
43	RD	220677 80NSSC19C0007	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Terves, LLC.	220677 80NSSC19C0007	\$ - \$ 80,180
43	RD	235820	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Masten Space Systems	235820	\$ - \$ 121,020
43	RD	236345	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	RFD Optics, LLC	236345	\$ - \$ 409
43	RD	24189	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	QorTek	24189	\$ - \$ (15,465)
43	RD	242767	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	Y			\$ - \$ 1,398
43	RD	26422	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	SET Group, LLC	26422	\$ - \$ 53,919
43	RD	27935	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	SET Group, LLC	27935	\$ - \$ 40
43	RD	4900019733	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Bechtel BWXT Idaho, LLC	4900019733	\$ - \$ 6,067
43	RD	80NSSC21PO175	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	Y			\$ - \$ 28,740
43	RD	AR8-19003X	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	AR8-19003X	\$ - \$ 25,045
43	RD	GO0-21078D	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO0-21078D	\$ - \$ 1,914
43	RD	GO0-21079A	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO0-21079A	\$ - \$ 11,281
43	RD	GO0-21080X	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO0-21080X	\$ - \$ 575
43	RD	GO7-18003A	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO7-18003A	\$ - \$ 12,310
43	RD	GO8-19043A	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO8-19043A	\$ - \$ 37,547
43	RD	GO8-19059X	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO8-19059X	\$ - \$ 48,630
43	RD	GO9-20044X	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO9-20044X	\$ - \$ 12,135
43	RD	GO9-20066A	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	GO9-20066A	\$ - \$ 9,698
43	RD	HST-GO-14783.002-A	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Space Telescope Science Institute	HST-GO-14783.002-A	\$ - \$ 8,627
43	RD	HST-GO-14794.001-A	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Space Telescope Science Institute	HST-GO-14794.001-A	\$ - \$ 7,517
43	RD	HST-GO-14799.001-A	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Space Telescope Science Institute	HST-GO-14799.001-A	\$ - \$ 1,263
43	RD	HST-GO-15318.003-A	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Space Telescope Science Institute	HST-GO-15318.003-A	\$ - \$ 18,886
43	RD	NAS5-00136	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	Y			\$ 695,172 \$ 1,774,680
43	RD	PSU083120	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	American GNC Corporation	PSU083120	\$ - \$ 13,475
43	RD	S181000001	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	UES, Inc.	S181000001	\$ - \$ 37,882
43	RD	SV4-74018	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Smithsonian Astrophysical Observatory (The)	SV4-74018	\$ - \$ 296,317
43	RD	XC19007	National Aeronautics and Space Administration Research and Development	Research and Development	\$ 4,080,072	\$ 621,816,479	N	Ultra Safe Nuclear Corporation	XC19007	\$ - \$ 67,528
45	024	Promotion of the Arts Grants to Organizations and Individuals	Research and Development	\$ 550	\$ 621,816,479	Y			\$ - \$ 550	
45	161	Promotion of the Humanities Research	Research and Development	\$ 169,774	\$ 621,816,479	Y			\$ - \$ 115,656	
45	161	Promotion of the Humanities Research	Research and Development	\$ 169,774	\$ 621,816,479	Y			\$ 30,749 \$ 54,118	
45	169	Promotion of the Humanities Office of Digital Humanities	Research and Development	\$ 7,065	\$ 621,816,479	Y			\$ - \$ 7,065	
45	301	Museums for America	Research and Development	\$ 4,933	\$ 621,816,479	Y			\$ - \$ 4,933	
45	RD	4300649110	National Endowment for the Arts and Humanities Research and Development	Research and Development	\$ 3,196	\$ 621,816,479	N	COP: Department of Education	4300649110	\$ - \$ 3,196
47	041	Engineering	Research and Development	\$ 11,494,677	\$ 621,816,479	N	Case Western Reserve University	RESS11535	\$ - \$ 67,051	

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
47	041	Engineering	Research and Development	\$ 11,494,677	\$ 621,816,479	N	Michigan Technological University	160304022	\$ -	\$ 37,289
47	041	Engineering	Research and Development	\$ 11,494,677	\$ 621,816,479	N	Minnesota, University of	A006079002	\$ -	\$ 57,107
47	041	Engineering	Research and Development	\$ 11,494,677	\$ 621,816,479	N	North Carolina State University	2012-1067-01 AMEND 4	\$ -	\$ 260,682
47	041	Engineering	Research and Development	\$ 11,494,677	\$ 621,816,479	N	Ohio State University	60078805 PO RF01616347	\$ -	\$ 62,159
47	041	Engineering	Research and Development	\$ 11,494,677	\$ 621,816,479	N	spotLESS Materials LLC	237140	\$ -	\$ 749
47	041	Engineering	Research and Development	\$ 11,494,677	\$ 621,816,479	N	The Trustees of the University of Pennsylvania	570440 PO 4580783	\$ -	\$ 15,079
47	041	Engineering	Research and Development	\$ 11,494,677	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	445588-19079	\$ -	\$ 7,263
47	041	Engineering	Research and Development	\$ 11,494,677	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	480359-19079	\$ -	\$ 4,720
47	041	Engineering	Research and Development	\$ 11,494,677	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	480360-19079	\$ -	\$ 28,675
47	041	Engineering	Research and Development	\$ 11,494,677	\$ 621,816,479	Y			\$ -	\$ 9,688,131
47	041	Engineering	Research and Development	\$ 11,494,677	\$ 621,816,479	Y			\$ 166,870	\$ 944,135
47	041	COVID-19	COVID-19 - Engineering	\$ 11,494,677	\$ 621,816,479	Y			\$ -	\$ 165,996
47	049	Mathematical and Physical Sciences	Research and Development	\$ 18,584,646	\$ 621,816,479	N	Board of Regents of The University of Wisconsin System	183405345/144AAC6327 AMEND 3	\$ -	\$ 145,705
47	049	Mathematical and Physical Sciences	Research and Development	\$ 18,584,646	\$ 621,816,479	N	Indiana University (State of Indiana)	SB-4856130-PSU PO 0087465	\$ -	\$ 26,552
47	049	Mathematical and Physical Sciences	Research and Development	\$ 18,584,646	\$ 621,816,479	N	Missouri University of Science and Technology	00068654-01	\$ -	\$ 20,960
47	049	Mathematical and Physical Sciences	Research and Development	\$ 18,584,646	\$ 621,816,479	N	National Radio Astronomy Observatory	370760	\$ -	\$ 77,585
47	049	Mathematical and Physical Sciences	Research and Development	\$ 18,584,646	\$ 621,816,479	N	Norfolk State University	F1040101	\$ -	\$ 87,326
47	049	Mathematical and Physical Sciences	Research and Development	\$ 18,584,646	\$ 621,816,479	N	University Auxiliary Services, Inc. (California State University)	PSU231221	\$ -	\$ 10,428
47	049	Mathematical and Physical Sciences	Research and Development	\$ 18,584,646	\$ 621,816,479	N	University of Illinois at Urbana-Champaign	101433-18143	\$ -	\$ 6,520
47	049	Mathematical and Physical Sciences	Research and Development	\$ 18,584,646	\$ 621,816,479	N	University of Pittsburgh	AWD00002876 (2036164-1)	\$ -	\$ 15,561
47	049	Mathematical and Physical Sciences	Research and Development	\$ 18,584,646	\$ 621,816,479	N	University of Wisconsin-Madison	0000000453	\$ -	\$ 221,543
47	049	Mathematical and Physical Sciences	Research and Development	\$ 18,584,646	\$ 621,816,479	N	University of Wisconsin-Madison	0000001204	\$ -	\$ 11,045
47	049	Mathematical and Physical Sciences	Research and Development	\$ 18,584,646	\$ 621,816,479	Y			\$ -	\$ 10,814,729
47	049	Mathematical and Physical Sciences	Research and Development	\$ 18,584,646	\$ 621,816,479	Y			\$ 549,452	\$ 7,146,692
47	050	Geosciences	Research and Development	\$ 6,586,000	\$ 621,816,479	N	Board of Regents of The University of Wisconsin System	673K444	\$ -	\$ 8,016
47	050	Geosciences	Research and Development	\$ 6,586,000	\$ 621,816,479	N	Colorado School of Mines	401574-5803	\$ -	\$ 7,614
47	050	Geosciences	Research and Development	\$ 6,586,000	\$ 621,816,479	N	Columbia University	38E(GG009393)	\$ -	\$ 739
47	050	Geosciences	Research and Development	\$ 6,586,000	\$ 621,816,479	N	Cornell University	71423-10305	\$ -	\$ 54,422
47	050	Geosciences	Research and Development	\$ 6,586,000	\$ 621,816,479	N	New York University	F0691-03 PO IB00238172	\$ -	\$ 82,353
47	050	Geosciences	Research and Development	\$ 6,586,000	\$ 621,816,479	N	Oregon State University OREGON STATE UNIVERSITY OFFICE OF	S2192A-A	\$ -	\$ 134,529
47	050	Geosciences	Research and Development	\$ 6,586,000	\$ 621,816,479	N	University of California at Davis	A17-0553-S002	\$ -	\$ 13,095
47	050	Geosciences	Research and Development	\$ 6,586,000	\$ 621,816,479	N	University of Colorado at Boulder	1559669 PO 1001413789	\$ -	\$ 40,601
47	050	Geosciences	Research and Development	\$ 6,586,000	\$ 621,816,479	N	Vermont, University of	AWD00000206SUB00000111	\$ -	\$ 38,643
47	050	Geosciences	Research and Development	\$ 6,586,000	\$ 621,816,479	N	Woods Hole Oceanographic Institution	M222380	\$ -	\$ 35,282
47	050	Geosciences	Research and Development	\$ 6,586,000	\$ 621,816,479	Y			\$ -	\$ 5,311,210
47	050	Geosciences	Research and Development	\$ 6,586,000	\$ 621,816,479	Y			\$ 449,012	\$ 847,507
47	070	Computer and Information Science and Engineering	Research and Development	\$ 9,417,881	\$ 621,816,479	N	Board of Regents of The University of Wisconsin System	203405438	\$ -	\$ 41,073
47	070	Computer and Information Science and Engineering	Research and Development	\$ 9,417,881	\$ 621,816,479	N	Northern Arizona University	1003107-03	\$ -	\$ 88,186
47	070	Computer and Information Science and Engineering	Research and Development	\$ 9,417,881	\$ 621,816,479	N	Rochester Institute of Technology	31856-01	\$ -	\$ 7,487
47	070	Computer and Information Science and Engineering	Research and Development	\$ 9,417,881	\$ 621,816,479	N	Rutgers-The State University of New Jersey	0016 PO 1477360	\$ -	\$ 214,476

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
47 070		Computer and Information Science and Engineering	Research and Development	\$ 9,417,881	\$ 621,816,479	N	University of Cincinnati	013096-002 PO 4600001777	\$ -	\$ 28,987
47 070		Computer and Information Science and Engineering	Research and Development	\$ 9,417,881	\$ 621,816,479	N	Yale University	GR109665(CON-80002380)	\$ -	\$ 37,844
47 070		Computer and Information Science and Engineering	Research and Development	\$ 9,417,881	\$ 621,816,479	Y			\$ -	\$ 7,357,077
47 070		Computer and Information Science and Engineering	Research and Development	\$ 9,417,881	\$ 621,816,479	Y			\$ 457,847	\$ 1,539,171
47 070	COVID-19	COVID-19 - Computer and Information Science and Engineering	Research and Development	\$ 9,417,881	\$ 621,816,479	Y			\$ -	\$ 103,580
47 074		Biological Sciences	Research and Development	\$ 8,868,668	\$ 621,816,479	N	Michigan State University	RC108280PSU	\$ -	\$ 103,846
47 074		Biological Sciences	Research and Development	\$ 8,868,668	\$ 621,816,479	N	Minnesota, University of	P007478102	\$ -	\$ 51,323
47 074		Biological Sciences	Research and Development	\$ 8,868,668	\$ 621,816,479	N	Montana State University	G147-18-W6822	\$ -	\$ 8,596
47 074		Biological Sciences	Research and Development	\$ 8,868,668	\$ 621,816,479	N	Purdue University	10001383-003	\$ -	\$ 21,631
47 074		Biological Sciences	Research and Development	\$ 8,868,668	\$ 621,816,479	N	Saint Louis University	ERS#RD45339	\$ -	\$ 44,954
47 074		Biological Sciences	Research and Development	\$ 8,868,668	\$ 621,816,479	N	University of California at Los Angeles	0830 G XB618	\$ -	\$ 17,357
47 074		Biological Sciences	Research and Development	\$ 8,868,668	\$ 621,816,479	N	University of Colorado at Boulder	1559643	\$ -	\$ 51,825
47 074		Biological Sciences	Research and Development	\$ 8,868,668	\$ 621,816,479	N	Virginia Institute of Marine Science	721653-712683	\$ -	\$ 23,728
47 074		Biological Sciences	Research and Development	\$ 8,868,668	\$ 621,816,479	N	Washington University in St. Louis	WU-16-136 2928541A	\$ -	\$ 72,093
47 074		Biological Sciences	Research and Development	\$ 8,868,668	\$ 621,816,479	Y			\$ -	\$ 5,308,959
47 074		Biological Sciences	Research and Development	\$ 8,868,668	\$ 621,816,479	Y			\$ 707,480	\$ 3,164,356
47 075		Social, Behavioral, and Economic Sciences	Research and Development	\$ 1,950,675	\$ 621,816,479	N	Indiana University (State of Indiana)	18-027-2	\$ -	\$ 4,521
47 075		Social, Behavioral, and Economic Sciences	Research and Development	\$ 1,950,675	\$ 621,816,479	N	Minnesota, University of	H006974401	\$ -	\$ 102,658
47 075		Social, Behavioral, and Economic Sciences	Research and Development	\$ 1,950,675	\$ 621,816,479	N	Ohio State University	60068034-PSU	\$ -	\$ 10,653
47 075		Social, Behavioral, and Economic Sciences	Research and Development	\$ 1,950,675	\$ 621,816,479	N	University of Nevada, Reno	UNR-17-33 PO 117GC000041	\$ -	\$ 132
47 075		Social, Behavioral, and Economic Sciences	Research and Development	\$ 1,950,675	\$ 621,816,479	Y			\$ -	\$ 1,419,019
47 075		Social, Behavioral, and Economic Sciences	Research and Development	\$ 1,950,675	\$ 621,816,479	Y			\$ 68,999	\$ 393,183
47 075	COVID-19	COVID-19 - Social, Behavioral, and Economic Sciences	Research and Development	\$ 1,950,675	\$ 621,816,479	Y			\$ -	\$ 20,509
47 076		Education and Human Resources	Research and Development	\$ 9,260,617	\$ 621,816,479	N	American Educational Research Association	231996	\$ -	\$ 23,765
47 076		Education and Human Resources	Research and Development	\$ 9,260,617	\$ 621,816,479	N	American Educational Research Association	232274	\$ -	\$ 23,765
47 076		Education and Human Resources	Research and Development	\$ 9,260,617	\$ 621,816,479	N	Concord Consortium (The)	293-01	\$ -	\$ 74,282
47 076		Education and Human Resources	Research and Development	\$ 9,260,617	\$ 621,816,479	N	Concord Consortium (The)	327.18.03	\$ -	\$ 212,698
47 076		Education and Human Resources	Research and Development	\$ 9,260,617	\$ 621,816,479	N	Norfolk State University	F1040086	\$ -	\$ 51,438
47 076		Education and Human Resources	Research and Development	\$ 9,260,617	\$ 621,816,479	N	North Carolina State University	2018-0676-01	\$ -	\$ 189,002
47 076		Education and Human Resources	Research and Development	\$ 9,260,617	\$ 621,816,479	N	Northern Arizona University	1003968-01	\$ -	\$ 7,063
47 076		Education and Human Resources	Research and Development	\$ 9,260,617	\$ 621,816,479	N	Pasadena City College	B210057	\$ -	\$ 59,656
47 076		Education and Human Resources	Research and Development	\$ 9,260,617	\$ 621,816,479	N	University of Southern California	107513952 PO 10721053	\$ -	\$ 19,462
47 076		Education and Human Resources	Research and Development	\$ 9,260,617	\$ 621,816,479	Y			\$ -	\$ 6,811,989
47 076		Education and Human Resources	Research and Development	\$ 9,260,617	\$ 621,816,479	Y			\$ 482,581	\$ 1,472,660
47 076	COVID-19	COVID-19 - Education and Human Resources	Research and Development	\$ 9,260,617	\$ 621,816,479	Y			\$ -	\$ 293,958
47 078		Polar Programs	Research and Development	\$ 699,675	\$ 621,816,479	Y			\$ -	\$ 125,604
47 078		Polar Programs	Research and Development	\$ 699,675	\$ 621,816,479	Y			\$ 354,290	\$ 521,109
47 078	COVID-19	COVID-19 - Polar Programs	Research and Development	\$ 699,675	\$ 621,816,479	Y			\$ -	\$ 52,962
47 079		Office of International Science and Engineering	Research and Development	\$ 111,282	\$ 621,816,479	N	State University of New York - Albany	18-32-73067	\$ -	\$ 1,120
47 079		Office of International Science and Engineering	Research and Development	\$ 111,282	\$ 621,816,479	Y			\$ -	\$ 50,368
47 079		Office of International Science and Engineering	Research and Development	\$ 111,282	\$ 621,816,479	Y			\$ 21,000	\$ 59,794
47 083		Integrative Activities	Research and Development	\$ 1,081,656	\$ 621,816,479	N	Boise State University	6800-PO124294	\$ -	\$ 31,392
47 083		Integrative Activities	Research and Development	\$ 1,081,656	\$ 621,816,479	Y			\$ -	\$ 430,174
47 083		Integrative Activities	Research and Development	\$ 1,081,656	\$ 621,816,479	Y			\$ 188,384	\$ 406,227
47 083	COVID-19	COVID-19 - Integrative Activities	Research and Development	\$ 1,081,656	\$ 621,816,479	Y			\$ 31,896	\$ 213,863
47 RD	0000000032	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	N	University of Wisconsin-Madison	0000000032	\$ -	\$ 68,515
47 RD	0000000533	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	N	University of Wisconsin-Madison	0000000533	\$ -	\$ 3,828
47 RD	010471-003	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	N	University of Cincinnati	010471-003	\$ -	\$ 3,385
47 RD	10001564-008	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	N	Purdue University	10001564-008	\$ -	\$ 26,570
47 RD	181223 PO101204	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	N	North Carolina Central University	181223 PO101204	\$ -	\$ 57,195
47 RD	214173	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	N	Association of Public and Land Grant Universities	214173	\$ -	\$ 14,920
47 RD	231256	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	Y			\$ -	\$ 229,666

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
47	RD 238077	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	N	Quantitative Scientific Solutions, LLC	238077	\$ -	\$ 36,138
47	RD 240820	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	Y			\$ -	\$ 53,449
47	RD 25-6238-0918-002	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	N	Nebraska, University of	25-6238-0918-002	\$ -	\$ 4,007
47	RD 480167-19079	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	480167-19079	\$ -	\$ 51,399
47	RD 702-111020-3	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	N	MRIGlobal	702-111020-3	\$ -	\$ 20,773
47	RD ADVANCE	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	Y			\$ -	\$ 12,166
47	RD CNS 16-50527	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	Y			\$ -	\$ 52,089
47	RD EAR-2127522	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	Y			\$ -	\$ 99,469
47	RD ICER 17-36333	National Science Foundation Other	Research and Development	\$ 1,500,010	\$ 621,816,479	Y			\$ -	\$ 362,337
47	RD IIP-1624727	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	Y			\$ -	\$ 146,524
47	RD IIP-1841474 PO 4504278448	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	N	Amgen	IIP-1841474 PO 4504278448	\$ -	\$ 196,529
47	RD PHY 20-15651	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	Y			\$ -	\$ 53,449
47	RD SUB00002345	National Science Foundation Research and Development	Research and Development	\$ 1,500,010	\$ 621,816,479	N	University of Florida	SUB00002345	\$ -	\$ 7,602
58	RD NONE	Securities and Exchange Commission Research and Development	Research and Development	\$ 26,142	\$ 621,816,479	Y			\$ -	\$ 26,142
64	RD 242009	Department of Veterans Affairs Research and Development	Research and Development	\$ 8,772	\$ 621,816,479	Y			\$ -	\$ 8,772
66	436	Surveys, Studies, Investigations, Demonstrations, and Training Grants and Cooper	Research and Development	\$ 13,822	\$ 621,816,479	Y			\$ -	\$ 6,244
66	461	Regional Wetland Program Development Grants	Research and Development	\$ 300,790	\$ 621,816,479	N	COP: Department of Environmental Protection	4300665862	\$ -	\$ 296,090
66	461	Regional Wetland Program Development Grants	Research and Development	\$ 300,790	\$ 621,816,479	N	New Jersey Department of Environmental Protection	SR16-012	\$ -	\$ 4,700
66	466	Chesapeake Bay Program	Research and Development	\$ 351,694	\$ 621,816,479	Y			\$ -	\$ 189,551
66	511	Office of Research and Development Consolidated Research/Training/Fellowships	Research and Development	\$ 8,452	\$ 621,816,479	N	Purdue University	16200038-032	\$ -	\$ 8,452
66	951	Environmental Education Grants	Research and Development	\$ 6,106	\$ 621,816,479	N	University of the Virgin Islands	EPAPSU19	\$ -	\$ 6,106
66	RD 011036-005	Environmental Protection Agency Research and Development	Research and Development	\$ 59,242	\$ 621,816,479	N	University of Cincinnati	011036-005	\$ -	\$ 8,257
66	RD 4300628567	Environmental Protection Agency Research and Development	Research and Development	\$ 59,242	\$ 621,816,479	N	COP: Department of Environmental Protection	4300628567	\$ -	\$ 20,648
66	RD 4300640900	Environmental Protection Agency Research and Development	Research and Development	\$ 59,242	\$ 621,816,479	N	COP: Department of Environmental Protection	4300640900	\$ -	\$ 12,404
66	RD PW2016-007	Environmental Protection Agency Research and Development	Research and Development	\$ 59,242	\$ 621,816,479	N	Wood Environment & Infrastructure Solutions, Inc.	PW2016-007	\$ -	\$ 17,933
77	008	U.S. Nuclear Regulatory Commission Scholarship and Fellowship Program	Research and Development	\$ 432,590	\$ 621,816,479	Y			\$ -	\$ 432,590
77	RD 31310019D0004	Nuclear Regulatory Commission Research and Development	Research and Development	\$ (3,777)	\$ 621,816,479	Y			\$ -	\$ (3,777)
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Arizona State University	17-108	\$ -	\$ 110,035
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Columbia University	2(GG010862)	\$ -	\$ 57,200
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Duryea Technologies	235822	\$ -	\$ 12,830
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Georgia Institute of Technology	AWD-100498-G6 AMENDMENT 4	\$ -	\$ 74,196
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	HAMR, Industries LLC	27692	\$ -	\$ 160,008
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Johns Hopkins University	2004000674	\$ -	\$ 193,378
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Luna Innovations, Inc.	357901PSU	\$ -	\$ 163,979
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Luna Innovations, Inc.	367802/PSU	\$ -	\$ 1,855
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	NanoSonic, Inc.	EN2-9844	\$ -	\$ 116,260
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Ohio State University	60057542 PO RF01459797	\$ -	\$ 60,614
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Parthian Energy	243134	\$ -	\$ 13,271
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Plug Power, Inc. (was Giner, Inc.)	01153	\$ -	\$ 32,186
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Princeton University	SUB0000267	\$ -	\$ 53,709
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	QCoefficient, Inc.	235365	\$ -	\$ 113,288
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Radiation Monitoring Devices, Inc.	C20-26	\$ -	\$ 29,655
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	The Board of Trustees of the Leland Stanford Junior University	61351724-124215	\$ 219,946	\$ 1,278,877
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	THE RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK	88828/2/1162931	\$ -	\$ 6,494
81	049	Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	University of California at Davis	A17-0309-S002 (201603457-02)	\$ -	\$ 151,675

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
81 049		Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	University of California at San Diego	94969563	\$ -	\$ 379
81 049		Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	University of Delaware Center for Composite Materials	51542	\$ -	\$ 80,252
81 049		Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	University of Illinois	088955-16609	\$ -	\$ 74,600
81 049		Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	University of Massachusetts	S5190000040525	\$ -	\$ 15,283
81 049		Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	University of Texas at Austin	UTA17-001144	\$ -	\$ 59,296
81 049		Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	University of Texas at Dallas	1301151	\$ -	\$ 41,304
81 049		Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Utah, University of	10049491-PENN PO U000154267	\$ -	\$ 180,145
81 049		Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	N	Washington University in St. Louis	WU-19-229	\$ -	\$ 78,758
81 049		Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	Y			\$ -	\$ 5,080,845
81 049		Office of Science Financial Assistance Program	Research and Development	\$ 14,649,171	\$ 621,816,479	Y			\$ 2,488,459	\$ 6,224,023
81 086		Conservation Research and Development	Research and Development	\$ 1,756,873	\$ 621,816,479	N	The Regents of the University of Michigan	SUBK00009789 PO 3005425226	\$ -	\$ 162,294
81 086		Conservation Research and Development	Research and Development	\$ 1,756,873	\$ 621,816,479	N	Virginia, University of	GQ10063.156346	\$ -	\$ 15,283
81 086		Conservation Research and Development	Research and Development	\$ 1,756,873	\$ 621,816,479	Y			\$ -	\$ 1,280,438
81 086		Conservation Research and Development	Research and Development	\$ 1,756,873	\$ 621,816,479	Y			\$ 30,084	\$ 298,858
81 087		Renewable Energy Research and Development	Research and Development	\$ 1,502,021	\$ 621,816,479	N	Antares Group Incorporated	20.079	\$ -	\$ 99,965
81 087		Renewable Energy Research and Development	Research and Development	\$ 1,502,021	\$ 621,816,479	N	Forest Concepts, LLC	210246	\$ -	\$ 77,867
81 087		Renewable Energy Research and Development	Research and Development	\$ 1,502,021	\$ 621,816,479	N	Oklahoma, University of	2019-64	\$ -	\$ 113,107
81 087		Renewable Energy Research and Development	Research and Development	\$ 1,502,021	\$ 621,816,479	N	The Regents of the University of California, Los Angeles	4550 G WA310	\$ 126,300	\$ 128,820
81 087		Renewable Energy Research and Development	Research and Development	\$ 1,502,021	\$ 621,816,479	N	The Regents of the University of Michigan	SUBK00009809	\$ -	\$ 135,176
81 087		Renewable Energy Research and Development	Research and Development	\$ 1,502,021	\$ 621,816,479	N	University of California at Los Angeles	4550 G YA100	\$ -	\$ 69,180
81 087		Renewable Energy Research and Development	Research and Development	\$ 1,502,021	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	418987-19079	\$ -	\$ 45,866
81 087		Renewable Energy Research and Development	Research and Development	\$ 1,502,021	\$ 621,816,479	N	Yale University	GK000624 (CON-80000150)	\$ -	\$ 31,144
81 087		Renewable Energy Research and Development	Research and Development	\$ 1,502,021	\$ 621,816,479	Y			\$ -	\$ 525,016
81 087		Renewable Energy Research and Development	Research and Development	\$ 1,502,021	\$ 621,816,479	Y			\$ 164,125	\$ 275,880
81 089		Fossil Energy Research and Development	Research and Development	\$ 5,191,633	\$ 621,816,479	N	H Quest Vanguard Inc.	231217	\$ -	\$ 4,891
81 089		Fossil Energy Research and Development	Research and Development	\$ 5,191,633	\$ 621,816,479	N	University of Texas at Austin	UTA19-000910	\$ -	\$ 76,344
81 089		Fossil Energy Research and Development	Research and Development	\$ 5,191,633	\$ 621,816,479	Y			\$ -	\$ 1,541,663
81 089		Fossil Energy Research and Development	Research and Development	\$ 5,191,633	\$ 621,816,479	Y			\$ 2,649,708	\$ 3,568,735
81 113		Defense Nuclear Nonproliferation Research	Research and Development	\$ 38,935	\$ 621,816,479	N	The Regents of the University of Michigan	SUBK00009799 PO 3005799149	\$ -	\$ 38,935
81 117		Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training	Research and Development	\$ 297,504	\$ 621,816,479	Y			\$ 116,526	\$ 297,504
81 121		Nuclear Energy Research, Development and Demonstration	Research and Development	\$ 2,120,866	\$ 621,816,479	N	Texas A&M University	M2100511	\$ -	\$ 6,520
81 121		Nuclear Energy Research, Development and Demonstration	Research and Development	\$ 2,120,866	\$ 621,816,479	N	The Regents of the University of Michigan	SUBK00012794	\$ -	\$ 24,942
81 121		Nuclear Energy Research, Development and Demonstration	Research and Development	\$ 2,120,866	\$ 621,816,479	N	Westinghouse Electric Company	190323 PO 4500759617	\$ -	\$ 22,092
81 121		Nuclear Energy Research, Development and Demonstration	Research and Development	\$ 2,120,866	\$ 621,816,479	Y			\$ -	\$ 1,291,444
81 121		Nuclear Energy Research, Development and Demonstration	Research and Development	\$ 2,120,866	\$ 621,816,479	Y			\$ 375,752	\$ 775,868
81 135		Advanced Research Projects Agency - Energy	Research and Development	\$ 3,304,615	\$ 621,816,479	N	Energy Trading Analytics, LLC	238198	\$ -	\$ 30,207
81 135		Advanced Research Projects Agency - Energy	Research and Development	\$ 3,304,615	\$ 621,816,479	N	Sandia National Laboratories	1356879 PO 2160330	\$ -	\$ 1,624
81 135		Advanced Research Projects Agency - Energy	Research and Development	\$ 3,304,615	\$ 621,816,479	N	United Technologies Corp.	1247168	\$ -	\$ 137,928
81 135		Advanced Research Projects Agency - Energy	Research and Development	\$ 3,304,615	\$ 621,816,479	Y	Virginia Polytechnic Institute and State University	429424-19079	\$ -	\$ 219,980
81 135		Advanced Research Projects Agency - Energy	Research and Development	\$ 3,304,615	\$ 621,816,479	Y			\$ -	\$ 312,644
81 135		Advanced Research Projects Agency - Energy	Research and Development	\$ 3,304,615	\$ 621,816,479	Y			\$ 1,632,629	\$ 2,602,232
81 RD 090634-17760		U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	University of Illinois	090634-17760	\$ -	\$ 209,603
81 RD 0F-60008		U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Argonne National Laboratory	0F-60008	\$ -	\$ 100,114
81 RD 132121		U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Fluor Corporation	132121	\$ -	\$ 199,798
81 RD 1356879		U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Sandia National Laboratories	1356879	\$ -	\$ 14,585
81 RD 1356879 PO 2153784		U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Sandia National Laboratories	1356879 PO 2153784	\$ -	\$ 6,484
81 RD 1356879 PO 2222955		U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Sandia National Laboratories	1356879 PO 2222955	\$ -	\$ 31,314
81 RD 1356879 PO 2228336		U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Sandia National Laboratories	1356879 PO 2228336	\$ -	\$ 34,807
81 RD 1356879 TO 2122947		U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Sandia National Laboratories	1356879 TO 2122947	\$ -	\$ 4,875

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
81 RD	1356879 TO 2143386	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Sandia National Laboratories	1356879 TO 2143386	\$ -	\$ 152,311
81 RD	136245	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Bettis Atomic Power Laboratory	136245	\$ -	\$ 129,840
81 RD	137358	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Bettis Atomic Power Laboratory	137358	\$ -	\$ 145,284
81 RD	138219	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Fluor Marine Propulsion, LLC	138219	\$ -	\$ 809,254
81 RD	142087	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Fluor Marine Propulsion, LLC	142087	\$ -	\$ 2,816
81 RD	215257 TASK ORDER 02	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Mission Support and Test Services, LLC	215257 TASK ORDER 02	\$ -	\$ 188,002
81 RD	215257/01	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Mission Support and Test Services, LLC	215257/01	\$ -	\$ 518,460
81 RD	217047	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Idaho National Laboratory	217047	\$ -	\$ 27,460
81 RD	238570	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Energy Fuels Inc.	238570	\$ -	\$ 1,040
81 RD	239439	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Materia USA, LLC	239439	\$ -	\$ 6,459
81 RD	239441	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Texas Mineral Resources Corp.	239441	\$ -	\$ 56,961
81 RD	243286	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Quantum Ventura Inc.	243286	\$ -	\$ 8,717
81 RD	293402 WO 424285	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Triad National Security, LLC (was LANL)	293402 WO 424285	\$ -	\$ 110,486
81 RD	4000158464	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Oak Ridge National Laboratory	4000158464	\$ -	\$ 391,368
81 RD	4000167168	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Oak Ridge National Laboratory	4000167168	\$ -	\$ 71,106
81 RD	4000174451	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Oak Ridge National Laboratory	4000174451	\$ -	\$ 139,034
81 RD	4000175374	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Oak Ridge National Laboratory	4000175374	\$ -	\$ 139,019
81 RD	4000175741	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Oak Ridge National Laboratory	4000175741	\$ -	\$ 40,143
81 RD	4000180720	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Oak Ridge National Laboratory	4000180720	\$ -	\$ 64,276
81 RD	4000183827	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Oak Ridge National Laboratory	4000183827	\$ -	\$ 16,990
81 RD	4000185383	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Oak Ridge National Laboratory	4000185383	\$ -	\$ 1,134
81 RD	419294	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	419294	\$ -	\$ (168)
81 RD	432185	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	432185	\$ -	\$ 14,875
81 RD	443328	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	443328	\$ -	\$ 115,139
81 RD	504345	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	504345	\$ -	\$ 171,613
81 RD	505195	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	505195	\$ -	\$ 39,934
81 RD	512983	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle Memorial Institute	512983	\$ -	\$ 2
81 RD	513484	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	513484	\$ -	\$ 27,205
81 RD	521721	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	521721	\$ -	\$ 44,344
81 RD	539058	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	539058	\$ -	\$ 42,505
81 RD	552313	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	552313	\$ -	\$ 35,000
81 RD	559778	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	559778	\$ -	\$ 10,034
81 RD	559779	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	559779	\$ -	\$ 8,080
81 RD	568397	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	568397	\$ -	\$ 29,681
81 RD	571684	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	571684	\$ -	\$ 28,926
81 RD	7370834	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Lawrence Berkeley National Laboratory	7370834	\$ -	\$ 1,982

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
81	RD 7434356	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Lawrence Berkeley National Laboratory	7434356	\$ -	\$ 54,071
81	RD 980550	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	ULC Technologies, LLC	980550	\$ -	\$ 14,231
81	RD ACS-7-70122-01	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	National Renewable Energy Laboratory	ACS-7-70122-01	\$ -	\$ 7,989
81	RD ADVANCE	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	Y			\$ -	\$ (29,657)
81	RD AHQ-9-92002-09	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	National Renewable Energy Laboratory	AHQ-9-92002-09	\$ -	\$ 2,187
81	RD B630324	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Lawrence Livermore National Laboratory	B630324	\$ -	\$ 7,859
81	RD B637571	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Lawrence Livermore National Laboratory	B637571	\$ -	\$ 15,162
81	RD B639389	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Lawrence Livermore National Laboratory	B639389	\$ -	\$ 228,262
81	RD B643529	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Lawrence Livermore National Laboratory	B643529	\$ -	\$ 20,469
81	RD B644823	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Lawrence Livermore National Laboratory	B644823	\$ -	\$ 8,261
81	RD B645183	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Battelle - Lawrence Livermore National Laboratory	B645183	\$ -	\$ 17,341
81	RD LTI-FE0022594-PSU	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Leonardo Technologies, Inc.	LTI-FE0022594-PSU	\$ -	\$ 23,265
81	RD P010221754 TASK ORDER 1	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Leidos, Inc.	P010221754 TASK ORDER 1	\$ -	\$ 101,376
81	RD P010221754 TASK ORDER 4	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Leidos, Inc.	P010221754 TASK ORDER 4	\$ -	\$ 61,944
81	RD P010221754 TASK ORDER 5	U.S. Department of Energy Other	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Leidos, Inc.	P010221754 TASK ORDER 5	\$ -	\$ 110,033
81	RD P010221754 TASK ORDER 7	U.S. Department of Energy Other	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Leidos, Inc.	P010221754 TASK ORDER 7	\$ -	\$ 85,039
81	RD P010221754 TASK ORDER 8	U.S. Department of Energy Other	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Leidos, Inc.	P010221754 TASK ORDER 8	\$ -	\$ 125,323
81	RD RJ407-G1	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Georgia Institute of Technology	RJ407-G1	\$ -	\$ 37,468
81	RD SB2010-001-1	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Spectral Energies, LLC	SB2010-001-1	\$ -	\$ 84,211
81	RD SUB-2020-10315	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Alliance for Sustainable Energy, LLC	SUB-2020-10315	\$ -	\$ 4,138
81	RD SUBK00008626 PO 3004992137	U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	The Regents of the University of Michigan	SUBK00008626 PO 3004992137	\$ -	\$ 218,858
81	RD COVID-19 - 293402_585371	COVID-19 - U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Triad National Security, LLC (was LANL)	293402_585371	\$ -	\$ 83,683
81	RD COVID-19 - 587178 SUB 628058	COVID-19 - U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Triad National Security, LLC (was LANL)	587178 SUB 628058	\$ -	\$ 1,576
81	RD COVID-19 - 293402 SUB 528821	COVID-19 - U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Triad National Security, LLC (was LANL)	293402 SUB 528821	\$ -	\$ 42,795
81	RD COVID-19 - 293402 WO 424285	COVID-19 - U.S. Department of Energy Research and Development	Research and Development	\$ 5,709,776	\$ 621,816,479	N	Triad National Security, LLC (was LANL)	293402 WO 424285	\$ -	\$ 193,000
84	015	Title VI Center for Global Studies (CGS) at The Pennsylvania State University	Research and Development	\$ 305,567	\$ 621,816,479	Y			\$ -	\$ 305,567
84	017	International Research and Studies	Research and Development	\$ 64,068	\$ 621,816,479	N	Delaware State University	18-070HEH	\$ -	\$ 6,993
84	017	International Research and Studies	Research and Development	\$ 64,068	\$ 621,816,479	Y			\$ -	\$ 57,075
84	027	Special Education Grants to States	Research and Development	\$ 475,259	\$ 621,816,479	N	COP: Department of Education	062-20-0042	\$ -	\$ 193,428
84	103	TRIO Staff Training Program	Research and Development	\$ 209,315	\$ 621,816,479	Y			\$ -	\$ 149,319
84	200	Graduate Assistance in Areas of National Need	Research and Development	\$ 292,133	\$ 621,816,479	Y			\$ -	\$ 292,133
84	229	Language Resource Centers	Research and Development	\$ 135,819	\$ 621,816,479	Y			\$ -	\$ 50
84	229	Language Resource Centers	Research and Development	\$ 135,819	\$ 621,816,479	Y			\$ 31,655	\$ 135,769
84	305	Education Research, Development and Dissemination	Research and Development	\$ 967,216	\$ 621,816,479	Y			\$ -	\$ 876,350
84	305	Invalid CFDA - Please correct	Research and Development	\$ 967,216	\$ 621,816,479	N	Pennsylvania, University of	569644	\$ -	\$ 8,188
84	305	Invalid CFDA - Please correct	Research and Development	\$ 967,216	\$ 621,816,479	N	Portland State University	100018	\$ -	\$ 25,442
84	305	Invalid CFDA - Please correct	Research and Development	\$ 967,216	\$ 621,816,479	Y			\$ -	\$ 57,236
84	324	Who receives and benefits from special education in the U.S.?	Research and Development	\$ 11,277	\$ 621,816,479	Y			\$ 2,074	\$ 11,277
84	327	Special Education Educational Technology Media, and Materials for Individuals with	Research and Development	\$ 347,089	\$ 621,816,479	Y			\$ -	\$ 347,089
84	335	Child Care Access Means Parents in School	Research and Development	\$ 141,015	\$ 621,816,479	Y			\$ -	\$ 141,015

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
84	RD	4100084652	U.S. Department of Education Research and Development	Research and Development	\$ 186,542	\$ 621,816,479	N	COP: Department of Education	4100084652	\$ - \$ 94,842
84	RD	G0183A-B	U.S. Department of Education Research and Development	Research and Development	\$ 186,542	\$ 621,816,479	N	Oregon State University OREGON STATE UNIVERSITY OFFICE OF	G0183A-B	\$ - \$ 91,700
90	500		International Broadcasting Independent Grantee Organizations	Research and Development	\$ 12,475	\$ 621,816,479	N	Radio Free Asia	1002-2019-026	\$ - \$ 12,475
93	077		Family Smoking Prevention and Tobacco Control Act Regulatory Research	Research and Development	\$ 883,643	\$ 621,816,479	Y			\$ - \$ 883,643
93	080		Blood Disorder Program: Prevention, Surveillance, and Research	Research and Development	\$ 19,024	\$ 621,816,479	N	Children's Hospital of Philadelphia	GRT-00000783	\$ - \$ 19,024
93	086		Healthy Marriage Promotion and Responsible Fatherhood Grants	Research and Development	\$ 16,913	\$ 621,816,479	N	Texas State University	20002-83268-2	\$ - \$ 5,094
93	086		Healthy Marriage Promotion and Responsible Fatherhood Grants	Research and Development	\$ 16,913	\$ 621,816,479	N	Texas State University	21006-83564-1 PO 4500146495	\$ - \$ 11,819
93	092		Affordable Care Act (ACA) Personal Responsibility Education Program	Research and Development	\$ 18,646	\$ 621,816,479	N	COP: Department of Health	4100081321	\$ - \$ 18,646
93	103		Food and Drug Administration Research	Research and Development	\$ 225,576	\$ 621,816,479	N	University of Kansas Medical Center	Z8B00010	\$ - \$ 1,345
93	103		Food and Drug Administration Research	Research and Development	\$ 225,576	\$ 621,816,479	N	University of Missouri	C00071472-11	\$ - \$ 159
93	103		Food and Drug Administration Research	Research and Development	\$ 225,576	\$ 621,816,479	Y			\$ - \$ 224,072
93	107		Area Health Education Centers	Research and Development	\$ 963,600	\$ 621,816,479	N	Northcentral Pennsylvania Area Health Education Center	PSU-ECHO-01	\$ - \$ 22,809
93	107	COVID-19	COVID-19 - Area Health Education Centers	Research and Development	\$ 963,600	\$ 621,816,479	Y			\$ 79,886 \$ 95,434
93	110		Maternal and Child Health Federal Consolidated Programs	Research and Development	\$ 370,829	\$ 621,816,479	N	Children's Hospital of Philadelphia	3209510522	\$ - \$ 3,339
93	110		Maternal and Child Health Federal Consolidated Programs	Research and Development	\$ 370,829	\$ 621,816,479	N	Children's Hospital of Philadelphia	3209610521	\$ - \$ 57,611
93	110		Maternal and Child Health Federal Consolidated Programs	Research and Development	\$ 370,829	\$ 621,816,479	Y	The Regents of the University of California, Los Angeles	1638 G WA051	\$ - \$ 44,778
93	110		Maternal and Child Health Federal Consolidated Programs	Research and Development	\$ 370,829	\$ 621,816,479	Y			\$ 17,984 \$ 265,101
93	113		Environmental Health	Research and Development	\$ 2,895,993	\$ 621,816,479	N	Michigan State University	RC109570PSU	\$ - \$ 11,767
93	113		Environmental Health	Research and Development	\$ 2,895,993	\$ 621,816,479	N	Pennsylvania, University of	577005	\$ - \$ 119,005
93	113		Environmental Health	Research and Development	\$ 2,895,993	\$ 621,816,479	N	PRESIDENT AND FELLOWS OF HARVARD COLLEGE HARVARD UNIVERSITY	112560-5104916 AMEND 2	\$ - \$ 59,259
93	113		Environmental Health	Research and Development	\$ 2,895,993	\$ 621,816,479	Y			\$ - \$ 1,453,289
93	113		Environmental Health	Research and Development	\$ 2,895,993	\$ 621,816,479	Y			\$ 519,886 \$ 1,252,673
93	121		Oral Diseases and Disorders Research	Research and Development	\$ 1,480,387	\$ 621,816,479	Y	University of Pittsburgh	CNVA00055576 (134310-1)	\$ - \$ 43,584
93	121		Oral Diseases and Disorders Research	Research and Development	\$ 1,480,387	\$ 621,816,479	Y			\$ - \$ 968,133
93	121		Oral Diseases and Disorders Research	Research and Development	\$ 1,480,387	\$ 621,816,479	Y			\$ 98,941 \$ 468,670
93	172		Human Genome Research	Research and Development	\$ 1,795,080	\$ 621,816,479	N	Johns Hopkins University	2002852861	\$ - \$ 298,260
93	172		Human Genome Research	Research and Development	\$ 1,795,080	\$ 621,816,479	Y	Johns Hopkins University	2003978433 AMENDMENT 1	\$ - \$ 526,387
93	172		Human Genome Research	Research and Development	\$ 1,795,080	\$ 621,816,479	Y			\$ - \$ 250,715
93	172		Human Genome Research	Research and Development	\$ 1,795,080	\$ 621,816,479	Y			\$ 196,545 \$ 719,718
93	173		Research Related to Deafness and Communication Disorders	Research and Development	\$ 647,261	\$ 621,816,479	N	Veterans Health Foundation	NIH 2019-1001	\$ - \$ 29,805
93	173		Research Related to Deafness and Communication Disorders	Research and Development	\$ 647,261	\$ 621,816,479	Y			\$ - \$ 273,446
93	173		Research Related to Deafness and Communication Disorders	Research and Development	\$ 647,261	\$ 621,816,479	Y			\$ 57,001 \$ 344,010
93	213		Research and Training in Complementary and Integrative Health	Research and Development	\$ 1,176,831	\$ 621,816,479	N	Georgetown University	411719 GR411710 PSU	\$ - \$ 27,911
93	213		Research and Training in Complementary and Integrative Health	Research and Development	\$ 1,176,831	\$ 621,816,479	N	Mount Sinai Medical Center	TACT2	\$ - \$ 9,492
93	213		Research and Training in Complementary and Integrative Health	Research and Development	\$ 1,176,831	\$ 621,816,479	Y			\$ - \$ 702,182
93	213		Research and Training in Complementary and Integrative Health	Research and Development	\$ 1,176,831	\$ 621,816,479	Y			\$ 143,890 \$ 437,246
93	226		Research on Healthcare Costs, Quality and Outcomes	Research and Development	\$ 726,596	\$ 621,816,479	N	Pennsylvania, University of	570280	\$ - \$ 25,822
93	226		Research on Healthcare Costs, Quality and Outcomes	Research and Development	\$ 726,596	\$ 621,816,479	N	RAND Corporation	SCON-00000017	\$ - \$ 104,057
93	226		Research on Healthcare Costs, Quality and Outcomes	Research and Development	\$ 726,596	\$ 621,816,479	N	Vanderbilt University Medical Center	VUMC87503	\$ - \$ 34,309
93	226		Research on Healthcare Costs, Quality and Outcomes	Research and Development	\$ 726,596	\$ 621,816,479	Y			\$ - \$ 214,818
93	226		Research on Healthcare Costs, Quality and Outcomes	Research and Development	\$ 726,596	\$ 621,816,479	Y			\$ 53,865 \$ 347,590
93	233		National Center on Sleep Disorders Research	Research and Development	\$ 466,252	\$ 621,816,479	Y			\$ - \$ 466,252
93	242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	N	Allen Institute of Artificial Intelligence (AI2)	AIP068713	\$ - \$ 21,247
93	242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	N	DePaul University	501455SG173-55	\$ - \$ 58,957
93	242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	N	Florida State University	R02128	\$ - \$ 1,000
93	242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	N	Geisinger Clinic	6919696	\$ - \$ 14,439
93	242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	N	Kansas, University of	FY2018-051	\$ - \$ 32,253
93	242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	N	McLean Hospital	401643	\$ - \$ 56,226
93	242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	N	Quadrant Biosciences Inc.	1293481860000	\$ - \$ 160,794
93	242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	N	Quadrant Biosciences Inc.	PCUSOMMH11347	\$ - \$ 14,311

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	N	University of Chicago	FP062571-B	\$ -	\$ (5,983)
93 242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	N	University of Illinois at Chicago	18057	\$ -	\$ 55,849
93 242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	N	Washington University in St. Louis	WU-19-103 PO 293456G	\$ -	\$ 90,263
93 242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	Y			\$ -	\$ 4,658,310
93 242		Mental Health Research Grants	Research and Development	\$ 6,649,183	\$ 621,816,479	Y			\$ 371,886	\$ 1,491,517
93 243		Substance Abuse and Mental Health Services Projects of Regional and National Sig	Research and Development	\$ 2,172,966	\$ 621,816,479	N	Child Health and Development Institute of Connecticut, Inc.	221-580	\$ -	\$ 58,783
93 243		Substance Abuse and Mental Health Services Projects of Regional and National Sig	Research and Development	\$ 2,172,966	\$ 621,816,479	N	COP: Department of Drug and Alcohol Program	4300655082	\$ 677,125	\$ 1,239,093
93 243		Substance Abuse and Mental Health Services Projects of Regional and National Sig	Research and Development	\$ 2,172,966	\$ 621,816,479	N	York/Adams MH IDD Program	230674	\$ -	\$ 7,823
93 243		Substance Abuse and Mental Health Services Projects of Regional and National Sig	Research and Development	\$ 2,172,966	\$ 621,816,479	N	York/Adams MH IDD Program	233323	\$ -	\$ 66,068
93 243		Substance Abuse and Mental Health Services Projects of Regional and National Sig	Research and Development	\$ 2,172,966	\$ 621,816,479	Y			\$ -	\$ 310,486
93 243		Substance Abuse and Mental Health Services Projects of Regional and National Sig	Research and Development	\$ 2,172,966	\$ 621,816,479	Y			\$ 97,973	\$ 435,969
93 262		Occupational Safety and Health Program	Research and Development	\$ 163,270	\$ 621,816,479	N	Marshfield Clinic Research Foundation	606871-00	\$ -	\$ 18,307
93 262		Occupational Safety and Health Program	Research and Development	\$ 163,270	\$ 621,816,479	N	Mary Imogene Bassett Hospital	5U540H007542 19	\$ -	\$ 790
93 262		Occupational Safety and Health Program	Research and Development	\$ 163,270	\$ 621,816,479	N	Mary Imogene Bassett Hospital	5U540H007542-20GB	\$ -	\$ 114,590
93 262		Occupational Safety and Health Program	Research and Development	\$ 163,270	\$ 621,816,479	N	Mary Imogene Bassett Hospital	5U540H007542-19GB	\$ -	\$ 5,911
93 273		Alcohol Research Programs	Research and Development	\$ 2,987,615	\$ 621,816,479	N	Minnesota, University of	A007345701	\$ -	\$ 24
93 273		Alcohol Research Programs	Research and Development	\$ 2,987,615	\$ 621,816,479	N	REAL Prevention LLC	233416	\$ -	\$ 20,296
93 273		Alcohol Research Programs	Research and Development	\$ 2,987,615	\$ 621,816,479	N	The Regents of the University of Michigan	SUBK00014961 PO 3006465570	\$ -	\$ 6,097
93 273		Alcohol Research Programs	Research and Development	\$ 2,987,615	\$ 621,816,479	N	Utah State University	201356-491	\$ -	\$ 264,779
93 273		Alcohol Research Programs	Research and Development	\$ 2,987,615	\$ 621,816,479	N	Utah State University	201356-491 09/12/2019 AMEND 3	\$ -	\$ 157,730
93 273		Alcohol Research Programs	Research and Development	\$ 2,987,615	\$ 621,816,479	Y			\$ -	\$ 2,179,864
93 273		Alcohol Research Programs	Research and Development	\$ 2,987,615	\$ 621,816,479	Y			\$ 216,075	\$ 358,825
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	Duke University	A03-1176	\$ -	\$ 23,938
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	Houston, University of	R-20-0011	\$ -	\$ 54,204
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	Minnesota, University of	P007183801	\$ -	\$ 56,816
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	New York University	F8621-02	\$ -	\$ 25,748
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	North Carolina, University of	5114624	\$ -	\$ 15,760
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	Northwestern University	60058507 PSU	\$ -	\$ 12,266
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	State University of New York - Buffalo	R1201849	\$ -	\$ 80,885
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	The Regents of the University of Michigan	3003718759	\$ -	\$ 4,214
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	The Regents of the University of Michigan	SUBK00012189 PO 3006200024	\$ -	\$ 39,892
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	University of Pittsburgh	AWD00000584 (134077-1)	\$ -	\$ 46,876
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	University of Pittsburgh	AWD00002374 (136029-1)	\$ -	\$ 186,364
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	University of Rochester	417871-G /UR FAO GR511145	\$ -	\$ 28,428
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	University of Texas Health Science Ctr	SA0000341	\$ -	\$ 427,400
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	University of Texas Health Science Ctr	SA0001044	\$ -	\$ 23,983
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	N	University of Wisconsin-Madison	0000000531	\$ -	\$ 47,068
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	Y			\$ -	\$ 2,913,621
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 8,449,734	\$ 621,816,479	Y			\$ 1,234,730	\$ 4,462,271
93 283		Centers for Disease Control and Prevention Investigations and Technical Assistan	Research and Development	\$ 48,437	\$ 621,816,479	N	Johns Hopkins Bloomberg School of Public Health	2004639926	\$ -	\$ 48,437
93 286		Discovery and Applied Research for Technological Innovations to Improve Human He	Research and Development	\$ 2,998,872	\$ 621,816,479	N	Actuated Medical, Inc.	5067-S01	\$ -	\$ 10,053

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 286		Discovery and Applied Research for Technological Innovations to Improve Human He	Research and Development	\$ 2,998,872	\$ 621,816,479	N	Aleo BME, Inc.	ALEOEB030462	\$ -	\$ 46,189
93 286		Discovery and Applied Research for Technological Innovations to Improve Human He	Research and Development	\$ 2,998,872	\$ 621,816,479	N	Minnesota, University of	N006269302	\$ -	\$ 265,676
93 286		Discovery and Applied Research for Technological Innovations to Improve Human He	Research and Development	\$ 2,998,872	\$ 621,816,479	N	Minnesota, University of	N006925701	\$ -	\$ 397,369
93 286		Discovery and Applied Research for Technological Innovations to Improve Human He	Research and Development	\$ 2,998,872	\$ 621,816,479	Y			\$ -	\$ 1,353,631
93 286		Discovery and Applied Research for Technological Innovations to Improve Human He	Research and Development	\$ 2,998,872	\$ 621,816,479	Y			\$ 297,161	\$ 925,954
93 297		Teenage Pregnancy Prevention Program	Research and Development	\$ 50,576	\$ 621,816,479	N	Women's Care Center of Erie County (The)	TPIAH193WCC	\$ -	\$ 50,576
93 301		Small Rural Hospital Improvement Grant Program	Research and Development	\$ 296,375	\$ 621,816,479	Y			\$ -	\$ 296,375
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 542,662	\$ 621,816,479	N	South Carolina, University of	21-4269	\$ -	\$ 2,864
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 542,662	\$ 621,816,479	N	University of Arizona	458879	\$ -	\$ 20,808
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 542,662	\$ 621,816,479	N	University of Central Florida	26036A01-03	\$ -	\$ 60,941
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 542,662	\$ 621,816,479	N	University of Chicago	AWD101843 (SUB00000451)	\$ -	\$ 3,552
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 542,662	\$ 621,816,479	N	University of Puerto Rico at Cayey	219899	\$ -	\$ 10,769
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 542,662	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	432098-19079	\$ -	\$ 73,332
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 542,662	\$ 621,816,479	Y			\$ -	\$ 32,605
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 542,662	\$ 621,816,479	Y			\$ 98,039	\$ 337,791
93 310		Trans-NIH Research Support	Research and Development	\$ 3,524,263	\$ 621,816,479	N	Columbia University	1(GG016281)	\$ -	\$ 70,226
93 310		Trans-NIH Research Support	Research and Development	\$ 3,524,263	\$ 621,816,479	N	Drexel University	900097	\$ -	\$ 17,550
93 310		Trans-NIH Research Support	Research and Development	\$ 3,524,263	\$ 621,816,479	N	New York University	19-A0-00-1003237 PROJ #114579	\$ -	\$ 555,740
93 310		Trans-NIH Research Support	Research and Development	\$ 3,524,263	\$ 621,816,479	N	Oregon, University of	281210C	\$ -	\$ 709,643
93 310		Trans-NIH Research Support	Research and Development	\$ 3,524,263	\$ 621,816,479	N	University of Pittsburgh	AWD00001053 (134698-7)	\$ -	\$ 29,976
93 310		Trans-NIH Research Support	Research and Development	\$ 3,524,263	\$ 621,816,479	Y			\$ -	\$ 18,575
93 310		Trans-NIH Research Support	Research and Development	\$ 3,524,263	\$ 621,816,479	Y			\$ 859,310	\$ 2,035,643
93 310	COVID-19	COVID-19 - Trans-NIH Research Support	Research and Development	\$ 3,524,263	\$ 621,816,479	N	Central Michigan University	F64627	\$ -	\$ 56,983
93 310	COVID-19	COVID-19 - Trans-NIH Research Support	Research and Development	\$ 3,524,263	\$ 621,816,479	N	University of Florida	SUB00002558	\$ -	\$ 29,927
93 315		Rare Disorders: Research, Surveillance, Health Promotion, and Education	Research and Development	\$ 63,780	\$ 621,816,479	Y			\$ -	\$ 63,780
93 350		National Center for Advancing Translational Sciences	Research and Development	\$ 2,924,625	\$ 621,816,479	N	Oregon State University OREGON STATE UNIVERSITY OFFICE OF	P0500A-B	\$ -	\$ 250,231
93 350		National Center for Advancing Translational Sciences	Research and Development	\$ 2,924,625	\$ 621,816,479	N	Research Foundation for Mental Hygiene I nc.	PO 152541	\$ -	\$ 164,799
93 350		National Center for Advancing Translational Sciences	Research and Development	\$ 2,924,625	\$ 621,816,479	N	University of Pittsburgh	AWD00000243 (134445-36)	\$ -	\$ 38,487
93 350		National Center for Advancing Translational Sciences	Research and Development	\$ 2,924,625	\$ 621,816,479	Y			\$ -	\$ 514,407
93 350		National Center for Advancing Translational Sciences	Research and Development	\$ 2,924,625	\$ 621,816,479	Y			\$ 38,974	\$ 1,956,701
93 351		Research Infrastructure Programs	Research and Development	\$ 2,380,430	\$ 621,816,479	Y			\$ -	\$ 1,062,425
93 351		Research Infrastructure Programs	Research and Development	\$ 2,380,430	\$ 621,816,479	Y			\$ 137,721	\$ 1,318,005
93 360		Biomedical Advanced Research and Development Authority (BARDA), Biodefense Medic	Research and Development	\$ 148,999	\$ 621,816,479	N	Microbiotix, Inc.	PENNSCARBXTT2019	\$ -	\$ 148,999
93 361		Nursing Research	Research and Development	\$ 721,899	\$ 621,816,479	N	Emory University	A227507	\$ -	\$ 21,066
93 361		Nursing Research	Research and Development	\$ 721,899	\$ 621,816,479	N	Northwell Health	AWD00001131-PSU	\$ -	\$ 21,594
93 361		Nursing Research	Research and Development	\$ 721,899	\$ 621,816,479	N	University of Maryland	1701115 PO#SR00004451	\$ -	\$ 167,995
93 361		Nursing Research	Research and Development	\$ 721,899	\$ 621,816,479	N	University of Miami	SPC-000340	\$ -	\$ 7,823
93 361		Nursing Research	Research and Development	\$ 721,899	\$ 621,816,479	Y			\$ -	\$ 431,597
93 361		Nursing Research	Research and Development	\$ 721,899	\$ 621,816,479	Y			\$ 8,779	\$ 71,824
93 391		Activities to Support State, Tribal, Local and Territorial (STLT) Health Departm	Research and Development	\$ 39,224	\$ 621,816,479	Y			\$ -	\$ 39,224
93 393		Cancer Cause and Prevention Research	Research and Development	\$ 4,458,422	\$ 621,816,479	N	Board of Regents of The University of Wisconsin System	0000000023	\$ -	\$ 10,635
93 393		Cancer Cause and Prevention Research	Research and Development	\$ 4,458,422	\$ 621,816,479	N	Temple University	261860-PSU	\$ -	\$ 141,498
93 393		Cancer Cause and Prevention Research	Research and Development	\$ 4,458,422	\$ 621,816,479	N	University of Puerto Rico	217570	\$ -	\$ 2,179
93 393		Cancer Cause and Prevention Research	Research and Development	\$ 4,458,422	\$ 621,816,479	Y			\$ -	\$ 2,208,178

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 393		Cancer Cause and Prevention Research	Research and Development	\$ 4,458,422	\$ 621,816,479	Y			\$ 347,431	\$ 2,095,932
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 830,545	\$ 621,816,479	N	Carnegie Mellon University	1090613-434032	\$ -	\$ 247,558
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 830,545	\$ 621,816,479	N	Carnegie Mellon University	1090614-435042	\$ -	\$ 35,273
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 830,545	\$ 621,816,479	N	Kaiser Permanente	209321-05	\$ -	\$ 65,084
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 830,545	\$ 621,816,479	N	The Regents of the University of Michiga	3004848468	\$ -	\$ 76,087
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 830,545	\$ 621,816,479	N	The Regents of the University of Michiga	SUBK00011540	\$ -	\$ 28,405
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 830,545	\$ 621,816,479	N	The Regents of the University of Michiga	SUBK00012128	\$ -	\$ 45,986
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 830,545	\$ 621,816,479	Y			\$ -	\$ 332,152
93 395		Cancer Treatment Research	Research and Development	\$ 650,667	\$ 621,816,479	N	Children's Hospital of Philadelphia	BIQSFP-COG AALL113111X51	\$ -	\$ 8,046
93 395		Cancer Treatment Research	Research and Development	\$ 650,667	\$ 621,816,479	N	ECOG-ACRIN Medical Research Foundation, Inc.	U10CA180820-06-PSCIIA	\$ -	\$ 19,713
93 395		Cancer Treatment Research	Research and Development	\$ 650,667	\$ 621,816,479	N	Icahn School of Medicine at Mount Sinai	0255-C921-4609	\$ -	\$ 4,246
93 395		Cancer Treatment Research	Research and Development	\$ 650,667	\$ 621,816,479	N	Louisville, University of	ULRF 14-1281	\$ -	\$ 7,581
93 395		Cancer Treatment Research	Research and Development	\$ 650,667	\$ 621,816,479	N	Louisville, University of	ULRF 20-0804-01	\$ -	\$ 28,139
93 395		Cancer Treatment Research	Research and Development	\$ 650,667	\$ 621,816,479	N	NRG Oncology	NRG-MACHTAY-GY7	\$ -	\$ 32,250
93 395		Cancer Treatment Research	Research and Development	\$ 650,667	\$ 621,816,479	N	Rector and Visitors of the University of Virginia	GBI0832 / PO2323865	\$ -	\$ 253,958
93 395		Cancer Treatment Research	Research and Development	\$ 650,667	\$ 621,816,479	N	Virginia Polytechnic Institute and State University	412536-19079	\$ -	\$ 540
93 395		Cancer Treatment Research	Research and Development	\$ 650,667	\$ 621,816,479	Y			\$ -	\$ 296,194
93 396		Cancer Biology Research	Research and Development	\$ 3,668,932	\$ 621,816,479	N	Cleveland Clinic Lerner College of Medicine	CCF21143188	\$ -	\$ 187,061
93 396		Cancer Biology Research	Research and Development	\$ 3,668,932	\$ 621,816,479	N	Loma Linda University	2050287-PSU-3	\$ -	\$ 45,080
93 396		Cancer Biology Research	Research and Development	\$ 3,668,932	\$ 621,816,479	N	Loma Linda University	2150287-PSU-4	\$ -	\$ 146,861
93 396		Cancer Biology Research	Research and Development	\$ 3,668,932	\$ 621,816,479	N	Oregon Health & Sciences University	1013137_PENNSTATE	\$ -	\$ 187,746
93 396		Cancer Biology Research	Research and Development	\$ 3,668,932	\$ 621,816,479	N	University of Pittsburgh	AWD00003405 (135524-2)	\$ -	\$ 2,034
93 396		Cancer Biology Research	Research and Development	\$ 3,668,932	\$ 621,816,479	N	Virginia, University of	GB10274 150997	\$ -	\$ 138,202
93 396		Cancer Biology Research	Research and Development	\$ 3,668,932	\$ 621,816,479	Y			\$ -	\$ 1,756,664
93 396		Cancer Biology Research	Research and Development	\$ 3,668,932	\$ 621,816,479	Y			\$ 293,043	\$ 1,205,284
93 398		Cancer Research Manpower	Research and Development	\$ 575,977	\$ 621,816,479	Y			\$ -	\$ 548,912
93 398		Cancer Research Manpower	Research and Development	\$ 575,977	\$ 621,816,479	Y			\$ 27,065	\$ 27,065
93 433		ACL National Institute on Disability, Independent Living, and Rehabilitation Res	Research and Development	\$ 666,318	\$ 621,816,479	Y			\$ -	\$ 18,951
93 433		ACL National Institute on Disability, Independent Living, and Rehabilitation Res	Research and Development	\$ 666,318	\$ 621,816,479	Y			\$ 150,321	\$ 647,367
93 550		Transitional Living for Homeless Youth	Research and Development	\$ 561	\$ 621,816,479	N	SafeNet	203732	\$ -	\$ 561
93 680		Medical Student Education	Research and Development	\$ 10,301	\$ 621,816,479	N	Oklahoma Health Sciences Center, University of	RS20192426-03	\$ -	\$ 10,301
93 732		Mental and Behavioral Health Education and Training Grants	Research and Development	\$ 269,176	\$ 621,816,479	Y			\$ -	\$ 269,176
93 738		PPHF: Racial and Ethnic Approaches to Community Health Program financed solely b	Research and Development	\$ 923,901	\$ 621,816,479	Y			\$ 139,996	\$ 849,800
93 738	COVID-19	COVID-19 - PPHF: Racial and Ethnic Approaches to Community Health Program financed solely b	Research and Development	\$ 923,901	\$ 621,816,479	Y			\$ -	\$ 74,101
93 788		Opioid STR	Research and Development	\$ 1,442,073	\$ 621,816,479	N	COP: Department of Corrections	4300645485	\$ -	\$ 69,763
93 788		Opioid STR	Research and Development	\$ 1,442,073	\$ 621,816,479	N	COP: Department of Drug and Alcohol Program	4100085617	\$ -	\$ 30,638
93 788		Opioid STR	Research and Development	\$ 1,442,073	\$ 621,816,479	N	COP: Department of Health	4300639680	\$ -	\$ 261,656
93 788		Opioid STR	Research and Development	\$ 1,442,073	\$ 621,816,479	N	Houston, University of	R-21-0029	\$ -	\$ 37,515
93 788		Opioid STR	Research and Development	\$ 1,442,073	\$ 621,816,479	Y			\$ -	\$ 272,505
93 788		Opioid STR	Research and Development	\$ 1,442,073	\$ 621,816,479	Y			\$ 1,624	\$ 257,329
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	N	Des Moines University	02-20-02 SUB2	\$ -	\$ 3,567
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	N	Duke University	2037894	\$ -	\$ 5,752
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	N	Kentucky, University of	3200002666-20-106	\$ -	\$ 27,728
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	N	Kentucky, University of	3200003472-21-015	\$ -	\$ 78,315

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	N	Minnesota, University of	N005406701 AMEND 2	\$ -	\$ 30,512
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	N	Minnesota, University of	N007979201	\$ -	\$ 74,061
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	N	Pennsylvania, University of	574392 PO 4626311	\$ -	\$ 107,197
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	N	University of Nevada, Reno	UNR-18-44	\$ -	\$ 56,211
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	N	University of Texas at Austin	UTA16-000756	\$ -	\$ 82,112
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	N	Vermont, University of	AWD00000123SUB00000060	\$ -	\$ 56,478
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	N	Washington University in St. Louis	WU-21-396	\$ -	\$ 5,487
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	Y			\$ -	\$ 7,476,137
93 837		Cardiovascular Diseases Research	Research and Development	\$ 9,965,737	\$ 621,816,479	Y			\$ 379,351	\$ 1,962,180
93 838		Lung Diseases Research	Research and Development	\$ 1,322,557	\$ 621,816,479	N	Brigham & Women's Hospital	122869	\$ -	\$ 379,220
93 838		Lung Diseases Research	Research and Development	\$ 1,322,557	\$ 621,816,479	N	COPD Foundation	5 U01 HL128954-05	\$ -	\$ 1,346
93 838		Lung Diseases Research	Research and Development	\$ 1,322,557	\$ 621,816,479	N	University of Colorado Denver	FY20.988.002	\$ -	\$ 11,214
93 838		Lung Diseases Research	Research and Development	\$ 1,322,557	\$ 621,816,479	N	University of Pittsburgh	AWD00002798 (416864-1)	\$ -	\$ 43,713
93 838		Lung Diseases Research	Research and Development	\$ 1,322,557	\$ 621,816,479	N	University of Pittsburgh	CNVA00046691(133106-16)	\$ -	\$ (626)
93 838		Lung Diseases Research	Research and Development	\$ 1,322,557	\$ 621,816,479	N	Wake Forest University Attn: Grants Accounting	290-101780-117620	\$ -	\$ 6,323
93 838		Lung Diseases Research	Research and Development	\$ 1,322,557	\$ 621,816,479	Y			\$ -	\$ 830,223
93 838	COVID-19	COVID-19 - Lung Diseases Research	Research and Development	\$ 1,322,557	\$ 621,816,479	N	University of Pittsburgh	CNVA00038682(134369-1)	\$ -	\$ 51,144
93 839		Blood Diseases and Resources Research	Research and Development	\$ 1,800,872	\$ 621,816,479	N	Actuated Medical, Inc.	5075-S01	\$ -	\$ 24,047
93 839		Blood Diseases and Resources Research	Research and Development	\$ 1,800,872	\$ 621,816,479	N	Children's Research Institute	ACRI 40-001 AMENDMENT 1	\$ -	\$ 222
93 839		Blood Diseases and Resources Research	Research and Development	\$ 1,800,872	\$ 621,816,479	N	Temple University	267434-PSU	\$ -	\$ 29,670
93 839		Blood Diseases and Resources Research	Research and Development	\$ 1,800,872	\$ 621,816,479	N	University of Maryland	67923-Z0155203	\$ -	\$ 3,315
93 839		Blood Diseases and Resources Research	Research and Development	\$ 1,800,872	\$ 621,816,479	N	University of Texas Health Science Ctr	166829/165808	\$ -	\$ 177,998
93 839		Blood Diseases and Resources Research	Research and Development	\$ 1,800,872	\$ 621,816,479	Y			\$ -	\$ 626,210
93 839		Blood Diseases and Resources Research	Research and Development	\$ 1,800,872	\$ 621,816,479	Y			\$ 155,323	\$ 939,410
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,013,431	\$ 621,816,479	N	Columbia University	2(GG012259)	\$ -	\$ 5,800
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,013,431	\$ 621,816,479	N	New York University Medical Center	19-A1-00-1000432; PROJ#113189	\$ -	\$ 1,792
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,013,431	\$ 621,816,479	N	Pennsylvania, University of	572781 PO 4601790	\$ -	\$ 1,209
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,013,431	\$ 621,816,479	N	University of Maryland	3000491 REQUEST:3369	\$ -	\$ 7,596
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,013,431	\$ 621,816,479	N	University of Maryland, School of Medicine	3000491 REQUEST: 4304	\$ -	\$ 3,798
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,013,431	\$ 621,816,479	N	University of Massachusetts	OSP2018039 PO WA00617531	\$ -	\$ 34,396
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,013,431	\$ 621,816,479	N	University of Texas Health Science Ctr	165503/164872	\$ -	\$ 73,480
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,013,431	\$ 621,816,479	Y			\$ -	\$ 1,867,809
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,013,431	\$ 621,816,479	Y			\$ 521,579	\$ 1,017,551
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Actuated Medical, Inc.	5059-S02	\$ -	\$ 522
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Arizona State University	ASUB00000567	\$ -	\$ 36,124
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Board of Regents of the University System of Georgia	SUB00002371	\$ -	\$ 28,495
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Children's Hospital of Philadelphia	204010521 PO 20193097	\$ -	\$ 105,607
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Children's Hospital of Philadelphia	3200040820	\$ -	\$ 648
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Connecticut, University of	UCHC7-67063357	\$ -	\$ 44,329
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Dynamic Entropy Technology LLC	226250	\$ -	\$ 60,142
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Georgia State University	SP00013024-02	\$ -	\$ (15,878)
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Georgia State University	SP00014262-01	\$ -	\$ 26,683
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Harvard Medical School	401536	\$ -	\$ 16,034
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Icahn School of Medicine at Mount Sinai	0255-7179-4609	\$ -	\$ 50,693
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Kaiser Foundation Research Institute	OOS030544-PSU	\$ -	\$ 42,719
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Kaiser Permanente	PSUCOMDK099882	\$ -	\$ 3,597

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Temple University	265300-PSU	\$ -	\$ 36,791
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	The Trustees of the University of Pennsylvania	580598 PO 4553028	\$ -	\$ 43,939
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	University of California at San Francisco	12271SC	\$ -	\$ 16,166
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	University of Texas Health Science Center	SUB 161564/161559	\$ -	\$ 33,721
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Washington University in St. Louis	WU-21-262	\$ -	\$ 2,716
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	N	Yale University	GR108900 (CON-80002282)	\$ -	\$ 12,218
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	Y			\$ -	\$ 5,543,096
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 9,375,500	\$ 621,816,479	Y			\$ 1,089,805	\$ 3,287,138
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	N	Actuated Medical, Inc.	5070-S01	\$ -	\$ 639
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	N	Columbia University	2(GG010847-01)	\$ -	\$ 126
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	N	Drexel University	900009-3	\$ -	\$ 4,189
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	N	Massachusetts General Hospital	232380	\$ -	\$ 80,680
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	N	Mayo Clinic	BER-224063-03 /PO 6663812	\$ -	\$ 11,544
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	N	Mayo Clinic	HMC-224063-03	\$ -	\$ (1,988)
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	N	Mayo Clinic	HMC-224063-04	\$ -	\$ 1,437
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	N	Rutgers-The State University of New Jersey	1803	\$ -	\$ 256
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	N	University of California at San Diego	66764208 PO S9001166	\$ 35,000	\$ 98,537
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	N	University of Cincinnati	011337-140228	\$ -	\$ 71
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	N	University of Pittsburgh	0061031 (131414-1)	\$ -	\$ 305,754
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	N	Utah, University of	10050533-04	\$ -	\$ 49,812
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	Y			\$ -	\$ 3,944,603
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,960,936	\$ 621,816,479	Y			\$ 290,700	\$ 1,465,276
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Carnegie Mellon University	1090598-425264	\$ -	\$ 14,223
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Children's Hospital Boston	GENFD0001835816	\$ -	\$ 379,478
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Children's Hospital Boston	GENFD0002008814	\$ -	\$ 139,720
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Colorado State University	G-45094-01	\$ -	\$ 65,268
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Cornell University	81060-10895	\$ -	\$ 220,569
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Johns Hopkins University	2002753700	\$ -	\$ 1,724
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Louisville, University of	ULRF_17-0750A-02	\$ -	\$ 17,931
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Microbiotix, Inc.	201106	\$ -	\$ 87
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	National Jewish Health	20083604	\$ -	\$ 1,734
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	North Carolina, University of	5103053	\$ -	\$ 1,312
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Novan Inc.	PSUA1143022	\$ -	\$ 65,766
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Stanford Medicine	62402848-165639	\$ -	\$ 126,143
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	The Jackson Laboratory	210310-0210-10	\$ -	\$ 84,986
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	The Regents of the University of Michigan	3003642650	\$ -	\$ 6,628
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	The Regents of the University of Michigan	SUBK00009188 PO 3005415261	\$ -	\$ 73,848
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	University of California at San Diego	80080601 PO S9001552	\$ -	\$ (1,165)
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	University of Illinois at Chicago	18076	\$ -	\$ 16,057
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	University of North Carolina Chapel Hill	5117468	\$ -	\$ 59,900

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	University of North Carolina Chapel Hill	5120489	\$ -	\$ 4,647
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	University of Texas Health Science Ctr	166875/166874	\$ -	\$ 35,213
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Utah, University of	10054720-02	\$ -	\$ 13,799
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Worcester Polytechnic Institute	10853-GR	\$ -	\$ 2,887
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	Y			\$ -	\$ 5,284,163
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	Y			\$ 789,344	\$ 2,385,660
93 855	COVID-19	COVID-19 - Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	Purdue University	11001048-006	\$ -	\$ 87,177
93 855	COVID-19	COVID-19 - Allergy and Infectious Diseases Research	Research and Development	\$ 9,121,979	\$ 621,816,479	N	The Jackson Laboratory	210310-0222-10	\$ -	\$ 34,224
93 859		Biomedical Research and Research Training	Research and Development	\$ 19,577,912	\$ 621,816,479	N	Arizona State University	17-133	\$ -	\$ 23,665
93 859		Biomedical Research and Research Training	Research and Development	\$ 19,577,912	\$ 621,816,479	N	Florida State University	R000002702	\$ -	\$ 79,751
93 859		Biomedical Research and Research Training	Research and Development	\$ 19,577,912	\$ 621,816,479	N	Georgetown University	AWD7772899-GR205577	\$ -	\$ 88,903
93 859		Biomedical Research and Research Training	Research and Development	\$ 19,577,912	\$ 621,816,479	N	Georgia, University of	SUB00001481	\$ -	\$ 8,624
93 859		Biomedical Research and Research Training	Research and Development	\$ 19,577,912	\$ 621,816,479	N	Minnesota, University of	N007645301	\$ -	\$ 208,211
93 859		Biomedical Research and Research Training	Research and Development	\$ 19,577,912	\$ 621,816,479	N	University of Florida	UFDSP00012167	\$ -	\$ 167,414
93 859		Biomedical Research and Research Training	Research and Development	\$ 19,577,912	\$ 621,816,479	N	University of Texas Southwestern Medical Center	GMO-200801 PO 0000002034	\$ -	\$ 152,937
93 859		Biomedical Research and Research Training	Research and Development	\$ 19,577,912	\$ 621,816,479	Y			\$ -	\$ 16,053,421
93 859		Biomedical Research and Research Training	Research and Development	\$ 19,577,912	\$ 621,816,479	Y			\$ 517,458	\$ 2,794,986
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Actuated Medical, Inc.	5073-S02	\$ -	\$ 143,696
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Arizona State University	ASUB00000125	\$ -	\$ 23,995
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Baylor University	7000001045	\$ -	\$ 62,643
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Board of Regents of The University of Wisconsin System	576K424	\$ -	\$ 3,393
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Board of Regents of The University of Wisconsin System	656K250 AMEND 5	\$ -	\$ 115,552
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Boston University	4500003422	\$ -	\$ 1,949
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Children's Hospital Boston	GENFD0001754391	\$ -	\$ 11,817
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Children's Hospital Boston	GENFD0001859791	\$ -	\$ 21,481
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Colorado, University of	FY20.812.002	\$ -	\$ 16,895
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Dartmouth College	R1376	\$ -	\$ 13,057
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Delaware, University of	57652	\$ -	\$ 35,106
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Georgetown University	412457 GR412396-PSU	\$ -	\$ 56,959
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Icahn School of Medicine at Mount Sinai	0254-3553-4609 (PROJECT 1)	\$ -	\$ 76,487
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Johns Hopkins University	2002903678 AMENDMENT NO. 5	\$ -	\$ 96,909
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	New York University	19-A0-00-1002957	\$ -	\$ 91,463
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	North Carolina, University of	5050088 AMEND 3	\$ -	\$ 427
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	North Carolina, University of	5116987	\$ -	\$ 33,855
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Northwestern University	60056369 PSU	\$ -	\$ 15,914
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	State University of New York - Buffalo	R1196764	\$ -	\$ (2)
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	Syracuse University	31095-05456-S01	\$ -	\$ 7,419
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	The Regents of the University of Michigan	SUBK00013309 PO 3006058031	\$ -	\$ 9,209
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	N	University of Massachusetts Amherst	20-015667	\$ -	\$ 4,137
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	Y			\$ -	\$ 5,458,040
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 11,689,494	\$ 621,816,479	Y			\$ 1,069,340	\$ 5,389,093
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Adelphi University	230720	\$ -	\$ 18,424
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Albert Einstein College of Medicine	311216 - AMENDMENT 4	\$ -	\$ 113,291
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Albert Einstein College of Medicine	311437	\$ -	\$ 128,175
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Albert Einstein College of Medicine	311437 PO #823549	\$ -	\$ 229,360
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Albert Einstein College of Medicine	31172R	\$ -	\$ 18,408
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Albert Einstein College of Medicine	31172T	\$ -	\$ 4,888
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Albert Einstein College of Medicine	31172X	\$ -	\$ 286,007
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Beth Israel Deaconess Medical Center	01028856	\$ -	\$ 14,662

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Board of Regents of The University of Wisconsin System	0000000785	\$ -	\$ 151,615
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Board of Regents of The University of Wisconsin System	0000000785	\$ 1,457	\$ 2,286
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Clemson University	2316-209-2014348	\$ -	\$ 221,870
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Elon University	17-001	\$ -	\$ 1
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Florida State University	R02163	\$ -	\$ 92,033
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Hebrew Rehabilitation Center	10.10.91551 AMENDMENT 5	\$ -	\$ 36,521
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Kent State University	403029-PSU	\$ -	\$ 46,902
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Klein Buendel, Inc.	0327-0177-000	\$ -	\$ 272,963
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Massachusetts General Hospital	233477	\$ -	\$ 68,274
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Proactive Life, Inc.	234190	\$ -	\$ 114,653
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	University of Illinois	17783-00	\$ -	\$ 24,618
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	University of Maryland	1600725	\$ -	\$ 48,036
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	University of Maryland	F301912-1	\$ -	\$ 173,492
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	University of Pittsburgh	AWD00003000 (135310-12)	\$ -	\$ 8,733
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	University of South Florida	1229-1118-00-A	\$ -	\$ 35,950
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	University of Southern California	115487434 PO 10782313	\$ -	\$ 46,595
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	Y			\$ -	\$ 3,101,544
93 866		Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	Y			\$ 1,619,890	\$ 5,298,908
93 866	COVID-19	COVID-19 - Aging Research	Research and Development	\$ 10,600,372	\$ 621,816,479	N	Brown University	00001381	\$ -	\$ 42,163
93 867		Vision Research	Research and Development	\$ 2,393,552	\$ 621,816,479	N	THE RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK	87527/2/1159967	\$ -	\$ 8,983
93 867		Vision Research	Research and Development	\$ 2,393,552	\$ 621,816,479	Y			\$ -	\$ 989,619
93 867		Vision Research	Research and Development	\$ 2,393,552	\$ 621,816,479	Y			\$ 1,135,286	\$ 1,394,950
93 879		Medical Library Assistance	Research and Development	\$ 471,003	\$ 621,816,479	N	University of Colorado Denver	FY19.995.002	\$ -	\$ 104,928
93 879		Medical Library Assistance	Research and Development	\$ 471,003	\$ 621,816,479	Y			\$ -	\$ 366,075
93 884		Grants for Primary Care Training and Enhancement	Research and Development	\$ 514,432	\$ 621,816,479	Y			\$ -	\$ 514,432
93 918		Grants to Provide Outpatient Early Intervention Services with Respect to HIV Dis	Research and Development	\$ 436,372	\$ 621,816,479	Y			\$ -	\$ 374,601
93 918	COVID-19	COVID-19 - Grants to Provide Outpatient Early Intervention Services with Respect to HIV Dis	Research and Development	\$ 436,372	\$ 621,816,479	Y			\$ -	\$ 61,771
93 928		Special Projects of National Significance	Research and Development	\$ 59,765	\$ 621,816,479	Y			\$ 14,288	\$ 59,765
93 959		Block Grants for Prevention and Treatment of Substance Abuse	Research and Development	\$ 420,876	\$ 621,816,479	N	COP: Commission on Crime and Delinquency	28768	\$ -	\$ 208,416
93 976		Primary Care Medicine and Dentistry Clinician Educator Career Development Awards	Research and Development	\$ 179,494	\$ 621,816,479	Y			\$ -	\$ 179,494
93 991		Preventive Health and Health Services Block Grant	Research and Development	\$ 7,500	\$ 621,816,479	N	Public Health Management Corporation	7491062101	\$ -	\$ 7,500
93 RD	0001758482	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Children's Hospital Boston	0001758482	\$ -	\$ 5,928
93 RD	0061271(414279-1)	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	University of Pittsburgh	0061271(414279-1)	\$ -	\$ 40,719
93 RD	080-18007-S23301	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Thomas Jefferson University	080-18007-S23301	\$ -	\$ 6,607
93 RD	1 R41 EY029192-01A	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Skyran Biologics, Inc.	1 R41 EY029192-01A	\$ -	\$ 8,933
93 RD	11954SC	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	The Regents of the University of California	11954SC	\$ -	\$ 10,940
93 RD	129210 NICHD-2019-POP02	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Duke Clinical Research Institute	129210 NICHD-2019-POP02	\$ -	\$ 1,184
93 RD	13(GG015997-01)	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Columbia University	13(GG015997-01)	\$ -	\$ 10,659
93 RD	136566 37208164-AA	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	The MITRE Corporation	136566 37208164-AA	\$ -	\$ 45,000
93 RD	139164 R01 CA212190-01A1	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Children's Hospital of Philadelphia	139164 R01 CA212190-01A1	\$ -	\$ (689)

See notes to schedule of expenditures of federal awards.

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93	RD	143322 AALL0434	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Children's Hospital of Philadelphia	143322 AALL0434	\$ - \$ (9,266)
93	RD	143322 COG ANBL 1531	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Children's Hospital of Philadelphia	143322 COG ANBL 1531	\$ - \$ 607
93	RD	182225	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	COP: Department of Health	182225	\$ - \$ 119,112
93	RD	200-2016-90385	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	Y			\$ - \$ 214,446
93	RD	201267-607	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Utah State University	201267-607	\$ - \$ 211,029
93	RD	201267-607	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Utah State University	201267-607	\$ - \$ 11,966
93	RD	HHSN272201700411	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Utah State University	HHSN272201700411	\$ - \$ 11,966
93	RD	203-7903	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Duke Clinical Research Institute	203-7903	\$ - \$ 18,661
93	RD	20CTA-DM0024	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Leidos	20CTA-DM0024	\$ - \$ 684,240
93	RD	215359 NICHD-2019-POP02	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Duke Clinical Research Institute	215359 NICHD-2019-POP02	\$ - \$ 773
93	RD	219461	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Johns Hopkins University	219461	\$ - \$ 187,859
93	RD	225529	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Family Health Council of Central PA	225529	\$ - \$ 105,502
93	RD	239503	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Task Force for Global Health, Inc.	239503	\$ - \$ 38,525
93	RD	242964	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Penngood LLC	242964	\$ - \$ 11,280
93	RD	243109	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Penngood LLC	243109	\$ - \$ 13,551
93	RD	243824	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Genesis Laboratories, Inc.	243824	\$ - \$ 69
93	RD	3258990621	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Children's Hospital of Philadelphia	3258990621	\$ - \$ 14,011
93	RD	33880-5	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Georgia Regents University	33880-5	\$ - \$ 20,340
93	RD	34-3501-2084-001	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Nebraska, University of	34-3501-2084-001	\$ - \$ 10,338
93	RD	4300635273	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	COP: Department of Health	4300635273	\$ - \$ 11,015
93	RD	4300638616	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	COP: Department of Human Services	4300638616	\$ - \$ 35,800
93	RD	572292 PO 4553028	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Pennsylvania, University of	572292 PO 4553028	\$ - \$ 2,173
93	RD	572292 PO 4698697	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Pennsylvania, University of	572292 PO 4698697	\$ - \$ 107,058
93	RD	578130 PO 4378658	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Pennsylvania, University of	578130 PO 4378658	\$ - \$ 89,025
93	RD	579627	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	The Trustees of the University of Pennsylvania	579627	\$ - \$ 18,858
93	RD	587178 SUB 614004	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Triad National Security, LLC (was LANL)	587178 SUB 614004	\$ - \$ 11,673
93	RD	75D30119C05743	U.S. Department of Health and Human Services Other	Research and Development	\$ 4,275,646	\$ 621,816,479	Y			\$ - \$ 290,907
93	RD	75D30120C0772	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Children's Hospital Boston	75D30120C0772	\$ - \$ 6,331
93	RD	75F40120P00425	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	Y			\$ - \$ 58,091
93	RD	8622.PSU.01	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	National Opinion Research Center	8622.PSU.01	\$ - \$ 180,899
93	RD	86675/2/1158241	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	THE RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK	86675/2/1158241	\$ - \$ 215,149
93	RD	8901210920	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Children's Hospital of Philadelphia	8901210920	\$ - \$ 9,091

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ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93	RD 98880674 PO 50674601	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	University of Southern California	98880674 PO 50674601	\$ -	\$ 23,040
93	RD A17-0496-S001-P0628598, A02	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	University of California at Santa Cruz	A17-0496-S001-P0628598, A02	\$ -	\$ 2,180
93	RD A226571	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Emory University	A226571	\$ -	\$ 655
93	RD ADVANCE	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Children's Hospital of Philadelphia	ADVANCE	\$ -	\$ 224
93	RD ADVANCE	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Pennsylvania, University of	ADVANCE	\$ -	\$ (3,901)
93	RD ADVANCE	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	The Regents of the University of Michiga	ADVANCE	\$ -	\$ (3,424)
93	RD ADVANCE	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	University of Kansas Medical Center	ADVANCE	\$ -	\$ 17,635
93	RD ADVANCE	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	University of Pittsburgh	ADVANCE	\$ -	\$ 500
93	RD ALEOGM130231	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Aleo BME, Inc.	ALEOGM130231	\$ -	\$ 32,705
93	RD AWD00000483SUB00000228	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Vermont, University of	AWD00000483SUB00000228	\$ -	\$ 4,770
93	RD BRE 15-016	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Hoosier Cancer Research Network	BRE 15-016	\$ -	\$ 3,541
93	RD CNVA00046691(133099-3)	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	University of Pittsburgh	CNVA00046691(133099-3)	\$ -	\$ 960
93	RD F0998-01	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	New York University	F0998-01	\$ -	\$ 58,547
93	RD FY20.291.002	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	University of Colorado Denver	FY20.291.002	\$ -	\$ 17,979
93	RD GENFD0001865529	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Children's Hospital Boston	GENFD0001865529	\$ -	\$ 453,071
93	RD GR101891 (CON-80001103)	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Yale University	GR101891 (CON-80001103)	\$ -	\$ 38,381
93	RD LTS13930	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Genzyme Inc.	LTS13930	\$ -	\$ 2,413
93	RD NYU ACTIV4	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	New York University School of Medicine	NYU ACTIV4	\$ -	\$ 96,104
93	RD PSU-RES201811	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Respana Therapeutics, Inc.	PSU-RES201811	\$ -	\$ 110
93	RD RC085400	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Idaho Department of Health and Welfare	RC085400	\$ -	\$ 103,286
93	RD RTB-004	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Massachusetts General Hospital	RTB-004	\$ -	\$ 21,441
93	RD SCON-00000119	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	RAND Corporation	SCON-00000119	\$ -	\$ 17,154
93	RD SUBK00008131-EXT 3	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	The Regents of the University of Michiga	SUBK00008131-EXT 3	\$ -	\$ 3,428
93	RD T929855	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Emory University	T929855	\$ -	\$ 27,315
93	RD UC 217661	U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	University of Alabama at Birmingham	UC 217661	\$ -	\$ 49,958
93	RD COVID-19 - A373595	COVID-19 - U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Emory University	A373595	\$ -	\$ 122,094
93	RD COVID-19 - 3RJK7	COVID-19 - U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	New Mexico, University of	3RJK7	\$ -	\$ 171,109
93	RD COVID-19 - FY21ITN448	COVID-19 - U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Benaroya Research Institute at Virginia Mason	FY21ITN448	\$ -	\$ 29,083
93	RD COVID-19 - HHNSN272201400007C	COVID-19 - U.S. Department of Health and Human Services Research and Development	Research and Development	\$ 4,275,646	\$ 621,816,479	N	Johns Hopkins University	HHNSN272201400007C	\$ 46,046	\$ 166,894
95	007	Research and Data Analysis	Research and Development	\$ 18,545	\$ 621,816,479	N	National Prevention Science Coalition	233421	\$ -	\$ 18,545
97	045	Cooperating Technical Partners	Research and Development	\$ 65,260	\$ 621,816,479	Y			\$ -	\$ 65,260
97	061	Centers for Homeland Security	Research and Development	\$ 307,738	\$ 621,816,479	N	Arizona State University	ASUB00000367	\$ 123,832	\$ 230,983

See notes to schedule of expenditures of federal awards.

THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2021

ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
97	061	Centers for Homeland Security	Research and Development	\$ 307,738	\$ 621,816,479	N	University of Nebraska Omaha	44-0108-1001-406	\$ -	\$ 76,755
98	001	USAID Foreign Assistance for Programs Overseas	Research and Development	\$ 106,208	\$ 621,816,479	N	Kansas State University	A21-0346-S004	\$ -	\$ 5,743
98	001	USAID Foreign Assistance for Programs Overseas	Research and Development	\$ 106,208	\$ 621,816,479	N	National Academy of Sciences	2000010563	\$ -	\$ 65,770
98	001	USAID Foreign Assistance for Programs Overseas	Research and Development	\$ 106,208	\$ 621,816,479	N	Solidarity Center	238657	\$ -	\$ 34,695
99	RD 060201280	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	N	L3Harris Technologies, Inc.	060201280	\$ -	\$ 21,813
99	RD 060201492	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	N	L3Harris Technologies, Inc.	060201492	\$ -	\$ 7,932
99	RD 090051SC-PSU-ARL-01	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	N	ZETA Associates Inc.	090051SC-PSU-ARL-01	\$ -	\$ 448,765
99	RD 11-G-5134/0005	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 126,302
99	RD 124818/140089	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	N	Johns Hopkins University	124818/140089	\$ -	\$ 131
99	RD 14-C-0150	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 574,502
99	RD 1575913 AMEND 4	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	N	Jet Propulsion Laboratory	1575913 AMEND 4	\$ -	\$ 56,411
99	RD 160151-PSU-ARL-01	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	N	ZETA Associates Inc.	160151-PSU-ARL-01	\$ -	\$ 113,139
99	RD 16855	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	N	Composite Technology Development Inc.	16855	\$ -	\$ 241,204
99	RD 17-G-2163/20F2223	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 4,056
99	RD 17G2163/ORDER 20F2223	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 117,154
99	RD 18-G-2165/19F2208	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 139,122
99	RD 2016-16021000002/007	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 33,638
99	RD 2016-16021000002/008	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 1,535,293
99	RD 2016-1602100002/008	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ (574,798)
99	RD 20191201	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 43,555
99	RD 26539	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 1,557
99	RD 27552	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 367,252
99	RD 4000171054	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	N	Battelle - Oak Ridge National Laboratory	4000171054	\$ -	\$ 54,349
99	RD 485704	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	485704	\$ -	\$ 57,334
99	RD 500819	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	N	Battelle - Pacific Northwest National Laboratory	500819	\$ -	\$ 98,860
99	RD DO 0003	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 8,585
99	RD FA8750-17-C-0254	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 320,433
99	RD HM0476-20-C-0016	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 1,477,132
99	RD IPA BREWER 2018	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 39,221
99	RD IPA CLINGERMAN 2019	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 284,317
99	RD IPA DALY 2019	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 93,971
99	RD IPA LEIBNER 2020	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 285,984
99	RD IPA NEIGHBORS 20	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 130,309
99	RD LI00163644	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	N	Raytheon Company	LI00163644	\$ -	\$ 8,837
99	RD N0001410F0004	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 88,812
99	RD N0001410F0010	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 11,530
99	RD N0001416F3013	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 136,500
99	RD N0001416FM010	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 697,344
99	RD N0001417FM004	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 35,292
99	RD N0001419C1067	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 42,862
99	RD N0001419C2031	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 1,168,176
99	RD N0001419C2033	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 415,215
99	RD N0001419FM004	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 200,345
99	RD N0001420FM005	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 490,898
99	RD N0002418F8402	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 45,276
99	RD N0002418F8407	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 18,359
99	RD N0002420F8330	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 14,959
99	RD N0002420F8338	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 135,664
99	RD N0002420F8347	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 272,607
99	RD N0002420F8348	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 290,006
99	RD N0002420F8349	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 40,907
99	RD N0002420F8358	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 601,121
99	RD N0002420F8359	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 1,302,279
99	RD N0002420F8361	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 163,205
99	RD N0002420F8362	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 116,231
99	RD N0002420F8363	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 392,237
99	RD N0002420F8364	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y			\$ -	\$ 399,036

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2021**

ALN	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended	
99	RD	N0002420F8370	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y		\$ -	\$ 1,417,622	
99	RD	N6600120P6234	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y		\$ -	\$ 23,112	
99	RD	NONE	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y		\$ -	\$ (113,224)	
99	RD	U16-002 019 PO 4104400084	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	N	Lockheed Martin Corporation, Inc. [MP]	U16-002 019 PO 4104400084	\$ -	\$ 50,983
99	RD	VELEA IPA 2020	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y		\$ -	\$ 276,199	
99	RD	W81XWH-17-1-0197	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y		\$ -	\$ 105,522	
99	RD	W911W6-19-C-0083	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y		\$ -	\$ 258,352	
99	RD	W912HQ-16-C-0006	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y		\$ -	\$ 853,633	
99	RD	W912HQ-17-C-0041	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y		\$ -	\$ 8,623	
99	RD	YENCHKO IPA 2018	USG Awards Classified Contracts Research and Development	Research and Development	\$ 16,107,743	\$ 621,816,479	Y		\$ -	\$ 31,700	
10	561		State Administrative Matching Grants for the Supplemental Nutrition Assistance P	SNAP	\$ 18,797,031	\$ 18,797,031	N	COP: Department of Human Services	4100085762	\$ 10,444,939	\$ 11,273,157
10	561		State Administrative Matching Grants for the Supplemental Nutrition Assistance P	SNAP	\$ 18,797,031	\$ 18,797,031	N	COP: Department of Human Services	4100088743	\$ 5,431,977	\$ 7,523,874
84	027		Special Education Grants to States	Special Education (IDEA)	\$ 475,259	\$ 281,831	N	COP: Bureau of Special Education	062-21-0042	\$ -	\$ 281,831
84	007		Federal Supplemental Opportunity Grant	Student Financial Assistance	\$ 6,471,833	\$ 570,084,196	Y			\$ -	\$ 6,471,833
84	033		Federal Work Study Program	Student Financial Assistance	\$ 1,979,975	\$ 570,084,196	Y			\$ -	\$ 1,979,975
84	038		Federal Perkins Loan Program	Student Financial Assistance	\$ 26,251,465	\$ 570,084,196	Y			\$ -	\$ 26,251,465
84	063		Federal Pell Grant Program	Student Financial Assistance	\$ 79,572,213	\$ 570,084,196	Y			\$ -	\$ 79,572,213
84	268		Federal Direct Loan Program	Student Financial Assistance	\$ 455,807,351	\$ 570,084,196	Y			\$ -	\$ 455,807,351
93	342		Health Professions Student Loan Program	Student Financial Assistance	\$ 1,359	\$ 570,084,196	Y			\$ -	\$ 1,359
84	042		Office of Postsecondary Education (OPE): Student Support Services Program	TRIO	\$ 563,126	\$ 3,433,390	Y			\$ -	\$ 494,411
84	042		TRIO Student Support Services	TRIO	\$ 563,126	\$ 3,433,390	Y			\$ -	\$ 68,715
84	044		TRIO Talent Search	TRIO	\$ 1,209,344	\$ 3,433,390	Y			\$ -	\$ 1,209,344
84	047		TRIO Upward Bound	TRIO	\$ 1,095,232	\$ 3,433,390	N	Northwest Tri-County Intermediate Unit	70465	\$ -	\$ 8,447
84	047		TRIO Upward Bound	TRIO	\$ 1,095,232	\$ 3,433,390	Y			\$ -	\$ 1,086,785
84	066		TRIO Educational Opportunity Centers	TRIO	\$ 269,749	\$ 3,433,390	Y			\$ -	\$ 269,749
84	217		TRIO McNair Post-Baccalaureate Achievement	TRIO	\$ 295,939	\$ 3,433,390	Y			\$ -	\$ 295,939
								Total	\$ 62,980,213	\$ 1,373,798,087	

See notes to schedule of expenditures of federal awards.

THE PENNSYLVANIA STATE UNIVERSITY
NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2021

1. BASIS OF PRESENTATION AND ACCOUNTING

The purpose of the Schedule of Expenditures of Federal Awards (“the Schedule”) is to present a summary of the activities of The Pennsylvania State University (“the University”) for the year ended June 30, 2021 which have been financed by the United States Government. The federal award information is presented in accordance with the provisions of Office of Management and Budget (“OMB”) Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (“Uniform Guidance”). The Schedule is prepared on the accrual basis of accounting.

Expenditures for federal awards are determined using the cost accounting principles and procedures set forth in OMB Circular A-21, *Cost Principles for Educational Institutions*, and the uniform administrative requirements as set forth in OMB Circular A-110, *Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations*, or the administrative and cost principles contained in Uniform Guidance, as applicable. Amounts passed through to subrecipients represent amounts paid to a third party for effort performed in support of the University’s federal awards.

Because the Schedule presents only a selected portion of the activities of the University, it is not intended to, and does not, present the financial position, results of operations or cash flows of the University.

The University’s consolidated financial statements are prepared on the accrual basis of accounting in conformity with accounting principles generally accepted in the United States of America (GAAP). The Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) is the source of Authoritative GAAP. The University’s consolidated financial statements include statements of financial position, activities and cash flows. In accordance with FASB ASC requirements, net assets and the changes in net assets are classified as with donor restrictions or without donor restrictions.

Negative amounts shown on the Schedule represent adjustments or credits made in the normal course of business to amounts reported as expenditures in prior years. Pass-through entity identifying numbers are presented where available.

2. INDIRECT COST RATE

The University has not elected to use the 10% de minimis indirect cost rate.

3. FEDERAL LOAN PROGRAMS

The University administers the following federal loan programs:

Title	ALN	Federal Capital Contribution for the Year Ended June 30, 2021	Loan Expenditures And Disbursements	Outstanding Balance at June 30, 2021
Federal Perkins Loan Program	84.038	\$ -	\$ -	\$ 26,251,465
Health Professions Student Loan Program	93.342	-	-	1,359

The above expenditures for the loan programs include disbursements and expenditures such as loans to students and administrative expenditures. The Schedule only includes administrative allowances charged to the loan program.

4. FEDERAL DIRECT LOAN PROGRAM

The University participates in the Federal Direct Student Loan Program (ALN 84.268) including Federal Stafford Loans and Federal PLUS Loans. Loan disbursements under the program for the year ended June 30, 2021 totaled \$455,807,351.

5. SUMMARY SCHEDULE

Programs:	<u>ALN</u>	<u>Subrecipient Expenditures</u>	<u>Expenditures</u>
Research and development cluster:			
Direct funding		\$ 42,000,975	\$ 549,681,867
Direct funding – COVID-19		285,520	3,187,491
Pass-through funds – Commonwealth of Pennsylvania		980,394	6,739,260
Pass-through funds – other institutions		764,704	60,154,561
Pass-through funds – other institutions – COVID-19		<u>112,747</u>	<u>2,053,300</u>
Total research and development cluster		<u>44,144,340</u>	<u>621,816,479</u>
Student financial aid cluster (direct):			
Department of Education:			
Federal Supplemental Educational Opportunity Grant	84.007	-	6,471,833
Federal Work Study Program	84.033	-	1,979,975
Federal Perkins Loan Program	84.038	-	26,251,465
Federal Pell Grant Program	84.063	-	79,572,213
Federal Direct Loan Program	84.268	-	455,807,351
Department of Health and Human Services:			
Health Professions Student Loan Program	93.342	-	<u>1,359</u>
Total student financial aid cluster		-	<u>570,084,196</u>
Other programs:			
Expanded Food and Nutrition Education Program	10.514	-	1,967,525
Airport Improvement Program	20.106	-	4,931,838
COVID-19 – Airport Improvement Program	20.106	-	2,037,240
COVID-19 – Education Stabilization Fund	84.425	-	118,283,833
Other direct funding		1,289,238	21,669,492
Other direct funding – COVID-19		46,595	286,303
Other pass-through funds – Commonwealth of Pennsylvania		17,472,302	29,331,419
Other pass-through funds – Commonwealth of Pennsylvania – COVID-19		-	1,070,103
Other pass-through funds – other institutions		27,738	2,050,096
Other pass-through funds – other institutions – COVID-19		-	<u>269,563</u>
Total other programs		<u>18,835,873</u>	<u>181,897,412</u>
Total programs		<u>\$ 62,980,213</u>	<u>\$ 1,373,798,087</u>



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INDEPENDENT AUDITORS' 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

To the Board of Trustees of The Pennsylvania State University
University Park, Pennsylvania

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 consolidated financial statements of The Pennsylvania State University and its subsidiaries (the "University"), which comprise the consolidated statement of financial position as of June 30, 2021, and the related consolidated statement of activities and consolidated cash flows for the year then ended, and the related notes to the consolidated financial statements, and have issued our report thereon dated December 17, 2021, which contained an unmodified opinion on those consolidated financial statements and which included an emphasis of matter paragraph regarding the University's change in method of accounting for leases, effective July 1, 2020, due to the adoption of Accounting Standard Codification Topic 842, *Leases*.

The consolidated financial statements of the University include various subsidiaries as outlined in Note 1 to the consolidated financial statements. The financial statements of Penn State Health, including subsidiaries Nittany Health, Inc.; Saint Joseph's Medical Group; Saint Joseph's Regional Health Network; Penn State Community Medical Group; Central PA Health Network; Penn State Health Hampden Medical Center; Penn State Health Lancaster Medical Center; Penn State Health Life Lion, LLC; Holy Spirit Medical Center; and The Corporation for Penn State subsidiaries, including The Pennsylvania State University Philanthropic Fund and Ben Franklin Technology Center of Central & Northern PA; which were audited by us; and the financial statements of Nittany Insurance Company, which was audited by other auditors, were not audited in accordance with *Government Auditing Standards*, and accordingly, this report does not include reporting on internal control over financial reporting or instances of reportable noncompliance associated with these entities.

Internal Control Over Financial Reporting

In planning and performing our audit of the consolidated financial statements, we considered the University's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the consolidated financial statements, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we do not express an opinion on the effectiveness of the University'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 entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a 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 and therefore, material weaknesses or significant deficiencies may exist that have not been identified. We did identify a deficiency in internal control, described in the accompanying schedule of findings and questioned costs as item 2021-001 that we consider to be a material weakness.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the University's consolidated 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 consolidated financial statements. 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 Standards*.

The University's Response to Finding

The University's response to the finding identified in our audit is described in the accompanying schedule of findings and questioned costs. The University's response was not subjected to the auditing procedures applied in the audit of the consolidated financial statements and, accordingly, we express no opinion on it.

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 University'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 University's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Deloitte & Touche LLP

December 17, 2021



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INDEPENDENT AUDITORS' REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM; REPORT ON INTERNAL CONTROL OVER COMPLIANCE; AND REPORT ON SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS REQUIRED BY THE UNIFORM GUIDANCE

To the Board of Trustees of The Pennsylvania State University
University Park, Pennsylvania

Report on Compliance for Each Major Federal Program

We have audited The Pennsylvania State University and its subsidiaries (the "University") compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the University's major federal programs for the year ended June 30, 2021. The University's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Our audit, described below, did not include the operations of The Corporation for Penn State subsidiaries, including Nittany Insurance Company; Penn State Recycling Markets Center; The Pennsylvania State University Philanthropic Fund; Research Park Management Corporation; Research Park Hotel Corporation; Ben Franklin Technology Center of Central & Northern PA; and Penn State Research Foundation, because these subsidiaries did not expend federal awards.

The University's consolidated financial statements include the operations of Penn State Health and its subsidiaries ("Penn Health") and the Pennsylvania College of Technology ("PCT"), which expended federal awards which are not included in the University's schedule of expenditures of federal awards during the year ended June 30, 2021, except Penn Health subsidiary, Milton S. Hershey Medical Center, which received federal awards and are included in the University's schedule of expenditures of federal awards. Our audit, described below, did not include the federal awards of Penn Health and PCT because Penn Health and PCT engaged other auditors to perform an audit of compliance.

Management's Responsibility

Management is responsible for compliance with the federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

Auditors' Responsibility

Our responsibility is to express an opinion on compliance for each of the University's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained

in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the University's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the University's compliance.

Opinion on Each Major Federal Program

In our opinion, the University complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2021.

Report on Internal Control Over Compliance

Management of the University is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the University's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of University's internal control over compliance.

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

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

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance

We have audited the consolidated financial statements of the University as of and for the year ended June 30, 2021, and have issued our report thereon dated December 17, 2021, which contained an unmodified opinion on those consolidated financial statements. Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by the Uniform Guidance and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated 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 expenditure of federal awards is fairly stated in all material respects in relation to the consolidated financial statements as a whole.

Deloitte & Touche LLP

July 14, 2022

THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF FINDINGS AND QUESTIONED COSTS
FOR THE YEAR ENDED JUNE 30, 2021

SECTION I—SUMMARY OF AUDITORS' RESULTS		
<i>Financial Statements</i>		
Type of report the auditor issued on whether the financial statements audited were prepared in accordance with GAAP: UNMODIFIED		
Internal control over financial reporting:		
• Material weakness (es) identified?	<input checked="" type="checkbox"/> _X_ yes	<input type="checkbox"/> _no
• Significant deficiency (ies) identified?	<input type="checkbox"/> _yes	<input checked="" type="checkbox"/> _X_ none reported
Noncompliance material to financial statements noted?	<input type="checkbox"/> _yes	<input checked="" type="checkbox"/> _X_ no
Federal Awards		
Internal control over major federal programs:		
• Material weakness (es) identified?	<input type="checkbox"/> _yes	<input checked="" type="checkbox"/> _X_ no
• Significant deficiency (ies) identified?	<input type="checkbox"/> _yes	<input checked="" type="checkbox"/> _X_ none reported
Type of auditor's report issued on compliance for major federal programs: Unmodified.		
Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)?	<input type="checkbox"/> _ yes	<input checked="" type="checkbox"/> _X_ no
Identification of major federal programs:		
<ul style="list-style-type: none"> • Research and Development Cluster - (See "Schedule of Expenditures of Federal Awards" for Cluster) • Education Stabilization Fund Under the Coronavirus AID, Relief, and Economic Security Act – ALN # 84.425 • Airport Improvement Program and COVID-19 Airport Programs – ALN # 20.106 • Expanded Food and Nutrition Education Program – ALN # 10.514 		
Dollar threshold used to distinguish between Type A and Type B programs:	\$ 4,121,394	
Auditee qualified as low-risk auditee?	<input checked="" type="checkbox"/> _X_ yes	<input type="checkbox"/> _no

THE PENNSYLVANIA STATE UNIVERSITY

SECTION II – FINANCIAL STATEMENT FINDINGS - Material Weakness

Recording of Grant and Gift Income: Finding: 2021-001

Criteria - In accordance with Accounting Standards Codification (ASC) 958-605, unconditional gifts of cash are recognized as revenue upon receipt, and accounts receivable should not be recognized on amounts spent in excess of the original gift, and revenue should not be deferred.

Condition - The University did not appropriately record as gift revenue certain cash receipts that in fact were gifts, and instead recorded the cash as grants, which resulted in a deferral of revenue. In addition, the University incorrectly recorded accounts receivable for expected grant reimbursements for money spent in excess of the cash received.

More specifically, gifts were received at academic units where the respective unit financial offices were responsible for recording gift and grant revenue received within the previous Enterprise Resource Planning (ERP) system. In many instances and over the course of many years, gifts received were incorrectly recorded as grants, and the corresponding revenue was deferred. In addition, Financial Reporting incorrectly recorded accounts receivable for expected future grant reimbursements based upon how the grant was initially recorded.

Cause - The University did not have appropriately designed and implemented internal controls regarding the recording of gift and grant revenue activity within the previous ERP system. As part of its internal controls, the University also did not perform subsequent reviews or reconciliations of the incorrectly recorded cash that was being deferred and the corresponding receivables that were recorded. Financial Reporting did not perform reviews and reconciliations as part of the financial closing process that would have identified and corrected the errors on a timely basis.

Effect - Over the course of many years, this resulted in a cumulative overstatement of \$113.2 million of deferred revenue and \$40.3 million of accounts receivable as of June 30, 2020.

Recommendation – The respective unit financial offices responsible for recording gift and grant revenue should recognize unconditional gifts of cash as revenue upon receipt, and accounts receivable should not be recognized on amounts spent in excess of the original gift, and revenue should not be deferred. Financial Reporting should perform reviews and reconciliations as part of the financial closing process that would identify and correct the errors on a timely basis.

Views of Responsible Officials - As part of management's remediation plan, management has implemented a new ERP system which will better enable the proper recording of gift and grant revenue. In addition, management is providing training to the financial offices on how gift and grant revenue should be recorded along with other corrective actions. Management is also currently in the process of designing and implementing a review control at the University Financial Reporting level that will enable Financial Reporting to detect a material misstatement related to gift and grant revenue received at the academic units on a timely basis. This control is expected to be performed on a quarterly basis and will include a review of relevant supporting documentation.

THE PENNSYLVANIA STATE UNIVERSITY

SUMMARY SCHEDULE OF PRIOR YEAR AUDIT FINDINGS FOR THE YEAR ENDED JUNE 30, 2021

The following schedule contains the finding reference number and title for the finding(s) included in the June 30, 2020 report and the status of each finding as of June 30, 2021.

Reference Number	Program	Corrective Action
2020-001	Federal Agency: U.S. Department of Health and Human Services/Health Resources and Services Administration Federal Program: Small Rural Hospital Improvement Grant Program/Coronavirus State Hospital Improvement Program ALN # Number: 93.301 Compliance Requirement: Reporting/ Federal Funding Accountability and Transparency Act	Corrected
