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

**The Pennsylvania State University
Fiscal Year Ended June 30, 2020**

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, 2020**

TABLE OF CONTENTS

| | |
|---|-----|
| Letter of Transmittal | 3 |
| Independent Auditors' Report together with Audited Financial Statements of the University | 6 |
| Schedule of Expenditures of Federal Awards | 45 |
| Notes to Schedule of Expenditures of Federal Awards | 95 |
| 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 <i>Government Auditing Standards</i> | 97 |
| 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 | 99 |
| Schedule of Findings and Questioned Costs | 102 |
| Summary Schedule of Prior Year Audit Findings | 106 |



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

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

March 29, 2021

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, 2020 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

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Enclosures

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Audited Financial Statements

The Pennsylvania State University
Fiscal Year Ended June 30, 2020

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, 2020 and 2019, and the related consolidated statements of activities and cash flows for the years 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 audits. We conducted our audits 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; and the Milton S. Hershey 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, 2020 and 2019, and the changes in its consolidated net assets and its consolidated cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated November 4, 2020, 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

November 4, 2020

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
ASSETS
JUNE 30, 2020 AND 2019
(in thousands)

| | <u>June 30, 2020</u> | <u>June 30, 2019</u> |
|---|----------------------|----------------------|
| Current assets: | | |
| Cash and cash equivalents | \$ 2,359,553 | \$ 2,178,713 |
| Short-term investments | 740,790 | 407,442 |
| Deposits held by bond trustees | 257,192 | 90,353 |
| Deposits held for others | 40,871 | 40,587 |
| Accounts receivable, net of allowances | 746,126 | 656,826 |
| Contributions receivable, net | 45,267 | 40,523 |
| Loans to students, net of allowances | 6,331 | 7,767 |
| Inventories | 58,927 | 52,516 |
| Prepaid expenses and other assets | 153,935 | 137,764 |
| Total current assets | <u>4,408,992</u> | <u>3,612,491</u> |
| Noncurrent assets: | | |
| Deposits held by bond trustees | 18,800 | 28,400 |
| Contributions receivable, net | 163,320 | 139,007 |
| Loans to students, net of allowances | 42,431 | 46,329 |
| Total investment in plant, net | 5,974,192 | 5,588,943 |
| Beneficial interest in perpetual trusts | 24,509 | 23,898 |
| Investments | 6,610,518 | 6,304,490 |
| Other assets | 170,480 | 177,398 |
| Total noncurrent assets | <u>13,004,250</u> | <u>12,308,465</u> |
| | | |
| Total assets | <u>\$ 17,413,242</u> | <u>\$15,920,956</u> |

See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
LIABILITIES AND NET ASSETS
JUNE 30, 2020 AND 2019
(in thousands)

| | <u>June 30, 2020</u> | <u>June 30, 2019</u> |
|--|----------------------|----------------------|
| Current liabilities: | | |
| Accounts payable and other accrued expenses | \$ 976,903 | \$ 728,510 |
| Deferred revenue | 343,127 | 364,875 |
| Long-term debt | 177,803 | 60,475 |
| Present value of annuities payable | 6,954 | 6,829 |
| Accrued postretirement benefits | 57,318 | 57,457 |
| Total current liabilities | <u>1,562,105</u> | <u>1,218,146</u> |
| Noncurrent liabilities: | | |
| Deposits held in custody for others | 23,382 | 25,328 |
| Deferred revenue | 598 | 615 |
| Long-term debt | 3,336,205 | 1,590,177 |
| Present value of annuities payable | 49,610 | 50,220 |
| Accrued postretirement benefits | 2,287,496 | 2,166,578 |
| Refundable United States Government student loans | 40,019 | 47,309 |
| Other liabilities | 289,547 | 285,752 |
| Total noncurrent liabilities | <u>6,026,857</u> | <u>4,165,979</u> |
| Total liabilities | <u>7,588,962</u> | <u>5,384,125</u> |
| Net assets: | | |
| Without donor restrictions - | | |
| Designated for specific purposes | 3,121,070 | 4,108,982 |
| Net investment in plant | 3,619,773 | 3,543,893 |
| Total without donor restrictions - The Pennsylvania State University | <u>6,740,843</u> | <u>7,652,875</u> |
| Noncontrolling interest | 259,126 | 252,217 |
| Total without donor restrictions | <u>6,999,969</u> | <u>7,905,092</u> |
| With donor restrictions | 2,824,311 | 2,631,739 |
| Total net assets | <u>9,824,280</u> | <u>10,536,831</u> |
| Total liabilities and net assets | <u>\$17,413,242</u> | <u>\$15,920,956</u> |

See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENT OF ACTIVITIES
FOR THE YEAR ENDED JUNE 30, 2020
(in thousands)

| | Without Donor Restrictions | With Donor Restrictions | Total |
|--|-------------------------------|----------------------------|---------------------|
| Operating revenues and other support: | | | |
| Tuition and fees, net of discounts of \$236,874 | \$ 1,824,603 | \$ - | \$ 1,824,603 |
| Commonwealth of Pennsylvania - | | | |
| Appropriations | 323,792 | - | 323,792 |
| Special contracts | 77,450 | - | 77,450 |
| Department of General Services projects | 909 | - | 909 |
| United States Government grants and contracts | 584,406 | - | 584,406 |
| Private grants and contracts | 200,071 | - | 200,071 |
| Gifts and pledges | 73,558 | 21,611 | 95,169 |
| Endowment spending | 126,397 | - | 126,397 |
| Other investment income | 151,459 | 1,865 | 153,324 |
| Sales and services of educational activities | 111,328 | - | 111,328 |
| Recovery of indirect costs | 201,075 | - | 201,075 |
| Auxiliary enterprises | 418,111 | - | 418,111 |
| Health System revenue | 2,639,262 | - | 2,639,262 |
| Other sources | 40,051 | - | 40,051 |
| Net assets released from restrictions | 16,120 | (16,120) | - |
| Total operating revenues and other support | <u>6,788,592</u> | <u>7,356</u> | <u>6,795,948</u> |
| Operating expenses: | | | |
| Educational and general - | | | |
| Instruction | 1,440,195 | - | 1,440,195 |
| Research | 954,603 | - | 954,603 |
| Public service | 119,117 | - | 119,117 |
| Academic support | 398,719 | - | 398,719 |
| Student services | 213,140 | - | 213,140 |
| Institutional support | 416,602 | - | 416,602 |
| Total educational and general | <u>3,542,376</u> | <u>-</u> | <u>3,542,376</u> |
| Auxiliary enterprises | 438,058 | - | 438,058 |
| Health System expense | 2,606,724 | - | 2,606,724 |
| Total operating expenses | <u>6,587,158</u> | <u>-</u> | <u>6,587,158</u> |
| Increase in net assets from operating activities | 201,434 | 7,356 | 208,790 |
| Nonoperating activities: | | | |
| Gifts and pledges | - | 127,880 | 127,880 |
| Current year investment returns | 201,691 | 63,165 | 264,856 |
| Endowment appreciation utilized | (109,697) | - | (109,697) |
| Changes in funds held by others in perpetuity | - | 638 | 638 |
| Write-offs and disposals of assets | (12,447) | - | (12,447) |
| Nonperiodic change in postretirement benefit plan | (52,422) | - | (52,422) |
| Other components of net periodic postretirement benefit cost | (79,591) | - | (79,591) |
| Actuarial adjustment on annuities payable | - | (6,467) | (6,467) |
| Pension prefunding expense | (1,061,000) | - | (1,061,000) |
| Increase (decrease) in net assets from nonoperating activities | <u>(1,113,466)</u> | <u>185,216</u> | <u>(928,250)</u> |
| Increase (decrease) in net assets - The Pennsylvania State University | (912,032) | 192,572 | (719,460) |
| Noncontrolling interest: | | | |
| Excess of revenues over expenses | 6,909 | - | 6,909 |
| Increase in net assets - noncontrolling interest | <u>6,909</u> | <u>-</u> | <u>6,909</u> |
| Increase (decrease) in total net assets | (905,123) | 192,572 | (712,551) |
| Net assets at the beginning of the year | 7,905,092 | 2,631,739 | 10,536,831 |
| Net assets at the end of the year | <u>\$ 6,999,969</u> | <u>\$ 2,824,311</u> | <u>\$ 9,824,280</u> |

See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENT OF ACTIVITIES
FOR THE YEAR ENDED JUNE 30, 2019
(in thousands)

| | Without Donor Restrictions | With Donor Restrictions | Total |
|--|-------------------------------|----------------------------|----------------------|
| Operating revenues and other support: | | | |
| Tuition and fees, net of discounts of \$230,201 | \$ 1,815,212 | \$ - | \$ 1,815,212 |
| Commonwealth of Pennsylvania - | | | |
| Appropriations | 313,967 | - | 313,967 |
| Special contracts | 74,613 | - | 74,613 |
| Department of General Services projects | 15,096 | - | 15,096 |
| United States Government grants and contracts | 518,913 | - | 518,913 |
| Private grants and contracts | 208,207 | - | 208,207 |
| Gifts and pledges | 82,290 | 24,187 | 106,477 |
| Endowment spending | 117,470 | - | 117,470 |
| Other investment income | 96,898 | 2,711 | 99,609 |
| Sales and services of educational activities | 108,532 | - | 108,532 |
| Recovery of indirect costs | 190,753 | - | 190,753 |
| Auxiliary enterprises | 487,725 | - | 487,725 |
| Health System revenue, net of provision for bad debts of \$67,188 | 2,508,876 | - | 2,508,876 |
| Other sources | 11,087 | - | 11,087 |
| Net assets released from restrictions | 60,326 | (60,326) | - |
| Total operating revenues and other support | 6,609,965 | (33,428) | 6,576,537 |
| Operating expenses: | | | |
| Educational and general - | | | |
| Instruction | 1,382,148 | - | 1,382,148 |
| Research | 891,346 | - | 891,346 |
| Public service | 118,241 | - | 118,241 |
| Academic support | 387,035 | - | 387,035 |
| Student services | 216,357 | - | 216,357 |
| Institutional support | 418,167 | - | 418,167 |
| Total educational and general | 3,413,294 | - | 3,413,294 |
| Auxiliary enterprises | 465,294 | - | 465,294 |
| Health System expense | 2,401,501 | - | 2,401,501 |
| Total operating expenses | 6,280,089 | - | 6,280,089 |
| Increase (decrease) in net assets from operating activities | 329,876 | (33,428) | 296,448 |
| Nonoperating activities: | | | |
| Gifts and pledges | - | 88,716 | 88,716 |
| Current year investment returns | 264,188 | 78,706 | 342,894 |
| Endowment appreciation utilized | (96,811) | - | (96,811) |
| Changes in funds held by others in perpetuity | - | 287 | 287 |
| Write-offs and disposals of assets | (7,240) | - | (7,240) |
| Nonperiodic change in postretirement benefit plan | 61,205 | - | 61,205 |
| Other components of net periodic postretirement benefit cost | (96,972) | - | (96,972) |
| Actuarial adjustment on annuities payable | - | (4,661) | (4,661) |
| Increase in net assets from nonoperating activities | 124,370 | 163,048 | 287,418 |
| Increase in net assets - The Pennsylvania State University | 454,246 | 129,620 | 583,866 |
| Noncontrolling interest: | | | |
| Excess of revenues over expenses | 28,571 | - | 28,571 |
| Increase in net assets - noncontrolling interest | 28,571 | - | 28,571 |
| Increase in total net assets | 482,817 | 129,620 | 612,437 |
| Net assets at the beginning of the year | 7,422,275 | 2,502,119 | 9,924,394 |
| Net assets at the end of the year | \$ 7,905,092 | \$ 2,631,739 | \$ 10,536,831 |

See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED JUNE 30, 2020 AND 2019
(in thousands)

| | <u>June 30, 2020</u> | <u>June 30, 2019</u> |
|--|----------------------|----------------------|
| Cash flows from operating activities: | | |
| (Decrease) increase in net assets | \$ (712,551) | \$ 612,437 |
| Adjustments to reconcile change in net assets to net cash (used in) provided by operating activities - | | |
| Actuarial adjustment on annuities payable | 6,467 | 4,661 |
| Contributions restricted for long-term investment | (108,909) | (115,551) |
| Interest and dividends restricted for long-term investment | (39,747) | (75,444) |
| Net realized and unrealized gains on long-term investments | (359,645) | (366,667) |
| Depreciation expense | 436,222 | 412,577 |
| Amortization (gain) expense | (26) | 1,171 |
| Write-offs and disposals of assets | 12,495 | 7,240 |
| Contributions of land, buildings and equipment | (9,604) | (44,452) |
| Provision for bad debts | 8,617 | 84,410 |
| Increase in deposits held for others | (283) | (3,743) |
| Decrease (increase) in receivables | 314 | (137,644) |
| Increase in inventories | (6,411) | (3,794) |
| Increase in prepaid expenses and other assets | (3,877) | (22,077) |
| Increase in accounts payable and other accrued expenses | 205,827 | 44,667 |
| (Decrease) increase in deferred revenue | (21,778) | 6,742 |
| Increase in accrued postretirement benefits | 120,780 | 30,479 |
| Net cash (used in) provided by operating activities | <u>(472,109)</u> | <u>435,012</u> |
| Cash flows from investing activities: | | |
| Purchase of land, buildings and equipment | (854,158) | (715,582) |
| Increase in deposits held by bond trustees | (157,239) | (16,094) |
| Repayments and advances on student loans | (10,190) | (3,059) |
| Collections on student loans | 7,702 | 7,503 |
| Purchase of investments | (4,517,307) | (2,886,333) |
| Proceeds from sale of investments | 4,180,128 | 2,891,401 |
| Net cash used in investing activities | <u>(1,351,064)</u> | <u>(722,164)</u> |
| Cash flows from financing activities: | | |
| Contributions restricted for long-term investment | 108,909 | 115,551 |
| Interest and dividends restricted for long-term investment | 39,747 | 75,444 |
| Payments of annuity obligations | (7,947) | (6,858) |
| Proceeds from long-term debt | 3,184,360 | 250,158 |
| Principal payments on long-term debt | (1,322,158) | (58,369) |
| Proceeds related to government student loan funds, net of collection costs | 1,102 | 834 |
| Net cash provided by financing activities | <u>2,004,013</u> | <u>376,760</u> |
| Net increase in cash and cash equivalents | 180,840 | 89,608 |
| Cash and cash equivalents at the beginning of the year | <u>2,178,713</u> | <u>2,089,105</u> |
| Cash and cash equivalents at the end of the year | <u>\$ 2,359,553</u> | <u>\$ 2,178,713</u> |

Supplemental disclosures of cash flow information (Note 2)

See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2020 AND 2019

1. THE UNIVERSITY AND RELATED ENTITIES

The Pennsylvania State University (“the University”), which was created as an instrumentality of the Commonwealth of Pennsylvania (“the 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 (“the 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 (“the 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.

The University classifies its activities in the accompanying consolidated statements of activities as operating and nonoperating. Operating activities primarily include all income and expenses related to carrying out the University's educational, research, and outreach mission. Operating revenues also include contributions and investment return used to fund current operations.

Nonoperating activities include investment return, net of amounts designated for current operations; contributions and other resources to be retained in perpetuity; present value adjustments of annuities payable; gains or losses on disposal of property and equipment; nonperiodic changes and other components of postretirement benefits; and other activities considered to be of a more unusual or non-recurring nature.

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.

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 included in deferred revenue reflects summer semester tuition collected prior to June 30, but applied to the subsequent fiscal year, as the University does not split summer semester revenue between fiscal years. Tuition receipts of \$149.6 million, included in deferred revenue at June 30, 2019, were recognized during the year ended June 30, 2020. Tuition receipts of \$147.5 million, included in deferred revenue at June 30, 2018, were recognized during the year ended June 30, 2019. 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 \$79.5 million, included in deferred revenue at June 30, 2019, were recognized during the year ended June 30, 2020. Grants and contracts receipts of \$75.2 million, included in deferred revenue at June 30, 2018, were recognized during the year ended June 30, 2019. The University has entered into numerous grants and contracts, with periods of performance ending at various dates from July 1, 2020 through December 31, 2050. The estimated performance obligations remaining under these grants and contracts as of June 30, 2020 total \$778.8 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, 2019 and 2018 were recognized during the years ended June 30, 2020 and 2019, respectively. 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 significant in 2019.

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 2020 and 2019, a decrease of \$2.1 million and \$3.0 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 \$36.0 million and \$30.4 million for the years ended June 30, 2020 and 2019, respectively, and is 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 \$76.6 million and \$60.4 million during 2020 and 2019, respectively.

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, 2020 and 2019. 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, 2020 and 2019 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 statements of cash flows for the years ended June 30:

| <i>(in thousands of dollars)</i> | <u>2020</u> | <u>2019</u> |
|--|-------------|-------------|
| Interest paid | \$ 72,817 | \$ 59,135 |
| Non-cash acquisitions of land, buildings and equipment | 10,980 | 53,425 |

Capitalized costs accrued related to construction are \$34.1 million and \$76.2 million as of June 30, 2020 and 2019, respectively. Taxes paid for 2020 and 2019 are considered immaterial. Cash and cash equivalents include certain investments in highly liquid instruments with initial 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, net at June 30 consists of the following:

| <i>(in thousands of dollars)</i> | <u>2020</u> | <u>2019</u> |
|--|-------------------|-------------------|
| Grants and contracts, net of allowance of \$2,173 and \$2,105 | \$ 177,086 | \$ 163,761 |
| Patient accounts receivable, net of allowance of \$91,899 at June 30, 2019 | 306,120 | 348,331 |
| Student receivables, net of allowance of \$14,706 and \$15,467 | 45,169 | 50,978 |
| Investment and interest receivable | 153,441 | 25,520 |
| Other, net of allowance of \$7,515 and \$7,299 | 64,310 | 68,236 |
| Total accounts receivable, net | <u>\$ 746,126</u> | <u>\$ 656,826</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.

For patient accounts receivable at June 30, 2019, the balance reflects an allowance for doubtful accounts that was based on management's analysis of contractually due amounts associated with services provided to patients who have third-party coverage (for example, for expected uncollectible deductibles and copayments or for payors who were known to be having financial difficulties that made the realization of amounts due unlikely). For receivables from self-pay patients at June 30, 2019, the subsidiaries of the Health System recorded a provision for bad debts in the period of service on the basis of past experience, which indicated that many patients were unable or unwilling to pay the portion of their bill for which they were financially responsible. In estimating the allowance for doubtful accounts, account age was taken into consideration. The difference between the standard rates (or the discounted rates if negotiated) and the amounts actually collected after all reasonable collection efforts had been exhausted was charged off against the allowance for doubtful accounts. For patient accounts receivable at June 30, 2020, no allowance is reflected due to the adoption of ASC Topic 606.

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. At June 30, 2020 and 2019, student loans represent 0.3% and 0.3% of total assets, respectively.

Funds advanced by the federal government of \$40.0 million and \$47.3 million at June 30, 2020 and 2019, respectively, are ultimately refundable to the government and are classified as liabilities in the consolidated statements of financial position. The University is liquidating its Perkins portfolio through collections of outstanding Perkins loans. 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:

| <i>(in thousands of dollars)</i> | <u>2020</u> | <u>2019</u> |
|--|------------------|------------------|
| Loans to students: | | |
| Federal government loan programs: | | |
| Perkins loan program | \$ 31,410 | \$ 37,053 |
| Health Professions Student Loans and Loans for Disadvantaged Students | <u>4</u> | <u>11</u> |
| Federal government loan programs | 31,414 | 37,064 |
| Institutional loan programs | <u>20,412</u> | <u>20,726</u> |
| | 51,826 | 57,790 |
| Less allowance for doubtful accounts: | | |
| Balance, beginning of year | (3,694) | (3,443) |
| Provision for doubtful accounts | <u>630</u> | <u>(251)</u> |
| Balance, end of year | <u>(3,064)</u> | <u>(3,694)</u> |
| Loans to students, net | <u>\$ 48,762</u> | <u>\$ 54,096</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 are as follows:

| | <i>(in thousands of dollars)</i> | | | | |
|---------------------------------------|----------------------------------|-------------------|------------------------|--------------------------|------------------|
| | <u>45 days or less</u> | <u>46-75 days</u> | <u>76-105 days</u> | <u>Over 105 days</u> | <u>Total</u> |
| <u>2020</u> | | | | | |
| Loans to students: | | | | | |
| Federal government loan programs | \$ 25,833 | \$ 32 | \$ 34 | \$ 5,515 | \$ 31,414 |
| Institutional loan programs | <u>17,245</u> | <u>20</u> | <u>21</u> | <u>3,126</u> | <u>20,412</u> |
| Total loans to students | <u>43,078</u> | <u>52</u> | <u>55</u> | <u>8,641</u> | <u>51,826</u> |
| Allowance for doubtful accounts: | | | | | |
| Federal government loan programs | | | | | (436) |
| Institutional loan programs | | | | | <u>(2,628)</u> |
| Total allowance for doubtful accounts | | | | | <u>(3,064)</u> |
| Total loans to students, net | | | | | <u>\$ 48,762</u> |

| | <i>(in thousands of dollars)</i> | | | | |
|---------------------------------------|----------------------------------|-------------------|------------------------|--------------------------|------------------|
| | <u>45 days or less</u> | <u>46-75 days</u> | <u>76-105 days</u> | <u>Over 105 days</u> | <u>Total</u> |
| <u>2019</u> | | | | | |
| Loans to students: | | | | | |
| Federal government loan programs | \$ 30,702 | \$ 29 | \$ 31 | \$ 6,302 | \$ 37,064 |
| Institutional loan programs | <u>17,571</u> | <u>16</u> | <u>15</u> | <u>3,124</u> | <u>20,726</u> |
| Total loans to students | <u>48,273</u> | <u>45</u> | <u>46</u> | <u>9,426</u> | <u>57,790</u> |
| Allowance for doubtful accounts: | | | | | |
| Federal government loan programs | | | | | (484) |
| Institutional loan programs | | | | | <u>(3,210)</u> |
| Total allowance for doubtful accounts | | | | | <u>(3,694)</u> |
| Total loans to students, net | | | | | <u>\$ 54,096</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. Investments in equity securities with readily determinable fair values and all investments in debt securities are reported at fair values with gains and losses included in the consolidated statements of activities. In the management of investments, 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 statements of activities.

The estimated fair value amounts for marketable debt, equity and fixed income securities held by the University have been determined using available market information as supplied by the various financial institutions that act as trustees or custodians for the University. For non-liquid holdings, generally limited partnership investments in private real estate, venture capital, private equity, natural resources, and private debt, estimated fair value is determined based upon financial information provided by the general partner. This financial information includes assumptions and methods that were reviewed by University management. The University believes that the estimated fair value is a reasonable estimate of market value as of June 30, 2020 and 2019. Because the limited partnerships are not readily marketable, the estimated 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.

Income on operating investments and income used for the annual distribution under the annual spending policy for endowments are reported in operating revenues within 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 is comprised of the following:

| <i>(in thousands of dollars)</i> | <u>2020</u> | <u>2019</u> |
|-----------------------------------|---------------------|---------------------|
| Land | \$ 167,894 | \$ 157,852 |
| Buildings | 8,287,052 | 7,744,942 |
| Improvements other than buildings | 778,983 | 722,140 |
| Equipment | <u>1,861,050</u> | <u>1,750,893</u> |
| Total plant | 11,094,979 | 10,375,827 |
| Less accumulated depreciation | <u>(5,120,787)</u> | <u>(4,786,884)</u> |
| Total investment in plant, net | <u>\$ 5,974,192</u> | <u>\$ 5,588,943</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 \$436.2 million and \$412.6 million for the fiscal years ended June 30, 2020 and 2019, respectively. The University has certain building and equipment lease agreements in effect which are considered capital leases that are included as long-term debt in the statements of financial position. These leases have been capitalized at the lower of fair market value or net present value of the minimum lease payments. Buildings and equipment held under capital leases are amortized on a straight-line basis over the shorter of the lease terms or the estimated useful lives of the assets. The capitalized cost and accumulated depreciation of the leases at June 30, 2020 and 2019 were \$121.4 million and \$72.4 million, and \$130.9 million and \$71.5 million, respectively.

Accounts Payable and Other Accrued Expenses

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

| <i>(in thousands of dollars)</i> | <u>2020</u> | <u>2019</u> |
|--|-------------------|-------------------|
| Accounts payable (non-Health System) | \$ 274,635 | \$ 270,540 |
| Health System accounts payable and other accrued expenses | 372,786 | 323,729 |
| Health System Medicare APP | 160,320 | - |
| Accrued payroll and other related liabilities | 139,604 | 113,249 |
| Accrued bond interest | 25,696 | 17,865 |
| Student deposits | <u>3,862</u> | <u>3,127</u> |
| Total accounts payable and other accrued expenses | <u>\$ 976,903</u> | <u>\$ 728,510</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 for the years ended June 30:

| | <i>(in thousands of dollars)</i> |
|-----------------------------|----------------------------------|
| Balance as of June 30, 2018 | \$ 81,231 |
| Adjustment to liability | 8,540 |
| Accretion expense | 3,516 |
| Liabilities settled | <u>(10,121)</u> |
| Balance as of June 30, 2019 | 83,166 |
| Adjustment to liability | 12,750 |
| Accretion expense | 3,681 |
| Liabilities settled | <u>(4,167)</u> |
| Balance as of June 30, 2020 | <u>\$ 95,430</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:

| <i>(in thousands of dollars)</i> | <u>2020</u> | <u>2019</u> |
|---|---------------------|----------------------|
| Net assets without donor restrictions: | | |
| Designated for specific purposes: | | |
| Designated for plant activities | \$ 1,591,041 | \$ 1,501,045 |
| Health System | 1,334,644 | 1,306,953 |
| Operating budget carryforward | 1,136,335 | 1,053,237 |
| Funds functioning as endowments | 922,800 | 860,795 |
| Designated for scholarships | 118,600 | 112,687 |
| Designated for pension prefunding | (1,061,000) | - |
| Designated for postretirement benefits | (1,063,060) | (961,864) |
| Other designated net assets | <u>141,710</u> | <u>236,129</u> |
| Total designated for specific purposes | <u>3,121,070</u> | <u>4,108,982</u> |
| Net investment in plant | <u>3,619,773</u> | <u>3,543,893</u> |
| Non-controlling interest | <u>259,126</u> | <u>252,217</u> |
| Total net assets without donor restrictions | <u>\$ 6,999,969</u> | <u>\$ 7,905,092</u> |
| Net assets with donor restrictions: | | |
| Endowment funds | \$ 2,454,544 | \$ 2,307,883 |
| Future contributions | 228,031 | 200,794 |
| Split-interest agreements | 94,537 | 92,919 |
| Student loan funds | 18,471 | 17,391 |
| Contributions for property, plant and equipment | <u>28,728</u> | <u>12,752</u> |
| Total net assets with donor restrictions | <u>\$ 2,824,311</u> | <u>\$ 2,631,739</u> |
| Total net assets | <u>\$ 9,824,280</u> | <u>\$ 10,536,831</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 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 lease assets and lease liabilities by lessees for those leases classified as operating under previous GAAP. In June 2020, the FASB issued ASU 2020-05, "Revenue from Contracts with Customers and Leases; Effective Dates for Certain Entities." This update defers the effective date of the original ASU. The update is now effective for the University beginning July 1, 2020. The University is currently evaluating the impact this guidance may have on its consolidated financial statements.

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. This update is

effective for the University beginning July 1, 2020, with early adoption permitted. The University has not yet evaluated the impact this guidance may have on its 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 outbreak of the disease has affected travel, commerce and financial markets globally, including in the United States. The continued spread of COVID-19 and its impact on social interaction, travel, economies and financial markets may 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.

Beginning in March 2020, undergraduate and graduate course instruction was conducted virtually, and most students vacated the campus. The University granted refunds of \$52.5 million in fiscal year 2020 for housing and dining services not provided after the move to virtual learning. Students continued to meet their academic requirements for the remainder of the 2019-20 academic year. In addition, the start of the 2020-21 academic year will be a hybrid learning environment, with a mix of virtual and in-person learning. Given the uncertainty over the progression of the virus and governmental emergency directives, there is no timetable for when instruction and campus operations will return to normal.

The Health System also experienced a significant reduction in the number of surgeries, physician office visits and emergency room volumes. This was due to measures meant to slow the spread of the virus, including quarantines and stay-at-home and shelter-in-place orders, as well as the community’s general concerns related to the risk of contracting COVID-19.

The federal government has taken several actions to provide financial assistance during this pandemic. The University has received, and may continue to receive, payments and advances under the Coronavirus Aid, Relief, and Economic Security Act, as amended by the Paycheck Protection Program and Health Care Enhancement Act (collectively, the “CARES Act”) or any other governmental assistance program which will be beneficial in addressing the impact of the novel coronavirus pandemic on the University’s results of operations and financial position. The CARES Act, which was signed into law on March 27, 2020, provides funding and flexibilities for higher education institutions to respond to the COVID-19 emergency. The University received an allocation of \$55.0 million based on the allocation criteria. At least 50% of these funds must be distributed as emergency aid to students who have had their semester disrupted by the COVID-19 pandemic with the remaining 50% of funds able to be used for institutional uses. The CARES Act defines allowable uses as any costs associated with significant changes to the delivery of instruction due to the coronavirus. At June 30, 2020, the University has disbursed \$24.2 million of the available \$27.5 million of the student portion of the funds. This disbursement of funds is presented within the instruction expense line within the consolidated statements of activities. At June 30, 2020, the University has recorded a receivable of \$0.9 million for funds disbursed to students but not yet reimbursed. At June 30, 2020 the University has not recorded any revenue or receivable related to the institutional portion of the CARES Act funding. As allowed by the CARES Act, at June 30, 2020, the University has deferred payment of \$24.9 million for the employer portion of Social

Security payroll tax, which is included in accounts payable and other accrued expenses in the consolidated statements of financial position. 50% of the deferred tax credit must be paid by December 31, 2021 with the remainder by December 31, 2022. The CARES Act also 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 statements of financial position. Also, during the year ended June 30, 2020, the Health System received approximately \$62.3 million from the Public Health and Social Services Emergency Fund ("Provider Relief Fund") of which \$53.1 million 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. For the amounts not recognized of \$9.1 million, the Health System is investigating if the funds will be able to be retained and are recorded as accounts payable and other accrued expenses in the consolidated statements of financial position.

In September 2020, Health and Human Services (HHS) issued new guidance on the reporting and recognition requirements for Provider Relief Fund recipients. The new guidance is not expected to have a material impact on the amounts recognized as Health System revenue in the consolidated statements of activities.

The COVID-19 pandemic has negatively affected national, state, and local economies and global financial markets, and the higher education landscape in general. While the financial impact on the University cannot be quantified at this time, the pandemic may have a material adverse effect on the current and future financial profile and operating performance of the University. 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.

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 the statement of financial position date, 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> | <u>June 30, 2020</u> | <u>June 30, 2019</u> |
|---|----------------------|----------------------|
| Total assets | \$ 17,413,242 | \$ 15,920,956 |
| Less: | | |
| Inventories | (58,927) | (52,516) |
| Prepaid expenses and other assets | (153,935) | (137,764) |
| Total investment in plant, net | (5,974,192) | (5,588,943) |
| Beneficial interest in perpetual trusts | (24,509) | (23,898) |
| Other assets | <u>(170,480)</u> | <u>(177,398)</u> |
| Total financial assets | 11,031,199 | 9,940,437 |
| Less: | | |
| Noncurrent investments | (6,610,518) | (6,304,490) |
| Contractual or donor-imposed restrictions: | | |
| Deposits held by bond trustees | (275,992) | (118,753) |
| Deposits held for others | (40,871) | (40,587) |
| Receivables subject to time restrictions | (47,633) | (58,071) |
| Receivables subject to donor-imposed restrictions | (141,006) | (102,791) |
| Loans to students, net | <u>(48,762)</u> | <u>(54,096)</u> |
| Financial assets available to meet cash needs for general expenditures within one year | <u>\$ 3,866,417</u> | <u>\$ 3,261,649</u> |

4. INVESTMENTS

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

| <i>(in thousands of dollars)</i> | <u>2020</u> | <u>2019</u> |
|----------------------------------|---------------------|---------------------|
| Money markets | \$ 268,874 | \$ 318,849 |
| Fixed income: | | |
| U.S. government/agency | 828,467 | 941,173 |
| U.S. corporate | 617,598 | 594,125 |
| Foreign | 181,614 | 148,584 |
| Other | 830,794 | 451,674 |
| Equities | 2,472,967 | 2,198,001 |
| Private capital | <u>2,150,994</u> | <u>2,059,526</u> |
| Total | <u>\$ 7,351,308</u> | <u>\$ 6,711,932</u> |

Other fixed income investments consist of collateralized mortgage obligations, mortgage-backed securities and asset-backed securities. Equity investments are comprised of domestic and foreign common stocks. Private capital consists primarily of interests in private real estate, venture capital, private equity, natural resources, private debt, commodities and hedge fund limited partnerships.

Futures contracts comprise the University's beneficially held derivative instruments at June 30, 2020 and 2019 and are included in the fair value of the University's investments. These contracts are fully cash collateralized and marked to market daily. The fair value of derivative instruments is included in the fair value of the University's investments within the money market category. Futures contracts have minimal credit risk because the counterparties are the exchanges themselves. Fully cash collateralized derivative securities comprised \$4.4 million or 0.06% and \$4.0 million, or 0.06%, of total investments at June 30, 2020 and 2019, respectively. The University's derivatives consist of S&P equity futures at June 30, 2020 and 2019 and are employed as a low cost, passive investment vehicle with daily liquidity which allows the University to maintain desired market exposure in light of irregular cash flows.

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

| <i>(in thousands of dollars)</i> <u>2020</u> | <u>Without donor restrictions</u> | <u>With donor restrictions</u> | <u>Total</u> |
|---|---------------------------------------|------------------------------------|-------------------|
| Investment income | \$ 168,159 | \$ 14,626 | \$ 182,785 |
| Net realized gains, including endowment spending | 167,949 | 35,934 | 203,883 |
| Net unrealized gains | <u>33,742</u> | <u>14,470</u> | <u>48,212</u> |
| Total returns | <u>\$ 369,850</u> | <u>\$ 65,030</u> | <u>\$ 434,880</u> |

| <i>(in thousands of dollars)</i> <u>2019</u> | <u>Without donor restrictions</u> | <u>With donor restrictions</u> | <u>Total</u> |
|--|---------------------------------------|------------------------------------|-------------------|
| Investment income | \$ 117,557 | \$ 17,811 | \$ 135,368 |
| Net realized gains (losses), including endowment spending | 87,123 | (66,484) | 20,639 |
| Net unrealized gains | <u>177,065</u> | <u>130,090</u> | <u>307,155</u> |
| Total returns | <u>\$ 381,745</u> | <u>\$ 81,417</u> | <u>\$ 463,162</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, 2020 and 2019, funds with an original gift value of \$44.8 million and \$13.0 million were "underwater" by \$3.0 million and \$2.3 million, respectively. 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:

| <i>(in thousands of dollars)</i> <u>2020</u> | <u>Without donor restrictions</u> | <u>With donor restrictions</u> | <u>Total</u> |
|---|---------------------------------------|------------------------------------|---------------------|
| Donor-restricted endowment funds | \$ - | \$ 2,424,281 | \$ 2,424,281 |
| Funds functioning as Endowments | <u>922,801</u> | <u>-</u> | <u>922,801</u> |
| Total net assets | <u>\$ 922,801</u> | <u>\$ 2,424,281</u> | <u>\$ 3,347,082</u> |
| | | | |
| <i>(in thousands of dollars)</i> <u>2019</u> | <u>Without donor restrictions</u> | <u>With donor restrictions</u> | <u>Total</u> |
| Donor-restricted endowment funds | \$ - | \$ 2,278,892 | \$ 2,278,892 |
| Funds functioning as Endowments | <u>860,795</u> | <u>-</u> | <u>860,795</u> |
| Total net assets | <u>\$ 860,795</u> | <u>\$ 2,278,892</u> | <u>\$ 3,139,687</u> |

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

| <i>(in thousands of dollars)</i> <u>2020</u> | <u>Without donor restrictions</u> | <u>With donor restrictions</u> | <u>Total</u> |
|--|---------------------------------------|------------------------------------|---------------------|
| Endowment net assets, beginning of the year | \$ 860,795 | \$ 2,278,892 | \$ 3,139,687 |
| Endowment return, net | 147,873 | 59,716 | 207,589 |
| Contributions | - | 85,673 | 85,673 |
| Endowment spending | (126,397) | - | (126,397) |
| Transfers to create funds functioning as endowments | <u>40,530</u> | <u>-</u> | <u>40,530</u> |
| Endowment net assets, end of the year | <u>\$ 922,801</u> | <u>\$ 2,424,281</u> | <u>\$ 3,347,082</u> |
| | | | |
| <i>(in thousands of dollars)</i> <u>2019</u> | <u>Without donor restrictions</u> | <u>With donor restrictions</u> | <u>Total</u> |
| Endowment net assets, beginning of the year | \$ 762,836 | \$ 2,099,675 | \$ 2,862,511 |
| Endowment return, net | 143,382 | 71,869 | 215,251 |
| Contributions | - | 107,348 | 107,348 |
| Endowment spending | (117,470) | - | (117,470) |
| Transfers to create funds functioning as endowments | <u>72,047</u> | <u>-</u> | <u>72,047</u> |
| Endowment net assets, end of the year | <u>\$ 860,795</u> | <u>\$ 2,278,892</u> | <u>\$ 3,139,687</u> |

Not included above are the endowment net assets of subsidiaries of \$33.7 million and \$32.4 million as of June 30, 2020 and 2019, respectively.

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 2020 and 2019) 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, 2020 about the University's financial assets and liabilities that are measured at fair value on a recurring basis:

| <i>(in thousands of dollars)</i> | Quoted Prices in Active Markets For Identical Assets <u>Level 1</u> | Significant Other Observable Inputs <u>Level 2</u> | Significant Unobservable Inputs <u>Level 3</u> | Total <u>Fair Value</u> |
|---|---|--|---|----------------------------|
| <u>Assets:</u> | | | | |
| Long-term Investment Pool: | | | | |
| Money markets | \$ 225,684 | \$ 13,742 | \$ - | \$ 239,426 |
| Fixed income | | | | |
| U.S. government/agency | - | 78,157 | - | 78,157 |
| U.S. corporate | - | 44,134 | - | 44,134 |
| Foreign | - | 7,748 | - | 7,748 |
| Other | - | 211,245 | - | 211,245 |
| Equities | <u>785,810</u> | <u>325</u> | - | <u>786,135</u> |
| Total | <u>\$ 1,011,494</u> | <u>\$ 355,351</u> | <u>\$ -</u> | <u>\$ 1,366,845</u> |
| Operating investments: | | | | |
| Money markets | \$ 29,448 | \$ - | \$ - | \$ 29,448 |
| Fixed income | | | | |
| U.S. government/agency | 2,573 | 747,737 | - | 750,310 |
| U.S. corporate | 11,368 | 562,096 | - | 573,464 |
| Foreign | 162 | 173,704 | - | 173,866 |
| Other | 152,364 | 467,185 | - | 619,549 |
| Equities | <u>245,315</u> | <u>54,613</u> | <u>5,132</u> | <u>305,060</u> |
| Total | <u>\$ 441,230</u> | <u>\$ 2,005,335</u> | <u>\$ 5,132</u> | <u>\$ 2,451,697</u> |
| Deposits held by bond trustees: | | | | |
| Money markets | \$ 275,992 | \$ - | \$ - | \$ 275,992 |
| Beneficial interest in perpetual trusts | | | | |
| | \$ - | \$ - | \$ 24,509 | \$ 24,509 |
| <u>Liabilities:</u> | | | | |
| Present value of annuities payable | \$ - | \$ - | \$ 56,564 | \$ 56,564 |

The following table presents information as of June 30, 2019 about the University's financial assets and liabilities that are measured at fair value on a recurring basis:

| <i>(in thousands of dollars)</i> | Quoted Prices in Active Markets For Identical Assets <u>Level 1</u> | Significant Other Observable Inputs <u>Level 2</u> | Significant Unobservable Inputs <u>Level 3</u> | Total <u>Fair Value</u> |
|--|---|--|---|----------------------------|
| Assets: | | | | |
| Long-term Investment Pool: | | | | |
| Money markets | \$ 147,569 | \$ 40,181 | \$ - | \$ 187,750 |
| Fixed income | | | | |
| U.S. government/agency | - | 106,695 | - | 106,695 |
| U.S. corporate | - | 72,121 | - | 72,121 |
| Foreign | - | 60,223 | - | 60,223 |
| Other | - | 86,696 | 40 | 86,736 |
| Equities | <u>900,617</u> | <u>4,812</u> | - | <u>905,429</u> |
| Total | <u>\$ 1,048,186</u> | <u>\$ 370,728</u> | <u>\$ 40</u> | <u>\$ 1,418,954</u> |
| Operating investments: | | | | |
| Money markets | \$ 90,798 | \$ 40,301 | \$ - | \$ 131,099 |
| Fixed income | | | | |
| U.S. government/agency | 71,951 | 762,527 | - | 834,478 |
| U.S. corporate | 41,294 | 480,710 | - | 522,004 |
| Foreign | 4,733 | 83,628 | - | 88,361 |
| Other | 16,909 | 347,858 | 171 | 364,938 |
| Equities | <u>214,037</u> | <u>2</u> | <u>5,453</u> | <u>219,492</u> |
| Total | <u>\$ 439,722</u> | <u>\$ 1,715,026</u> | <u>\$ 5,624</u> | <u>\$ 2,160,372</u> |
| Deposits held by bond trustees: | | | | |
| Money markets | \$ 118,753 | \$ - | \$ - | \$ 118,753 |
| Beneficial interest in perpetual trusts | | | | |
| | \$ - | \$ - | \$ 23,898 | \$ 23,898 |
| Liabilities: | | | | |
| Present value of annuities payable | \$ - | \$ - | \$ 57,049 | \$ 57,049 |

The fair value tables above exclude investments of \$3,532.8 million and \$3,132.6 million as of June 30, 2020 and 2019, respectively, which are measured at net asset value (NAV) per share or its equivalent and are not classified in the fair value hierarchy.

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 share method of accounting for the LTIP is utilized by the University. Each participating fund enters into and withdraws from the LTIP based on monthly share values. At June 30, 2020 and 2019, the fair value of endowment funds and funds functioning as endowments within the LTIP totaled \$3,351.2 million and \$3,164.9 million, respectively. At June 30, 2020 and 2019, the fair value of operating funds included in the LTIP totaled \$1,399.8 million and \$1,383.5 million, respectively.

The following tables present information related to changes in Level 3 for each category of financial assets and liabilities for year ended June 30, 2020:

| <i>(in thousands of dollars)</i> | Operating Investments | Long Term Investment Pool | Beneficial Interest in Perpetual Trusts |
|--|--|---------------------------------|---|
| <u>Assets:</u> | | | |
| Beginning balance | \$ 5,624 | \$ 40 | \$ 23,898 |
| Total realized and unrealized gains (losses) | (331) | - | 611 |
| Net transfers out | (161) | (40) | - |
| Ending balance | <u>\$ 5,132</u> | <u>\$ -</u> | <u>\$ 24,509</u> |
| | Present Value of Annuities Payable | | |
| <u>Liabilities:</u> | | | |
| Beginning balance | \$ 57,049 | | |
| Actuarial adjustment of liability | (548) | | |
| Gifts | 719 | | |
| Sales | (656) | | |
| Ending balance | <u>\$ 56,564</u> | | |

The following tables present information related to changes in Level 3 for each category of financial assets and liabilities for year ended June 30, 2019:

| <i>(in thousands of dollars)</i> | Operating Investments | Long Term Investment Pool | Beneficial Interest in Perpetual Trusts |
|-------------------------------------|--|---------------------------------|---|
| <u>Assets:</u> | | | |
| Beginning balance | \$ 5,297 | \$ - | \$ 23,587 |
| Total realized and unrealized gains | 156 | - | 311 |
| Purchases | 171 | 40 | - |
| Ending balance | <u>\$ 5,624</u> | <u>\$ 40</u> | <u>\$ 23,898</u> |
| | Present Value of Annuities Payable | | |
| <u>Liabilities:</u> | | | |
| Beginning balance | \$ 59,236 | | |
| Actuarial adjustment of liability | 1,129 | | |
| Gifts | 279 | | |
| Sales | (3,595) | | |
| Ending balance | <u>\$ 57,049</u> | | |

There were no transfers of assets between Level 3 and Level 2 in 2019 and between Level 1 and Level 2 in 2020 and 2019.

The following table presents the fair value and redemption frequency for those investments whose fair value is not readily determinable and is estimated using NAV or its equivalent as of June 30, 2020 and 2019:

| <i>(in thousands of dollars)</i> | Fair Value | | Unfunded | Redemption | Redemption |
|----------------------------------|---------------------|---------------------|----------------------|------------------------------------|---------------|
| | <u>2020</u> | <u>2019</u> | Commitments | | |
| | | | At | Frequency | Notice Period |
| | | | <u>June 30, 2020</u> | | |
| Commingled Funds: | | | | | |
| U.S. Equity | \$ 347,000 | \$ 262,664 | | Monthly | 30 days |
| Non-U.S. Equity | <u>701,902</u> | <u>693,701</u> | | Daily/Monthly | |
| Subtotal | <u>\$ 1,048,902</u> | <u>\$ 956,365</u> | | Quarterly | 5-90 days |
| Marketable Investment | | | | | |
| Partnerships: | | | | | |
| Absolute Return | \$ 98,031 | \$ 61,895 | | Quarterly | 60 days |
| Distressed Debt | 51,611 | 54,518 | | Quarterly/ Semi Annual | 60-90 days |
| Commodities | 55,429 | 70,711 | | Monthly | 30-60 days |
| Opportunistic | 439,617 | 291,267 | | Monthly/ Quarterly/ Annually | 30-90 days |
| Directional Long/Short | 317,408 | 288,072 | | Monthly | 30 days |
| Core Real Estate | <u>25,109</u> | <u>-</u> | | Quarterly | 90 days |
| Subtotal | <u>\$ 987,205</u> | <u>\$ 766,463</u> | | | |
| Non-Marketable Investment | | | | | |
| Partnerships: | | | | | |
| Private Real Estate | \$ 64,303 | \$ 56,782 | \$ 69,930 | | |
| Venture Capital | 600,905 | 530,760 | 165,380 | | |
| Private Equity | 479,269 | 500,739 | 330,195 | | |
| Natural Resources | 123,414 | 133,764 | 70,111 | | |
| Private Debt | <u>228,768</u> | <u>187,733</u> | <u>197,993</u> | | |
| Subtotal | <u>\$ 1,496,659</u> | <u>\$ 1,409,778</u> | <u>\$ 833,609</u> | | |
| Total | <u>\$ 3,532,766</u> | <u>\$ 3,132,606</u> | <u>\$ 833,609</u> | | |

Commingled Funds include investments that aggregate assets from multiple investors and are managed collectively following a prescribed strategy. Redemptions vary from daily to quarterly with required notification of 90 days or less. U.S. equity strategies aim to diversify sources of return by investing in various U.S. equity vehicles. The non-U.S. equity strategy is invested in developed and developing countries outside of the United States and spans the entire equity capitalization spectrum. These collective portfolios preclude the need to obtain securities registration in foreign countries.

Marketable Investment Partnerships include several hedge funds whose underlying positions are traded via public securities markets. Liquidity terms range from quarterly to annually with advance notification for redemption ranging from 30 to 90 days. The fair values of the investments for each fund in this category have been estimated using the net asset value of the LTIP's share holdings in the fund. Six major investment strategies are included within this category. Absolute Return refers to relative value strategies. Distressed Debt refers to securities rated below investment grade, along with non-rated debt. Commodities refer to publicly traded commodity instruments primarily including futures and options. Opportunistic refers to global multi-strategy. Directional refers to equity long/short strategies in both U.S. and non-U.S. markets. Core Real Estate refers to investments in operating and substantially leased institutional quality real estate.

Non-Marketable Investment Partnerships include limited partnership interests in a variety of illiquid investments. The fair values of the investments for each fund in this category have been estimated using the net asset value of the LTIP's ownership interest in partner's capital and cannot be redeemed. Realizations from each fund are received as the underlying investments are liquidated or distributed, typically within 10

years after initial commitment. Unfunded commitments represent remaining commitments of the LTIP's drawdown funds as of June 30, 2020. Five major investment strategies are included within this category. Private Real Estate includes properties primarily located in the U.S. Venture Capital includes non-public startups and enterprises in early stages of growth located globally. Private Equity includes buyouts of previously public companies as well as enterprises that are planning to go public in the near future, including funds focusing on opportunities outside the U.S. Natural Resources largely include companies primarily involved in oil and natural gas in addition to a variety of other natural resources. Private Debt includes global private credit securities rated below investment grade as well as non-rated debt.

7. CONTRIBUTIONS RECEIVABLE

Contributions receivable are summarized as follows as of June 30:

| <i>(in thousands of dollars)</i> | <u>2020</u> | <u>2019</u> |
|----------------------------------|-------------------|-------------------|
| In one year or less | \$ 48,794 | \$ 47,135 |
| Between one year and five years | 87,164 | 75,687 |
| More than five years | <u>122,935</u> | <u>112,164</u> |
| Contributions receivable, gross | 258,893 | 234,986 |
| Less allowance | (3,825) | (5,723) |
| Less discount | <u>(46,481)</u> | <u>(49,733)</u> |
| Contributions receivable, net | <u>\$ 208,587</u> | <u>\$ 179,530</u> |

Contributions received during the years ended June 30, 2020 and 2019 are discounted at rates ranging from 0.16% to 0.19% and 1.71% to 2.15%, respectively. The discount rates for prior periods ranged from 0.11% to 6.28%.

At June 30, 2020 and 2019, the University has received bequest intentions of \$682.6 million and \$606.3 million, respectively, and certain other conditional promises to give of \$53.1 million and \$50.5 million, respectively. 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, 2020:

| | <i>(in thousands of dollars)</i> |
|-----------------------------------|----------------------------------|
| Balance at the beginning of year | \$ 179,530 |
| New pledges | 79,435 |
| Collections on pledges | (55,527) |
| Decrease in allowance | 1,898 |
| Decrease in unamortized discounts | <u>3,251</u> |
| Balance at the end of year | <u>\$ 208,587</u> |

In preparing the 2019 financial statements, the University identified and corrected an out of period error related to certain conditional contributions that had been previously recognized as unconditional contributions. As such, contributions receivable in the accompanying consolidated statement of financial position as of June 30, 2019, and gifts and pledges with donor restrictions in the accompanying consolidated statement of activities for the year ended June 30, 2019 have been reduced by \$27.6 million, respectively, to correct this out of period error.

8. LONG-TERM DEBT

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

| <i>(in thousands of dollars)</i> | <u>2020</u> | <u>2019</u> |
|---|-------------|-------------|
| <u>The Pennsylvania State University Bonds</u> | | |
| Series 2020A | \$ 80,495 | \$ - |
| Series 2020B | 331,040 | - |
| Series 2020D | 1,065,165 | - |
| Series 2020E | 61,885 | - |
| Series 2019A | 107,000 | 107,000 |
| Series 2019B | 119,000 | 119,000 |
| Series 2018 | 63,235 | 64,210 |
| Series 2017A | 152,170 | 154,680 |
| Series 2017B | 119,645 | 122,340 |
| Series 2016A | 114,070 | 116,890 |
| Series 2016B | 201,805 | 211,980 |
| Series 2015A | 59,220 | 60,800 |
| Series 2015B | 96,540 | 100,515 |
| Series 2010 | - | 123,625 |
| Series 2009B | - | 74,235 |
| Series 2007B | 39,925 | 43,835 |
| <u>Pennsylvania Higher Educational Facilities</u> | | |
| <u>Authority University Revenue Bonds</u> | | |
| <u>(issued for The Pennsylvania State</u> | | |
| <u>University)</u> | | |
| Series 2006 | 1,890 | 2,155 |
| Series 2004 | 1,905 | 2,230 |
| Series 2002 | 1,045 | 1,530 |
| <u>Penn State Health Bonds</u> | | |
| Series 2019 | 200,000 | - |
| <u>Cumberland County Municipal Authority</u> | | |
| <u>Revenue Bonds (issued for Penn State</u> | | |
| <u>Health)</u> | | |
| Series 2019 | 222,000 | - |
| <u>Lycoming County Authority College</u> | | |
| <u>Revenue Bonds (issued for Penn</u> | | |
| <u>College)</u> | | |
| Series 2016 | 48,820 | 50,675 |
| Series 2015 | 2,875 | 3,440 |
| Series 2012 | 21,005 | 22,175 |
| Series 2011 | 36,315 | 37,655 |
| Total bonds payable | 3,147,050 | 1,418,970 |
| Unamortized bond premiums | 208,372 | 164,003 |
| Unamortized deferred bond costs | (14,164) | (6,504) |

Notes payable, lines of credit and capital leases

| | | |
|---|---------------------|---------------------|
| Notes payable | 24,688 | 21,366 |
| Lines of credit | 105,000 | - |
| Capital lease obligations | <u>43,062</u> | <u>52,817</u> |
| Total notes payable, lines of credit and capital leases | <u>172,750</u> | <u>74,183</u> |
| Total long-term debt | <u>\$ 3,514,008</u> | <u>\$ 1,650,652</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 | 1.449% - 2.888% | \$5,650 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% | \$1,575 to \$6,720 through September 2049 |
| Series 2019B | Fixed | 2.05% - 3.50% | \$2,555 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% | \$1,020 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% | \$2,630 to \$5,965 through September 2037 with \$34,750 and \$44,620 due September 2042 and September 2047, respectively |
| Series 2017B | Fixed | 1.777% - 3.793% | \$2,740 to \$3,830 through September 2032 with \$21,305 and \$56,595 due September 2037 and September 2047, respectively |
| Series 2016A | Fixed | 5.00% | \$2,965 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% | \$1,660 to \$3,445 through September 2035 with \$20,000 due September 2040 |
| Series 2015B | Fixed | 5.00% | \$4,180 to \$8,435 through September 2035 |
| Series 2007B | Fixed | 5.25% | \$4,125 to \$5,955 through August 2027 |
| Pennsylvania Higher Educational Facilities Authority ("PHEFA") University Revenue Bonds | | | |
| Series 2006 | Fixed | 4.400% - 5.125%* | \$280 due September 2020 and \$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 |

**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 2016 | Fixed | 2.125% - 5.00% | \$1,930 to \$3,615 through October 2032 with \$19,345 due October 2037 |
| Series 2015 | Fixed | 2.50% - 3.29% | \$465 to \$625 through January 2025 |
| Series 2012 | Fixed | 3.00% - 5.00% | \$2,565, \$6,395 and \$12,045 due May 2022, May 2026 and May 2032, respectively |
| Series 2011 | Fixed | 4.00% - 5.24% | \$1,590 to \$1,850 through July 2021 with \$14,170 and \$18,705 due July 2026 and July 2030, respectively |

The Series 2020A Bonds are general obligation bonds issued in March 2020 for the purpose of financing various construction and renovation projects. The Series 2020A Bonds are subject to early redemption provisions, at the option of the University, beginning September 2030. The bonds maturing in September 2045 and September 2050 are subject to mandatory sinking fund redemption.

The Series 2020B Bonds are taxable general obligation bonds issued in March 2020 for the purpose of financing the general corporate purposes of the University and the current refunding and defeasance of all of the outstanding Series 2010 Bonds. The Series 2020B Bonds are subject to optional redemption provisions prior to maturity, in such order of their maturity as directed by the University, at the make-whole redemption price. The bonds maturing in September 2040 and September 2050 are subject to mandatory sinking fund redemption. In conjunction with the issuance of the Series 2020B Bonds, the University legally defeased the Series 2010 Bonds by irrevocably depositing the required funds in an escrow fund to be used to pay interest accrued, maturing principal, and redemption price of the refunded bonds.

The Series 2020D Bonds are taxable general obligation bonds issued in May 2020 for the purpose of financing the current refunding and defeasance of all of the outstanding Series 2020C Notes. The Series 2020D Bonds are subject to optional redemption provisions prior to maturity, in such order of their maturity as directed by the University, at the make-whole redemption price. The bonds maturing in September 2043 and September 2050 are subject to mandatory sinking fund redemption. In conjunction with the issuance of the Series 2020D Bonds, the University legally defeased the Series 2020C Notes by irrevocably depositing the required funds used to pay interest accrued, maturing principal, and redemption price of the refunded notes at, or prior to, the redemption date. The Series 2020C Notes were taxable notes issued in April 2020 for the purpose of the Commonwealth of Pennsylvania State Employees' Retirement System ("SERS") prefunding, as described in Note 11.

The Series 2020E Bonds are general obligation bonds issued in May 2020 for the purpose of financing the current refunding and defeasance of all of the outstanding Series 2009B Bonds. The Series 2020E Bonds are subject to early redemption provisions, at the option of the University, beginning March 2030. In conjunction with the issuance of the Series 2020E Bonds, the University legally defeased the Series 2009B Bonds by irrevocably depositing the required funds used to pay interest accrued, maturing principal, and redemption price of the refunded bonds at, or prior to, the redemption date.

The Penn State Health Taxable Bonds, Series 2019 and the Cumberland County Municipal Authority Revenue Bonds, Series 2019 were issued in November 2019 by the Health System for the purpose of financing capital projects, acquiring the administrative office, paying off intercompany debt, and financing general corporate purposes.

The University believes it has complied with all financial debt covenants for the years ended June 30, 2020 and 2019.

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> |
|-------------|--|
| 2021 | \$ 51,040 |
| 2022 | 84,100 |
| 2023 | 86,750 |
| 2024 | 89,490 |
| 2025 | 92,280 |
| Thereafter | <u>2,743,390</u> |
| | <u>\$ 3,147,050</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, 2020, the carrying value and estimated fair value of the University's bonds payable, including issuance premiums and deferred bond costs, are \$3,341.3 million and \$3,466.8 million, respectively. At June 30, 2019, the carrying value and estimated fair value of the University's bonds payable, including issuance premiums and deferred bond costs, were \$1,576.5 million and \$1,596.8 million, respectively. Certain bond issues have associated issuance premiums; these issuance premiums total \$208.4 million and \$164.0 million at June 30, 2020 and 2019, respectively, 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 \$14.2 million and \$6.5 million at June 30, 2020 and 2019, respectively, 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, lines of credit and capital leases

The University has four notes payable included within the consolidated statements of financial position at June 30, 2020 with balances of \$4.7 million, \$5.9 million, \$7.4 million, and \$6.7 million. These notes have payments due through June 2024, June 2025, March 2026, and August 2039 and bear interest at 2.60%, 2.85%, 2.80%, and 3.52%, respectively. The current portion of payments due under these notes totals \$3.7 million at June 30, 2020.

During 2020, the Health System established several lines of credit to serve as a bridge to meet capital and operating needs. In April 2020, the Health System established a revolving line of credit with PNC Bank in the amount of \$75.0 million, with \$25.0 million reserved for letters of credit, expiring in April 2021. The interest on this line of credit is LIBOR-based, with a commitment fee on the undrawn portion. As of June 30, 2020, the Health System had drawn \$50.0 million on the line.

In April 2020, the Health System established a revolving line of credit with Fulton Bank in the amount of \$55.0 million. Interest on the line of credit is LIBOR-based, with a commitment fee on the undrawn portion. The commitment fee commences after April 2021. The line of credit expires in April 2022. As of June 30, 2020, the Health System had drawn \$55.0 million on the line.

In April 2020, the Health System established a revolving line of credit with Huntington Bank in the amount of \$100.0 million. Interest on the line of credit is LIBOR-based, with a commitment fee on the undrawn portion. The line of credit expires in April 2022. As of June 30, 2020, the Health System had not drawn on the line.

As of June 30, 2020, the Health System had a total draw on these lines of credit of \$105.0 million, which is reflected in the current portion of long-term debt.

The University has certain building and equipment lease agreements in effect which are considered capital leases. Future minimum lease payments under capital leases together with the present value of the net minimum lease payments as of June 30, 2020 are as follows:

| <u>Year</u> | <i>(in thousands of dollars)</i> |
|------------------------------|----------------------------------|
| 2021 | \$ 10,916 |
| 2022 | 7,424 |
| 2023 | 5,841 |
| 2024 | 4,706 |
| 2025 | 3,399 |
| Thereafter | <u>23,489</u> |
| Total minimum lease payments | 55,775 |
| Less imputed interest | <u>(12,713)</u> |
| Capital lease obligation | 43,062 |
| Current portion | 9,193 |
| Long-term portion | <u>\$ 33,869</u> |

9. OPERATING LEASES

The University has certain lease agreements in effect which are considered operating leases. During the year ended June 30, 2020, the University recorded expenses of \$19.0 million for leased equipment and \$36.3 million for leased building space. During the year ended June 30, 2019, the University recorded expenses of \$22.6 million for leased equipment and \$37.7 million for leased building space.

Future minimum lease payments under operating leases as of June 30, 2020 are as follows:

| <u>Year</u> | <i>(in thousands of dollars)</i> |
|------------------------------|----------------------------------|
| 2021 | \$ 28,831 |
| 2022 | 23,096 |
| 2023 | 16,659 |
| 2024 | 14,159 |
| 2025 | 11,779 |
| Thereafter | <u>51,465</u> |
| Total minimum lease payments | <u>\$ 145,989</u> |

10. FUNCTIONAL AND NATURAL CLASSIFICATION OF EXPENSES

Functional expenses by natural classification as of June 30, 2020 are as follows:

| <i>(in thousands of dollars)</i> | <u>Educational and General</u> | <u>Auxiliary Enterprises</u> | <u>Health System</u> | <u>Total</u> |
|---|------------------------------------|----------------------------------|--------------------------|---------------------|
| Salaries and wages | \$ 1,775,559 | \$ 106,226 | \$ 1,223,310 | \$ 3,105,095 |
| Benefits | 568,733 | 49,086 | 302,936 | 920,755 |
| Depreciation | 293,713 | 37,597 | 104,912 | 436,222 |
| Plant operations and maintenance | 116,773 | 13,592 | 56,307 | 186,672 |
| Other components of net periodic postretirement benefit cost | 79,140 | 451 | - | 79,591 |
| Interest | 25,123 | 27,372 | 9,669 | 62,164 |
| Supplies, services, and other | 762,475 | 204,185 | 909,590 | 1,876,250 |
| Total | <u>\$ 3,621,516</u> | <u>\$ 438,509</u> | <u>\$ 2,606,724</u> | <u>\$ 6,666,749</u> |

Functional expenses by natural classification as of June 30, 2019 are as follows:

| <i>(in thousands of dollars)</i> | <u>Educational and General</u> | <u>Auxiliary Enterprises</u> | <u>Health System</u> | <u>Total</u> |
|---|------------------------------------|----------------------------------|--------------------------|---------------------|
| Salaries and wages | \$ 1,693,149 | \$ 108,831 | \$ 1,110,763 | \$ 2,912,743 |
| Benefits | 539,695 | 55,855 | 285,459 | 881,009 |
| Depreciation | 272,561 | 38,203 | 101,813 | 412,577 |
| Plant operations and maintenance | 150,493 | 19,585 | 47,789 | 217,867 |
| Other components of net periodic postretirement benefit cost | 96,344 | 628 | - | 96,972 |
| Interest | 24,599 | 23,031 | 11,902 | 59,532 |
| Supplies, services, and other | <u>732,797</u> | <u>219,789</u> | <u>843,775</u> | <u>1,796,361</u> |
| Total | <u>\$ 3,509,638</u> | <u>\$ 465,922</u> | <u>\$ 2,401,501</u> | <u>\$ 6,377,061</u> |

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 SERS and The Public School Employees' Retirement System or defined contribution plans administered by the Teachers Insurance and Annuity Association. The University is billed for its share of the estimated actuarial cost of the defined benefit plans (\$131.2 million and \$125.8 million for the years ended June 30, 2020 and 2019, respectively). 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 \$299.0 million and \$285.2 million for the years ended June 30, 2020 and 2019, respectively.

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. The University's contributions to this plan for the years ended June 30, 2020 and 2019 were \$127.8 million and \$122.7 million, respectively, and represent approximately 6.1% of total contributions to the plan based on projections for fiscal year 2020. The plan is funded at less than 65% with the funded ratio of the plan at 56.5% as of December 31, 2019.

In April 2020, the University entered into an agreement with SERS to prefund \$1.061 billion of the University's unfunded actuarial accrued liability in exchange for credits against future contributions. The pension prefunding expense is included within nonoperating activities in the consolidated statement of activities for the year ended June 30, 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 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, 2020 and 2019 are the following amounts that have not yet been recognized in net periodic postretirement cost: unrecognized prior service cost (benefit) of (\$0.9) million and (\$2.5) million and unrecognized actuarial loss of \$447.7 million and \$396.9 million, respectively.

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

Change in benefit obligation:
(in thousands of dollars)

| | <u>2020</u> | <u>2019</u> |
|---|---------------------|---------------------|
| Benefit obligation at beginning of year | \$ 2,224,035 | \$ 2,193,555 |
| Service cost | 40,397 | 41,329 |
| Interest cost | 79,242 | 89,066 |
| Actuarial gain | (175,759) | (171,326) |
| Benefits paid | (51,631) | (46,617) |
| Plan amendment | - | - |
| Plan assumptions | <u>228,530</u> | <u>118,028</u> |
| Benefit obligation at end of year | <u>\$ 2,344,814</u> | <u>\$ 2,224,035</u> |

Change in plan assets:

(in thousands of dollars)

| | <u>2020</u> | <u>2019</u> |
|--|-----------------------|-----------------------|
| Fair value of plan assets at beginning of year | \$ - | \$ - |
| Employer contributions | 51,631 | 46,617 |
| Benefits paid | <u>(51,631)</u> | <u>(46,617)</u> |
| Fair value of plan assets at end of year | \$ - | \$ - |
| Funded status | \$ (2,344,814) | \$ (2,224,035) |
| Unrecognized prior service cost (benefit) | - | - |
| Unrecognized net actuarial loss | - | - |
| Accrued postretirement benefit expense | <u>\$ (2,344,814)</u> | <u>\$ (2,224,035)</u> |

Net periodic postretirement cost includes the following components for the years ended June 30:

(in thousands of dollars)

| | <u>2020</u> | <u>2019</u> |
|---------------------------------------|-------------------|-------------------|
| Operating expenses: | | |
| Service cost | \$ 40,397 | \$ 41,329 |
| Nonoperating activities: | | |
| Interest cost | 79,242 | 89,066 |
| Amortization of prior service cost | (1,574) | (1,574) |
| Amortization of unrecognized net loss | <u>1,923</u> | <u>9,480</u> |
| Net periodic postretirement cost | <u>\$ 119,988</u> | <u>\$ 138,301</u> |

The assumed healthcare cost trend rate used in measuring the accumulated postretirement benefit obligation was 6.70% and 6.90% for the years ended June 30, 2020 and 2019, respectively, reduced each year to an ultimate level of 5.00%. The postretirement benefit obligation discount rate was 3.22% and 3.92% for the years ended June 30, 2020 and 2019, respectively. During 2020, the plan had favorable claims experience compared to assumptions and the permanent repeal of the excise tax also created favorable results. During 2019, the plan also had favorable claims experience compared to assumptions in addition to positive results related to the change in the mortality table and improvement scale.

If the healthcare cost trend rate assumptions were increased by 1% in each year, the accumulated postretirement benefit obligation would be increased by \$501.9 million and \$461.6 million as of June 30, 2020 and 2019, respectively. 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 \$28.7 million and \$30.8 million as of June 30, 2020 and 2019, respectively. If the healthcare cost trend rate assumptions were decreased by 1% in each year, the accumulated postretirement benefit obligation would be decreased by \$387.6 million and \$367.7 million as of June 30, 2020 and 2019, respectively. 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 \$21.7 million and \$23.3 million as of June 30, 2020 and 2019, respectively.

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> |
|---------|----------------------------------|
| 2021 | \$ 57,273 |
| 2022 | 61,902 |
| 2023 | 66,527 |
| 2024 | 71,563 |
| 2025 | 76,322 |
| 2026-30 | 442,718 |

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 minority ownership by Highmark Health.

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"), 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.

In July 2015, the Health System acquired SJRHN/SJMG. SJRHN/SJMG is a 180-bed, not-for-profit acute care hospital that provides inpatient, outpatient, and emergency care services to the Berks County Region.

In January 2016, the ownership of Nittany transferred from the University to the Health System. Nittany (formerly Penn State Hershey Health System, Inc.) is a corporate investor in healthcare joint ventures, which are supportive of the missions of the Health System. Nittany's objectives are consistent with the strategic objective to extend the range of healthcare services offered by and through the Health System over a broader geographic region. Nittany recorded non-controlling interest related to the acquisition of additional ownership interest in a joint venture. This non-controlling interest is recorded in net assets without donor restrictions within the consolidated statements of financial position with a value at June 30, 2020 and 2019 of \$2.1 million.

In May 2016, the ownership of MSHMC transferred from the University to the Health System. At June 30, 2020, MSHMC is a 548-bed, not-for-profit acute care, academic medical center located in Hershey, Pennsylvania. The University retains ownership of the buildings and land occupied by MSHMC, which is co-located with the University's College of Medicine. The clinical facilities of the Medical Center complex are leased to MSHMC. MSHMC makes certain payments to support the College of Medicine. MSHMC is a Level 1 Regional Trauma Center and provides inpatient, outpatient, and emergency care services to residents of central Pennsylvania through its central facility in Hershey and 36 medical group sites. Additionally, MSHMC operates an ambulatory surgical center, which provides endoscopy procedures to the Centre County Region.

In February 2017, the Health System established PSCMG. The purpose of PSCMG is to extend the ambulatory clinical footprint of the Health System into a broader geographic region. In October 2017, the Health System, through an asset purchase agreement, began operations of 18 medical group sites. As of June 30, 2020, PSCMG has 26 medical group sites.

In July 2017, CIN ownership was transferred from joint ownership by MSHMC and SJRHN/SJMG to direct ownership by the Health System. The purpose of CIN is to develop population health initiatives across the Health System organization.

In October 2017, the Health System established Hampden. The purpose of Hampden Medical Center was to acquire property in Cumberland County, which is intended to be the future site of an acute care hospital. The land acquisition took place in October 2017.

In March 2018, the Health System formed LPADC. The purpose of LPADC was to acquire property in Lancaster County, which is intended to be the future site of an acute care hospital and medical office building. The land acquisition took place in July 2019.

In June 2020, the Health System established the Penn State Health Life Lion, LLC. The purpose of Penn State Health Life Lion, LLC is to provide emergency medical services into a broader geographic region.

In January 2018, Highmark Health purchased a 20% minority interest in the Health System. The Health System received contributed capital in exchange for three board seats and certain reserve powers. Additionally, 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 statements of financial position with a value at June 30, 2020 and 2019 of \$257.0 million and \$250.1 million, respectively.

During 2020 and 2019, 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 statements of activities. Additionally, during 2020 and 2019, the Health System paid Highmark Health \$174.3 million and \$161.6 million, respectively, related to employee benefit expenses and recorded \$512.4 million and \$577.5 million, respectively, in net patient revenue related to Highmark Health Third Party Payor contracts. During 2020, the Health System recorded 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 statements of financial position.

On November 1, 2020, the Health System completed a member substitution agreement whereby the Health System became the parent company of Holy Spirit Health System and its subsidiaries. No cash was paid as part of this transaction. The valuation of the transaction is in process.

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 \$1,349.8 million, of which \$1,005.6 million has been paid or accrued as of June 30, 2020. 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 \$45.8 million and \$37.8 million as of June 30, 2020 and 2019, respectively. 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 years ended June 30, 2020 and 2019, of the medical malpractice claims liability in the amount of \$157.3 million and \$166.3 million is recorded as of June 30, 2020 and 2019, respectively.

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 \$29.8 million and \$32.1 million at June 30, 2020 and 2019, respectively. 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 \$7.8 million and \$7.2 million, discounted at 0.29% and 1.76%, respectively, is recorded as of June 30, 2020 and 2019, respectively. The University has established a trust fund, in the amount of \$14.5 million and \$13.8 million at June 30, 2020 and 2019, respectively, as required by PA-DLI, 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. Recently, government reviews of healthcare providers for compliance with regulations have increased. 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 November 4, 2020, 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 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 the date on which the consolidated financial statements were issued, \$50 million has been drawn on these lines of credit.

THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2020

| CFDA Number | 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 |
|-------------|---------------------------------|---|--------------------------|-----------------------|----------------|--------------|--|--|--|-----------------|
| 10 001 | | Agricultural Research Basic and Applied Research | Research and Development | \$ 1,653,434 | \$ 644,904,305 | Y | | | \$ 55,048 | \$ 1,478,792 |
| 10 001 | | Agricultural Research Basic and Applied Research | Research and Development | \$ 1,653,434 | \$ 644,904,305 | N | Geisinger Health System | U.S. DEPARTMENT OF AGRICULTURE | | \$ 67,799 |
| 10 025 | | Plant and Animal Disease, Pest Control, and Animal Care | Research and Development | \$ 1,763,874 | \$ 644,904,305 | Y | | | | \$ 488,695 |
| 10 025 | | Plant and Animal Disease, Pest Control, and Animal Care | Research and Development | \$ 1,763,874 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 44198928 | | \$ 139,765 |
| 10 170 | | Specialty Crop Block Grant Program - Farm Bill | Research and Development | \$ 585,493 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 44176523 | | \$ 19,571 |
| 10 170 | | Specialty Crop Block Grant Program - Farm Bill | Research and Development | \$ 585,493 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 44176527 | | \$ 19,806 |
| 10 170 | | Specialty Crop Block Grant Program - Farm Bill | Research and Development | \$ 585,493 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 44176532 | | \$ (29) |
| 10 170 | | Specialty Crop Block Grant Program - Farm Bill | Research and Development | \$ 585,493 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 44187029 | \$ 170,592 | \$ 182,241 |
| 10 170 | | Specialty Crop Block Grant Program - Farm Bill | Research and Development | \$ 585,493 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 44187030 | \$ 117,157 | \$ 236,095 |
| 10 170 | | Specialty Crop Block Grant Program - Farm Bill | Research and Development | \$ 585,493 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 44187250 | | \$ 44,855 |
| 10 170 | | Specialty Crop Block Grant Program - Farm Bill | Research and Development | \$ 585,493 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | C940000031 | | \$ 1,298 |
| 10 170 | | Specialty Crop Block Grant Program - Farm Bill | Research and Development | \$ 585,493 | \$ 644,904,305 | N | Pennsylvania Co-Operative Potato Growers, Inc. | N/A | | \$ 35,099 |
| 10 170 | | Specialty Crop Block Grant Program - Farm Bill | Research and Development | \$ 585,493 | \$ 644,904,305 | N | Pennsylvania Co-Operative Potato Growers, Inc. | ME44176528 | | \$ 297 |
| 10 170 | | Specialty Crop Block Grant Program - Farm Bill | Research and Development | \$ 585,493 | \$ 644,904,305 | N | University of New Hampshire | AM190100XXXXG012 | | \$ 1,791 |
| 10 200 | | Grants for Agricultural Research, Special Research Grants | Research and Development | \$ 861,995 | \$ 644,904,305 | Y | | | | \$ 800,043 |
| 10 200 | | Grants for Agricultural Research, Special Research Grants | Research and Development | \$ 861,995 | \$ 644,904,305 | N | Rutgers University | 2017-34383-27261 AMEND 1 | | \$ 6,700 |
| 10 200 | | Grants for Agricultural Research, Special Research Grants | Research and Development | \$ 861,995 | \$ 644,904,305 | N | Rutgers University | 2019-34383-29903 | | \$ 20,000 |
| 10 200 | | Grants for Agricultural Research, Special Research Grants | Research and Development | \$ 861,995 | \$ 644,904,305 | N | University of Maine, The | 2016-34141-25708 | | \$ 13,536 |
| 10 200 | | Grants for Agricultural Research, Special Research Grants | Research and Development | \$ 861,995 | \$ 644,904,305 | N | University of Maine, The | 2019-34141-30285 | | \$ 21,716 |
| 10 202 | | Cooperative Forestry Research | Research and Development | \$ 1,282,801 | \$ 644,904,305 | Y | | | | \$ 1,282,801 |
| 10 203 | | Payments to Agricultural Experiment Stations Under the Hatch Act | Research and Development | \$ 9,797,361 | \$ 644,904,305 | Y | | | | \$ 9,797,361 |
| 10 210 | | Higher Education - Graduate Fellowships Grant Program | Research and Development | \$ 85,213 | \$ 644,904,305 | Y | | | | \$ 85,213 |
| 10 212 | | Small Business Innovation Research | Research and Development | \$ 11,522 | \$ 644,904,305 | N | Epicrop Technologies Inc. | 2017-33610-27022 | | \$ 11,522 |
| 10 215 | | Sustainable Agriculture Research and Education | Research and Development | \$ 432,432 | \$ 644,904,305 | N | Cornell University | USDA | | \$ 13,230 |
| 10 215 | | Sustainable Agriculture Research and Education | Research and Development | \$ 432,432 | \$ 644,904,305 | N | University of Maryland | 20173864026915 | | \$ 5,271 |
| 10 215 | | Sustainable Agriculture Research and Education | Research and Development | \$ 432,432 | \$ 644,904,305 | N | University of Vermont, The | 2016-38640-25380 | | \$ 126,970 |
| 10 215 | | Sustainable Agriculture Research and Education | Research and Development | \$ 432,432 | \$ 644,904,305 | N | University of Vermont, The | 2017-38540-26915 | | \$ 4,851 |
| 10 215 | | Sustainable Agriculture Research and Education | Research and Development | \$ 432,432 | \$ 644,904,305 | N | University of Vermont, The | 2017-38640-26915 | \$ 35,488 | \$ 161,745 |
| 10 215 | | Sustainable Agriculture Research and Education | Research and Development | \$ 432,432 | \$ 644,904,305 | N | University of Vermont, The | 2018-38640-28415 | \$ 4,105 | \$ 97,980 |
| 10 215 | | Sustainable Agriculture Research and Education | Research and Development | \$ 432,432 | \$ 644,904,305 | N | University of Vermont, The | 2053864023777 | | \$ 5,110 |
| 10 217 | | Higher Education - Institution Challenge Grants Program | Research and Development | \$ 87,932 | \$ 644,904,305 | Y | | | | \$ 87,932 |
| 10 250 | | Agricultural and Rural Economic Research, Cooperative Agreements and Collaborations | Research and Development | \$ 11,081 | \$ 644,904,305 | Y | | | | \$ 11,081 |
| 10 253 | | Consumer Data and Nutrition Research | Research and Development | \$ 55,145 | \$ 644,904,305 | Y | | | | \$ 55,145 |
| 10 303 | | Integrated Programs | Research and Development | \$ 1,038,472 | \$ 644,904,305 | Y | | | \$ 15,460 | \$ 1,038,472 |
| 10 304 | | Homeland Security Agricultural | Research and Development | \$ 87,490 | \$ 644,904,305 | N | Cornell University | 2016-37620-25852 | | \$ 34,227 |
| 10 304 | | Homeland Security Agricultural | Research and Development | \$ 87,490 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300636029 | | \$ 53,263 |
| 10 307 | | Organic Agriculture Research and Extension Initiative | Research and Development | \$ 1,022,958 | \$ 644,904,305 | Y | | | \$ 96,305 | \$ 1,022,958 |
| 10 309 | | Specialty Crop Research Initiative | Research and Development | \$ 449,087 | \$ 644,904,305 | Y | | | \$ 49,567 | \$ 201,906 |
| 10 309 | | Specialty Crop Research Initiative | Research and Development | \$ 449,087 | \$ 644,904,305 | N | Michigan State University | 2014-51181-22380 | | \$ 42,727 |
| 10 309 | | Specialty Crop Research Initiative | Research and Development | \$ 449,087 | \$ 644,904,305 | N | North Carolina State University | 2016-51181-25404 | | \$ 18,088 |
| 10 309 | | Specialty Crop Research Initiative | Research and Development | \$ 449,087 | \$ 644,904,305 | N | North Carolina State University | 2016-51181-25409 | | \$ 99,955 |
| 10 309 | | Specialty Crop Research Initiative | Research and Development | \$ 449,087 | \$ 644,904,305 | N | North Carolina State University | USDA NATIONAL INSTITUTE OF FOO | | \$ 16,744 |
| 10 309 | | Specialty Crop Research Initiative | Research and Development | \$ 449,087 | \$ 644,904,305 | N | Rutgers University | 2016-51181-235399 | | \$ 12,070 |
| 10 309 | | Specialty Crop Research Initiative | Research and Development | \$ 449,087 | \$ 644,904,305 | N | Texas A&M University | 2018-51181-28436 | | \$ 49,523 |
| 10 309 | | Specialty Crop Research Initiative | Research and Development | \$ 449,087 | \$ 644,904,305 | N | Washington State University | 2019-51181-30013 | | \$ 2,870 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | Y | | | \$ 1,961,081 | \$ 7,706,299 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | N | Cornell University | USDA NATIONAL INSTITUTE OF FOO | | \$ 144,169 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | N | Piedmont Conservation Council | 2019-68010-29128 | | \$ 2,261 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | N | Purdue University | 2016-67019-25014 | | \$ 35,357 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | N | Purdue University | 2019-67017-29258 | | \$ 35,405 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | N | Rutgers University | 2017-67023-26906 | | \$ 45,509 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | N | Sam Houston State University | 2017-68006-26235 | | \$ 67,832 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | N | Syracuse University | 2016-68006-24739 | | \$ 14,550 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | N | University of Alabama, The | 2018-67017-27558 | | \$ 67,734 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | N | University of California, Davis | 2018-67015-27500 | | \$ 69,928 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | N | University of New Hampshire | 2017-67013-26594 | | \$ 78,994 |

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, 2020

| CFDA Number | 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 | \$ 8,478,617 | \$ 644,904,305 | N | University of Pennsylvania | 2018-67015-27494 | \$ 16,056 | \$ 91,289 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | 2017-67019-26401 | | \$ 25,002 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | Research and Development | \$ 8,478,617 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | 2018-67007-28452 | | \$ 43,525 |
| 10 311 | | Beginning Farmer and Rancher Development Program | Research and Development | \$ 433,557 | \$ 644,904,305 | Y | | | | \$ 296,342 |
| 10 312 | | Biomass Research and Development Initiative Competitive Grants Program (BRDI) | Research and Development | \$ 27,285 | \$ 644,904,305 | N | Dartmouth College | USDA | | \$ 27,285 |
| 10 320 | | Sun Grant Program | Research and Development | \$ 357,694 | \$ 644,904,305 | N | South Dakota State University | 2014-38502-22598 | \$ 322,440 | \$ 355,437 |
| 10 320 | | Sun Grant Program | Research and Development | \$ 357,694 | \$ 644,904,305 | N | South Dakota State University | N/A | | \$ 2,257 |
| 10 329 | | Crop Protection and Pest Management Competitive Grants Program | Research and Development | \$ 590,406 | \$ 644,904,305 | Y | | | \$ 23,537 | \$ 247,651 |
| 10 329 | | Crop Protection and Pest Management Competitive Grants Program | Research and Development | \$ 590,406 | \$ 644,904,305 | N | Cornell University | USDA NATIONAL INSTITUTE OF FOO | | \$ 13,422 |
| 10 329 | | Crop Protection and Pest Management Competitive Grants Program | Research and Development | \$ 590,406 | \$ 644,904,305 | N | North Carolina State University | 2016-70006-25877 | | \$ 4,379 |
| 10 329 | | Crop Protection and Pest Management Competitive Grants Program | Research and Development | \$ 590,406 | \$ 644,904,305 | N | University of Maryland | 2015-70006-24277 | | \$ 1,649 |
| 10 330 | | Alfalfa and Forage Research Program | Research and Development | \$ 34,249 | \$ 644,904,305 | N | University of Wisconsin | 2017-70005-27087 | | \$ 34,249 |
| 10 500 | | Cooperative Extension Service | Research and Development | \$ 4,249,981 | \$ 644,904,305 | Y | | | | \$ 3,911,897 |
| 10 500 | | Cooperative Extension Service | Research and Development | \$ 4,249,981 | \$ 644,904,305 | N | University of Minnesota | 2018-41520-28908 | \$ 70,337 | \$ 216,318 |
| 10 500 | | Cooperative Extension Service | Research and Development | \$ 4,249,981 | \$ 644,904,305 | N | University of Nebraska | 2017-41521-27121 | | \$ 1,572 |
| 10 680 | | Forest Health Protection | Research and Development | \$ 98,296 | \$ 644,904,305 | Y | | | | \$ 98,296 |
| 10 699 | | Partnership Agreements | Research and Development | \$ 3,248 | \$ 644,904,305 | Y | | | | \$ 3,248 |
| 10 777 | | Norman E. Borlaug International Agricultural Science and Technology Fellowship | Research and Development | \$ 29,334 | \$ 644,904,305 | Y | | | | \$ 25,728 |
| 10 777 | | Norman E. Borlaug International Agricultural Science and Technology Fellowship | Research and Development | \$ 29,334 | \$ 644,904,305 | N | Michigan State University | N/A | | \$ 3,606 |
| 10 902 | | Soil and Water Conservation | Research and Development | \$ 98,967 | \$ 644,904,305 | N | Capital RC&D | NATIONAL FISH AND WILDLIFE | | \$ 36,554 |
| 10 902 | | Soil and Water Conservation | Research and Development | \$ 98,967 | \$ 644,904,305 | N | Great Lakes Commission | USDA NATURAL RESOURCES CONSERV | | \$ 718 |
| 10 902 | | Soil and Water Conservation | Research and Development | \$ 98,967 | \$ 644,904,305 | N | Indiana University of Pennsylvania | NR193A750010C0001 | | \$ 40,043 |
| 10 902 | | Soil and Water Conservation | Research and Development | \$ 98,967 | \$ 644,904,305 | N | University of Rhode Island, The | 68-3A75-17-480 | | \$ 2,373 |
| 10 903 | | Soil Survey | Research and Development | \$ (2,958) | \$ 644,904,305 | Y | | | | \$ (2,958) |
| 10 912 | | Environmental Quality Incentives Program | Research and Development | \$ 76,181 | \$ 644,904,305 | Y | | | \$ 36,830 | \$ 55,549 |
| 10 960 | | Technical Agricultural Assistance | Research and Development | \$ 172,961 | \$ 644,904,305 | Y | | | | \$ 172,961 |
| 10 RD | 19-07-PSU | Agricultural Marketing Service - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | N | Christmas Tree Promotion Board | USDA AGRICULTURAL MARKETING SE | | \$ 1,472 |
| 10 RD | 14-JV-11242302-144 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | | \$ 5,850 |
| 10 RD | 17-JV-11272167-048 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | | \$ 56,336 |
| 10 RD | 19-JV-11272167-035 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | | \$ 13,287 |
| 10 RD | 2015-68001-23233 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | | \$ (102) |
| 10 RD | 2016-46100-25845 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | | \$ 102,656 |
| 10 RD | 2016-70006-25833 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | | \$ 20,285 |
| 10 RD | 2017-51300-26818 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | \$ 9,258 | \$ 385,779 |
| 10 RD | 2017-67015-26455 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | | \$ 102,539 |
| 10 RD | 2018-67013-27402 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | \$ 39,767 | \$ 182,972 |
| 10 RD | TA-CR-16-028 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | | \$ 17,021 |
| 10 RD | 228897 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | N | American Pecan Council, The | USDA | | \$ 9,889 |
| 10 RD | 44187249 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 44187249 | | \$ 14,364 |
| 10 RD | F0016275102008 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | N | Purdue University | USDA NATIONAL INSTITUTE OF FOO | | \$ 5,184 |
| 10 RD | 0702-PP2018-PATCH | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | N | Rutgers University | 2016-51181-25399 | | \$ 124,296 |
| 10 RD | 35-5420-2004-003 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | N | University of Nebraska | 2017-41521-27121 | | \$ 16,956 |
| 10 RD | GNE19-215-33243 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | N | University of Vermont, The | 2018-38640-28415 | | \$ 931 |
| 10 RD | LNE19-380-33243 | Department of Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | N | University of Vermont, The | 2018-38640-28415 | | \$ 69,275 |
| 10 RD | 2019-67009-29006 | National Institute of Food and Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | | \$ 39,029 |
| 10 RD | 2019-67011-29728 | National Institute of Food and Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | | \$ 41,680 |
| 10 RD | 2019-67021-29224 | National Institute of Food and Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | | \$ 96,948 |
| 10 RD | 2019-68012-29904 | National Institute of Food and Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | \$ 11,127 | \$ 11,127 |
| 10 RD | 6/1/2020-5/31/2021 | National Institute of Food and Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | Y | | | | \$ 3,835 |
| 10 RD | ADVANCE | National Institute of Food and Agriculture - Non-Specified | Research and Development | \$ 1,423,915 | \$ 644,904,305 | N | North Carolina State University | USDA NATIONAL INSTITUTE OF FOO | | \$ 102,306 |
| 11 013 | | Education Quality Award Ambassadorship | Research and Development | \$ 15,000 | \$ 644,904,305 | Y | | | | \$ 15,000 |

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, 2020

| CFDA Number | 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 |
|-------------|---------------------------------|---|--------------------------|-----------------------|----------------|--------------|--|--|--|-----------------|
| 11 017 | | Ocean Acidification Program (OAP) | Research and Development | \$ 9,092 | \$ 644,904,305 | N | Virginia Institute of Marine Science | NA18OAR0170430 | | \$ 9,092 |
| 11 020 | | Cluster Grants | Research and Development | \$ 317,852 | \$ 644,904,305 | Y | | | | \$ 317,852 |
| 11 307 | | Economic Adjustment Assistance | Research and Development | \$ 108,530 | \$ 644,904,305 | N | Gannon University | N/A | | \$ 108,530 |
| 11 417 | | Sea Grant Support | Research and Development | \$ 937,082 | \$ 644,904,305 | Y | | | \$ 241,899 | \$ 879,671 |
| 11 417 | | Sea Grant Support | Research and Development | \$ 937,082 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 1434-03HQURU1548 | | \$ 48,073 |
| 11 417 | | Sea Grant Support | Research and Development | \$ 937,082 | \$ 644,904,305 | N | University of Illinois | NA19OAR4170391 | | \$ 1,367 |
| 11 417 | | Sea Grant Support | Research and Development | \$ 937,082 | \$ 644,904,305 | N | University of Minnesota | NA19OAR170388 | | \$ 7,971 |
| 11 429 | | Marine Sanctuary Program | Research and Development | \$ 7,418 | \$ 644,904,305 | Y | | | | \$ 7,418 |
| 11 431 | | Climate and Atmospheric Research | Research and Development | \$ 409,768 | \$ 644,904,305 | Y | | | \$ 40,932 | \$ 252,561 |
| 11 431 | | Climate and Atmospheric Research | Research and Development | \$ 409,768 | \$ 644,904,305 | Y | RAND Corporation | NA16OAR4310179 | | \$ 155,602 |
| 11 431 | | Climate and Atmospheric Research | Research and Development | \$ 409,768 | \$ 644,904,305 | N | University of Michigan | NA15OAR4310148 | | \$ 1,605 |
| 11 432 | | National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes | Research and Development | \$ 2,233 | \$ 644,904,305 | N | University of Illinois | NA17OAR43201152 | | \$ 6,596 |
| 11 432 | | National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes | Research and Development | \$ 2,233 | \$ 644,904,305 | N | University of Michigan | NA17OAR43201152 | | \$ (4,363) |
| 11 459 | | Weather and Air Quality Research | Research and Development | \$ 443,079 | \$ 644,904,305 | Y | | | | \$ 438,840 |
| 11 459 | | Weather and Air Quality Research | Research and Development | \$ 443,079 | \$ 644,904,305 | N | University of Mississippi | NA19OAR4590339 | | \$ 4,239 |
| 11 468 | | Applied Meteorological Research | Research and Development | \$ 164,636 | \$ 644,904,305 | Y | | | | \$ 164,636 |
| 11 478 | | Center for Sponsored Coastal Ocean Research Coastal Ocean Program | Research and Development | \$ 46,467 | \$ 644,904,305 | N | Virginia Institute of Marine Science | NA16NOS478027 | | \$ 46,467 |
| 11 481 | | Educational Partnership Program | Research and Development | \$ 51,798 | \$ 644,904,305 | N | Howard University | NA16SEC4810006 | | \$ 51,798 |
| 11 482 | | Coral Reef Conservation Program | Research and Development | \$ 8,608 | \$ 644,904,305 | Y | | | | \$ 8,608 |
| 11 609 | | Measurement and Engineering Research and Standards | Research and Development | \$ 564,509 | \$ 644,904,305 | Y | | | | \$ 564,509 |
| 11 RD | 1333LB19P00000172 | Department of Commerce - Non-Specified | Research and Development | \$ 355,441 | \$ 644,904,305 | Y | | | | \$ 46,418 |
| 11 RD | 1333MJ19PNRMA0093 | Department of Commerce - Non-Specified | Research and Development | \$ 355,441 | \$ 644,904,305 | Y | | | | \$ 8,450 |
| 11 RD | INTERNAL SUB AWARD | Department of Commerce - Non-Specified | Research and Development | \$ 355,441 | \$ 644,904,305 | Y | | | \$ 55,224 | \$ 69,918 |
| 11 RD | PC2.2-157 PO 56066 | Department of Commerce - Non-Specified | Research and Development | \$ 355,441 | \$ 644,904,305 | N | University of Delaware | 70NANB17H002 | | \$ 6,904 |
| 11 RD | 1333MD18PNNEE0032 | National Oceanic and Atmospheric Administration - Non-Specified | Research and Development | \$ 355,441 | \$ 644,904,305 | Y | | | | \$ 7,586 |
| 11 RD | INTERNAL SUB AWARD | National Oceanic and Atmospheric Administration - Non-Specified | Research and Development | \$ 355,441 | \$ 644,904,305 | Y | | | | \$ 96,244 |
| 11 RD | MOA-2018-050-11539 | National Oceanic and Atmospheric Administration - Non-Specified | Research and Development | \$ 355,441 | \$ 644,904,305 | Y | | | | \$ 22,223 |
| 11 RD | NA18OAR4310302 | National Oceanic and Atmospheric Administration - Non-Specified | Research and Development | \$ 355,441 | \$ 644,904,305 | Y | | | | \$ 133 |
| 11 RD | SP133E17SE1302 | National Oceanic and Atmospheric Administration - Non-Specified | Research and Development | \$ 355,441 | \$ 644,904,305 | Y | | | | \$ 1 |
| 11 RD | 8601-SUB03 | National Oceanic and Atmospheric Administration - Non-Specified | Research and Development | \$ 355,441 | \$ 644,904,305 | N | Earth Resources Technology, Inc | NATIONAL OCEANIC AND ATMOSPHER | | \$ 12,808 |
| 11 RD | S2017-0119 | National Oceanic and Atmospheric Administration - Non-Specified | Research and Development | \$ 355,441 | \$ 644,904,305 | N | Synoptic Data | NATIONAL OCEANIC AND ATMOSPHER | | \$ 84,756 |
| 12 300 | | Basic and Applied Scientific Research | Research and Development | \$ 8,573,798 | \$ 644,904,305 | Y | | | \$ 404,985 | \$ 8,010,305 |
| 12 300 | | Basic and Applied Scientific Research | Research and Development | \$ 8,573,798 | \$ 644,904,305 | N | North Carolina Agricultural and Technical State University | N/A | | \$ 7,937 |
| 12 300 | | Basic and Applied Scientific Research | Research and Development | \$ 8,573,798 | \$ 644,904,305 | N | Purdue University | N00014-18-1-2371 | | \$ 98,289 |
| 12 300 | | Basic and Applied Scientific Research | Research and Development | \$ 8,573,798 | \$ 644,904,305 | N | Stony Brook University, State University of New York | N00014-18-1-2614 | | \$ (631) |
| 12 300 | | Basic and Applied Scientific Research | Research and Development | \$ 8,573,798 | \$ 644,904,305 | N | University of Connecticut | N00014-16-1-3199 | | \$ 13,661 |
| 12 300 | | Basic and Applied Scientific Research | Research and Development | \$ 8,573,798 | \$ 644,904,305 | N | University of Connecticut | N00014-17-1-2478 | | \$ 103,570 |
| 12 300 | | Basic and Applied Scientific Research | Research and Development | \$ 8,573,798 | \$ 644,904,305 | N | University of Minnesota | N00014-12-1-1030 | | \$ (48) |
| 12 300 | | Basic and Applied Scientific Research | Research and Development | \$ 8,573,798 | \$ 644,904,305 | N | University of Minnesota | N00014-17-1-2438 | | \$ 78,117 |
| 12 300 | | Basic and Applied Scientific Research | Research and Development | \$ 8,573,798 | \$ 644,904,305 | N | University of Washington | N00014-19-1-2593 | | \$ 84,497 |
| 12 300 | | Basic and Applied Scientific Research | Research and Development | \$ 8,573,798 | \$ 644,904,305 | N | Vanderbilt University | N00014-18-1-2107 | | \$ 42,805 |
| 12 300 | | Basic and Applied Scientific Research | Research and Development | \$ 8,573,798 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | N00014-16-1-3043 | | \$ 87,195 |
| 12 300 | | Basic and Applied Scientific Research | Research and Development | \$ 8,573,798 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | N00014-17-1-2520 | | \$ 48,101 |
| 12 351 | | Scientific Research - Combating Weapons of Mass Destruction | Research and Development | \$ 1,378,826 | \$ 644,904,305 | Y | | | \$ 644,134 | \$ 1,129,397 |
| 12 351 | | Scientific Research - Combating Weapons of Mass Destruction | Research and Development | \$ 1,378,826 | \$ 644,904,305 | N | University of Iowa, The | HDTRA1-18-1-0012 | | \$ 126,830 |
| 12 351 | | Scientific Research - Combating Weapons of Mass Destruction | Research and Development | \$ 1,378,826 | \$ 644,904,305 | N | University of Minnesota | HDTRA11710045 | | \$ 134 |
| 12 351 | | Scientific Research - Combating Weapons of Mass Destruction | Research and Development | \$ 1,378,826 | \$ 644,904,305 | N | University of Minnesota | HDTRA11710445 | | \$ 122,465 |
| 12 420 | | Military Medical Research and Development | Research and Development | \$ 1,396,738 | \$ 644,904,305 | Y | | | \$ 88,011 | \$ 1,396,738 |
| 12 431 | | Basic Scientific Research | Research and Development | \$ 2,152,886 | \$ 644,904,305 | Y | | | \$ 78,348 | \$ 1,706,313 |
| 12 431 | | Basic Scientific Research | Research and Development | \$ 2,152,886 | \$ 644,904,305 | N | George Mason University | N/A | | \$ 76,328 |
| 12 431 | | Basic Scientific Research | Research and Development | \$ 2,152,886 | \$ 644,904,305 | N | National Center for Manufacturing Sciences | W911NF-18-2-0041 | | \$ 41,523 |
| 12 431 | | Basic Scientific Research | Research and Development | \$ 2,152,886 | \$ 644,904,305 | N | University of Wisconsin - Madison | W911NF-17-1-0462 | | \$ 105,114 |

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, 2020**

| CFDA Number | 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 |
|-------------|---------------------------------|--|--------------------------|-----------------------|----------------|--------------|---|--|--|-----------------|
| 12 431 | | Basic Scientific Research | Research and Development | \$ 2,152,886 | \$ 644,904,305 | N | Worcester Polytechnic Institute | W911NF-15-2-0024 | | \$ 223,608 |
| 12 556 | | Competitive Grants: Promoting K-12 Student Achievement at Military-Connected Schools | Research and Development | \$ 275,424 | \$ 644,904,305 | Y | | | | \$ 275,424 |
| 12 630 | | Basic, Applied, and Advanced Research in Science and Engineering | Research and Development | \$ 864,404 | \$ 644,904,305 | Y | | | \$ 271,636 | \$ 530,737 |
| 12 630 | | Basic, Applied, and Advanced Research in Science and Engineering | Research and Development | \$ 864,404 | \$ 644,904,305 | N | Texas Agricultural Experiment Station, The | HM04761912015 | | \$ 35,391 |
| 12 630 | | Basic, Applied, and Advanced Research in Science and Engineering | Research and Development | \$ 864,404 | \$ 644,904,305 | N | The Network Science Consortium | U.S. ARMY RESEARCH, DEVELOPMENT | | \$ 212,257 |
| 12 630 | | Basic, Applied, and Advanced Research in Science and Engineering | Research and Development | \$ 864,404 | \$ 644,904,305 | N | University of Utah, The | U.S. ARMY RESEARCH LABORATORY | | \$ 86,019 |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | Y | | | \$ 772,212 | \$ 3,810,034 |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | N | Delaware State University | AIR FORCE OFFICE OF SCIENTIFIC | | \$ 60,787 |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | N | Florida International University | AIR FORCE OFFICE OF SCIENTIFIC | | \$ 33,940 |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | N | National Center for Defense Manufacturing & Machining | FA8650-12-2-7230 | | \$ (59,701) |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | N | National Center for Defense Manufacturing & Machining | FA8650-16-2-5700 | \$ 235,130 | \$ 648,315 |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | N | Northwestern University | AIR FORCE OFFICE OF SCIENTIFIC | | \$ 14,855 |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | N | Physical Sciences, Inc. | HQ0147-16-C-7808 | | \$ 59,979 |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | N | Purdue University | FA9550-19-1-0008 | | \$ 459,827 |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | N | Research Foundation for The State University of New York, The | FA95501710088 | | \$ 93,258 |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | N | Stanford University | FA9550-14-10317 | | \$ 135,925 |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | N | University of Wisconsin - Madison | FA9550-19-1-0385 | | \$ 33,329 |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | FA9550-17-1-0341 | | \$ 74,226 |
| 12 800 | | Air Force Defense Research Sciences Program | Research and Development | \$ 5,535,236 | \$ 644,904,305 | N | Youngstown State University | FA8650-16-2-5700 | | \$ 148,675 |
| 12 902 | | Information Security Grants | Research and Development | \$ 43,061 | \$ 644,904,305 | Y | | | | \$ 43,061 |
| 12 910 | | Research and Technology Development | Research and Development | \$ 6,509,291 | \$ 644,904,305 | Y | | | \$ 1,750,966 | \$ 4,907,722 |
| 12 910 | | Research and Technology Development | Research and Development | \$ 6,509,291 | \$ 644,904,305 | N | Carnegie Mellon University | DEFENSE ADVANCED RESEARCH PROJ | | \$ 680,519 |
| 12 910 | | Research and Technology Development | Research and Development | \$ 6,509,291 | \$ 644,904,305 | N | Montana State University | D18AC00031 | | \$ 32,176 |
| 12 910 | | Research and Technology Development | Research and Development | \$ 6,509,291 | \$ 644,904,305 | N | University of Colorado | W31P4Q-13-1-0015 | | \$ 7,080 |
| 12 910 | | Research and Technology Development | Research and Development | \$ 6,509,291 | \$ 644,904,305 | N | University of Oklahoma, The | D18AP0069 | | \$ 72,079 |
| 12 910 | | Research and Technology Development | Research and Development | \$ 6,509,291 | \$ 644,904,305 | N | University of South Florida | D15AP0089 | | \$ 70,645 |
| 12 910 | | Research and Technology Development | Research and Development | \$ 6,509,291 | \$ 644,904,305 | N | University of Southern California | W911NF-18-1-0027 | | \$ 132,085 |
| 12 910 | | Research and Technology Development | Research and Development | \$ 6,509,291 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | HR0011-16-C-0035 | | \$ 329,146 |
| 12 910 | | Research and Technology Development | Research and Development | \$ 6,509,291 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | W911NF-16-2-0010 | | \$ 277,839 |
| 12 RD | HR0011-15-C-0029 | Defense Advanced Research Projects Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 334,620 | \$ (17,067) |
| 12 RD | HR0011-20-C-0067 | Defense Advanced Research Projects Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 498 | \$ 392,542 |
| 12 RD | N66001-12-C-4032 | Defense Advanced Research Projects Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 498 |
| 12 RD | 1141322-418784 | Defense Advanced Research Projects Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Carnegie Mellon University | N66001-17-2-4064 | | \$ 672,539 |
| 12 RD | 401733-5801 | Defense Advanced Research Projects Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Colorado School of Mines | DEFENSE ADVANCED RESEARCH PROJ | | \$ 11,619 |
| 12 RD | 2019-021 | Defense Advanced Research Projects Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Galois, Inc. | DEFENSE ADVANCED RESEARCH PROJ | | \$ 150,306 |
| 12 RD | E203809-3 | Defense Advanced Research Projects Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | George Mason University | DEFENSE ADVANCED RESEARCH PROJ | | \$ 119,082 |
| 12 RD | E203809-3 | Defense Advanced Research Projects Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | George Mason University | HR0011-16-C-0055 | | \$ (24,687) |
| 12 RD | 124818 TO 161121 | Defense Advanced Research Projects Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Johns Hopkins University | HR0011-17-D-0001 | | \$ 50,157 |
| 12 RD | G169-19-W7329 | Defense Advanced Research Projects Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Montana State University | D18AC00031 | | \$ 84,570 |
| 12 RD | PO-0018619 | Defense Advanced Research Projects Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Perspecta Inc. | DEFENSE ADVANCED RESEARCH PROJ | | \$ 59,613 |
| 12 RD | 40001859-027 | Defense Advanced Research Projects Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Purdue University | HR0011-18-3-0004 | | \$ 25,578 |
| 12 RD | P010231342 | Defense Intelligence Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Leidos | HC1028-12-D-0021 | | \$ 237,207 |

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, 2020

| CFDA Number | 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 | STP0-19-65976-0 | Defense Threat Reduction Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | CRDF Global | DEFENSE THREAT REDUCTION AGENC | | \$ 29,990 |
| 12 RD | P010216733 | Defense Threat Reduction Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Leidos | HC1028-12-D-0001 | | \$ 1,889 |
| 12 RD | P010237053 | Defense Threat Reduction Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Leidos | HDTRA1-17-C-0019 | | \$ 63,043 |
| 12 RD | HM047620C0016 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 466,216 |
| 12 RD | HQ0034-20-1-0002 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 72,124 |
| 12 RD | W912PX-19-D-0001/19F0019 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 341,514 |
| 12 RD | 26906 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Applied Physical Sciences Corporation | HR0011-18-C-0004 | | \$ 8 |
| 12 RD | 22941 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Brimrose Technology Corporation | HQ0147-15-C-7401 | | \$ 6,281 |
| 12 RD | SC1519801 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Charles River Analytics Inc. | W81XWH-17-C-0002 | | \$ 154,681 |
| 12 RD | SC001-00000001314 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Charles Stark Draper Laboratory, Inc., The | HM0476-17-009 | | \$ 17,348 |
| 12 RD | S18-06114 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | EOIR Technologies, Inc. | DOTC-13-01-INIT334 | | \$ (621) |
| 12 RD | MSA 124818 TO 151814 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Johns Hopkins University | HQ0034-13-D-0003 | | \$ 90,754 |
| 12 RD | MSA 124818 TO 159206 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Johns Hopkins University | HQ003419D0006 | | \$ 99,300 |
| 12 RD | P010216733 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Leidos | HC1028-12-D-0021 | | \$ 54,664 |
| 12 RD | 0659055 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Mainstream Engineering Corporation | HQ0147-18-C-0037 | | \$ 26,823 |
| 12 RD | 26973 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Mainstream Engineering Corporation | HQ1047-19-C-7132 | | \$ 99,772 |
| 12 RD | 26860 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | QorTek Inc. | QU0147-17-C-7345 | | \$ (439) |
| 12 RD | 26544 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Senvol LLC | SP4701-18-P-0112 | | \$ (1,039) |
| 12 RD | 2017-107 CLIN 0001 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Steel Founders' Society of America | SP4701-17-D-1161 | | \$ 20,271 |
| 12 RD | 2102876-04 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Stevens Institute of Technology | HQ0034-13-D-0004 | | \$ 6,155 |
| 12 RD | 1247168 | Department of Defense - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | United Technologies Research Center | DE-AR0000994 | | \$ 128,975 |
| 12 RD | FA8750-17-C-0254 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 247,246 |
| 12 RD | FA8750-19-C-1519 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 868,860 |
| 12 RD | FA9550-15-1-0400 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 843 |
| 12 RD | FA9550-18-1-0135 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 205,786 |
| 12 RD | FA9550-18-1-0296 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 287,394 |
| 12 RD | FA9550-20-1-0084 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 6,055 |
| 12 RD | PO 19006 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Arrow Tech Associates, Inc. | FA8651-19-P-0111 | | \$ 46,939 |
| 12 RD | 238-5404-PSU | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Azimuth Corporation | AIR FORCE RESEARCH LABORATORY | | \$ 6,616 |
| 12 RD | 238-5404-PSU2 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Azimuth Corporation | AIR FORCE RESEARCH LABORATORY | | \$ 54,841 |
| 12 RD | S901982BAH | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Booz Allen Hamilton Inc. | FA8750-17-F-0105 | | \$ 739,184 |
| 12 RD | 20180006 PROJ 9308 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | CFD Research Corporation | FA8650-18-C-6870 | | \$ 101,196 |
| 12 RD | 216084 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Dynamic Systems & Research Corporation | AIR FORCE RESEARCH LABORATORY | | \$ 31,290 |
| 12 RD | 401119780 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | General Electric | FA8650-16-2-5700 | | \$ 137,527 |
| 12 RD | 26496 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | HAMR Industries LLC | FA8651-18-P-0056 | | \$ (2,904) |
| 12 RD | 201826 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | H-Nu Systems LLC | FA9453-17-C00421 | | \$ 8,595 |
| 12 RD | IIA-1815-SK-00001 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Homeland Defense & Security Inc | FA8075-13-D-0001 | | \$ (658) |
| 12 RD | 201040 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | INVERCON LLC | AIR FORCE OFFICE OF SCIENTIFIC | | \$ 36,808 |
| 12 RD | K002528-00-S01 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Kitware, Inc. | FA8650-19-C-1011 | | \$ 91,316 |
| 12 RD | PO10203201 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Leidos | FA9451-17-D-0070 | | \$ 36,483 |
| 12 RD | 4103009755 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Lockheed Martin Corporation | U.S. DEPARTMENT OF THE AIR FOR | | \$ 6,129 |
| 12 RD | 4104151937 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Lockheed Martin Corporation | U.S. DEPARTMENT OF THE AIR FOR | | \$ 6,606 |
| 12 RD | 4104158293 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Lockheed Martin Corporation | U.S. DEPARTMENT OF THE AIR FOR | | \$ 1,225 |

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, 2020

| CFDA Number | 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 | 28198 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Mainstream Engineering Corporation | FA8649-20-P-0348 | \$ 53,356 |
| 12 | RD | 1627-PENN | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Matrix Research Inc. | U.S. DEPARTMENT OF THE AIR FOR | \$ 1 |
| 12 | RD | SC 87878-4270-46 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Physical Sciences, Inc. | FA8650-19-C-5043 | \$ 114,695 |
| 12 | RD | 28361 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | QorTek Inc. | FA9453-19-C-0669 | \$ 5,283 |
| 12 | RD | 4201931021 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Raytheon Company | JOINT IED DEFEAT ORGANIZATION | \$ 13,883 |
| 12 | RD | 7405-1901 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Reaction Systems, Inc. | FA8650-19-C-2405 | \$ 31,889 |
| 12 | RD | 24296 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Sabre Systems, Inc. | FA8750-16-C-0216 | \$ 26,471 |
| 12 | RD | SPG-FD-18-C-0024 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | SP Global, Inc | FA8750-18-C-0033 | \$ 44,034 |
| 12 | RD | T2019-496 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | TelAztec | FA9451-17-C-0095 | \$ 14,945 |
| 12 | RD | SC16-5995-1 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Toyon Research Corporation | FA8650-16-C-1769 | \$ 50,574 |
| 12 | RD | AF191-063-01 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Trusted Science and Technology, Inc. | FA8750-19-C-1020 | \$ 47,885 |
| 12 | RD | S-111-04G-001 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | UES, Inc | FA8650-18-D-5405 | \$ 7,195 |
| 12 | RD | S-111-041-001 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | UES, Inc | FA8650-18-D-5405 | \$ 30,635 |
| 12 | RD | S-160-000-001 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | UES, Inc. | FA8650-19-C-2051 | \$ 167,896 |
| 12 | RD | S-163-001-001 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | UES, Inc. | FA8650-19-C-5080 | \$ 11,825 |
| 12 | RD | 1254302_PO 2607009 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | United Technologies Research Center | FA8650-20-C-7001 | \$ 5,714 |
| 12 | RD | RSC18008 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | University of Dayton Research Institute | FA8650-18-D-5761/0001 | \$ 39,453 |
| 12 | RD | UTA14-001124 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | University of Texas at Austin, The | FA9550-14-1-0089 | \$ 85,294 |
| 12 | RD | UTA14-001124 | Department of the Air Force - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | University of Texas at Austin, The | FA95601410089 | \$ 8,601 |
| 12 | RD | W15P7T-06-D-R401 DO 0012 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 16,624 |
| 12 | RD | W81XWH-16-1-0725 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 259,986 |
| 12 | RD | W81XWH-17-1-0197 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 232,075 |
| 12 | RD | W81XWH-17-C-0247 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 284,722 |
| 12 | RD | W81XWH1810103 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 159,741 |
| 12 | RD | W81XWH-18-1-0283 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 55,972 |
| 12 | RD | W81XWH-18-D-0017 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 9,016 |
| 12 | RD | W911NF-11-D-0002 DO 0001 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (169) |
| 12 | RD | W911NF-11-D-0002 DO 0003 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 172,983 |
| 12 | RD | W911NF-13-2-0045 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 2,802,681 |
| 12 | RD | W911NF-15-2-0066 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 104,803 |
| 12 | RD | W911NF-17-1-0155 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (1,244) |
| 12 | RD | W911NF-18-1-0043 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 111,225 |
| 12 | RD | W911NF-18-1-0414 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 117,429 |
| 12 | RD | W911W6-17-2-0003 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 344,807 |
| 12 | RD | W911W6-19-C-0083 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 170,968 |
| 12 | RD | W912HQ-16-C-0006 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 829,164 |
| 12 | RD | W912HQ-17-C-0041 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 81,558 |
| 12 | RD | W91CRB-17-C-0047 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 77,707 |
| 12 | RD | CS 2019 0002 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Abbott Point of Care Inc. | U.S. ARMY MEDICAL RESEARCH AND | \$ 59,286 |
| 12 | RD | 2014-309 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Technology International | DOTC-17-01-INIT0451 | \$ 73,500 |
| 12 | RD | 2014-309 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Technology International | DOTC-17-01-INIT0453 | \$ 116,250 |
| 12 | RD | 2018-867 CWMD1826-001 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Technology International | U.S. ARMY CONTRACTING COMMAND | \$ 46,903 |
| 12 | RD | 2018-825 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Technology International | U.S. DEPARTMENT OF THE ARMY | \$ 117,644 |
| 12 | RD | 2018-867 TO #CWMD1907-001 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Technology International | US ARMY CONTRACTING COMMAND | \$ 313,528 |
| 12 | RD | 2015-328 TASK 01 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Technology International | W15QKN-10-9-0003 | \$ 4,916 |

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, 2020

| CFDA Number | 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 1257-2075 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Aptima Inc | W56KGU-18-C-0023 | | \$ (519) |
| 12 | RD 371 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | AVX Aircraft Company | W911W6-13-2-0004 | | \$ 109,991 |
| 12 | RD 1130236-420700 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Carnegie Mellon University | W911NF1820218 | | \$ 192,532 |
| 12 | RD SC1608001 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Charles River Analytics Inc. | U.S. DEPARTMENT OF THE ARMY | | \$ 2,501 |
| 12 | RD 3039 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Concurrent Technologies Corporation | W56HZV-16-9-0001 | | \$ 2,242 |
| 12 | RD 177966 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | CytoSorbents Corporation | W81XWH-16-C-0025 | | \$ 1 |
| 12 | RD 183737 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | DCS Corporation | W56HZV-17-C-0062 | | \$ 45,226 |
| 12 | RD 190873 W56HZV-17-C-0062 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | DCS Corporation | W56HZV-17-C-0062 TES-S-17-01 | | \$ 65,639 |
| 12 | RD MSRC-FY19-04 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Denver Research Institute | U.S. ARMY MEDICAL RESEARCH AND | | \$ 52,664 |
| 12 | RD E2030473 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | George Mason University | N/A | | \$ 13,214 |
| 12 | RD 24025 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | H.F. Webster Engineering Services | W911QX-16-C-0024 | | \$ (503) |
| 12 | RD 26625 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | HAMR Industries LLC | W15QKN-19-C-0009 | | \$ 246,137 |
| 12 | RD 2521-2 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Intelligent Automation, Inc. | W911NF-20-C-0010 | | \$ 56,339 |
| 12 | RD 2479-1 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Intelligent Automation, Inc. | W911QX-19-P-0188 | | \$ 32,399 |
| 12 | RD W81XWH-17-2-0032 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Johns Hopkins University | U.S. ARMY RESEARCH, DEVELOPMENT | | \$ (18,496) |
| 12 | RD 217716 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Micromechatronics, Inc | U.S. DEPARTMENT OF THE ARMY | | \$ 16,336 |
| 12 | RD AR2-0114 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Nanosonic, Inc | W31P4Q-18-C-0114 | | \$ 202,697 |
| 12 | RD 28196 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | National Center for Defense Manufacturing & Machining | W9124P-19-9-0001 | | \$ 20,125 |
| 12 | RD 101917-01 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | New Tech Ceramics, Inc. | ARMY RIF - UNKNOWN NUMBER | | \$ (291) |
| 12 | RD 030519-01 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | New Tech Ceramics, Inc. | W91CRB-17-C-0022 | | \$ 36,507 |
| 12 | RD 060418-01 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | New Tech Ceramics, Inc. | W91CRB-17-C-0022 | | \$ 10,909 |
| 12 | RD 19-07 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | NextGen Aeronautics | W911W619C0043 | | \$ 30,000 |
| 12 | RD 2016-1652-04 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | North Carolina State University | W911NF-16-1-0406 | | \$ 216,486 |
| 12 | RD 209847 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Novateur Research Solutions, LLC | W31P4Q-18-C-0055 | | \$ 86,856 |
| 12 | RD PO-0018668 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Perspecta Inc. | W91CRB-18-D-0006 | | \$ 466,028 |
| 12 | RD 13000802-017 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Purdue University | W911NF1910488 | | \$ 50,723 |
| 12 | RD 214553 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | QorTek Inc. | W31P4Q-18-C-0104 | | \$ 303,755 |
| 12 | RD 5003884741 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Rolls-Royce | N00014-16-C-2031 | | \$ 337,956 |
| 12 | RD STC-19-02 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Strategic Technology Consulting | W15QKN-18-9-1008 | | \$ 65,893 |
| 12 | RD S18-095004 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | SURVICE Engineering Company | DOTC-17-01-INIT0086 | | \$ 56,857 |
| 12 | RD S-161-000-001 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | UES, Inc | W911NF19P0024 | | \$ (2,729) |
| 12 | RD 095624-17501 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | University of Illinois | W912HZ19P0047 | | \$ 10,528 |
| 12 | RD 10028801-PENN-APP CLIN 006 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | University of Utah, The | U.S. ARMY RESEARCH LABORATORY | | \$ 125,893 |
| 12 | RD 417718G / UR FAO GR511037 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | UR Medicine | W81XWH-17-1-03331 | | \$ 6,110 |
| 12 | RD PO-0016096 L1 1 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Vencore, Inc. | W91ZLK-15-D-0006 | | \$ (62) |
| 12 | RD 25549 W15QKN-18-C-0002 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | VRC Metal Systems, LLC | W15QKN-18-C-0002 | | \$ 15,260 |
| 12 | RD 26871 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | VRC Metal Systems, LLC | W912HZ19P0031 | | \$ 17,669 |
| 12 | RD 16-TMP-01-215461 | Department of the Army - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Worcester Polytechnic Institute | W911NF-15-2-0024 | | \$ (981) |
| 12 | RD N00014-05-D-0275 DO 0002 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 7,661 | \$ 7,661 |
| 12 | RD N00014-05-G-0106 DO 0116 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ (66) |
| 12 | RD N00014-10-D-0145 DO 0004 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 248,159 | \$ 567,484 |
| 12 | RD N00014-10-D-0145 DO 0010 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 12,364 |
| 12 | RD N00014-10-G-0259 DO 0034 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 1,197,183 |
| 12 | RD N00014-14-1-0847 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ (478) |

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, 2020

| CFDA Number | 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 | N00014-15-D-5003 DO 0001 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 645,460 |
| 12 | RD | N00014-15-D-5003 DO 0002 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 618,257 |
| 12 | RD | N00014-15-D-5003 DO 1417FM004 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 1,015,713 | \$ 1,124,068 |
| 12 | RD | N00014-15-D-5003 DO 1418FM019 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 212,202 |
| 12 | RD | N00014-15-D-5003 DO 1419FM002 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 147,474 | \$ 589,872 |
| 12 | RD | N00014-15-D-5003 DO 16-F-M010 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 1,036,528 | \$ 2,565,925 |
| 12 | RD | N00014-15-D-5003 DO 19FM004 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 471,091 | \$ 508,744 |
| 12 | RD | N00014-15-D-5003 DO 19FM008 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 444,843 | \$ 788,955 |
| 12 | RD | N00014-15-D-5003 DO 20FM001 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 124,356 |
| 12 | RD | N00014-15-G-0001 DO 0001 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 95,422 |
| 12 | RD | N00014-15-G-0001 DO 0002 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 2,254,557 |
| 12 | RD | N00014-15-G-0001 DO 0003 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 19,508 |
| 12 | RD | N00014-15-G-0001 DO 0005 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 226,856 |
| 12 | RD | N00014-15-G-0001 DO 1416F3005 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (2,617) |
| 12 | RD | N00014-15-G-0001 DO 1416F3013 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 91,455 |
| 12 | RD | N00014-15-G-0001 DO 1418F2006 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 4,190,436 | \$ 7,852,425 |
| 12 | RD | N00014-15-G-0001 DO 18F1006 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 3,304,637 |
| 12 | RD | N00014-15-G-0001 DO 18F7001 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 151,372 |
| 12 | RD | N00014-15-G-0001/16-F-3013 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 11,656 |
| 12 | RD | N00014-15-G-0001/17-F-2015 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 2,442 |
| 12 | RD | N00014-16-1-2082 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 27,444 |
| 12 | RD | N00014-16-1-2816 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 15,118 |
| 12 | RD | N00014-16-1-2912 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 71,298 |
| 12 | RD | N00014-16-1-2952 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 12,545 |
| 12 | RD | N00014-17-1-2361 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 144,158 |
| 12 | RD | N00014-17-1-2894 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 547,661 |
| 12 | RD | N00014-18-1-2471 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 12,778 |
| 12 | RD | N00014-18-1-2511 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 96,284 |
| 12 | RD | N00014-18-1-2595 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 176,024 |
| 12 | RD | N00014-18-1-2793 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 96,058 |
| 12 | RD | N00014-18-1-2895 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 6,633 |
| 12 | RD | N00014-19-C-1055 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 587,979 |
| 12 | RD | N00014-19-C-1067 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 116,471 |
| 12 | RD | N00014-19-C-2031 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,684,255 |
| 12 | RD | N00014-19-C-2033 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 633,515 |
| 12 | RD | N00014-19-C-2034 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 446,019 |
| 12 | RD | N00014-19-C-2064 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 95,065 |
| 12 | RD | N0001419TG00369 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 10,792 |
| 12 | RD | N00014-20-1-2278 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 7,567 |
| 12 | RD | N00014-20-C-1061 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 664,055 |
| 12 | RD | N00014-20-C-2002 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 830,658 |

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, 2020**

| CFDA Number | 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 | N00014-20-D-7001 DO 20FM005 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 37,316 |
| 12 | RD | N00014-20-D-7001 DO 20FM006 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 43,661 |
| 12 | RD | N0001919TG00368 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 12,918 |
| 12 | RD | N00024-12-D-6404 DO 0016 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (53) |
| 12 | RD | N00024-12-D-6404 DO 0069 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (99) |
| 12 | RD | N00024-12-D-6404 DO 0095 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 12,356 | \$ 12,356 |
| 12 | RD | N00024-12-D-6404 DO 0102 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 1,133 | \$ 1,133 |
| 12 | RD | N00024-12-D-6404 DO 0167 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 3,061 |
| 12 | RD | N00024-12-D-6404 DO 0191 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 1,092 | \$ 1,092 |
| 12 | RD | N00024-12-D-6404 DO 0225 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (665) |
| 12 | RD | N00024-12-D-6404 DO 0227 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 6,197 |
| 12 | RD | N00024-12-D-6404 DO 0246 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 37,841 | \$ 49,391 |
| 12 | RD | N00024-12-D-6404 DO 0260 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (941) |
| 12 | RD | N00024-12-D-6404 DO 0287 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (541) |
| 12 | RD | N00024-12-D-6404 DO 0296 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (200) |
| 12 | RD | N00024-12-D-6404 DO 0309 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (23,678) |
| 12 | RD | N00024-12-D-6404 DO 0322 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (15,922) |
| 12 | RD | N00024-12-D-6404 DO 0334 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 334,805 |
| 12 | RD | N00024-12-D-6404 DO 0348 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (1,553) |
| 12 | RD | N00024-12-D-6404 DO 0350 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (11,529) |
| 12 | RD | N00024-12-D-6404 DO 0372 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1 |
| 12 | RD | N00024-12-D-6404 DO 0412 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1 |
| 12 | RD | N00024-12-D-6404 DO 0417 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (80,045) |
| 12 | RD | N00024-12-D-6404 DO 0423 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 58,035 | \$ 928,078 |
| 12 | RD | N00024-12-D-6404 DO 0425 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 5,889 | \$ 13,637 |
| 12 | RD | N00024-12-D-6404 DO 0426 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 4,460,367 |
| 12 | RD | N00024-12-D-6404 DO 0429 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (90,910) |
| 12 | RD | N00024-12-D-6404 DO 0445 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (924) |
| 12 | RD | N00024-12-D-6404 DO 0448 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (24,438) |
| 12 | RD | N00024-12-D-6404 DO 0451 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 36,363 | \$ 665,969 |
| 12 | RD | N00024-12-D-6404 DO 0455 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (224) |

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, 2020**

| CFDA Number | 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 | N00024-12-D-6404 DO 0456 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (579) |
| 12 | RD | N00024-12-D-6404 DO 0458 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,171,333 |
| 12 | RD | N00024-12-D-6404 DO 0472 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (562) |
| 12 | RD | N00024-12-D-6404 DO 0481 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 46,906 |
| 12 | RD | N00024-12-D-6404 DO 0486 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 877,851 |
| 12 | RD | N00024-12-D-6404 DO 0488 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 35 |
| 12 | RD | N00024-12-D-6404 DO 0492 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 38,267 |
| 12 | RD | N00024-12-D-6404 DO 0495 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 57,485 |
| 12 | RD | N00024-12-D-6404 DO 0496 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (16) |
| 12 | RD | N00024-12-D-6404 DO 0497 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (827) |
| 12 | RD | N00024-12-D-6404 DO 0498 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (9,489) |
| 12 | RD | N00024-12-D-6404 DO 0499 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (5,915) |
| 12 | RD | N00024-12-D-6404 DO 0500 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,788 |
| 12 | RD | N00024-12-D-6404 DO 0505 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 120,059 |
| 12 | RD | N00024-12-D-6404 DO 0509 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (13,490) |
| 12 | RD | N00024-12-D-6404 DO 0514 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (615) |
| 12 | RD | N00024-12-D-6404 DO 0524 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (369) |
| 12 | RD | N00024-12-D-6404 DO 0526 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 45,192 | \$ 45,192 |
| 12 | RD | N00024-12-D-6404 DO 0529 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 108,050 |
| 12 | RD | N00024-12-D-6404 DO 0530 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 59,964 |
| 12 | RD | N00024-12-D-6404 DO 0532 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 5,460,267 |
| 12 | RD | N00024-12-D-6404 DO 0533 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 445,961 |
| 12 | RD | N00024-12-D-6404 DO 0535 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 71,037 |
| 12 | RD | N00024-12-D-6404 DO 0541 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (11,451) |
| 12 | RD | N00024-12-D-6404 DO 0542 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (345) |
| 12 | RD | N00024-12-D-6404 DO 0544 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (280) |
| 12 | RD | N00024-12-D-6404 DO 0545 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 60,461 |
| 12 | RD | N00024-12-D-6404 DO 0548 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 442,143 |
| 12 | RD | N00024-12-D-6404 DO 0549 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 110,402 |
| 12 | RD | N00024-12-D-6404 DO 0553 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 551,492 |
| 12 | RD | N00024-12-D-6404 DO 0556 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 13,490 |

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, 2020**

| CFDA Number | 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 | N00024-12-D-6404 DO 0559 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (356) |
| 12 | RD | N00024-12-D-6404 DO 0572 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 3 |
| 12 | RD | N00024-12-D-6404 DO 0574 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (623) |
| 12 | RD | N00024-12-D-6404 DO 0577 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (7,143) |
| 12 | RD | N00024-12-D-6404 DO 0580 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (348) |
| 12 | RD | N00024-12-D-6404 DO 0583 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 809,758 |
| 12 | RD | N00024-12-D-6404 DO 0586 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (818) |
| 12 | RD | N00024-12-D-6404 DO 17F8300 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 80,430 |
| 12 | RD | N00024-12-D-6404 DO 17F8302 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 41,760 |
| 12 | RD | N00024-12-D-6404 DO 17F8304 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 95,592 |
| 12 | RD | N00024-12-D-6404 DO 17F8310 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 325,988 |
| 12 | RD | N00024-12-D-6404 DO 17F8311 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 374 |
| 12 | RD | N00024-12-D-6404 DO 17F8313 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (33,828) |
| 12 | RD | N00024-12-D-6404 DO 17F8317 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 9,665 | \$ 10,225 |
| 12 | RD | N00024-12-D-6404 DO 17F8318 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (2,355) |
| 12 | RD | N00024-12-D-6404 DO 17F8320 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 54,773 |
| 12 | RD | N00024-12-D-6404 DO 17F8321 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (260) |
| 12 | RD | N00024-12-D-6404 DO 17F8324 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (248) |
| 12 | RD | N00024-12-D-6404 DO 17F8325 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (617) |
| 12 | RD | N00024-12-D-6404 DO 17F8326 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (8) |
| 12 | RD | N00024-12-D-6404 DO 17F8327 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 50,729 |
| 12 | RD | N00024-12-D-6404 DO 17F8330 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (653) |
| 12 | RD | N00024-12-D-6404 DO 17F8331 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 27,487 |
| 12 | RD | N00024-12-D-6404 DO 17F8332 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 12,150 |
| 12 | RD | N00024-12-D-6404 DO 17F8338 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 75,499 |
| 12 | RD | N00024-12-D-6404 DO 17F8340 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 702,724 |
| 12 | RD | N00024-12-D-6404 DO 17F8341 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (330) |
| 12 | RD | N00024-12-D-6404 DO 17F8343 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 208,047 |
| 12 | RD | N00024-12-D-6404 DO 17F8344 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 148,840 |
| 12 | RD | N00024-12-D-6404 DO 17F8346 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (11,658) |
| 12 | RD | N00024-12-D-6404 DO 17F8348 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (2,085) |

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, 2020**

| CFDA Number | 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 | N00024-12-D-6404 DO 17F8352 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 421 |
| 12 | RD | N00024-12-D-6404 DO 17F8353 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (859) |
| 12 | RD | N00024-12-D-6404 DO 17F8354 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 136,071 |
| 12 | RD | N00024-12-D-6404 DO 17F8356 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (1,109) |
| 12 | RD | N00024-12-D-6404 DO 17F8364 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (8) |
| 12 | RD | N00024-12-D-6404 DO 17F8365 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (3,401) |
| 12 | RD | N00024-12-D-6404 DO 18F8302 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (68) |
| 12 | RD | N00024-12-D-6404 DO 18F8304 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (328) |
| 12 | RD | N00024-12-D-6404 DO 18F8305 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 320 |
| 12 | RD | N00024-12-D-6404 DO 18F8306 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 311,432 |
| 12 | RD | N00024-12-D-6404 DO 18F8307 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 304,149 | \$ 477,878 |
| 12 | RD | N00024-12-D-6404 DO 18F8309 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 966,364 | \$ 2,565,373 |
| 12 | RD | N00024-12-D-6404 DO 18F8310 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (716) |
| 12 | RD | N00024-12-D-6404 DO 18F8311 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 132,349 |
| 12 | RD | N00024-12-D-6404 DO 18F8312 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 458 |
| 12 | RD | N00024-12-D-6404 DO 18F8313 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 264,279 |
| 12 | RD | N00024-12-D-6404 DO 18F8314 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 2,992,425 |
| 12 | RD | N00024-12-D-6404 DO 18F8315 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (2,687) |
| 12 | RD | N00024-12-D-6404 DO 18F8317 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 89,731 | \$ 1,515,225 |
| 12 | RD | N00024-12-D-6404 DO 18F8318 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 71,021 |
| 12 | RD | N00024-12-D-6404 DO 18F8321 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 2,484,080 |
| 12 | RD | N00024-12-D-6404 DO 18F8324 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 47,101 |
| 12 | RD | N00024-12-D-6404 DO 18F8325 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 576,046 |
| 12 | RD | N00024-12-D-6404 DO 18F8326 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,327 |
| 12 | RD | N00024-12-D-6404 DO 18F8327 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (5,274) |
| 12 | RD | N00024-12-D-6404 DO 18F8329 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 132,416 |
| 12 | RD | N00024-12-D-6404 DO 18F8332 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (5,136) |
| 12 | RD | N00024-12-D-6404 DO 18F8333 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,131 |
| 12 | RD | N00024-12-D-6404 DO 18F8334 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (67) |
| 12 | RD | N00024-12-D-6404 DO 18F8335 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 18,530 | \$ 65,246 |
| 12 | RD | N00024-12-D-6404 DO 18F8341 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (1,096) |

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, 2020**

| CFDA Number | 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 | N00024-12-D-6404 DO 18F8342 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (2,021) |
| 12 | RD | N00024-12-D-6404 DO 18F8343 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 812,410 |
| 12 | RD | N00024-12-D-6404 DO 18F8344 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 484,189 |
| 12 | RD | N00024-12-D-6404 DO 18F8345 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 895 |
| 12 | RD | N00024-12-D-6404 DO 18F8346 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 4,438 |
| 12 | RD | N00024-12-D-6404 DO 18F8347 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (81) |
| 12 | RD | N00024-12-D-6404 DO 18F8348 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 906,834 |
| 12 | RD | N00024-12-D-6404 DO 18F8349 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (1,108) |
| 12 | RD | N00024-12-D-6404 DO 18F8350 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (368) |
| 12 | RD | N00024-12-D-6404 DO 18F8352 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (121) |
| 12 | RD | N00024-12-D-6404 DO 18F8353 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 328,657 |
| 12 | RD | N00024-12-D-6404 DO 18F8354 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 46,684 |
| 12 | RD | N00024-12-D-6404 DO 18F8355 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 15,799 |
| 12 | RD | N00024-12-D-6404 DO 18F8356 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 142,489 |
| 12 | RD | N00024-12-D-6404 DO 18F8357 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 698,443 |
| 12 | RD | N00024-12-D-6404 DO 18F8358 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 30,928 |
| 12 | RD | N00024-12-D-6404 DO 18F8360 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 5,260 |
| 12 | RD | N00024-12-D-6404 DO 18F8363 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 66,839 | \$ 379,525 |
| 12 | RD | N00024-12-D-6404 DO 18F8365 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,557,371 |
| 12 | RD | N00024-12-D-6404 DO 18F8366 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 61,169 | \$ 175,682 |
| 12 | RD | N00024-12-D-6404 DO 19F8300 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,348 |
| 12 | RD | N00024-12-D-6404 DO 19F8301 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,054,000 |
| 12 | RD | N00024-12-D-6404 DO 19F8302 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 557,892 |
| 12 | RD | N00024-12-D-6404 DO 19F8303 | COVID-19 - Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 160,000 |
| 12 | RD | N00024-12-D-6404 DO 19F8303 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 184,126 |
| 12 | RD | N00024-12-D-6404 DO 19F8304 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,244,393 |
| 12 | RD | N00024-12-D-6404 DO 19F8305 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 278,874 |
| 12 | RD | N00024-18-D-6401 DO 18F8402 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 92,170 |
| 12 | RD | N00024-18-D-6401 DO 18F8404 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 714 |
| 12 | RD | N00024-18-D-6401 DO 18F8405 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (4,207) |
| 12 | RD | N00024-18-D-6401 DO 18F8407 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,410,605 |

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, 2020**

| CFDA Number | 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 | N00024-18-D-6401 DO 18F8408 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (3,897) |
| 12 | RD | N00024-18-D-6401 DO 18F8409 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (1,693) |
| 12 | RD | N00024-18-D-6401 DO 18F8410 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 4,273,176 | \$ 56,717,867 |
| 12 | RD | N00024-18-D-6401 DO 18F8411 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 506,396 |
| 12 | RD | N00024-18-D-6401 DO 18F8412 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 175,710 |
| 12 | RD | N00024-18-D-6401 DO 18F8413 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 33,797 |
| 12 | RD | N00024-18-D-6401 DO 18F8414 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (1,583) |
| 12 | RD | N00024-18-D-6401 DO 18F8415 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (761) |
| 12 | RD | N00024-18-D-6401 DO 18F8416 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 119,378 |
| 12 | RD | N00024-18-D-6401 DO 18F8417 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 7,011 |
| 12 | RD | N00024-18-D-6401 DO 18F8418 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 55,531 | \$ 74,452 |
| 12 | RD | N00024-18-D-6401 DO 18F8419 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 104,139 |
| 12 | RD | N00024-18-D-6401 DO 18F8420 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 488,056 |
| 12 | RD | N00024-18-D-6401 DO 18F8421 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 105,401 |
| 12 | RD | N00024-18-D-6401 DO 18F8422 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 63,769 |
| 12 | RD | N00024-18-D-6401 DO 18F8423 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 20,879 |
| 12 | RD | N00024-18-D-6401 DO 18F8425 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 518,990 |
| 12 | RD | N00024-18-D-6401 DO 18F8426 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 492,811 |
| 12 | RD | N00024-18-D-6401 DO 18F8427 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 893,915 | \$ 2,337,698 |
| 12 | RD | N00024-18-D-6401 DO 18F8428 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (2,520) |
| 12 | RD | N00024-18-D-6401 DO 18F8429 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 316,039 |
| 12 | RD | N00024-18-D-6401 DO 18F8430 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 586,253 | \$ 782,074 |
| 12 | RD | N00024-18-D-6401 DO 18F8431 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 107,956 |
| 12 | RD | N00024-18-D-6401 DO 18F8432 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 779,427 |
| 12 | RD | N00024-18-D-6401 DO 18F8433 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 68,503 |
| 12 | RD | N00024-18-D-6401 DO 18F8434 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 31,591 |
| 12 | RD | N00024-18-D-6401 DO 18F8435 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 132,990 |
| 12 | RD | N00024-18-D-6401 DO 18F8436 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 222,520 |
| 12 | RD | N00024-18-D-6401 DO 18F8437 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 84,552 |
| 12 | RD | N00024-18-D-6401 DO 18F8438 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 3,107,436 |
| 12 | RD | N00024-18-D-6401 DO 18F8439 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 61 |

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, 2020**

| CFDA Number | 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 | N00024-18-D-6401 DO 18F8440 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 524,699 | \$ 11,088,691 |
| 12 | RD | N00024-18-D-6401 DO 18F8442 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 157,709 |
| 12 | RD | N00024-18-D-6401 DO 18F8443 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 57,158 |
| 12 | RD | N00024-18-D-6401 DO 18F8444 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 28,973 |
| 12 | RD | N00024-18-D-6401 DO 18F8445 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 189,684 | \$ 8,324,620 |
| 12 | RD | N00024-18-D-6401 DO 18F8447 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 14,938 |
| 12 | RD | N00024-18-D-6401 DO 18F8448 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 193,000 | \$ 896,744 |
| 12 | RD | N00024-18-D-6401 DO 18F8450 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,106,831 |
| 12 | RD | N00024-18-D-6401 DO 18F8451 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 331,920 |
| 12 | RD | N00024-18-D-6401 DO 18F8452 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 109,507 |
| 12 | RD | N00024-18-D-6401 DO 19F8401 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 144,934 |
| 12 | RD | N00024-18-D-6401 DO 19F8402 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 15,617 |
| 12 | RD | N00024-18-D-6401 DO 19F8403 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 23,366 |
| 12 | RD | N00024-18-D-6401 DO 19F8404 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 321,392 |
| 12 | RD | N00024-18-D-6401 DO 19F8405 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 139,491 | \$ 1,224,421 |
| 12 | RD | N00024-18-D-6401 DO 19F8406 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 617,148 | \$ 14,356,050 |
| 12 | RD | N00024-18-D-6401 DO 19F8407 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 82,964 |
| 12 | RD | N00024-18-D-6401 DO 19F8408 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,249,769 |
| 12 | RD | N00024-18-D-6401 DO 19F8409 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 192,515 |
| 12 | RD | N00024-18-D-6401 DO 19F8411 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 214,008 | \$ 2,988,948 |
| 12 | RD | N00024-18-D-6401 DO 19F8412 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 20,394 |
| 12 | RD | N00024-18-D-6401 DO 19F8413 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 442,718 |
| 12 | RD | N00024-18-D-6401 DO 19F8414 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 219,441 | \$ 1,329,776 |
| 12 | RD | N00024-18-D-6401 DO 19F8415 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 448,881 |
| 12 | RD | N00024-18-D-6401 DO 19F8416 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,153,521 |
| 12 | RD | N00024-18-D-6401 DO 19F8417 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 739,314 |
| 12 | RD | N00024-18-D-6401 DO 19F8418 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 184,245 |
| 12 | RD | N00024-18-D-6401 DO 19F8420 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 232,254 |
| 12 | RD | N00024-18-D-6401 DO 19F8421 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,329,847 |
| 12 | RD | N00024-18-D-6401 DO 19F8422 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 338,094 |
| 12 | RD | N00024-18-D-6401 DO 19F8423 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 114,304 |

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, 2020**

| CFDA Number | 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 | N00024-18-D-6401 DO 19F8424 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 47,108 |
| 12 | RD | N00024-18-D-6401 DO 19F8425 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 497,804 |
| 12 | RD | N00024-18-D-6401 DO 19F8426 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 69,693 |
| 12 | RD | N00024-18-D-6401 DO 19F8427 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 273,450 |
| 12 | RD | N00024-18-D-6401 DO 19F8428 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 5,593 |
| 12 | RD | N00024-18-D-6401 DO 19F8429 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 420,248 |
| 12 | RD | N00024-18-D-6401 DO 19F8431 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 81,650 |
| 12 | RD | N00024-18-D-6401 DO 19F8432 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,296,246 |
| 12 | RD | N00024-18-D-6401 DO 19F8433 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 2,174,798 |
| 12 | RD | N00024-18-D-6401 DO 19F8434 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 34,867 |
| 12 | RD | N00024-18-D-6401 DO 19F8435 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 5,445,183 |
| 12 | RD | N00024-18-D-6401 DO 19F8437 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 486,090 | \$ 2,419,174 |
| 12 | RD | N00024-18-D-6401 DO 19F8438 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 2,765,332 |
| 12 | RD | N00024-18-D-6401 DO 19F8439 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 991,634 |
| 12 | RD | N00024-18-D-6401 DO 19F8441 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 549,513 |
| 12 | RD | N00024-18-D-6401 DO 19F8442 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ (15) |
| 12 | RD | N00024-18-D-6401 DO 19F8443 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 608,507 |
| 12 | RD | N00024-18-D-6401 DO 19F8444 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 986,101 |
| 12 | RD | N00024-18-D-6401 DO 19F8445 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 3,631,651 |
| 12 | RD | N00024-18-D-6401 DO 19F8446 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 741,613 |
| 12 | RD | N00024-18-D-6401 DO 19F8447 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 431,560 |
| 12 | RD | N00024-18-D-6401 DO 19F8448 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 415,730 |
| 12 | RD | N00024-18-D-6401 DO 19F8449 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 798,878 |
| 12 | RD | N00024-18-D-6401 DO 19F8451 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 767,237 |
| 12 | RD | N00024-18-D-6401 DO 19F8452 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 914,889 |
| 12 | RD | N00024-18-D-6401 DO 19F8453 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 310,818 |
| 12 | RD | N00024-18-D-6401 DO 19F8455 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 68,057 |
| 12 | RD | N00024-18-D-6401 DO 19F8456 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 657,367 |
| 12 | RD | N00024-18-D-6401 DO 19F8457 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 3,031,800 |
| 12 | RD | N00024-18-D-6401 DO 19F8458 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 850,622 |
| 12 | RD | N00024-18-D-6401 DO 19F8460 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 587,222 |

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, 2020

| CFDA Number | 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 | N00024-18-D-6401 DO 19F8461 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 830,384 |
| 12 | RD | N00024-18-D-6401 DO 19F8462 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 373,485 |
| 12 | RD | N00024-18-D-6401 DO 19F8463 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 117,628 |
| 12 | RD | N00024-18-D-6401 DO 19F8464 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 770,596 |
| 12 | RD | N00024-18-D-6401 DO 19F8466 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 67,537 |
| 12 | RD | N00024-18-D-6401 DO 19F8467 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 211,796 |
| 12 | RD | N00024-18-D-6401 DO 19F8468 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 203,464 |
| 12 | RD | N00024-18-D-6401 DO 19F8469 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 83,218 |
| 12 | RD | N00024-18-D-6401 DO 19F8471 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 87,863 |
| 12 | RD | N00024-18-D-6401 DO 19F8472 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 13,858 |
| 12 | RD | N00024-18-D-6401 DO 19F8473 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 563,325 |
| 12 | RD | N00024-18-D-6401 DO 19F8474 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 102,205 |
| 12 | RD | N00024-18-D-6401 DO 19F8475 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 198,149 |
| 12 | RD | N00024-18-D-6401 DO 19F8476 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 114,282 |
| 12 | RD | N00024-18-D-6401 DO 19F8477 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 163,703 | \$ 1,752,391 |
| 12 | RD | N00024-18-D-6401 DO 19F8478 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 82,452 |
| 12 | RD | N00024-18-D-6401 DO 19F8480 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 99,048 |
| 12 | RD | N00024-18-D-6401 DO 19F8481 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 21,678 |
| 12 | RD | N00024-18-D-6401 DO 19F8482 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 21,019 |
| 12 | RD | N00024-18-D-6401 DO 19F8483 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 112,491 |
| 12 | RD | N00024-18-D-6401 DO 19F8484 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 745,930 |
| 12 | RD | N00024-18-D-6401 DO 19F8485 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 462,684 |
| 12 | RD | N00024-18-D-6401 DO 19F8486 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 111,622 |
| 12 | RD | N00024-18-D-6401 DO 19F8487 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 617,303 | \$ 1,501,375 |
| 12 | RD | N00024-18-D-6401 DO 19F8488 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 127,863 |
| 12 | RD | N00024-18-D-6401 DO 19F8489 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 539,283 |
| 12 | RD | N00024-18-D-6401 DO 19F8490 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 167,112 |
| 12 | RD | N00024-18-D-6401 DO 19F8491 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 515,280 |
| 12 | RD | N00024-18-D-6401 DO 19F8492 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 151,304 | \$ 1,239,461 |
| 12 | RD | N00024-18-D-6401 DO 19F8493 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 193,444 |
| 12 | RD | N00024-18-D-6401 DO 19F8494 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 48,106 |

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, 2020**

| CFDA Number | 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 | N00024-18-D-6401 DO 19F8495 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 330,688 |
| 12 | RD | N00024-18-D-6401 DO 19F8497 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 612,036 |
| 12 | RD | N00024-18-D-6401 DO 19F8498 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 237,006 |
| 12 | RD | N00024-18-D-6401 DO 19F8499 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 27,084 |
| 12 | RD | N00024-18-D-6401 DO 20F8320 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 241,483 |
| 12 | RD | N00024-18-D-6401 DO 20F8323 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 17,543 |
| 12 | RD | N00024-18-D-6401 DO 20F8324 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 125,376 |
| 12 | RD | N00024-18-D-6401 DO 20F8326 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 366,222 |
| 12 | RD | N00024-18-D-6401 DO 20F8328 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 94,927 |
| 12 | RD | N00024-18-D-6401 DO 20F8329 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 254,337 |
| 12 | RD | N00024-18-D-6401 DO 20F8330 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 70,213 |
| 12 | RD | N00024-18-D-6401 DO 20F8331 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 67,910 |
| 12 | RD | N00024-18-D-6401 DO 20F8333 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | \$ 6,772 | \$ 1,657,615 |
| 12 | RD | N00024-18-D-6401 DO 20F8334 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 239,700 |
| 12 | RD | N00024-18-D-6401 DO 20F8335 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 48,556 |
| 12 | RD | N00024-18-D-6401 DO 20F8337 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 389,278 |
| 12 | RD | N00024-18-D-6401 DO 20F8338 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 113,616 |
| 12 | RD | N00024-18-D-6401 DO 20F8340 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 24,939 |
| 12 | RD | N00024-18-D-6401 DO 20F8341 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 138,695 |
| 12 | RD | N00024-18-D-6401 DO 20F8342 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 199,038 |
| 12 | RD | N00024-18-D-6401 DO 20F8344 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,720,023 |
| 12 | RD | N00024-18-D-6401 DO 20F8345 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 30,688 |
| 12 | RD | N00024-18-D-6401 DO 20F8346 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 82,698 |
| 12 | RD | N00024-18-D-6401 DO 20F8347 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 107,419 |
| 12 | RD | N00024-18-D-6401 DO 20F8348 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 12,509 |
| 12 | RD | N00024-18-D-6401 DO 20F8349 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 8,446 |
| 12 | RD | N00024-18-D-6401 DO 20F8352 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 9,713 |
| 12 | RD | N00024-18-D-6401 DO 20F8353 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 55,302 |
| 12 | RD | N00024-18-D-6401 DO 20F8354 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 13,779 |
| 12 | RD | N00024-18-D-6401 DO 20F8357 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 189,395 |
| 12 | RD | N00024-18-D-6401 DO 20F8358 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 90,389 |

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, 2020**

| CFDA Number | 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 | N00024-18-D-6401 DO 20F8359 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 173,656 |
| 12 | RD | N00024-18-D-6401 DO 20F8360 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 9,447 |
| 12 | RD | N00024-18-D-6401 DO 20F8361 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 86,433 |
| 12 | RD | N00024-18-D-6401 DO 20F8362 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 28,816 |
| 12 | RD | N00024-18-D-6401 DO 20F8363 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 7,877 |
| 12 | RD | N00024-18-D-6401 DO 20F8364 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 98,630 |
| 12 | RD | N00024-18-D-6401 DO 20F8366 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 815,947 |
| 12 | RD | N00024-18-D-6401 DO 20F8367 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 304,842 |
| 12 | RD | N00024-18-D-6401 DO 20F8368 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 37,861 |
| 12 | RD | N00024-18-D-6401 DO 20F8370 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 128,272 |
| 12 | RD | N00024-18-D-6401 DO 20F8373 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 6,325 |
| 12 | RD | N00024-18-D-6401 DO 20F8374 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 64,416 |
| 12 | RD | N00024-18-D-6401 DO 20F8375 | COVID-19 - Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 178,676 |
| 12 | RD | N00024-18-D-6401 DO 20F8375 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 63,688 |
| 12 | RD | N00024-18-D-6401 DO 20F8376 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 76,806 |
| 12 | RD | N00024-18-D-6401 DO 20F8379 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 35,298 |
| 12 | RD | N00024-18-D-6401 DO 20F8380 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 24,175 |
| 12 | RD | N00024-18-D-6401 DO 20F8381 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 2,862 |
| 12 | RD | N00024-18-D-6401 DO 20F8384 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 2,515 |
| 12 | RD | N00024-18-D-6401 DO 20F8385 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 45,888 |
| 12 | RD | N00024-18-D-6401 DO 20F8388 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 6,654 |
| 12 | RD | N00024-18-D-6401 DO 20F8389 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 136,303 |
| 12 | RD | N00024-18-D-6401 DO 20F8391 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 6,178 |
| 12 | RD | N00024-18-D-6401 DO 20F8393 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 11,606 |
| 12 | RD | N00024-18-D-6401 DO 20F8395 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 5,848 |
| 12 | RD | N00024-18-D-6401 DO 20F8397 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 4,702 |
| 12 | RD | N00024-18-D-6401 DO 20F8398 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 1,707 |
| 12 | RD | N00024-18-D-6401 DO 20F8399 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 11,514 |
| 12 | RD | N00173-17-1-G004 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 18,862 |
| 12 | RD | N65236-19-TG-02404 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 19,498 |
| 12 | RD | N6600119P6189 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 18,252 |
| 12 | RD | N6600120P6234 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | \$ 11,553 |
| 12 | RD | 34858 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Cooling Technologies, Inc | U.S. DEPARTMENT OF THE NAVY | \$ 139,825 |

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, 2020

| CFDA Number | 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 | 2012-532 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Technology International | N00014-11-D-0504 | | \$ 10,518 |
| 12 RD | 2015-460 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Technology International | N00014-14-D-0377 | | \$ 115,298 |
| 12 RD | 2015-460 TO-01 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Technology International | N00014-14-D-0377 DO-0002 | | \$ 124 |
| 12 RD | 2018-457 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Technology International | N00014-17-D-4003 | | \$ 301,145 |
| 12 RD | 2019-482 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Technology International | N00024-18-3-2231 | \$ 21,827 | \$ 103,573 |
| 12 RD | 2018-427 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Advanced Technology International | N00024-98-9-2310 | | \$ (86) |
| 12 RD | N68335-17-C-0037/1 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Analysis, Design & Diagnostics, Inc. | N68335-17-C-0037 | | \$ 47,274 |
| 12 RD | 263-18-PSU-01 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Applied Optimization, Inc | N68335-17-C-0149 | | \$ 25,792 |
| 12 RD | 1902084-PSU-01 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Applied Optimization, Inc | N68335-19-C-0299 | | \$ 37,027 |
| 12 RD | 1910086PSU-01 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Applied Optimization, Inc | N68335-19-C-0366 | | \$ 17,028 |
| 12 RD | 2018-0425-N-PSU | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Applied Optimization, Inc. | N68335-18-C-0340 | | \$ (233) |
| 12 RD | APS-18-17 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Applied Physical Sciences Corporation | N00024-17-C-2117 | | \$ 19,174 |
| 12 RD | 911175 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Assurance Technology Corporation | N0017317F6702 | | \$ 37,544 |
| 12 RD | 921123 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Assurance Technology Corporation | N00173-18-C-6007 | | \$ 32,050 |
| 12 RD | 1004858 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | BAE Systems | N00024-13-D-6400 | | \$ 54,164 |
| 12 RD | 1022225 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | BAE Systems | N66001-16-C-4001 | | \$ 1,781 |
| 12 RD | 28112 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | BAE Systems | N66001-16-C-4001 | | \$ 4,847 |
| 12 RD | 1017191 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | BAE Systems | N68335-18-C-0106 | | \$ 37,847 |
| 12 RD | C200398 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Bechtel Bettis, Inc. | B9233018CNR000004 | | \$ 540,906 |
| 12 RD | 137808 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Bettis Atomic Power Laboratory | N0002818C2130 | | \$ 2,740 |
| 12 RD | 26933 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | BNNI, LLC | N00014-18-C-2012 | | \$ (1,157) |
| 12 RD | DWY-16-100 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Brashear LP | MIT LINCOLN LABS | | \$ 466,859 |
| 12 RD | 226884 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Cascade Technologies, Inc. | U.S. DEPARTMENT OF THE NAVY | | \$ 39,769 |
| 12 RD | SC1527501 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Charles River Analytics Inc. | OFFICE OF NAVAL RESEARCH | | \$ 110,159 |
| 12 RD | SC1720001 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Charles River Analytics Inc. | OFFICE OF NAVAL RESEARCH | | \$ 68,323 |
| 12 RD | 18090 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Composite Technology Development, Inc. | OFFICE OF NAVAL RESEARCH | | \$ 114,258 |
| 12 RD | 27894 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | D'Angelo Technologies, LLC | N00024-18-3-2231 | | \$ 27,878 |
| 12 RD | 14017 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Engineering & Software System Solutions, Inc | N6833518C0201 | | \$ (50) |
| 12 RD | 27355 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Gear Research Institute | N00019-17-C-0020 | | \$ 74,678 |
| 12 RD | 401105828 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | General Electric | N00014-18-C-2010 | | \$ 293,519 |
| 12 RD | 24548 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Image Acoustics, Inc. | N00014-18-C-2008 | | \$ 50,579 |
| 12 RD | 25484 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | In-Depth Engineering Corporation | N68335-18-C-0066 | | \$ 338,336 |
| 12 RD | 27937 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Innoventing, LLC | N6833520C0273 | | \$ 21,244 |
| 12 RD | 2532-1 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Intelligent Automation, Inc. | N68335-20-C-0146 | | \$ 38,965 |
| 12 RD | 117643 TO 153690 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Johns Hopkins University | N00024-13-D-6400 | | \$ 405,558 |
| 12 RD | MSA 117643/ 24961 TO 138016 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Johns Hopkins University | N00024-13-D-6400 | | \$ (19,246) |
| 12 RD | 25294/17-4037 OPTION | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | KCF Technologies | N00024-17-C-4037 | | \$ 39,748 |
| 12 RD | 209613 PO 134120 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Knolls Atomic Power Laboratory | N00024-18-C-2130 | | \$ 25,000 |
| 12 RD | 227833 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Lupine Materials & Technology | N6833519C0555 | | \$ 42,000 |
| 12 RD | NV1-0354 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Nanosonic, Inc | U.S. DEPARTMENT OF THE NAVY | | \$ 56,001 |
| 12 RD | 1046 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | NEYA Systems LLC | N00014-18-C-2023 | | \$ 22,508 |
| 12 RD | SUBCONTRACT 2018-038 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Noise Control Engineering, LLC | N6833519C0072 | | \$ 21,052 |
| 12 RD | 2015-1959-04 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | North Carolina State University | N00014-15-1-2863 | | \$ 224,787 |
| 12 RD | 7500148620 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Northrop Grumman Corporation | N00178-04-D-4091/N410 | | \$ 325,865 |
| 12 RD | 4000176164 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Oak Ridge National Laboratory | OFFICE OF NAVAL RESEARCH | | \$ 61,415 |
| 12 RD | 1775 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Questek Innovations LLC | N68335-17-C-0318 | | \$ (322) |
| 12 RD | 1875 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Questek Innovations LLC | N68335-18-C-0537 | | \$ 71,775 |
| 12 RD | 498565 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Rolls-Royce | N00014-09-D-0680 | | \$ (206) |
| 12 RD | 5003884741 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Rolls-Royce | N00014-16-C-2031 | | \$ 96,744 |
| 12 RD | RSL 27824 2019-190 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | RSL Fiber Systems LLC | N00024-18-3-2331 | | \$ 5,962 |

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, 2020**

| CFDA Number | 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 5004-PSU DO 6 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Sabre Systems, Inc. | N00178-05-D-4546 DO-4Y02 | | \$ 11 |
| 12 | RD 205455 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Senvol LLC | N/A | | \$ 98,666 |
| 12 | RD 27012 PO 18118PENN | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | SRICO Incorporated | N00030-18-C-0213 | | \$ (8) |
| 12 | RD 208699 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Systems Technology, Inc | N6833518C0092 | | \$ 57,285 |
| 12 | RD 2108-001-02 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Technical Data Analysis, Inc. | OFFICE OF NAVAL RESEARCH | | \$ 6,484 |
| 12 | RD 28211 PO T2019-547 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | TelAztec | N68335-19-C-0201 | | \$ 14,997 |
| 12 | RD ISEG-19-01 DO 001 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Trident Systems Inc | N6833519C0500 | | \$ 130,677 |
| 12 | RD 170406-3329-01 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | TRS Technologies, Inc | N00014-17-C-4004 | | \$ 1,020 |
| 12 | RD S-174-000-001 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | UES, Inc. | N68335-19-C-0854 | | \$ 46,642 |
| 12 | RD ADVANCE | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | University of Oregon | OFFICE OF NAVAL RESEARCH | | \$ 8,116 |
| 12 | RD 450487-19079 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | N00014-17-1-2498 | | \$ 127,524 |
| 12 | RD 25192 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | VRC Metal Systems, LLC | N00024-17-C-4020 | | \$ 186,537 |
| 12 | RD 25193 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | VRC Metal Systems, LLC | N68335-17-C-0556 | | \$ 10,474 |
| 12 | RD 25809 | Department of the Navy - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Welkins, LLC | N00253-17-C-001 | | \$ 1,827 |
| 12 | RD HQ0147-16-C-6006 | Missile Defense Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 122,984 |
| 12 | RD SC19-F111-1 | National Geospatial-Intelligence Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Toyon Research Corporation | HM0476-18-C-0065 | | \$ 5,331 |
| 12 | RD H98230-16-D-0022 DO 0001 | National Security Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 321,299 |
| 12 | RD H98230-16-D-0022/0002 | National Security Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 274,999 |
| 12 | RD H98230-16-D-0022/0004 | National Security Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 352,589 |
| 12 | RD H98230-16-D-0022/0006 | National Security Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ (502) |
| 12 | RD H98230-16-D-0022/0007 | National Security Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 151,484 |
| 12 | RD H98230-16-D-0022/0008 | National Security Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 374,995 |
| 12 | RD H98230-16-D-0022/0009 | National Security Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 162,027 |
| 12 | RD H98230-20-D-0027/0001 | National Security Agency - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 40,416 |
| 12 | RD M0008816WRPC702 | United States Marine Corps - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ 64,462 |
| 12 | RD M00264-18-P-0213 | United States Marine Corps - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | Y | | | | \$ (143) |
| 12 | RD ISEG-18-02 DO-001 | United States Marine Corps - Non-Specified | Research and Development | \$ 268,278,005 | \$ 644,904,305 | N | Trident Systems Inc | M67854-18-C-6703 | | \$ 386,728 |
| 15 | 225 | Recreation and Visitor Services | Research and Development | \$ 43,232 | \$ 644,904,305 | Y | | | | \$ 43,232 |
| 15 | 232 | Wildland Fire Research and Studies | Research and Development | \$ 96,057 | \$ 644,904,305 | Y | | | | \$ 96,057 |
| 15 | 560 | SECURE Water Act - Research Agreements | Research and Development | \$ 42,448 | \$ 644,904,305 | Y | | | | \$ 42,448 |
| 15 | 608 | Fish and Wildlife Management Assistance | Research and Development | \$ 50,953 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4100081597 | | \$ 24,581 |
| 15 | 608 | Fish and Wildlife Management Assistance | Research and Development | \$ 50,953 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4100084026 | | \$ 26,372 |
| 15 | 634 | State Wildlife Grants | Research and Development | \$ 115,893 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4100084552 | | \$ 115,893 |
| 15 | 657 | Endangered Species Conservation - Recovery Implementation Funds | Research and Development | \$ 108,738 | \$ 644,904,305 | N | National Fish and Wildlife Foundation | N/A | | \$ 108,738 |
| 15 | 662 | Great Lakes Restoration | Research and Development | \$ 310,360 | \$ 644,904,305 | Y | | | \$ 124,243 | \$ 310,360 |
| 15 | 678 | Cooperative Ecosystem Studies Unit | Research and Development | \$ 85,814 | \$ 644,904,305 | Y | | | | \$ 85,814 |
| 15 | 805 | Assistance to State Water Resources Research Institutes | Research and Development | \$ 77,269 | \$ 644,904,305 | Y | | | \$ 40,489 | \$ 76,946 |
| 15 | 805 | Assistance to State Water Resources Research Institutes | Research and Development | \$ 77,269 | \$ 644,904,305 | N | University of Illinois | G16AP00001 | | \$ 323 |
| 15 | 808 | U.S. Geological Survey Research and Data Collection | Research and Development | \$ 12,652 | \$ 644,904,305 | Y | | | | \$ 12,652 |
| 15 | 812 | Cooperative Research Units | Research and Development | \$ 440,951 | \$ 644,904,305 | Y | | | | \$ 436,349 |
| 15 | 812 | Cooperative Research Units | Research and Development | \$ 440,951 | \$ 644,904,305 | N | North Carolina State University | U.S. GEOLOGICAL SURVEY | | \$ 4,602 |
| 15 | 815 | National Land Remote Sensing Education Outreach and Research | Research and Development | \$ 4,000 | \$ 644,904,305 | N | California University of Pennsylvania | U.S. GEOLOGICAL SURVEY | | \$ 4,000 |
| 15 | 945 | Cooperative Research and Training Programs - Resources of the National Park System | Research and Development | \$ 315,779 | \$ 644,904,305 | Y | | | \$ 9,492 | \$ 272,398 |
| 15 | 945 | Cooperative Research and Training Programs - Resources of the National Park System | Research and Development | \$ 315,779 | \$ 644,904,305 | N | Oregon State University | NATIONAL PARK SERVICE | | \$ 43,381 |
| 15 | RD 140D0420C0066 | Department of the Interior - Non-Specified | Research and Development | \$ 636,053 | \$ 644,904,305 | Y | | | | \$ 16,348 |

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, 2020

| CFDA Number | 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 |
|-------------|---------------------------------|---|--------------------------|-----------------------|----------------|--------------|--|--|--|-----------------|
| 15 | RD 1434-03HQRU1548 | Department of the Interior - Non-Specified | Research and Development | \$ 636,053 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 1434-03HQRU1548 | | \$ 201,290 |
| 15 | RD 23033 | Department of the Interior - Non-Specified | Research and Development | \$ 636,053 | \$ 644,904,305 | N | Hadal, Inc. | D16PC00210 | | \$ (1,444) |
| 15 | RD 078687-15715 AC867 | Department of the Interior - Non-Specified | Research and Development | \$ 636,053 | \$ 644,904,305 | N | University of Illinois | G16AP00001 | | \$ 61,507 |
| 15 | RD 1434-03HQRU1548 | Fish and Wildlife Service - Non-Specified | Research and Development | \$ 636,053 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 1434-03HQRU1548 | | \$ 318,561 |
| 15 | RD 1434-03HQRU1548 RES PROJ 27 | Fish and Wildlife Service - Non-Specified | Research and Development | \$ 636,053 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 1434-03HQRU1548 RES PROJ 27 | | \$ 564 |
| 15 | RD G16AP00079 | U.S. Geological Survey - Non-Specified | Research and Development | \$ 636,053 | \$ 644,904,305 | Y | | | | \$ 6,330 |
| 15 | RD ADVANCE | U.S. Geological Survey - Non-Specified | Research and Development | \$ 636,053 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | ADVANCE | | \$ 32,897 |
| 16 | 560 | National Institute of Justice Research, Evaluation, and Development Project Grants | Research and Development | \$ 562,480 | \$ 644,904,305 | Y | | | \$ 89,327 | \$ 484,063 |
| 16 | 560 | National Institute of Justice Research, Evaluation, and Development Project Grants | Research and Development | \$ 562,480 | \$ 644,904,305 | N | Indiana University-Purdue University Indianapolis | NATIONAL INSTITUTE OF JUSTICE | | \$ 78,417 |
| 16 | 734 | Special Data Collections and Statistical Studies | Research and Development | \$ 80,135 | \$ 644,904,305 | Y | | | | \$ 80,135 |
| 16 | 738 | Edward Byrne Memorial Justice Assistance Grant Program | Research and Development | \$ 281,782 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 28733 | | \$ 119,901 |
| 16 | 738 | Edward Byrne Memorial Justice Assistance Grant Program | Research and Development | \$ 281,782 | \$ 644,904,305 | N | University of Wisconsin | 857912016JA | | \$ 10,491 |
| 16 | 817 | Innovations in Community-Based Crime Reduction | Research and Development | \$ 12,890 | \$ 644,904,305 | N | Arizona State University | FP00007901 | | \$ 12,890 |
| 16 | 888 | Consolidated And Technical Assistance Grant Program to Address Children and Youth Experiencing Domestic and Sexual Violence and Engage Men and Boys as Allies | Research and Development | \$ 7,027 | \$ 644,904,305 | N | Safe Journey | 2017-CY-AX-0004 | | \$ 7,027 |
| 16 | RD ADVANCE | Department of Justice - Non-Specified | Research and Development | \$ 53,185 | \$ 644,904,305 | N | YWCA of Greater Pittsburgh | 2019-VT-BX-0109 | | \$ 2,161 |
| 16 | RD 2014-DN-BX-K007 | National Institute of Justice - Non-Specified | Research and Development | \$ 53,185 | \$ 644,904,305 | Y | | | \$ 26,964 | \$ 51,024 |
| 19 | 522 | Overseas Refugee Assistance Programs for Strategic Global Priorities | Research and Development | \$ 48,463 | \$ 644,904,305 | Y | | | \$ 312 | \$ 48,463 |
| 20 | 109 | Air Transportation Centers of Excellence | Research and Development | \$ 724,724 | \$ 644,904,305 | Y | | | \$ 63,727 | \$ 724,724 |
| 20 | 205 | Highway Planning and Construction | Research and Development | \$ 11,999 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300615114 | | \$ 11,999 |
| 20 | 215 | Highway Training and Education | Research and Development | \$ 1,750 | \$ 644,904,305 | Y | | | | \$ 1,750 |
| 20 | 219 | Recreational Trails Program | Research and Development | \$ 186,500 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | BRC-PRT-22-273 | | \$ 186,500 |
| 20 | 701 | University Transportation Centers Program | Research and Development | \$ 169,733 | \$ 644,904,305 | Y | | | | \$ 169,733 |
| 20 | RD 6913G618P800139 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | | \$ 27,792 |
| 20 | RD 69A3551847103 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | \$ 1,171,789 | \$ 1,684,072 |
| 20 | RD IMAC018-040-00 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | | \$ 87,267 |
| 20 | RD PA 2017-007-00 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | | \$ 13,229 |
| 20 | RD PA 2018-040-00 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | | \$ 760,946 |
| 20 | RD PA 2019-004-00 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | | \$ 1,502,000 |
| 20 | RD PA 2020-001-00 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | \$ 20,971 | \$ 1,316,876 |
| 20 | RD PA 2020-04 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | | \$ 150 |
| 20 | RD PA 24-2017-007-00 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | | \$ 50 |
| 20 | RD PA 24-7011 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | \$ 70,620 | \$ 137,397 |
| 20 | RD 228213 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | N | Feature Based Systems, Inc. | U.S. DEPARTMENT OF TRANSPORTAT | | \$ 37,000 |
| 20 | RD SUB0000854 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | N | National Academy of Sciences | FR-RRD-0070-16-01-00 | | \$ 9,326 |
| 20 | RD 16D00016-PSU; DTNH2216D00016 | Department of Transportation - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | N | TransAnalytics, LLC | DTNH2216D00016 | | \$ 57,576 |
| 20 | RD 13-C-AJFE-PSU AMEND 31 | Federal Aviation Administration - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | | \$ 29,318 |
| 20 | RD 13-C-AJFE-PSU AMEND 35 | Federal Aviation Administration - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | | \$ 10,911 |
| 20 | RD RH092-G1 | Federal Aviation Administration - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | N | Georgia Institute of Technology | FEDERAL AVIATION ADMINISTRATIO | | \$ 29,764 |
| 20 | RD 22205 TASK ORDER 94 AMEND 4A | Federal Aviation Administration - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | N | United Technologies Corporation - Pratt & Whitney Division | DTFAWA-15-A-80010 | | \$ 55,956 |
| 20 | RD 22205 TASK ORDER 94 AMEND 4B | Federal Aviation Administration - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | N | United Technologies Corporation - Pratt & Whitney Division | FEDERAL AVIATION ADMINISTRATIO | | \$ 44,705 |
| 20 | RD 693J618C000009 | Federal Railroad Administration - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | Y | | | \$ 31,195 | \$ 170,549 |
| 20 | RD 1142 826418 PO 1194230 | Federal Railroad Administration - Non-Specified | Research and Development | \$ 5,977,509 | \$ 644,904,305 | N | Rutgers University | 693J619C000013 | | \$ 2,625 |
| 23 | 002 | Appalachian Area Development | Research and Development | \$ 32,278 | \$ 644,904,305 | N | Appalachian Regional Commission | ARC | \$ 32,278 | \$ 32,278 |
| 43 | 001 | Science | Research and Development | \$ 6,422,850 | \$ 644,904,305 | Y | | | \$ 866,435 | \$ 5,467,227 |
| 43 | 001 | Science | Research and Development | \$ 6,422,850 | \$ 644,904,305 | N | Cornell University | NNX16AK876 | | \$ 18,145 |

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, 2020

| CFDA Number | 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 | \$ 6,422,850 | \$ 644,904,305 | N | George Washington University, The | NATIONAL AERONAUTICS AND SPACE | | \$ 42,806 |
| 43 | 001 | Science | Research and Development | \$ 6,422,850 | \$ 644,904,305 | N | Georgetown University | NATIONAL AERONAUTICS AND SPACE | | \$ 45,697 |
| 43 | 001 | Science | Research and Development | \$ 6,422,850 | \$ 644,904,305 | N | Jet Propulsion Laboratory | NATIONAL AERONAUTICS AND SPACE | | \$ 25,705 |
| 43 | 001 | Science | Research and Development | \$ 6,422,850 | \$ 644,904,305 | N | Montana State University | NNX16AJ62G | | \$ 63,648 |
| 43 | 001 | Science | Research and Development | \$ 6,422,850 | \$ 644,904,305 | N | Smithsonian Astrophysical Observatory | 80NSSC19K0371 | | \$ 20,868 |
| 43 | 001 | Science | Research and Development | \$ 6,422,850 | \$ 644,904,305 | N | Smithsonian Astrophysical Observatory | NAS8-03060 | | \$ 404,977 |
| 43 | 001 | Science | Research and Development | \$ 6,422,850 | \$ 644,904,305 | N | Universities Space Research Association | 80NSSC18K1313 | | \$ 33,656 |
| 43 | 001 | Science | Research and Development | \$ 6,422,850 | \$ 644,904,305 | N | University of California, Irvine | 80NSSC17K0698 | | \$ 125,833 |
| 43 | 001 | Science | Research and Development | \$ 6,422,850 | \$ 644,904,305 | N | University of Georgia | NNXAF09G S05 | | \$ 19,452 |
| 43 | 001 | Science | Research and Development | \$ 6,422,850 | \$ 644,904,305 | N | Villanova University | 80NSSC18K0417 | | \$ 38,059 |
| 43 | 001 | Science | Research and Development | \$ 6,422,850 | \$ 644,904,305 | N | Yale University | 80NSSC18K0443 | | \$ 116,777 |
| 43 | 002 | Aeronautics | Research and Development | \$ 610,964 | \$ 644,904,305 | Y | | | | \$ 129,850 |
| 43 | 002 | Aeronautics | Research and Development | \$ 610,964 | \$ 644,904,305 | N | University of Tennessee, Knoxville, The | NNX17AJ95A | | \$ 481,114 |
| 43 | 003 | Exploration | Research and Development | \$ 126,880 | \$ 644,904,305 | Y | | | | \$ 122,619 |
| 43 | 003 | Exploration | Research and Development | \$ 126,880 | \$ 644,904,305 | N | Georgia Institute of Technology | NATIONAL AERONAUTICS AND SPACE | | \$ 4,261 |
| 43 | 008 | Education | Research and Development | \$ 628,910 | \$ 644,904,305 | Y | | | \$ 197,482 | \$ 628,910 |
| 43 | 012 | Space Technology | Research and Development | \$ 406,162 | \$ 644,904,305 | Y | | | | \$ 287,381 |
| 43 | 012 | Space Technology | Research and Development | \$ 406,162 | \$ 644,904,305 | N | Georgia Institute of Technology | NATIONAL AERONAUTICS AND SPACE | | \$ 35,371 |
| 43 | 012 | Space Technology | Research and Development | \$ 406,162 | \$ 644,904,305 | N | Michigan Technological University | NATIONAL AERONAUTICS AND SPACE | | \$ 83,410 |
| 43 | RD | 80NSSC17K0122 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 92,026 |
| 43 | RD | 80NSSC17K0183 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 6,502 |
| 43 | RD | 80NSSC17K0639 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 7,304 |
| 43 | RD | 80NSSC17K0640 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 12,939 |
| 43 | RD | 80NSSC17K0752 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 11,419 |
| 43 | RD | 80NSSC18K0147 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | \$ 163,821 | \$ 330,786 |
| 43 | RD | 80NSSC18K0205 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 45,518 |
| 43 | RD | 80NSSC18K0282 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 1,047,544 |
| 43 | RD | 80NSSC18K0355 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 91,264 |
| 43 | RD | 80NSSC18K0458 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 201,114 |
| 43 | RD | 80NSSC18K0878 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 115,588 |
| 43 | RD | 80NSSC18K1178 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 56,155 |
| 43 | RD | 80NSSC18K1695 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 35,765 |
| 43 | RD | 80NSSC18K1730 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 57,574 |
| 43 | RD | 80NSSC18M0094 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | \$ 261,841 | \$ 1,221,261 |
| 43 | RD | 80NSSC18P1677 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 66 |
| 43 | RD | 80NSSC18P2403 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ (2,509) |
| 43 | RD | 80NSSC18P3698 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 51,625 |
| 43 | RD | 80NSSC19K0101 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 22,873 |
| 43 | RD | 80NSSC19K1531 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 35,975 |
| 43 | RD | 80NSSC19P0042 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ (117) |
| 43 | RD | 80NSSC19P0332 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 10,000 |
| 43 | RD | NAS5-00136 | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | \$ 682,632 | \$ 2,003,500 |
| 43 | RD | NNX16AE64G | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 8,022 |
| 43 | RD | NNX16AF33G | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | | \$ 14,072 |
| 43 | RD | NNX17AB07G | National Aeronautics and Space Administration - Non-Specified | \$ 10,627,776 | \$ 644,904,305 | Y | | | \$ 945,968 | \$ 1,566,612 |

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, 2020**

| CFDA Number | 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 | APS-15-07 MOD 01 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Applied Physical Sciences Corporation | NNL15AA00C | \$ 5,539 |
| 43 | RD | 4900019733 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | BWXT NOG Technologies, Inc | NATIONAL AERONAUTICS AND SPACE | \$ 68,477 |
| 43 | RD | 7-10888-01 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Carnegie Institute | NATIONAL AERONAUTICS AND SPACE | \$ 26,136 |
| 43 | RD | 17-250 PO 18-163 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Continuum Dynamics, Inc | NATIONAL AERONAUTICS AND SPACE | \$ 126,720 |
| 43 | RD | 19-192 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Continuum Dynamics, Inc | NATIONAL AERONAUTICS AND SPACE | \$ 19,577 |
| 43 | RD | 216017 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | ElectroDynamic Applications, Inc | NATIONAL AERONAUTICS AND SPACE | \$ 92,129 |
| 43 | RD | 80NSSC17C0029-PSU-705-817125 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Fibertek, Inc. | 80NSSC17C0029 | \$ 33,738 |
| 43 | RD | 5407395 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Hamilton Sundstrand | NASA'S GODDARD SPACE FLIGHT CE | \$ 7,714 |
| 43 | RD | 5408250 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Hamilton Sundstrand | NASA'S GODDARD SPACE FLIGHT CE | \$ 7,714 |
| 43 | RD | 5408272 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Hamilton Sundstrand | NASA'S GODDARD SPACE FLIGHT CE | \$ 7,714 |
| 43 | RD | 2387-1 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Intelligent Automation, Inc. | NAVAL AIR WARFARE CENTER | \$ 50,532 |
| 43 | RD | 1544619 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Jet Propulsion Laboratory | N/A | \$ 11,406 |
| 43 | RD | 1607073 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Jet Propulsion Laboratory | N/A | \$ 6,312 |
| 43 | RD | 1569843 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Jet Propulsion Laboratory | NASA | \$ 4,726 |
| 43 | RD | 1575913 AMEND 4 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Jet Propulsion Laboratory | NATIONAL AERONAUTICS AND SPACE | \$ 161,593 |
| 43 | RD | 1621034 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Jet Propulsion Laboratory | NATIONAL AERONAUTICS AND SPACE | \$ 3,047 |
| 43 | RD | 1624761 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Jet Propulsion Laboratory | NATIONAL AERONAUTICS AND SPACE | \$ 9,987 |
| 43 | RD | 1633061 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Jet Propulsion Laboratory | NATIONAL AERONAUTICS AND SPACE | \$ 3,375 |
| 43 | RD | 1547612 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Jet Propulsion Laboratory | NNN12AA01C | \$ 246,739 |
| 43 | RD | 1549273 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Jet Propulsion Laboratory | NNN12AA01C | \$ 90,262 |
| 43 | RD | 145170 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Johns Hopkins University | NATIONAL AERONAUTICS AND SPACE | \$ 78,403 |
| 43 | RD | 147577 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Johns Hopkins University | NATIONAL AERONAUTICS AND SPACE | \$ 179,840 |
| 43 | RD | 224719 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Masten Space Systems | 80NSSC19C0508 | \$ 18,000 |
| 43 | RD | 26422 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | SET Group, LLC | 80NSSC18C0125 | \$ 79,919 |
| 43 | RD | 27935 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | SET Group, LLC | 80NSSC19C0503 | \$ 19,152 |
| 43 | RD | SV9-89016 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Smithsonian Astrophysical Observatory | 80NSSC19K0234 | \$ 12,621 |
| 43 | RD | SV9-89025 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Smithsonian Astrophysical Observatory | 80NSSC19K0371 | \$ 25,548 |
| 43 | RD | AR8-19016X | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Smithsonian Astrophysical Observatory | NAS8-03060 | \$ 3,841 |
| 43 | RD | AR9-20002X | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Smithsonian Astrophysical Observatory | NAS8-03060 | \$ 14,240 |

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, 2020**

| CFDA Number | 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 | GO7-18003A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Smithsonian Astrophysical Observatory | NAS8-03060 | \$ 32,723 |
| 43 | RD | GO8-19043A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Smithsonian Astrophysical Observatory | NAS8-03060 | \$ 3,023 |
| 43 | RD | GO8-19059X | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Smithsonian Astrophysical Observatory | NAS8-03060 | \$ 92,508 |
| 43 | RD | GO9-20066A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Smithsonian Astrophysical Observatory | NAS8-03060 | \$ 17,502 |
| 43 | RD | SV4-74018 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Smithsonian Astrophysical Observatory | NAS8-03060 | \$ 271,724 |
| 43 | RD | HST-GO-14799.001-A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Space Telescope Science Institute | N/A | \$ 18,236 |
| 43 | RD | HST-GO-14932.001-A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Space Telescope Science Institute | N/A | \$ 6,183 |
| 43 | RD | HST-GO-14937.002-A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Space Telescope Science Institute | N/A | \$ 1,861 |
| 43 | RD | HST-GO-15237.003-A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Space Telescope Science Institute | N/A | \$ 7,390 |
| 43 | RD | HST-GO-15318.003-A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Space Telescope Science Institute | N/A | \$ 3,421 |
| 43 | RD | HST-GO-13468.001-A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Space Telescope Science Institute | NAS5-26555 | \$ 6,006 |
| 43 | RD | HST-GO-14258.001-A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Space Telescope Science Institute | NAS5-26555 | \$ 2,949 |
| 43 | RD | HST-GO-14729.003-A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Space Telescope Science Institute | NAS5-26555 | \$ 13,996 |
| 43 | RD | HST-GO-14745.001-A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Space Telescope Science Institute | NAS5-26555 | \$ 624 |
| 43 | RD | HST-GO-14783.002-A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Space Telescope Science Institute | NAS5-26555 | \$ 6,735 |
| 43 | RD | HST-GO-14794.001-A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Space Telescope Science Institute | NAS5-26555 | \$ 44,613 |
| 43 | RD | HST-GO-15083.001-A | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Space Telescope Science Institute | NAS5-26555 | \$ 14,676 |
| 43 | RD | 220677 80NSSC19C0007 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | Terves Inc. | 80NSSC19C0007 | \$ 107,579 |
| 43 | RD | FP060761-C AMEND 2 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | University of Chicago | NNX16AB44G | \$ 25,942 |
| 43 | RD | 1557824 | National Aeronautics and Space Administration - Non-Specified | Research and Development | \$ 10,627,776 | \$ 644,904,305 | N | University of Colorado | 80NSSC19K0450 | \$ 61,192 |
| 45 | 161 | Promotion of the Humanities Research | Research and Development | \$ 111,912 | \$ 644,904,305 | Y | | | \$ 111,912 | |
| 45 | 301 | Museums for America | Research and Development | \$ 23,201 | \$ 644,904,305 | Y | | | \$ 23,201 | |
| 45 | 312 | National Leadership Grants | Research and Development | \$ 121,447 | \$ 644,904,305 | Y | | | \$ 9,966 | \$ 78,241 |
| 47 | 041 | Engineering | Research and Development | \$ 9,613,385 | \$ 644,904,305 | Y | | | \$ 318,325 | \$ 8,900,925 |
| 47 | 041 | Engineering | Research and Development | \$ 9,613,385 | \$ 644,904,305 | N | Case Western Reserve University | NATIONAL SCIENCE FOUNDATION | | \$ 75,148 |
| 47 | 041 | Engineering | Research and Development | \$ 9,613,385 | \$ 644,904,305 | N | H Quest Vanguard, Inc | 1914147 | | \$ 39,848 |
| 47 | 041 | Engineering | Research and Development | \$ 9,613,385 | \$ 644,904,305 | N | Michigan Technological University | CBET-1639342 | | \$ 40,061 |
| 47 | 041 | Engineering | Research and Development | \$ 9,613,385 | \$ 644,904,305 | N | North Carolina State University | EEC-1160483 | | \$ 415,877 |
| 47 | 041 | Engineering | Research and Development | \$ 9,613,385 | \$ 644,904,305 | N | North Carolina State University | N/A | | \$ 13,154 |
| 47 | 041 | Engineering | Research and Development | \$ 9,613,385 | \$ 644,904,305 | N | Rensselaer Polytechnic Institute | EFRI-1433311 | | \$ 14,888 |
| 47 | 041 | Engineering | Research and Development | \$ 9,613,385 | \$ 644,904,305 | N | Spotless Materials, LLC | 1843624 | | \$ 28,198 |
| 47 | 041 | Engineering | Research and Development | \$ 9,613,385 | \$ 644,904,305 | N | University of Notre Dame | 2016-NE-2698 | | \$ 31,403 |
| 47 | 041 | Engineering | Research and Development | \$ 9,613,385 | \$ 644,904,305 | N | University of Pennsylvania | 1542707 | | \$ 13,883 |
| 47 | 041 | Engineering | Research and Development | \$ 9,613,385 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | IIP-1738689 | | \$ 40,000 |
| 47 | 049 | Mathematical and Physical Sciences | Research and Development | \$ 16,505,285 | \$ 644,904,305 | Y | | | \$ 419,573 | \$ 15,832,596 |
| 47 | 049 | Mathematical and Physical Sciences | Research and Development | \$ 16,505,285 | \$ 644,904,305 | N | Indiana University | NATIONAL SCIENCE FOUNDATION | | \$ 57,177 |
| 47 | 049 | Mathematical and Physical Sciences | Research and Development | \$ 16,505,285 | \$ 644,904,305 | N | Norfolk State University | 1832031 | | \$ 73,756 |
| 47 | 049 | Mathematical and Physical Sciences | Research and Development | \$ 16,505,285 | \$ 644,904,305 | N | University of California, Irvine | CHI-1414466 | | \$ 133,574 |
| 47 | 049 | Mathematical and Physical Sciences | Research and Development | \$ 16,505,285 | \$ 644,904,305 | N | University of Pittsburgh | 1740630 | | \$ 111,769 |
| 47 | 049 | Mathematical and Physical Sciences | Research and Development | \$ 16,505,285 | \$ 644,904,305 | N | University of Wisconsin | 1700765 | | \$ 134,372 |
| 47 | 049 | Mathematical and Physical Sciences | Research and Development | \$ 16,505,285 | \$ 644,904,305 | N | University of Wisconsin - Madison | 1629270 | | \$ 27,224 |
| 47 | 049 | Mathematical and Physical Sciences | Research and Development | \$ 16,505,285 | \$ 644,904,305 | N | Yale University | 1616086 | | \$ 60,454 |
| 47 | 050 | Geosciences | Research and Development | \$ 7,640,734 | \$ 644,904,305 | Y | | | \$ 670,190 | \$ 7,239,351 |
| 47 | 050 | Geosciences | Research and Development | \$ 7,640,734 | \$ 644,904,305 | N | Colorado School of Mines | NATIONAL SCIENCE FOUNDATION | | \$ 21,611 |
| 47 | 050 | Geosciences | Research and Development | \$ 7,640,734 | \$ 644,904,305 | N | Columbia University | NATIONAL SCIENCE FOUNDATION | | \$ 13,070 |
| 47 | 050 | Geosciences | Research and Development | \$ 7,640,734 | \$ 644,904,305 | N | Cornell University | N/A | \$ 14,204 | \$ 58,887 |
| 47 | 050 | Geosciences | Research and Development | \$ 7,640,734 | \$ 644,904,305 | N | Cornell University | NATIONAL SCIENCE FOUNDATION | | \$ 141,269 |
| 47 | 050 | Geosciences | Research and Development | \$ 7,640,734 | \$ 644,904,305 | N | New York University | OPP-1739003 | | \$ 85,834 |
| 47 | 050 | Geosciences | Research and Development | \$ 7,640,734 | \$ 644,904,305 | N | Ohio State University, The | 1617185 | | \$ 70,024 |
| 47 | 050 | Geosciences | Research and Development | \$ 7,640,734 | \$ 644,904,305 | N | University of Illinois | EAR-1331906 | | \$ (2,490) |
| 47 | 050 | Geosciences | Research and Development | \$ 7,640,734 | \$ 644,904,305 | N | University of New Hampshire | EAR-1331841 | | \$ 17,668 |

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, 2020

| CFDA Number | 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 |
|-------------|---------------------------------|--|--------------------------|-----------------------|----------------|--------------|---|--|--|-----------------|
| 47 050 | | Geosciences | Research and Development | \$ 7,640,734 | \$ 644,904,305 | N | University of Wisconsin | PLR-1600823 | | \$ 14,089 |
| 47 050 | | Geosciences | Research and Development | \$ 7,640,734 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | 479483-19079 | | \$ (19,768) |
| 47 070 | | Computer and Information Science and Engineering | Research and Development | \$ 9,285,281 | \$ 644,904,305 | Y | | | \$ 233,951 | \$ 8,392,412 |
| 47 070 | | Computer and Information Science and Engineering | Research and Development | \$ 9,285,281 | \$ 644,904,305 | N | Carnegie Mellon University | NATIONAL SCIENCE FOUNDATION | | \$ 4,796 |
| 47 070 | | Computer and Information Science and Engineering | Research and Development | \$ 9,285,281 | \$ 644,904,305 | N | Northern Arizona University | 1639529 | | \$ 12,149 |
| 47 070 | | Computer and Information Science and Engineering | Research and Development | \$ 9,285,281 | \$ 644,904,305 | N | Rutgers University | 1640834 | | \$ 855,334 |
| 47 070 | | Computer and Information Science and Engineering | Research and Development | \$ 9,285,281 | \$ 644,904,305 | N | University of California, Santa Barbara | CCF-1500848 | | \$ 12,313 |
| 47 070 | | Computer and Information Science and Engineering | Research and Development | \$ 9,285,281 | \$ 644,904,305 | N | University of Wisconsin | 1934752 | | \$ 8,277 |
| 47 074 | | Biological Sciences | Research and Development | \$ 7,550,155 | \$ 644,904,305 | Y | | | \$ 1,201,993 | \$ 7,136,366 |
| 47 074 | | Biological Sciences | Research and Development | \$ 7,550,155 | \$ 644,904,305 | N | Iowa State University | 1558071 | | \$ 26,047 |
| 47 074 | | Biological Sciences | Research and Development | \$ 7,550,155 | \$ 644,904,305 | N | Michigan State University | 1740874 | | \$ 81,738 |
| 47 074 | | Biological Sciences | Research and Development | \$ 7,550,155 | \$ 644,904,305 | N | Montana State University | 1716698 | | \$ 85,009 |
| 47 074 | | Biological Sciences | Research and Development | \$ 7,550,155 | \$ 644,904,305 | N | Purdue University | 1831493-DEB | | \$ 22,041 |
| 47 074 | | Biological Sciences | Research and Development | \$ 7,550,155 | \$ 644,904,305 | N | Stanford University | 1518681 | | \$ 16,613 |
| 47 074 | | Biological Sciences | Research and Development | \$ 7,550,155 | \$ 644,904,305 | N | University of California, San Diego | 1444435 | | \$ 43,633 |
| 47 074 | | Biological Sciences | Research and Development | \$ 7,550,155 | \$ 644,904,305 | N | University of Connecticut | 1703048 | | \$ 12,162 |
| 47 074 | | Biological Sciences | Research and Development | \$ 7,550,155 | \$ 644,904,305 | N | Virginia Institute of Marine Science | 1754692 | | \$ 38,386 |
| 47 074 | | Biological Sciences | Research and Development | \$ 7,550,155 | \$ 644,904,305 | N | Washington University in St. Louis | MCB1546840 | | \$ 55,684 |
| 47 075 | | Social, Behavioral, and Economic Sciences | Research and Development | \$ 2,358,573 | \$ 644,904,305 | Y | | | \$ 191,848 | \$ 2,207,010 |
| 47 075 | | Social, Behavioral, and Economic Sciences | Research and Development | \$ 2,358,573 | \$ 644,904,305 | N | Indiana University | 1759694 | | \$ 4,913 |
| 47 075 | | Social, Behavioral, and Economic Sciences | Research and Development | \$ 2,358,573 | \$ 644,904,305 | N | University of Minnesota | 1825768 | | \$ 108,938 |
| 47 075 | | Social, Behavioral, and Economic Sciences | Research and Development | \$ 2,358,573 | \$ 644,904,305 | N | University of Texas at Dallas, The | 152864 | | \$ 37,712 |
| 47 076 | | COVID-19 - Education and Human Resources | Research and Development | \$ 8,837,046 | \$ 644,904,305 | Y | | | | \$ 10,186 |
| 47 076 | | Education and Human Resources | Research and Development | \$ 8,837,046 | \$ 644,904,305 | Y | | | \$ 525,582 | \$ 8,007,992 |
| 47 076 | | Education and Human Resources | Research and Development | \$ 8,837,046 | \$ 644,904,305 | N | Concord Consortium, The | 293.01 | | \$ 224,703 |
| 47 076 | | Education and Human Resources | Research and Development | \$ 8,837,046 | \$ 644,904,305 | N | Concord Consortium, The | NATIONAL SCIENCE FOUNDATION | | \$ 71,036 |
| 47 076 | | Education and Human Resources | Research and Development | \$ 8,837,046 | \$ 644,904,305 | N | Norfolk State University | 1547771 | | \$ 57,189 |
| 47 076 | | Education and Human Resources | Research and Development | \$ 8,837,046 | \$ 644,904,305 | N | North Carolina State University | 1761110 | | \$ 112,210 |
| 47 076 | | Education and Human Resources | Research and Development | \$ 8,837,046 | \$ 644,904,305 | N | University of Georgia | 1741910 | | \$ 72,580 |
| 47 076 | | Education and Human Resources | Research and Development | \$ 8,837,046 | \$ 644,904,305 | N | University of Oklahoma, The | 1561660 | | \$ 46,041 |
| 47 076 | | Education and Human Resources | Research and Development | \$ 8,837,046 | \$ 644,904,305 | N | University of Southern California | DGE-1807047 | | \$ 21,399 |
| 47 078 | | Polar Programs | Research and Development | \$ 4,085 | \$ 644,904,305 | Y | | | | \$ 4,085 |
| 47 079 | | Office of International Science and Engineering | Research and Development | \$ 39,600 | \$ 644,904,305 | Y | | | | \$ 23,650 |
| 47 079 | | Office of International Science and Engineering | Research and Development | \$ 39,600 | \$ 644,904,305 | N | CRDF Global | NATIONAL INSTITUTES OF HEALTH | | \$ 4,250 |
| 47 079 | | Office of International Science and Engineering | Research and Development | \$ 39,600 | \$ 644,904,305 | N | University at Albany, State University of New York | 1545917 | | \$ 11,700 |
| 47 080 | | Office of Cyberinfrastructure | Research and Development | \$ 11,255 | \$ 644,904,305 | Y | | | | \$ 11,255 |
| 47 083 | | Integrative Activities | Research and Development | \$ 734,281 | \$ 644,904,305 | Y | | | \$ 192,679 | \$ 663,414 |
| 47 083 | | Integrative Activities | Research and Development | \$ 734,281 | \$ 644,904,305 | N | Boise State University | NATIONAL SCIENCE FOUNDATION | | \$ 70,867 |
| 47 RD | ADVANCE | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 84,645 |
| 47 RD | AGS 18-52428 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 84,000 |
| 47 RD | BCS 15-54834 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 41,207 |
| 47 RD | BCS 16-17396 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 20,250 |
| 47 RD | BCS 16-40500 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 7,643 |
| 47 RD | BCS 17-19187 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 6,616 |
| 47 RD | BCS 18-39269 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 20,667 | \$ 20,667 |
| 47 RD | CBET 18-03808 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 8,860 |
| 47 RD | CHE 16-09572 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 57 |
| 47 RD | CHE 18-07703 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 385 |
| 47 RD | CHE 18-32471 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 296,235 | \$ 758,904 |
| 47 RD | CHE 19-45015 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 61,705 |
| 47 RD | CMMI 14-63482 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ (394) |
| 47 RD | CMMI 17-62188 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 143,358 |
| 47 RD | CMMI 18-26221 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 93,013 |
| 47 RD | CMMI 19-00698 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 6,375 |
| 47 RD | CMMI 19-07389 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | | \$ 172 |

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, 2020

| CFDA Number | 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 | CMMI 19-32991 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 88,375 | |
| 47 | RD | CNS 15-26425 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 70,385 | |
| 47 | RD | CNS 16-50527 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 6,524 | |
| 47 | RD | DEB 15-56444 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 124,989 | |
| 47 | RD | DEB 17-62760 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 56,696 | |
| 47 | RD | DGE 16-63343 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 372,249 | |
| 47 | RD | DGE 17-23687 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 9,097 | |
| 47 | RD | DMR 16-54625 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 91,352 | |
| 47 | RD | DMR 18-51987 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 83,668 | |
| 47 | RD | DMR 19-17579 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 114,793 | |
| 47 | RD | DMS 16-28411 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 5,359 | |
| 47 | RD | EAR 13-31726 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 25,404 | |
| 47 | RD | EAR 16-06738 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 43,160 | |
| 47 | RD | EAR 16-34108 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 11,044 | |
| 47 | RD | EAR 17-23057 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 4,225 | |
| 47 | RD | EAR-1933203 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 3,600 | |
| 47 | RD | ECCS 19-33334 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 20,017 | |
| 47 | RD | EEC 18-55256 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 776 | |
| 47 | RD | EFRI 14-33378 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 28,291 | |
| 47 | RD | IIP 18-41474 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 41,909 | |
| 47 | RD | MCB 15-16999 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 103,590 | |
| 47 | RD | MCB 17-15984 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 6,028 | |
| 47 | RD | OCE 19-24559 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 492 | |
| 47 | RD | OISE 18-29573 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | \$ 21,000 | \$ 113,881 | |
| 47 | RD | OPP 17-23832 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 512 | |
| 47 | RD | PHY 16-07517 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 188,285 | |
| 47 | RD | PHY 16-07648 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 9,910 | |
| 47 | RD | PHY 16-13939 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 91,877 | |
| 47 | RD | PHY 16-20777 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 6,394 | |
| 47 | RD | PHY 20-15651 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 51,591 | |
| 47 | RD | SES 18-53209 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 97,164 | |
| 47 | RD | SMA 16-41047 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | Y | | | \$ 31,031 | |
| 47 | RD | 214173 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | Association of Public and Land-Grant Universities | NATIONAL SCIENCE FOUNDATION | \$ 11,250 | |
| 47 | RD | PSU231221 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | California State University, Los Angeles | DMR-1523588 | \$ 28,618 | |
| 47 | RD | 38E(GG009393) | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | Columbia University | NATIONAL SCIENCE FOUNDATION | \$ 29,260 | |
| 47 | RD | 2016-NE-2699 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | Nanoelectronics Research Corporation | P29819 | \$ 7,446 | \$ 47,912 |
| 47 | RD | 181223 PO101204 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | North Carolina Central University | 1523617 | \$ 98,730 | |
| 47 | RD | 1003968-01 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | Northern Arizona University | 1856384 | \$ 24,708 | |
| 47 | RD | 10001564-008 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | Purdue University | 1901932-DBI | \$ 17,100 | |
| 47 | RD | 010471-003 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | University of Cincinnati | 1635089 | \$ 29,733 | |
| 47 | RD | 25-6238-0918-002 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | University of Nebraska | 1924322 | \$ 19,185 | |
| 47 | RD | UNR-17-33 PO 117GC000041 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | University of Nevada, Reno | N/A | \$ 12,755 | |
| 47 | RD | 0000000032 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | University of Wisconsin | 1719277-PHY | \$ 275,304 | |
| 47 | RD | 0000000533 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | University of Wisconsin | 1935550-CMMI | \$ 3,913 | |
| 47 | RD | 0000000453 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | University of Wisconsin - Madison | 1913607-PHY | \$ 181,341 | |
| 47 | RD | AWD000115.A | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | Vassar College | 1811123 | \$ 35,000 | |
| 47 | RD | FP00001220_SA001 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | Virginia Commonwealth University | 1617710 | \$ 208,064 | |
| 47 | RD | 480167-19079 | National Science Foundation - Non-Specified | Research and Development | \$ 4,267,904 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | MCB-1919455 | \$ 6,900 | |
| 58 | RD | NONE | United States Securities and Exchange Commission - Non-Specified | Research and Development | \$ 600,305 | \$ 644,904,305 | Y | | | \$ 600,305 | |
| 64 | RD | 219530 | Department of Veterans Affairs - Non-Specified | Research and Development | \$ 4,339 | \$ 644,904,305 | Y | | | \$ 4,339 | |
| 66 | 034 | | Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities Relating to the Clean Air Act | Research and Development | \$ 10,285 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4100074732 | \$ 10,285 | |
| 66 | 461 | | Regional Wetland Program Development Grants | Research and Development | \$ 199,700 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300638386 | \$ 186,548 | |
| 66 | 461 | | Regional Wetland Program Development Grants | Research and Development | \$ 199,700 | \$ 644,904,305 | N | State of New Jersey Department of Environmental Protection | CD-962843-15 | \$ 13,152 | |
| 66 | 466 | | Chesapeake Bay Program | Research and Development | \$ 407,212 | \$ 644,904,305 | Y | | | \$ 198,456 | |
| 66 | 466 | | Chesapeake Bay Program | Research and Development | \$ 407,212 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300615517 | \$ 20,427 | |

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, 2020

| CFDA Number | 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 | Research and Development | \$ 407,212 | \$ 644,904,305 | N | Mid-Atlantic 4R Nutrient Stewardship Association | 0602.17.057424 | | \$ 74,039 |
| 66 951 | | Environmental Education Grants | Research and Development | \$ 15,096 | \$ 644,904,305 | N | University of the Virgin Islands | 96258918 | | \$ 15,096 |
| 66 RD | EP-W-09-028-SITEOP-106 | Environmental Protection Agency - Non-Specified | Research and Development | \$ 284,570 | \$ 644,904,305 | N | Amec Foster Wheeler | ENVIRONMENTAL PROTECTION AGENC | | \$ (3,245) |
| 66 RD | PW2016-007 | Environmental Protection Agency - Non-Specified | Research and Development | \$ 284,570 | \$ 644,904,305 | N | Amec Foster Wheeler | ENVIRONMENTAL PROTECTION AGENC | | \$ 18,170 |
| 66 RD | 4300593881 | Environmental Protection Agency - Non-Specified | Research and Development | \$ 284,570 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300593881 | | \$ 1,510 |
| 66 RD | 4300605085 | Environmental Protection Agency - Non-Specified | Research and Development | \$ 284,570 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300605085 | | \$ 85,964 |
| 66 RD | 4300628567 | Environmental Protection Agency - Non-Specified | Research and Development | \$ 284,570 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300628567 | | \$ 153,199 |
| 66 RD | 4300640900 | Environmental Protection Agency - Non-Specified | Research and Development | \$ 284,570 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300640900 | | \$ 14,610 |
| 66 RD | 011036-002 | Environmental Protection Agency - Non-Specified | Research and Development | \$ 284,570 | \$ 644,904,305 | N | University of Cincinnati | SU83694001 | | \$ 14,362 |
| 77 008 | | U.S. Nuclear Regulatory Commission Scholarship and Fellowship Program | Research and Development | \$ 223,057 | \$ 644,904,305 | Y | | | | \$ 223,057 |
| 77 RD | 31310019D0004 | Nuclear Regulatory Commission - Non-Specified | Research and Development | \$ 338,505 | \$ 644,904,305 | Y | | | | \$ 338,505 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | Y | | | \$ 1,624,870 | \$ 8,512,621 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Altex Technologies | U.S. DEPARTMENT OF ENERGY | | \$ 86,805 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Arizona State University | U.S. DEPARTMENT OF ENERGY | | \$ 36,608 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Columbia University | DE-SC0016579 | | \$ 86,069 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Florida State University | U.S. DEPARTMENT OF ENERGY | | \$ 36,051 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Georgia Institute of Technology | DE-SC0012577 | | \$ 87,135 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Giner, Inc | U.S. DEPARTMENT OF ENERGY | | \$ 43,204 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | H Quest Vanguard, Inc | DE-SC0017227 | | \$ 66,199 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Johns Hopkins University | DE-SC0019331 | | \$ 277,500 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Luna Innovations, Inc. | DE-SC0018670 | | \$ 79,603 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Massachusetts Institute of Technology | U.S. DEPARTMENT OF ENERGY | | \$ (2,470) |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Nanosonic, Inc | DE-SC0019844 | | \$ 75,000 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Ohio State University, The | DE-SC0016584 | | \$ 146,575 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Plasma Processes, LLC | DE-SC0015931 | | \$ 11,903 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Princeton University | DE-SC0019364 | | \$ 105,700 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Stanford University | DE-SC0016162 | \$ 144,041 | \$ 852,717 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | UES, Inc. | DE-SC0013215 | | \$ (28) |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | University of Arkansas | DE-SC0016529 | | \$ 12,358 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | University of California, Davis | DE-SC0016605 | | \$ 146,517 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | University of California, San Diego | DE-SC0017981 | | \$ 76,088 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | University of Delaware | DE-SC0019155 | | \$ 60,806 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | University of Illinois | DE-SC0018260 | | \$ 127,085 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | University of Massachusetts | U.S. DEPARTMENT OF ENERGY | | \$ 6,554 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | University of Texas at Austin, The | DE-SC0018042 | | \$ 81,494 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | University of Texas at Dallas, The | DE-SC0010697 | | \$ 50,209 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | University of Utah, The | DE-SC0019285 | | \$ 242,603 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Washington University in St. Louis | DE-SC0012722 | | \$ 776 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Washington University in St. Louis | U.S. DEPARTMENT OF ENERGY | | \$ 121,142 |
| 81 049 | | Office of Science Financial Assistance Program | Research and Development | \$ 11,427,415 | \$ 644,904,305 | N | Yale University | U.S. DEPARTMENT OF ENERGY | | \$ 591 |
| 81 086 | | Conservation Research and Development | Research and Development | \$ 2,109,192 | \$ 644,904,305 | Y | | | | \$ 1,692,695 |
| 81 086 | | Conservation Research and Development | Research and Development | \$ 2,109,192 | \$ 644,904,305 | N | Michigan State University | DE-EE0007803 | | \$ 93,572 |
| 81 086 | | Conservation Research and Development | Research and Development | \$ 2,109,192 | \$ 644,904,305 | N | University of Michigan | DE-EE0008456 | | \$ 128,188 |
| 81 086 | | Conservation Research and Development | Research and Development | \$ 2,109,192 | \$ 644,904,305 | N | University of Virginia | DE-EE0008195 | | \$ 194,737 |
| 81 087 | | Renewable Energy Research and Development | Research and Development | \$ 1,331,529 | \$ 644,904,305 | Y | | | \$ 138,339 | \$ 380,153 |
| 81 087 | | Renewable Energy Research and Development | Research and Development | \$ 1,331,529 | \$ 644,904,305 | N | 3M | DE-AR0000776 | | \$ 19,807 |
| 81 087 | | Renewable Energy Research and Development | Research and Development | \$ 1,331,529 | \$ 644,904,305 | N | Antares Group Incorporated | U.S. DEPARTMENT OF ENERGY | | \$ 175,281 |
| 81 087 | | Renewable Energy Research and Development | Research and Development | \$ 1,331,529 | \$ 644,904,305 | N | Composite Technology Development, Inc. | DE-EE0007248 | | \$ 94,830 |

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, 2020

| CFDA Number | 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 |
|-------------|---------------------------------|--|--------------------------|-----------------------|----------------|--------------|---|--|--|-----------------|
| 81 087 | | Renewable Energy Research and Development | Research and Development | \$ 1,331,529 | \$ 644,904,305 | N | Forest Concepts LLC | U.S. DEPARTMENT OF ENERGY | | \$ 130,996 |
| 81 087 | | Renewable Energy Research and Development | Research and Development | \$ 1,331,529 | \$ 644,904,305 | N | University of California, Los Angeles | DE-EE0007613 | \$ 53,229 | \$ 98,953 |
| 81 087 | | Renewable Energy Research and Development | Research and Development | \$ 1,331,529 | \$ 644,904,305 | N | University of Illinois | SA-19-09 | | \$ 28,450 |
| 81 087 | | Renewable Energy Research and Development | Research and Development | \$ 1,331,529 | \$ 644,904,305 | N | University of Michigan | DE-EE0008482 | | \$ 180,399 |
| 81 087 | | Renewable Energy Research and Development | Research and Development | \$ 1,331,529 | \$ 644,904,305 | N | University of Oklahoma, The | DE-EE0008602 | | \$ 123,929 |
| 81 087 | | Renewable Energy Research and Development | Research and Development | \$ 1,331,529 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | DE-EE0007613 | | \$ 3,726 |
| 81 087 | | Renewable Energy Research and Development | Research and Development | \$ 1,331,529 | \$ 644,904,305 | N | Yale University | DE-EE0007983 | | \$ 95,005 |
| 81 089 | | Fossil Energy Research and Development | Research and Development | \$ 5,205,743 | \$ 644,904,305 | Y | | | \$ 2,175,703 | \$ 5,153,502 |
| 81 089 | | Fossil Energy Research and Development | Research and Development | \$ 5,205,743 | \$ 644,904,305 | N | University of Texas at Austin, The | DE-FE0031760 | | \$ 52,241 |
| 81 117 | | Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training and Technical Analysis/Assistance | Research and Development | \$ 451,039 | \$ 644,904,305 | Y | | | \$ 156,285 | \$ 451,039 |
| 81 121 | | Nuclear Energy Research, Development and Demonstration | Research and Development | \$ 1,792,786 | \$ 644,904,305 | Y | | | \$ 544,398 | \$ 1,740,748 |
| 81 121 | | Nuclear Energy Research, Development and Demonstration | Research and Development | \$ 1,792,786 | \$ 644,904,305 | N | Westinghouse Electric Company LLC | DE-NE0008522 | | \$ 52,038 |
| 81 122 | | Electricity Delivery and Energy Reliability, Research, Development and Analysis | Research and Development | \$ 88,651 | \$ 644,904,305 | Y | | | | \$ 88,651 |
| 81 135 | | Advanced Research Projects Agency - Energy | Research and Development | \$ 889,952 | \$ 644,904,305 | Y | | | \$ 386,934 | \$ 893,197 |
| 81 135 | | Advanced Research Projects Agency - Energy | Research and Development | \$ 889,952 | \$ 644,904,305 | N | Ocean Renewable Power Company | DE-AR0000658 | | \$ (3,245) |
| 81 RD | 89243319CFE000032 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | | \$ 67,018 |
| 81 RD | ADVANCE | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | | \$ 23,668 |
| 81 RD | DE-AR0000801 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | \$ 308,270 | \$ 620,536 |
| 81 RD | DE-AR0000821 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | \$ 639,737 | \$ 1,565,588 |
| 81 RD | DE-EE0008096 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | | \$ 204,755 |
| 81 RD | DE-FE0026825 0006 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | \$ 38,146 | \$ 153,757 |
| 81 RD | DE-FE0026825 0008 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | \$ 5,296 | \$ 69,448 |
| 81 RD | DE-FE0031280 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | | \$ 46,577 |
| 81 RD | DE-FE0031544 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | \$ 19,810 | \$ 241,526 |
| 81 RD | DE-NE0008688 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | \$ 5,264 | \$ 140,590 |
| 81 RD | DE-NE0008737 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | | \$ 18,000 |
| 81 RD | DE-SC0002145 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | | \$ 105,219 |
| 81 RD | DE-SC0012375 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | \$ 530,725 | \$ 1,019,184 |
| 81 RD | DE-SC0018032 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | | \$ 163,045 |
| 81 RD | DE-SC0018035 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | | \$ 229,589 |
| 81 RD | DE-SC0018038 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | | \$ 138,036 |
| 81 RD | DE-SC0018087 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | | \$ 240,172 |
| 81 RD | DE-SC0019349 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | Y | | | | \$ 109,034 |
| 81 RD | 7F-30076 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Argonne National Laboratory | DE-AC02-06CH11357 | | \$ 60,890 |
| 81 RD | 17-108 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Arizona State University | U.S. DEPARTMENT OF ENERGY | | \$ 49,474 |
| 81 RD | 163662 AMEND 4 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Energy Alliance, LLC | N/A | | \$ 20,861 |
| 81 RD | 188340 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Energy Alliance, LLC | U.S. DEPARTMENT OF ENERGY | | \$ 174,064 |
| 81 RD | 217047 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Energy Alliance, LLC | U.S. DEPARTMENT OF ENERGY | | \$ 72,263 |
| 81 RD | 228234 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Energy Alliance, LLC | U.S. DEPARTMENT OF ENERGY | | \$ 95,119 |
| 81 RD | 443328 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Memorial Institute | U.S. DEPARTMENT OF ENERGY | | \$ 90,309 |
| 81 RD | 481090 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Memorial Institute Pacific Northwest National Laboratory | DE-AC05-76RL01830 | | \$ 22,547 |
| 81 RD | 499137 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Memorial Institute Pacific Northwest National Laboratory | DE-AC05-76RL01830 | | \$ 10,140 |
| 81 RD | 512983 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Northwest National Laboratory | DE-AC05-76RL01830 | | \$ 36,594 |
| 81 RD | 419294 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Memorial Institute Pacific Northwest National Laboratory | DEPARTMENT OF ENERGY | | \$ 168 |
| 81 RD | 452458 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Memorial Institute Pacific Northwest National Laboratory | U.S. DEPARTMENT OF ENERGY | | \$ 24,849 |

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, 2020**

| CFDA Number | 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 | 485704 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Memorial Institute Pacific Northwest National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 122,698 |
| 81 | RD | 500819 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Memorial Institute Pacific Northwest National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 14,562 |
| 81 | RD | 504345 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Memorial Institute Pacific Northwest National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 39,140 |
| 81 | RD | 432185 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Battelle Memorial Institute, Pacific Northwest Division | U.S. DEPARTMENT OF ENERGY | \$ 91,043 |
| 81 | RD | 125444 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Bechtel Bettis, Inc. | DE-NR0000031 | \$ 23,624 |
| 81 | RD | 317797 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Brookhaven National Laboratory | N/A | \$ 2,518 |
| 81 | RD | 300324 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Brookhaven National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 3,710 |
| 81 | RD | 369475 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Brookhaven National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 16,466 |
| 81 | RD | 4300158753 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Consolidated Nuclear Security, LLC | U.S. DEPARTMENT OF ENERGY | \$ 7,255 |
| 81 | RD | 132121 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Fluor Corporation | U.S. DEPARTMENT OF ENERGY | \$ 154,855 |
| 81 | RD | RJ407-G1 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Georgia Institute of Technology | DE-FE0031288 | \$ 55,746 |
| 81 | RD | 27692 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | HAMR Industries LLC | DE-SC0018777 | \$ 58,829 |
| 81 | RD | 15C1391400 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Jefferson Science Associates LLC | N/A | \$ 21,638 |
| 81 | RD | 133121 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Knolls Atomic Power Laboratory | 89233018CNR000004 | \$ 9,712 |
| 81 | RD | 101490 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Knolls Atomic Power Laboratory | DE-NR000031 | \$ (1,335) |
| 81 | RD | B626737 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Lawrence Berkeley National Laboratory | N/A | \$ (4,030) |
| 81 | RD | 7352259 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Lawrence Berkeley National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 103,695 |
| 81 | RD | 7370834 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Lawrence Berkeley National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 7,780 |
| 81 | RD | 7434356 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Lawrence Berkeley National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 55,263 |
| 81 | RD | B630324 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Lawrence Livermore National Laboratory | DE-AC52-07NA27344 | \$ 14,320 |
| 81 | RD | B634531 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Lawrence Livermore National Laboratory | DE-AC52-07NA27344 | \$ 59,181 |
| 81 | RD | B635759 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Lawrence Livermore National Laboratory | DE-AC52-07NA27344 | \$ 20,984 |
| 81 | RD | B636657 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Lawrence Livermore National Laboratory | DE-AC52-07NA27344 | \$ 52,122 |
| 81 | RD | B637571 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Lawrence Livermore National Laboratory | DE-AC52-07NA27344 | \$ 30,339 |
| 81 | RD | B639389 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Lawrence Livermore National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 48,524 |
| 81 | RD | P010221754 TASK ORDER 1 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Leidos | 89243318CFE000003 | \$ 117,117 |
| 81 | RD | P010221754 TASK ORDER 4 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Leidos | 89243318CFE000003 | \$ 70,596 |
| 81 | RD | P010221754 TASK ORDER 2 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Leidos | NATIONAL ENERGY TECHNOLOGY LAB | \$ 384 |
| 81 | RD | 293402 WO 424285 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Los Alamos National Laboratory | DE-AC52-06NA25396 | \$ 215,012 |
| 81 | RD | 367801/PSU | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Luna Innovations, Inc. | DE-SC0019787 | \$ 31,572 |
| 81 | RD | 215257/01 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Mission Support And Test Services | DE-NA0003624 | \$ 1,410,381 |
| 81 | RD | ACS-7-70122-01 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | National Renewable Energy Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 5,665 |
| 81 | RD | AHQ-9-92002-09 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | National Renewable Energy Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 17,813 |
| 81 | RD | 4000158464 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Oak Ridge National Laboratory | DOE | \$ 755,443 |
| 81 | RD | 4000105709 MOD 17 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Oak Ridge National Laboratory | N/A | \$ 3,348 |
| 81 | RD | 4000165223 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Oak Ridge National Laboratory | N/A | \$ 8,000 |
| 81 | RD | 4000105709 MOD 19 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Oak Ridge National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 14,447 |

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, 2020**

| CFDA Number | 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 | 4000167936 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Oak Ridge National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 2,463 |
| 81 | RD | 4000169451 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Oak Ridge National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 21,888 |
| 81 | RD | 4000171054 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Oak Ridge National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 5,848 |
| 81 | RD | 4000174451 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Oak Ridge National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 114,667 |
| 81 | RD | 4000175374 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Oak Ridge National Laboratory | U.S. DEPARTMENT OF ENERGY | \$ 2,316 |
| 81 | RD | 100018 AMENDMENT 1 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Portland State University | R305A180374 | \$ 17,702 |
| 81 | RD | 209064 PO F2D82345 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | PPG Industries, Inc | DE-EE0006250 | \$ (19,125) |
| 81 | RD | 1356879 PO 1910637 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Sandia National Laboratories | DE-NA0003525 | \$ 62,241 |
| 81 | RD | 1356879 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Sandia National Laboratories | N/A | \$ 75,574 |
| 81 | RD | 1356879 PO 1929132 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Sandia National Laboratories | N/A | \$ 35,181 |
| 81 | RD | 1356879 PO 2153784 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Sandia National Laboratories | N/A | \$ 28,262 |
| 81 | RD | 775396 PO 1526522 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Sandia National Laboratories | N/A | \$ (4,587) |
| 81 | RD | 1356879 TO 2029271 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Sandia National Laboratories | U.S. DEPARTMENT OF ENERGY | \$ 14,000 |
| 81 | RD | 27413 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Solution Spray Technologies LLC | DE-EE008307 | \$ 7,612 |
| 81 | RD | 27582 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Starfire Industries, LLC | DE-SC0019828 | \$ 40,000 |
| 81 | RD | 293402 SUB 528821 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Triad National Security, LLC | 89233218CNA000001 | \$ 96,942 |
| 81 | RD | 293402_585371 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | Triad National Security, LLC | U.S. DEPARTMENT OF ENERGY | \$ 9,848 |
| 81 | RD | SUBK00009799 PO 3005799149 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | University of Michigan | DE-NA0003920 | \$ 1,625 |
| 81 | RD | SUBK00008626 PO 3004992137 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | University of Michigan | U.S. DEPARTMENT OF ENERGY | \$ 100,165 |
| 81 | RD | 4000158836 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | UT-Battelle | DE-AC05-00OR22725 | \$ 1,214 |
| 81 | RD | 4000175741 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | UT-Battelle | DE-AC05-00OR22725 | \$ 2,651 |
| 81 | RD | 4000171054 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | UT-Battelle | U.S. DEPARTMENT OF ENERGY | \$ 90,422 |
| 81 | RD | 4000167168 | Department of Energy - Non-Specified | Research and Development | \$ 10,275,916 | \$ 644,904,305 | N | UT-Battelle | U.S. DEPARTMENT OF ENERGY | \$ 97,570 |
| 84 | 015 | | National Resource Centers Program for Foreign Language and Area Studies or Foreign Language and International Studies Program and Foreign Language and Area Studies Fellowship Program | Research and Development | \$ 212,610 | \$ 644,904,305 | Y | | | \$ 212,610 |
| 84 | 017 | | International Research and Studies | Research and Development | \$ 68,303 | \$ 644,904,305 | Y | | | \$ 56,980 |
| 84 | 017 | | International Research and Studies | Research and Development | \$ 68,303 | \$ 644,904,305 | N | Delaware State University | U.S. DEPARTMENT OF EDUCATION | \$ 11,323 |
| 84 | 022 | | Overseas Programs - Doctoral Dissertation Research Abroad | Research and Development | \$ 567 | \$ 644,904,305 | Y | | | \$ 567 |
| 84 | 200 | | Graduate Assistance in Areas of National Need | Research and Development | \$ 272,230 | \$ 644,904,305 | Y | | | \$ 272,230 |
| 84 | 229 | | Language Resource Centers | Research and Development | \$ 138,684 | \$ 644,904,305 | Y | | \$ 27,626 | \$ 138,684 |
| 84 | 305 | | Education Research, Development and Dissemination | Research and Development | \$ 1,592,681 | \$ 644,904,305 | Y | | | \$ 907,346 |
| 84 | 305 | | Education Research, Development and Dissemination | Research and Development | \$ 1,592,681 | \$ 644,904,305 | N | Texas A&M University | R305A150057 | \$ 51,688 |
| 84 | 327 | | Special Education Educational Technology Media, and Materials for Individuals with Disabilities | Research and Development | \$ 426,547 | \$ 644,904,305 | Y | | | \$ 426,547 |
| 84 | RD | R305A150391 | Department of Education - Non-Specified | Research and Development | \$ 827,753 | \$ 644,904,305 | Y | | | \$ 2,570 |
| 84 | RD | R305A150488 | Department of Education - Non-Specified | Research and Development | \$ 827,753 | \$ 644,904,305 | Y | | | \$ 493,814 |
| 84 | RD | R305A160403 | Department of Education - Non-Specified | Research and Development | \$ 827,753 | \$ 644,904,305 | Y | | \$ 26,690 | \$ 127,935 |
| 84 | RD | 4100084652 | Department of Education - Non-Specified | Research and Development | \$ 827,753 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4100084652 | \$ 190,580 |
| 84 | RD | R305A160401 | Institute of Education Sciences - Non-Specified | Research and Development | \$ 827,753 | \$ 644,904,305 | Y | | | \$ 12,854 |
| 93 | 077 | | Family Smoking Prevention and Tobacco Control Act Regulatory Research | Research and Development | \$ 606,821 | \$ 644,904,305 | Y | | \$ 11,821 | \$ 606,821 |
| 93 | 086 | | Healthy Marriage Promotion and Responsible Fatherhood Grants | Research and Development | \$ 31,724 | \$ 644,904,305 | N | Texas State University | 90MF0067-05-00 | \$ 31,724 |
| 93 | 088 | | Advancing System Improvements for Key Issues in Women's Health | Research and Development | \$ 297 | \$ 644,904,305 | N | U.S. Committee for Refugees and Immigrants | 1 ASTWH160047-01-00 | \$ 297 |
| 93 | 092 | | Affordable Care Act (ACA) Personal Responsibility Education Program | Research and Development | \$ 24,786 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4100081321 | \$ 24,786 |
| 93 | 103 | | Food and Drug Administration Research | Research and Development | \$ 201,605 | \$ 644,904,305 | Y | | | \$ 177,961 |

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, 2020

| CFDA Number | 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 |
|-------------|---------------------------------|---|--------------------------|-----------------------|----------------|--------------|---------------------------------------|--|--|-----------------|
| 93 103 | | Food and Drug Administration Research | Research and Development | \$ 201,605 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | U.S. FOOD AND DRUG ADMINISTRAT | | \$ 21,099 |
| 93 103 | | Food and Drug Administration Research | Research and Development | \$ 201,605 | \$ 644,904,305 | N | University of Kansas Medical Center | 5R01FD003937-03 | | \$ 2,545 |
| 93 110 | | Maternal and Child Health Federal Consolidated Programs | Research and Development | \$ 66,756 | \$ 644,904,305 | Y | | | | \$ 2,976 |
| 93 110 | | Maternal and Child Health Federal Consolidated Programs | Research and Development | \$ 66,756 | \$ 644,904,305 | N | Boston Children's Hospital | U.S. DEPARTMENT OF HEALTH AND | | \$ 691 |
| 93 110 | | Maternal and Child Health Federal Consolidated Programs | Research and Development | \$ 66,756 | \$ 644,904,305 | N | University of California, Los Angeles | HEALTH RESOURCES AND SERVICES | | \$ 63,089 |
| 93 113 | | Environmental Health | Research and Development | \$ 3,142,020 | \$ 644,904,305 | Y | | | \$ 351,113 | \$ 2,883,968 |
| 93 113 | | Environmental Health | Research and Development | \$ 3,142,020 | \$ 644,904,305 | N | Boston University | 1R01ES025791-01A1 | | \$ 61,000 |
| 93 113 | | Environmental Health | Research and Development | \$ 3,142,020 | \$ 644,904,305 | N | Harvard University | NATIONAL INSTITUTES OF HEALTH | | \$ 40,486 |
| 93 113 | | Environmental Health | Research and Development | \$ 3,142,020 | \$ 644,904,305 | N | Michigan State University | 1R01ES029227 | | \$ 28,459 |
| 93 113 | | Environmental Health | Research and Development | \$ 3,142,020 | \$ 644,904,305 | N | University of Pennsylvania | 1-R01-ES-029294-01A1 | | \$ 101,018 |
| 93 121 | | Oral Diseases and Disorders Research | Research and Development | \$ 1,531,114 | \$ 644,904,305 | Y | | | \$ 202,386 | \$ 1,531,114 |
| 93 172 | | Human Genome Research | Research and Development | \$ 709,139 | \$ 644,904,305 | Y | | | \$ 132,279 | \$ 709,139 |
| 93 173 | | Research Related to Deafness and Communication Disorders | Research and Development | \$ 786,237 | \$ 644,904,305 | Y | | | \$ 200,563 | \$ 715,653 |
| 93 173 | | Research Related to Deafness and Communication Disorders | Research and Development | \$ 786,237 | \$ 644,904,305 | N | Osmic Enterprises | 4R44AG051311-03 | | \$ 10,069 |
| 93 173 | | Research Related to Deafness and Communication Disorders | Research and Development | \$ 786,237 | \$ 644,904,305 | N | University of Georgia | 1R01DC013904 | | \$ 3,788 |
| 93 213 | | Research and Training in Complementary and Integrative Health | Research and Development | \$ 1,497,498 | \$ 644,904,305 | Y | | | \$ 338,079 | \$ 1,452,575 |
| 93 213 | | Research and Training in Complementary and Integrative Health | Research and Development | \$ 1,497,498 | \$ 644,904,305 | N | Carnegie Mellon University | NATIONAL INSTITUTES OF HEALTH | | \$ 1,359 |
| 93 213 | | Research and Training in Complementary and Integrative Health | Research and Development | \$ 1,497,498 | \$ 644,904,305 | N | Georgetown University | NATIONAL INSTITUTES OF HEALTH | | \$ 39,373 |
| 93 213 | | Research and Training in Complementary and Integrative Health | Research and Development | \$ 1,497,498 | \$ 644,904,305 | N | Mount Sinai Medical Center | 4UH3 AT009149-01 | | \$ 4,191 |
| 93 226 | | Research on Healthcare Costs, Quality and Outcomes | Research and Development | \$ 756,084 | \$ 644,904,305 | Y | | | \$ 5,273 | \$ 399,112 |
| 93 226 | | Research on Healthcare Costs, Quality and Outcomes | Research and Development | \$ 756,084 | \$ 644,904,305 | N | RAND Corporation | U19HS024067 | | \$ 256,324 |
| 93 226 | | Research on Healthcare Costs, Quality and Outcomes | Research and Development | \$ 756,084 | \$ 644,904,305 | N | University of North Carolina | 5R18H8023912-03 | | \$ 12,506 |
| 93 226 | | Research on Healthcare Costs, Quality and Outcomes | Research and Development | \$ 756,084 | \$ 644,904,305 | N | University of Pennsylvania | 5R01HS024918-03 REVISED | | \$ 88,142 |
| 93 233 | | National Center on Sleep Disorders Research | Research and Development | \$ 9,106 | \$ 644,904,305 | Y | | | | \$ 9,106 |
| 93 242 | | Mental Health Research Grants | Research and Development | \$ 6,027,824 | \$ 644,904,305 | Y | | | \$ 412,810 | \$ 5,572,958 |
| 93 242 | | Mental Health Research Grants | Research and Development | \$ 6,027,824 | \$ 644,904,305 | N | Florida State University | NATIONAL INSTITUTES OF HEALTH | | \$ 8,010 |
| 93 242 | | Mental Health Research Grants | Research and Development | \$ 6,027,824 | \$ 644,904,305 | N | Geisinger Health System | 1R01MH107431-01 | | \$ 220,491 |
| 93 242 | | Mental Health Research Grants | Research and Development | \$ 6,027,824 | \$ 644,904,305 | N | Quadrant Biosciences Inc. | 2R42MH111347-02A1 | | \$ 14,723 |
| 93 242 | | Mental Health Research Grants | Research and Development | \$ 6,027,824 | \$ 644,904,305 | N | University of Chicago | 1R21MH110716-01A1 | | \$ 12,831 |
| 93 242 | | Mental Health Research Grants | Research and Development | \$ 6,027,824 | \$ 644,904,305 | N | University of Kansas | 5R01MH079252-08 | | \$ 61,883 |
| 93 242 | | Mental Health Research Grants | Research and Development | \$ 6,027,824 | \$ 644,904,305 | N | University of Pittsburgh | 2R01MH048463-24 | | \$ 80,959 |
| 93 242 | | Mental Health Research Grants | Research and Development | \$ 6,027,824 | \$ 644,904,305 | N | University of Rochester | 5R01MH097293-05 | | \$ (20,767) |
| 93 242 | | Mental Health Research Grants | Research and Development | \$ 6,027,824 | \$ 644,904,305 | N | Washington University in St. Louis | 1R01MH115128-01A1 | | \$ 73,138 |
| 93 243 | | Substance Abuse and Mental Health Services Projects of Regional and National Significance | Research and Development | \$ 666,627 | \$ 644,904,305 | Y | | | \$ 83,455 | \$ 528,772 |
| 93 243 | | Substance Abuse and Mental Health Services Projects of Regional and National Significance | Research and Development | \$ 666,627 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300655082 | | \$ 129,855 |
| 93 262 | | Occupational Safety and Health Program | Research and Development | \$ 231,018 | \$ 644,904,305 | N | Bassett Healthcare Network | CENTERS FOR DISEASE CONTROL AN | | \$ 31,497 |
| 93 262 | | Occupational Safety and Health Program | Research and Development | \$ 231,018 | \$ 644,904,305 | N | Bassett Healthcare Network | NATIONAL INSTITUTE FOR OCCUPAT | | \$ 122,247 |
| 93 262 | | Occupational Safety and Health Program | Research and Development | \$ 231,018 | \$ 644,904,305 | N | Bassett Healthcare Network | NATIONAL INSTITUTES OF HEALTH | | \$ 13,032 |
| 93 262 | | Occupational Safety and Health Program | Research and Development | \$ 231,018 | \$ 644,904,305 | N | Marshfield Clinic Research Institute | CENTERS FOR DISEASE CONTROL AN | | \$ 15,622 |

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, 2020

| CFDA Number | 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 |
|-------------|---------------------------------|--|--------------------------|-----------------------|----------------|--------------|--|--|--|-----------------|
| 93 273 | | Alcohol Research Programs | Research and Development | \$ 2,459,940 | \$ 644,904,305 | Y | | | \$ 533,762 | \$ 2,378,175 |
| 93 273 | | Alcohol Research Programs | Research and Development | \$ 2,459,940 | \$ 644,904,305 | N | Carnegie Mellon University | NATIONAL INSTITUTES OF HEALTH | | \$ 31,715 |
| 93 273 | | Alcohol Research Programs | Research and Development | \$ 2,459,940 | \$ 644,904,305 | N | Real Prevention LLC | NATIONAL INSTITUTES OF HEALTH | | \$ 6,480 |
| 93 273 | | Alcohol Research Programs | Research and Development | \$ 2,459,940 | \$ 644,904,305 | N | University of Minnesota | 1R01AA023504 | | \$ 16,218 |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | Y | | | \$ 1,358,974 | \$ 6,979,248 |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | Colorado State University | NATIONAL INSTITUTE ON DRUG ABU | | \$ 52,172 |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | Duke University | NATIONAL INSTITUTES OF HEALTH | | \$ 120,774 |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | Iowa State University | R01DA13709 | | \$ (12,744) |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | RAND Corporation | R01DA045800 | | \$ 18,247 |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | Stanford University | 5U01DA044399 | | \$ (3) |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | Syracuse University | 7R01DA039924-02 | | \$ 9,541 |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | University at Buffalo, State University of New York, The | 5R01DA04123105 | | \$ 85,067 |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | University of Houston | R03DA047597 | | \$ 18,480 |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | University of Michigan | 1R01DA039901-01 | | \$ 43,296 |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | University of Minnesota | 5R01DA037904-05 | | \$ 221,803 |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | University of Minnesota | R01DA037902 | | \$ 23,458 |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | University of North Carolina | 5R01DA042988-03 | | \$ 58,634 |
| 93 279 | | Drug Abuse and Addiction Research Programs | Research and Development | \$ 7,650,835 | \$ 644,904,305 | N | University of Texas Health Science Center, The | 1R01DA045815-01A1 | | \$ 29,190 |
| 93 286 | | Discovery and Applied Research for Technological Innovations to Improve Human Health | Research and Development | \$ 1,367,678 | \$ 644,904,305 | Y | | | \$ 25,862 | \$ 1,370,891 |
| 93 286 | | Discovery and Applied Research for Technological Innovations to Improve Human Health | Research and Development | \$ 1,367,678 | \$ 644,904,305 | N | Actuated Medical, Inc. | NATIONAL INSTITUTES OF HEALTH | | \$ 14,618 |
| 93 286 | | Discovery and Applied Research for Technological Innovations to Improve Human Health | Research and Development | \$ 1,367,678 | \$ 644,904,305 | N | University of Minnesota | 1U01EB026978-01 | | \$ (7,252) |
| 93 286 | | Discovery and Applied Research for Technological Innovations to Improve Human Health | Research and Development | \$ 1,367,678 | \$ 644,904,305 | N | University of Minnesota | 5U01EB025144-02 | | \$ (10,579) |
| 93 297 | | Teenage Pregnancy Prevention Program | Research and Development | \$ 37,746 | \$ 644,904,305 | N | Women's Care Center of Erie County, Inc. | 1TP1AH000193-01-00 | | \$ 37,746 |
| 93 300 | | National Center for Health Workforce Analysis | Research and Development | \$ 299,175 | \$ 644,904,305 | Y | | | | \$ 299,175 |
| 93 301 | | Small Rural Hospital Improvement Grant Program | Research and Development | \$ 2,583,137 | \$ 644,904,305 | Y | | | | \$ 306,578 |
| 93 307 | | Minority Health and Health Disparities Research | Research and Development | \$ 176,768 | \$ 644,904,305 | Y | | | | \$ 2,110 |
| 93 307 | | Minority Health and Health Disparities Research | Research and Development | \$ 176,768 | \$ 644,904,305 | N | Case Western Reserve University | NATIONAL CENTER ON MINORITY HE | | \$ 8,453 |
| 93 307 | | Minority Health and Health Disparities Research | Research and Development | \$ 176,768 | \$ 644,904,305 | N | Ohio State University, The | NATIONAL INSTITUTES OF HEALTH | | \$ 13,334 |
| 93 307 | | Minority Health and Health Disparities Research | Research and Development | \$ 176,768 | \$ 644,904,305 | N | University of Arizona, The | 1R01MD011600-01A1 | | \$ 24,113 |
| 93 307 | | Minority Health and Health Disparities Research | Research and Development | \$ 176,768 | \$ 644,904,305 | N | University of Puerto Rico at Cayey | 1R21MD013701-02 | | \$ 54,138 |
| 93 307 | | Minority Health and Health Disparities Research | Research and Development | \$ 176,768 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | R01MD013338-01 | | \$ 74,620 |
| 93 310 | | Trans-NIH Research Support | Research and Development | \$ 1,001,240 | \$ 644,904,305 | Y | | | \$ 58,718 | \$ 708,140 |
| 93 310 | | Trans-NIH Research Support | Research and Development | \$ 1,001,240 | \$ 644,904,305 | N | Drexel University | NATIONAL INSTITUTE OF HEALTH | | \$ 17,825 |
| 93 310 | | Trans-NIH Research Support | Research and Development | \$ 1,001,240 | \$ 644,904,305 | N | Drexel University | NATIONAL INSTITUTES OF HEALTH | | \$ 14,041 |
| 93 310 | | Trans-NIH Research Support | Research and Development | \$ 1,001,240 | \$ 644,904,305 | N | New York University | 5UG3OD023332-02 | | \$ (1,379) |
| 93 310 | | Trans-NIH Research Support | Research and Development | \$ 1,001,240 | \$ 644,904,305 | N | New York University | NATIONAL INSTITUTES OF HEALTH | | \$ 88,816 |

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, 2020

| CFDA Number | 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 |
|-------------|---------------------------------|---|--------------------------|-----------------------|----------------|--------------|--|--|--|-----------------|
| 93 310 | | Trans-NIH Research Support | Research and Development | \$ 1,001,240 | \$ 644,904,305 | N | University of Oregon | IUG3OD023389 | | \$ 173,797 |
| 93 350 | | National Center for Advancing Translational Sciences | Research and Development | \$ 288,676 | \$ 644,904,305 | Y | | | \$ 18,734 | \$ 211,679 |
| 93 350 | | National Center for Advancing Translational Sciences | Research and Development | \$ 288,676 | \$ 644,904,305 | N | Oregon State University | OT2TR003428 | | \$ 38,322 |
| 93 350 | | National Center for Advancing Translational Sciences | Research and Development | \$ 288,676 | \$ 644,904,305 | N | University of Pittsburgh | 5UL1TR001857-04 | | \$ 38,675 |
| 93 351 | | Research Infrastructure Programs | Research and Development | \$ 3,241,547 | \$ 644,904,305 | Y | | | \$ 97,620 | \$ 3,239,424 |
| 93 351 | | Research Infrastructure Programs | Research and Development | \$ 3,241,547 | \$ 644,904,305 | N | Actuated Medical, Inc. | NATIONAL INSTITUTES OF HEALTH | | \$ 2,123 |
| 93 361 | | Nursing Research | Research and Development | \$ 872,693 | \$ 644,904,305 | Y | | | \$ 31,581 | \$ 486,331 |
| 93 361 | | Nursing Research | Research and Development | \$ 872,693 | \$ 644,904,305 | N | Emory University | NATIONAL INSTITUTES OF HEALTH | | \$ 10,093 |
| 93 361 | | Nursing Research | Research and Development | \$ 872,693 | \$ 644,904,305 | N | University of Maryland | 1R01NR015982-03 | | \$ 336,621 |
| 93 361 | | Nursing Research | Research and Development | \$ 872,693 | \$ 644,904,305 | N | University of Maryland | N/A | | \$ 13,928 |
| 93 361 | | Nursing Research | Research and Development | \$ 872,693 | \$ 644,904,305 | N | University of Miami | 5R01NR014851-05 | | \$ 11,162 |
| 93 361 | | Nursing Research | Research and Development | \$ 872,693 | \$ 644,904,305 | N | University of Tennessee Health Science Center, The | 5R01NR017850-02 | | \$ 2,913 |
| 93 361 | | Nursing Research | Research and Development | \$ 872,693 | \$ 644,904,305 | N | Yale University | 5R01NR016191-05 | | \$ 11,645 |
| 93 393 | | Cancer Cause and Prevention Research | Research and Development | \$ 1,888,389 | \$ 644,904,305 | Y | | | \$ 166,580 | \$ 1,720,232 |
| 93 393 | | Cancer Cause and Prevention Research | Research and Development | \$ 1,888,389 | \$ 644,904,305 | N | Ohio State University, The | NATIONAL INSTITUTES OF HEALTH | | \$ 11,489 |
| 93 393 | | Cancer Cause and Prevention Research | Research and Development | \$ 1,888,389 | \$ 644,904,305 | N | Temple University | 1R01CA229542-01 | | \$ 66,457 |
| 93 393 | | Cancer Cause and Prevention Research | Research and Development | \$ 1,888,389 | \$ 644,904,305 | N | University of Puerto Rico | NATIONAL CANCER INSTITUTE | | \$ 3,142 |
| 93 393 | | Cancer Cause and Prevention Research | Research and Development | \$ 1,888,389 | \$ 644,904,305 | N | University of Puerto Rico at Cayey | 1R21CA239457-02 | | \$ 10,829 |
| 93 393 | | Cancer Cause and Prevention Research | Research and Development | \$ 1,888,389 | \$ 644,904,305 | N | University of Wisconsin | 2P01CA180945-06 | | \$ 76,240 |
| 93 394 | | Cancer Detection and Diagnosis Research | Research and Development | \$ 1,068,476 | \$ 644,904,305 | Y | | | \$ 83,012 | \$ 594,053 |
| 93 394 | | Cancer Detection and Diagnosis Research | Research and Development | \$ 1,068,476 | \$ 644,904,305 | N | Carnegie Mellon University | 5R01CA230339-02 | | \$ 136,410 |
| 93 394 | | Cancer Detection and Diagnosis Research | Research and Development | \$ 1,068,476 | \$ 644,904,305 | N | Kaiser Foundation Research Institute | 5R01CA206196-02 | | \$ 65,420 |
| 93 394 | | Cancer Detection and Diagnosis Research | Research and Development | \$ 1,068,476 | \$ 644,904,305 | N | Kaiser Foundation Research Institute | NATIONAL INSTITUTES OF HEALTH | | \$ (14,114) |
| 93 394 | | Cancer Detection and Diagnosis Research | Research and Development | \$ 1,068,476 | \$ 644,904,305 | N | Northwestern University | 5R01CA154908-09 | | \$ 183,335 |
| 93 394 | | Cancer Detection and Diagnosis Research | Research and Development | \$ 1,068,476 | \$ 644,904,305 | N | University of Michigan | NATIONAL INSTITUTES OF HEALTH | | \$ 38,574 |
| 93 394 | | Cancer Detection and Diagnosis Research | Research and Development | \$ 1,068,476 | \$ 644,904,305 | N | University of Michigan | R01CA215574 | | \$ 39,122 |
| 93 394 | | Cancer Detection and Diagnosis Research | Research and Development | \$ 1,068,476 | \$ 644,904,305 | N | University of Michigan | U01CA232931 | | \$ 25,676 |
| 93 395 | | Cancer Treatment Research | Research and Development | \$ 314,604 | \$ 644,904,305 | Y | | | \$ 29,931 | \$ 220,708 |
| 93 395 | | Cancer Treatment Research | Research and Development | \$ 314,604 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | NATIONAL INSTITUTES OF HEALTH | | \$ 1,893 |
| 93 395 | | Cancer Treatment Research | Research and Development | \$ 314,604 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | U10 CA98543-08 | | \$ 55,129 |
| 93 395 | | Cancer Treatment Research | Research and Development | \$ 314,604 | \$ 644,904,305 | N | ECOG-ACRIN Medical Research Foundation, Inc. | NATIONAL INSTITUTES OF HEALTH | | \$ 6,667 |
| 93 395 | | Cancer Treatment Research | Research and Development | \$ 314,604 | \$ 644,904,305 | N | NRG Oncology | NATIONAL INSTITUTES OF HEALTH | \$ 744 | \$ 2,306 |
| 93 395 | | Cancer Treatment Research | Research and Development | \$ 314,604 | \$ 644,904,305 | N | University of Louisville | 5R01CA185972-05 | | \$ 27,901 |
| 93 396 | | Cancer Biology Research | Research and Development | \$ 2,919,398 | \$ 644,904,305 | Y | | | \$ 247,447 | \$ 2,587,084 |
| 93 396 | | Cancer Biology Research | Research and Development | \$ 2,919,398 | \$ 644,904,305 | N | Loma Linda University | NATIONAL INSTITUTES OF HEALTH | | \$ 3,847 |
| 93 396 | | Cancer Biology Research | Research and Development | \$ 2,919,398 | \$ 644,904,305 | N | Oregon Health & Science University | I124CA231877-01 | | \$ 14,169 |
| 93 396 | | Cancer Biology Research | Research and Development | \$ 2,919,398 | \$ 644,904,305 | N | University of Virginia | 1R01CA178393-01A1 | | \$ 314,298 |
| 93 398 | | Cancer Research Manpower | Research and Development | \$ 432,599 | \$ 644,904,305 | Y | | | | \$ 160,379 |
| 93 433 | | ACL National Institute on Disability, Independent Living, and Rehabilitation Research | Research and Development | \$ 440,447 | \$ 644,904,305 | Y | | | \$ 208,416 | \$ 440,447 |
| 93 550 | | Transitional Living for Homeless Youth | Research and Development | \$ 10,070 | \$ 644,904,305 | N | SafeNet | 90CX7100-01-00 | | \$ 10,070 |

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, 2020

| CFDA Number | 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 | |
|-------------|---------------------------------|--|--------------------------|-----------------------|----------------|--------------|--|--|--|-----------------|------------|
| 93 626 | | State Health Insurance Assistance Program | Research and Development | \$ 65,088 | \$ 644,904,305 | N | Colorado State University | NATIONAL INSTITUTE FOR OCCUPAT | \$ 59,770 | \$ 65,088 | |
| 93 738 | | PPHF: Racial and Ethnic Approaches to Community Health Program financed solely by Public Prevention and Health Funds | Research and Development | \$ 232,665 | \$ 644,904,305 | Y | | | \$ 115,051 | \$ 232,665 | |
| 93 788 | | Opioid STR | Research and Development | \$ 1,106,494 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4100078566 | | \$ 77,191 | |
| 93 788 | | Opioid STR | Research and Development | \$ 1,106,494 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4100085796 | | \$ 30,499 | |
| 93 788 | | Opioid STR | Research and Development | \$ 1,106,494 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300639680 | \$ 50,000 | \$ 212,423 | |
| 93 837 | | Cardiovascular Diseases Research | Research and Development | \$ 5,536,559 | \$ 644,904,305 | Y | | | \$ 232,786 | \$ 5,149,457 | |
| 93 837 | | Cardiovascular Diseases Research | Research and Development | \$ 5,536,559 | \$ 644,904,305 | N | Actuated Medical, Inc. | NATIONAL INSTITUTES OF HEALTH | | | \$ 80,000 |
| 93 837 | | Cardiovascular Diseases Research | Research and Development | \$ 5,536,559 | \$ 644,904,305 | N | Duke University | NATIONAL INSTITUTES OF HEALTH | | | \$ 4,104 |
| 93 837 | | Cardiovascular Diseases Research | Research and Development | \$ 5,536,559 | \$ 644,904,305 | N | University of Arizona, The | 5R01HL123078-03 | | | \$ 2,210 |
| 93 837 | | Cardiovascular Diseases Research | Research and Development | \$ 5,536,559 | \$ 644,904,305 | N | University of Kentucky | 5U01HL133359-02 | | | \$ 19,558 |
| 93 837 | | Cardiovascular Diseases Research | Research and Development | \$ 5,536,559 | \$ 644,904,305 | N | University of Kentucky | 5U01HL133359-03 | | | \$ 73,263 |
| 93 837 | | Cardiovascular Diseases Research | Research and Development | \$ 5,536,559 | \$ 644,904,305 | N | University of Minnesota | R01HL130099-03 | | | \$ 44,030 |
| 93 837 | | Cardiovascular Diseases Research | Research and Development | \$ 5,536,559 | \$ 644,904,305 | N | University of Nevada, Reno | 5R01HL137852-02 | | | \$ 43,868 |
| 93 837 | | Cardiovascular Diseases Research | Research and Development | \$ 5,536,559 | \$ 644,904,305 | N | University of Pennsylvania | 1-R01-HL-138306-01A1 | | | \$ 65,832 |
| 93 837 | | Cardiovascular Diseases Research | Research and Development | \$ 5,536,559 | \$ 644,904,305 | N | Yale University | R01HL125918 | | | \$ 538 |
| 93 838 | | Lung Diseases Research | Research and Development | \$ 679,977 | \$ 644,904,305 | Y | | | \$ 26,329 | \$ 590,565 | |
| 93 838 | | Lung Diseases Research | Research and Development | \$ 679,977 | \$ 644,904,305 | N | COPD Foundation | NATIONAL INSTITUTES OF HEALTH | | | \$ 32,405 |
| 93 838 | | Lung Diseases Research | Research and Development | \$ 679,977 | \$ 644,904,305 | N | University of California, Santa Cruz | 5U01HL137183-03 | | | \$ 47,147 |
| 93 838 | | Lung Diseases Research | Research and Development | \$ 679,977 | \$ 644,904,305 | N | University of Pittsburgh | 5U01HL128954-03 | | | \$ (27) |
| 93 838 | | Lung Diseases Research | Research and Development | \$ 679,977 | \$ 644,904,305 | N | University of Pittsburgh | 5U01HL128954-04 | | | \$ 3,611 |
| 93 838 | | Lung Diseases Research | Research and Development | \$ 679,977 | \$ 644,904,305 | N | University of Pittsburgh | 5U01HL128954-05 | | | \$ 6,276 |
| 93 839 | | Blood Diseases and Resources Research | Research and Development | \$ 959,041 | \$ 644,904,305 | Y | | | \$ 75,821 | \$ 668,602 | |
| 93 839 | | Blood Diseases and Resources Research | Research and Development | \$ 959,041 | \$ 644,904,305 | N | All Children's Research Institute Inc | NATIONAL INSTITUTES OF HEALTH | | | \$ 3,112 |
| 93 839 | | Blood Diseases and Resources Research | Research and Development | \$ 959,041 | \$ 644,904,305 | N | University of Miami | NATIONAL INSTITUTES OF HEALTH | | | \$ 13,193 |
| 93 839 | | Blood Diseases and Resources Research | Research and Development | \$ 959,041 | \$ 644,904,305 | N | University of Texas Health Science Center, The | 7R01HL141950-02 | | | \$ 274,134 |
| 93 846 | | Arthritis, Musculoskeletal and Skin Diseases Research | Research and Development | \$ 2,497,912 | \$ 644,904,305 | Y | | | \$ 312,060 | \$ 2,292,657 | |
| 93 846 | | Arthritis, Musculoskeletal and Skin Diseases Research | Research and Development | \$ 2,497,912 | \$ 644,904,305 | N | Columbia University | 1R01AR071316-01A1 | | | \$ 61,229 |
| 93 846 | | Arthritis, Musculoskeletal and Skin Diseases Research | Research and Development | \$ 2,497,912 | \$ 644,904,305 | N | NYU Langone Health | 1R01AR074500-01A1 | | | \$ 20,654 |
| 93 846 | | Arthritis, Musculoskeletal and Skin Diseases Research | Research and Development | \$ 2,497,912 | \$ 644,904,305 | N | University of Maryland | 2R01AR063631-06A1 | | | \$ 3,777 |
| 93 846 | | Arthritis, Musculoskeletal and Skin Diseases Research | Research and Development | \$ 2,497,912 | \$ 644,904,305 | N | University of North Carolina | 5R37AR018687-44 | | | \$ 71,282 |
| 93 846 | | Arthritis, Musculoskeletal and Skin Diseases Research | Research and Development | \$ 2,497,912 | \$ 644,904,305 | N | University of Texas Health Science Center, The | 7R01AR070887-03 | | | \$ 48,313 |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | Research and Development | \$ 7,399,079 | \$ 644,904,305 | Y | | | \$ 1,288,517 | \$ 6,961,879 | |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | Research and Development | \$ 7,399,079 | \$ 644,904,305 | N | Actuated Medical, Inc. | NATIONAL INSTITUTES OF HEALTH | | | \$ 28,410 |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | Research and Development | \$ 7,399,079 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | N/A | | | \$ 107,768 |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | Research and Development | \$ 7,399,079 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | NATIONAL INSTITUTES OF HEALTH | | | \$ 39,949 |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | Research and Development | \$ 7,399,079 | \$ 644,904,305 | N | Columbia University | NATIONAL INSTITUTES OF HEALTH | | | \$ 24,569 |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | Research and Development | \$ 7,399,079 | \$ 644,904,305 | N | Dynamic Entropy Technology LLC | NATIONAL INSTITUTE OF DIABETES | | | \$ 59,597 |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | Research and Development | \$ 7,399,079 | \$ 644,904,305 | N | Georgia State University | 1R21DK115180-01 | | | \$ 43,921 |

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, 2020**

| CFDA Number | 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 | \$ 7,399,079 | \$ 644,904,305 | N | Kaiser Foundation Research Institute | 2R56DK099882-05 | | \$ 6,481 |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | Research and Development | \$ 7,399,079 | \$ 644,904,305 | N | Kaiser Foundation Research Institute | NATIONAL INSTITUTES OF HEALTH | | \$ 24,990 |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | Research and Development | \$ 7,399,079 | \$ 644,904,305 | N | Mount Sinai Medical Center | 5U24DK062429-20 | | \$ 43,011 |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | Research and Development | \$ 7,399,079 | \$ 644,904,305 | N | University of California, San Francisco | 5R01DK098233-04 | | \$ 725 |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | Research and Development | \$ 7,399,079 | \$ 644,904,305 | N | University of Texas Health Science Center, The | 5R25DK078381-13 | | \$ 22,331 |
| 93 853 | | Extramural Research Programs in the Neurosciences and Neurological Disorders | Research and Development | \$ 4,538,251 | \$ 644,904,305 | Y | | | \$ 162,644 | \$ 4,151,874 |
| 93 853 | | Extramural Research Programs in the Neurosciences and Neurological Disorders | Research and Development | \$ 4,538,251 | \$ 644,904,305 | N | Columbia University | NATIONAL INSTITUTES OF HEALTH | | \$ 25,973 |
| 93 853 | | Extramural Research Programs in the Neurosciences and Neurological Disorders | Research and Development | \$ 4,538,251 | \$ 644,904,305 | N | Massachusetts General Hospital | 1R01NS102735-01A1 | | \$ 81,832 |
| 93 853 | | Extramural Research Programs in the Neurosciences and Neurological Disorders | Research and Development | \$ 4,538,251 | \$ 644,904,305 | N | Mayo Clinic | N/A | | \$ (1,368) |
| 93 853 | | Extramural Research Programs in the Neurosciences and Neurological Disorders | Research and Development | \$ 4,538,251 | \$ 644,904,305 | N | University of California, San Diego | 5U01NS087964-04 | | \$ 21,039 |
| 93 853 | | Extramural Research Programs in the Neurosciences and Neurological Disorders | Research and Development | \$ 4,538,251 | \$ 644,904,305 | N | University of Pittsburgh | 2R01NS076511-06 | | \$ 204,268 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | Y | | | \$ 877,589 | \$ 8,000,951 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Boston Children's Hospital | NATIONAL INSTITUTES OF HEALTH | | \$ 187,536 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | NATIONAL INSTITUTES OF HEALTH | | \$ 4,195 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Colorado State University | NATIONAL INSTITUTES OF HEALTH | | \$ 32,782 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Columbia University | 5R01AI124678-03 | | \$ 83,654 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Cornell University | 2R01AI092571-06A1 | | \$ 192,418 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Cornell University | NATIONAL INSTITUTES OF HEALTH | | \$ 12,552 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Imperial College London | NATIONAL INSTITUTE OF ALLERGY | | \$ (37) |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Jackson Laboratory, The | 1U19AI142733-01 | | \$ 195,817 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Johns Hopkins University | 1R01AI117032-01 | | \$ 86,474 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Microbiotix, Inc. | 1R01AI132276 | | \$ 190,538 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Microbiotix, Inc. | R43A 141132 | | \$ 75,029 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | National Jewish Health | U01 AI097073-04 | | \$ 15,958 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Respana Therapeutics Inc | 1R41AI136294-01A1 | | \$ 143,131 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | University of Arizona, The | 7R21AL132353-02 | | \$ 6,414 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | University of California | 1UM1AI110498-02 | | \$ 1,195 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | University of California, San Diego | 2R01AI090141-05 | | \$ 88,480 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | University of Louisville | 5R01AI127970-03 | | \$ 19,994 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | University of Michigan | 1R01AI110780-01A1 | | \$ 5,661 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | University of Michigan | 1R01AI143852-01 | | \$ 7,215 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | University of North Carolina | 1R01A121558-01 | | \$ 29,547 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | University of Washington | 5R21AI123690-02 | | \$ 13,656 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | University of Wisconsin - Madison | 5UM1AI114271-06 | | \$ 5,596 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Utah State University | HHSN272017000411 | | \$ 22,332 |
| 93 855 | | Allergy and Infectious Diseases Research | Research and Development | \$ 9,472,942 | \$ 644,904,305 | N | Wake Forest University | R01AI116815 | | \$ 26,982 |
| 93 857 | | Measuring Interoperability Progress through Individuals' Access and Use of the Electronic Health Data | Research and Development | \$ 110,029 | \$ 644,904,305 | N | University of Texas at Austin, The | 1R01HL129077-01A1 | | \$ 110,029 |
| 93 859 | | Biomedical Research and Research Training | Research and Development | \$ 16,110,963 | \$ 644,904,305 | Y | | | \$ 841,599 | \$ 14,971,219 |
| 93 859 | | Biomedical Research and Research Training | Research and Development | \$ 16,110,963 | \$ 644,904,305 | N | Arizona State University | 1R01GM122082-01 | | \$ 175,758 |

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, 2020

| CFDA Number | 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 |
|-------------|---------------------------------|--|--------------------------|-----------------------|----------------|--------------|--|--|--|-----------------|
| 93 859 | | Biomedical Research and Research Training | Research and Development | \$ 16,110,963 | \$ 644,904,305 | N | Carnegie Mellon University | NATIONAL INSTITUTES OF HEALTH | | \$ 42,559 |
| 93 859 | | Biomedical Research and Research Training | Research and Development | \$ 16,110,963 | \$ 644,904,305 | N | Florida State University | 5P41GM122698-02 | | \$ 767 |
| 93 859 | | Biomedical Research and Research Training | Research and Development | \$ 16,110,963 | \$ 644,904,305 | N | Florida State University | DEPARTMENT OF HEALTH AND HUMAN | | \$ 79,751 |
| 93 859 | | Biomedical Research and Research Training | Research and Development | \$ 16,110,963 | \$ 644,904,305 | N | Georgetown University | 1R01GM123007-01 | | \$ 75,742 |
| 93 859 | | Biomedical Research and Research Training | Research and Development | \$ 16,110,963 | \$ 644,904,305 | N | University of Georgia | 1R01GM124203-01 | | \$ 20,294 |
| 93 859 | | Biomedical Research and Research Training | Research and Development | \$ 16,110,963 | \$ 644,904,305 | N | University of Minnesota | 1R01GM134681-01 | | \$ 139,217 |
| 93 859 | | Biomedical Research and Research Training | Research and Development | \$ 16,110,963 | \$ 644,904,305 | N | University of North Carolina | 5R01GM083059-10 | | \$ 2,822 |
| 93 859 | | Biomedical Research and Research Training | Research and Development | \$ 16,110,963 | \$ 644,904,305 | N | University of North Carolina | 5R01GM083059-11 | | \$ 23,103 |
| 93 859 | | Biomedical Research and Research Training | Research and Development | \$ 16,110,963 | \$ 644,904,305 | N | University of North Carolina | 5R01GM115597-04 | | \$ 46,432 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | Y | | | \$ 1,932,833 | \$ 8,528,896 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | Arizona State University | NATIONAL INSTITUTES OF HEALTH | | \$ 112,257 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | Boston Children's Hospital | NATIONAL INSTITUTES OF HEALTH | | \$ 14,704 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | 1R21HD089151-01A1 | | \$ (214) |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | Georgetown University | NATIONAL INSTITUTES OF HEALTH | | \$ 36,712 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | Georgia State University | NATIONAL INSTITUTES OF HEALTH | | \$ 21,431 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | Icahn School of Medicine at Mount Sinai | NATIONAL INSTITUTES OF HEALTH | | \$ 240,660 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | New York University | 1R01HD094830-01 REVISIED | | \$ 82,826 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | New York University | 5U01HD076595-03 | | \$ 29,389 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | New York University | 7R01HD081252-05 | | \$ 328,815 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | University at Buffalo, State University of New York, The | 5R01HD08708204 | | \$ 24,221 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | University at Buffalo, State University of New York, The | 5R21HD9151502 | | \$ 5,692 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | University of California, Los Angeles | 5R01HD092471-02 | | \$ 7,632 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | University of North Carolina | 5R01HD080786-04 | | \$ 168,113 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | University of Wisconsin | 7R01HD081361-05 | | \$ 263,023 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | University of Wisconsin | R01HD080201-01A1 | | \$ 21,449 |
| 93 865 | | Child Health and Human Development Extramural Research | Research and Development | \$ 9,885,605 | \$ 644,904,305 | N | University of Wisconsin - Madison | 1R21HD91459-01 | | \$ (1) |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | Y | | | \$ 1,537,496 | \$ 7,784,765 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | Adelphi University | NATIONAL INSTITUTES OF HEALTH | | \$ 7,372 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | Albert Einstein College of Medicine | NATIONAL INSTITUTES OF HEALTH | | \$ 430,150 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | Beth Israel Deaconess Medical Center | R01AG030618 | | \$ 76,403 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | Elon University | 1R15AG052903-01 | | \$ 5,431 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | Florida State University | NATIONAL INSTITUTES OF HEALTH | | \$ 37,526 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | Hebrew Rehabilitation Center | N/A | | \$ 2,876 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | Hebrew Rehabilitation Center | R24AG054259 | | \$ 74,265 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | Massachusetts General Hospital | 1R56AG062208 | | \$ 174,197 |

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, 2020**

| CFDA Number | 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 | \$ 9,026,951 | \$ 644,904,305 | N | National Bureau of Economic Research | NATIONAL INSTITUTES OF HEALTH | | \$ 11,865 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | Northwestern University | NATIONAL INSTITUTES OF HEALTH | | \$ (494) |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | University of California | 3R01AG046938-03S1 | | \$ 16,857 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | University of Kentucky | 2R01AG026307-11 | | \$ 17,714 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | University of Maryland | R01AG050516 | | \$ 71,932 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | University of Maryland | R01AG050516-03 | | \$ 18,649 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | University of Michigan | 5R01AG058724-02 | | \$ 40,804 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | University of Southern California | 1R37AG057685-01 | | \$ 68,410 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | University of Wisconsin | 5U19AG051426-04 | \$ 2,247 | \$ 186,660 |
| 93 866 | | Aging Research | Research and Development | \$ 9,026,951 | \$ 644,904,305 | N | University of Wisconsin | N/A | \$ 1,000 | \$ 1,569 |
| 93 867 | | Vision Research | Research and Development | \$ 1,835,406 | \$ 644,904,305 | Y | | | \$ 349,432 | \$ 1,754,104 |
| 93 867 | | Vision Research | Research and Development | \$ 1,835,406 | \$ 644,904,305 | N | Skyran Biologics Inc | 1R41EY029192-01 | | \$ 21,930 |
| 93 867 | | Vision Research | Research and Development | \$ 1,835,406 | \$ 644,904,305 | N | Stony Brook University, State University of New York | 1R01EY03008501A1 | | \$ 42,657 |
| 93 879 | | Medical Library Assistance | Research and Development | \$ 323,272 | \$ 644,904,305 | Y | | | | \$ 41,306 |
| 93 879 | | Medical Library Assistance | Research and Development | \$ 323,272 | \$ 644,904,305 | N | University of Colorado Denver | 7R01LM012734-03 | | \$ 214,427 |
| 93 918 | | COVID-19 - Grants to Provide Outpatient Early Intervention Services with Respect to HIV Disease | Research and Development | \$ 488,730 | \$ 644,904,305 | Y | | | | \$ 1,626 |
| 93 918 | | Grants to Provide Outpatient Early Intervention Services with Respect to HIV Disease | Research and Development | \$ 488,730 | \$ 644,904,305 | Y | | | \$ 31,537 | \$ 487,104 |
| 93 928 | | Special Projects of National Significance | Research and Development | \$ 188,446 | \$ 644,904,305 | Y | | | \$ 41,003 | \$ 188,446 |
| 93 RD 1 U01 DD001270-01-00 | | Centers for Disease Control and Prevention - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 54,189 |
| 93 RD 6NU 58DP 006587-01-01 | | Centers for Disease Control and Prevention - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 73,275 | \$ 402,175 |
| 93 RD 75D30119C05743 | | Centers for Disease Control and Prevention - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 143,847 |
| 93 RD 0001758482 | | Centers for Disease Control and Prevention - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Boston Children's Hospital | CENTERS FOR DISEASE CONTROL AN | | \$ 5 |
| 93 RD 8901210919 | | Centers for Disease Control and Prevention - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | CENTERS FOR DISEASE CONTROL AN | | \$ 12,995 |
| 93 RD 8901210920 | | Centers for Disease Control and Prevention - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | CENTERS FOR DISEASE CONTROL AN | | \$ 19,225 |
| 93 RD 4300635273 | | Centers for Disease Control and Prevention - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300635273 | | \$ 113,850 |
| 93 RD 1H79T1081432-01 | | Department of Health and Human Services - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 55,901 | \$ 161,182 |
| 93 RD 75D30119C05128 | | Department of Health and Human Services - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 63,026 |
| 93 RD 4300623749 | | Department of Health and Human Services - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300623749 | | \$ 8,696 |
| 93 RD 4300624798 | | Department of Health and Human Services - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300624798 | | \$ 103,263 |
| 93 RD 4300638616 | | Department of Health and Human Services - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300638616 | | \$ 90,230 |
| 93 RD 225529 | | Department of Health and Human Services - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Family Health Council of Central Pennsylvania | DEPARTMENT OF HEALTH | | \$ 166,244 |
| 93 RD 233421 | | Department of Health and Human Services - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | National Prevention Science Coalition | OFFICE OF NATIONAL DRUG CONTR | | \$ 9,477 |
| 93 RD 10050533-04 | | Department of Health and Human Services - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Utah, The | 1U01NS107486-01A1 | | \$ 1,970 |
| 93 RD 211609 | | Food and Drug Administration - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ (2,362) |
| 93 RD HHSF223201610124C | | Food and Drug Administration - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 82,879 |
| 93 RD 3209610520 | | Health Resources and Services Administration - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | HEALTH RESOURCES AND SERVICES | | \$ 57,612 |
| 93 RD 3258990620 | | Health Resources and Services Administration - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | HEALTH RESOURCES AND SERVICES | | \$ 13,954 |
| 93 RD 6/1/2020-5/31/2021 | | Health Resources and Services Administration - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | HEALTH RESOURCES AND SERVICES | | \$ 4,677 |
| 93 RD 4300595254 | | Health Resources and Services Administration - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Commonwealth of Pennsylvania | 4300595254 | | \$ (2,839) |
| 93 RD 1638 G WA051 | | Health Resources and Services Administration - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of California, Los Angeles | 5UA6MC32492-02-00 | | \$ 53,212 |
| 93 RD 1 DP1 HD086071-01 | | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 148,314 |

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, 2020

| CFDA Number | 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 1 F31 AT009814-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 525 |
| 93 | RD 1 F31 NS105461-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 23,557 |
| 93 | RD 1 F32 GM128311-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 54,097 |
| 93 | RD 1 K08 HS024585-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 24,464 |
| 93 | RD 1 K22 CA225705-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 149,096 |
| 93 | RD 1 KL2 TR002015-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 870,528 |
| 93 | RD 1 P01 HL134609-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 1,873,780 |
| 93 | RD 1 P50 HD089922-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 79,996 | \$ 1,337,798 |
| 93 | RD 1 R01 AA026865-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 246,137 |
| 93 | RD 1 R01 AG055636-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 42,300 |
| 93 | RD 1 R01 AG059682-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 173,537 |
| 93 | RD 1 R01 AG067471-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 27,122 |
| 93 | RD 1 R01 AI104844-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 59,424 | \$ 411,383 |
| 93 | RD 1 R01 AI125565-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 286,999 |
| 93 | RD 1 R01 AI145057-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 109,126 | \$ 955,742 |
| 93 | RD 1 R01 AR073364-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 42,497 |
| 93 | RD 1 R01 CA237153-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 169,881 |
| 93 | RD 1 R01 DK110060-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 474,350 |
| 93 | RD 1 R01 DK120170-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 138,575 |
| 93 | RD 1 R01 GM117014-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 254,580 |
| 93 | RD 1 R01 GM121613-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 69,840 |
| 93 | RD 1 R01 GM126479-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 27,341 | \$ 144,546 |
| 93 | RD 1 R01 GM127954-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 193,865 |
| 93 | RD 1 R01 GM130691 01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 194,490 |
| 93 | RD 1 R01 HD079410-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 34,919 |
| 93 | RD 1 R01 HD083323-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 109,412 | \$ 400,639 |
| 93 | RD 1 R01 HD088448-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 11,000 | \$ 73,800 |
| 93 | RD 1 R01 HG009906-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 44,669 |
| 93 | RD 1 R01 HL127316-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | (20,330) |
| 93 | RD 1 R01 HL131921-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 367,943 |
| 93 | RD 1 R01 HL136587-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 772,614 |
| 93 | RD 1 R01 HL137809-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 356,813 |
| 93 | RD 1 R01 HL147344-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 57,820 | \$ 330,227 |
| 93 | RD 1 R01 MH114974-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 610,503 |
| 93 | RD 1 R01 MH118308-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 158,681 |
| 93 | RD 1 R01 NS092662-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 182,182 |
| 93 | RD 1 R01 NS099630-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 302,295 |
| 93 | RD 1 R01 NS108407-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 668,594 |
| 93 | RD 1 R03 DA047582-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 50,981 |
| 93 | RD 1 R13 ES031015-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 7,884 |
| 93 | RD 1 R21 AG057218-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 3,678 | \$ 5,634 |
| 93 | RD 1 R21 AI138152-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 69,394 |
| 93 | RD 1 R21 AI139706-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 47,981 |
| 93 | RD 1 R21 AI144765-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 22,707 |
| 93 | RD 1 R21 AT010118-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 63,468 | \$ 113,774 |
| 93 | RD 1 R21 CA196924-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | (7,629) |
| 93 | RD 1 R21 DC016708-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 5,088 |
| 93 | RD 1 R21 GM132793-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 135,354 |
| 93 | RD 1 R35 GM122595-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 185,398 |
| 93 | RD 1 R40MC31765-01-00 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 22,893 | \$ 267,189 |
| 93 | RD 1 R01 HD076994-01A | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 488,064 |
| 93 | RD 1 S10 OD025161-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 600,000 |
| 93 | RD 1 TLI TR002016-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 193,633 |
| 93 | RD 1 U01 AR071077-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 612,366 | \$ 1,130,624 |
| 93 | RD 1 UL1 TR002014-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 112,751 | \$ 3,409,474 |
| 93 | RD 2 H76HA00627-19-00 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 57,339 |
| 93 | RD 2 R01 DK015658-45A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 323,821 |
| 93 | RD 2 R01 ES021762-06A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 24,703 |
| 93 | RD 2 R01 HD059783-06A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 1,089 | \$ 1,089 |
| 93 | RD 2 R01 HG004160-11A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 185,871 |
| 93 | RD 2 R01 HL097111-07A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 306,294 |
| 93 | RD 2 R01 MH099851 06 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 60,700 |
| 93 | RD 2 R01 NR012757-06 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | 29,161 |

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, 2020

| CFDA Number | 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 | 2 R01 NS088367-06A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ | \$ 255,172 |
| 93 RD | 2 R56 AG005214-23A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 35,007 | \$ 121,865 |
| 93 RD | 200-2016-90385 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 168,180 |
| 93 RD | 3 R01 ES019672-06S1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 123,582 |
| 93 RD | 3 U01 DK082183-10S1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 15,686 |
| 93 RD | 4 R00 AG056596-03 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 113,628 |
| 93 RD | 4 R33 MH107631-03 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 212,463 |
| 93 RD | 4 R37 DA009815-19 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 136,536 |
| 93 RD | 4 UH3 AG052167-04 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 36,120 | \$ 61,230 |
| 93 RD | 5 R01 HD046064-14 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 36,500 |
| 93 RD | 5 R01 HL119245-04 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 2,278 | \$ 2,278 |
| 93 RD | 5 R01 MH109692-03 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 63,356 |
| 93 RD | 5 U01 DK082183-09 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 4,089 | \$ 222,040 |
| 93 RD | 7 R01 DK100562-06 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 29,995 |
| 93 RD | 7 R01 CA204044-02 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 35,245 | \$ 347,036 |
| 93 RD | 7 R01 DK064165-15 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 524,225 |
| 93 RD | 7 R01 DK103150-05 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 10,076 |
| 93 RD | 7 R01 DK106072-03 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 1,949 |
| 93 RD | 7 R01 GM114015-04 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 114,745 | \$ 251,526 |
| 93 RD | 7-R01-AG049735-03 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 232,074 |
| 93 RD | 90IFRE0018-01-00 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 11,253 | \$ 129,313 |
| 93 RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | \$ 989 | \$ 1,213,175 |
| 93 RD | HHSN276201800170P | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | Y | | | | \$ 79,632 |
| 93 RD | 311216 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Albert Einstein College of Medicine | NATIONAL INSTITUTES OF HEALTH | | \$ 112,109 |
| 93 RD | 31135X | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Albert Einstein College of Medicine | NATIONAL INSTITUTES OF HEALTH | | \$ (463) |
| 93 RD | 311437 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Albert Einstein College of Medicine | NATIONAL INSTITUTES OF HEALTH | | \$ 152,125 |
| 93 RD | 6/1/2020-5/31/2021 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Albert Einstein College of Medicine | NATIONAL INSTITUTES OF HEALTH | | \$ 825 |
| 93 RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Albert Einstein College of Medicine | NATIONAL INSTITUTES OF HEALTH | | \$ 40,072 |
| 93 RD | ALEOGM130231 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Albert Einstein College of Medicine | NATIONAL INSTITUTES OF HEALTH | | \$ 30,507 |
| 93 RD | ATHN2015002-HCT5 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | American Thrombosis & Hemostasis Network | NATIONAL INSTITUTES OF HEALTH | | \$ (304) |
| 93 RD | 7000001045 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Baylor University | NATIONAL INSTITUTES OF HEALTH | | \$ 57,377 |
| 93 RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Baylor University | NATIONAL INSTITUTES OF HEALTH | | \$ 4,909 |
| 93 RD | GENFD0001665438 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Boston Children's Hospital | NATIONAL INSTITUTES OF HEALTH | | \$ 618,960 |
| 93 RD | NONE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Boston Children's Hospital | NATIONAL INSTITUTES OF HEALTH | | \$ 102,831 |
| 93 RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Brigham and Women's Hospital | NATIONAL INSTITUTES OF HEALTH | | \$ 7,209 |
| 93 RD | 00001381 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Brown University | NATIONAL INSTITUTES OF HEALTH | | \$ 37,551 |

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, 2020

| CFDA Number | 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 | 1090587-421413 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Carnegie Mellon University | NATIONAL INSTITUTES OF HEALTH | \$ 3,595 |
| 93 | RD | 139164 R01 CA212190-01A1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | NATIONAL INSTITUTES OF HEALTH | \$ 1,689 |
| 93 | RD | 143322 AALL0434 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Children's Hospital of Philadelphia | NATIONAL INSTITUTES OF HEALTH | \$ 24,477 |
| 93 | RD | 1(GG015084-01) | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Columbia University | NATIONAL INSTITUTES OF HEALTH | \$ 80,851 |
| 93 | RD | 900009-3 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Drexel University | NATIONAL INSTITUTES OF HEALTH | \$ 3,845 |
| 93 | RD | 203-7903 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Duke Clinical Research Institute | NATIONAL INSTITUTES OF HEALTH | \$ 18,486 |
| 93 | RD | NONE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Duke Clinical Research Institute | NATIONAL INSTITUTES OF HEALTH | \$ 1,737 |
| 93 | RD | NICHD-2014-FUR01 275201000031 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Duke Clinical Research Institute | NICHD-2014-FUR01 | \$ 805 |
| 93 | RD | U10CA180820-06-PSCI1A | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | ECOG-ACRIN Medical Research Foundation, Inc. | NATIONAL INSTITUTES OF HEALTH | \$ 20,003 |
| 93 | RD | T929855 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Emory University | NATIONAL EYE INSTITUTE | \$ 37,639 |
| 93 | RD | A226571 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Emory University | NATIONAL INSTITUTES OF HEALTH | \$ 23,357 |
| 93 | RD | 800007142-01 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Florida International University | NATIONAL INSTITUTES OF HEALTH | \$ 13,802 |
| 93 | RD | R02128 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Florida State University | NATIONAL INSTITUTES OF HEALTH | \$ 8,010 |
| 93 | RD | 112560-5104916 AMEND 2 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Harvard University | 5R01ES028033-03 | \$ 53,555 |
| 93 | RD | 210285 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Jackson Laboratory, The | NATIONAL INSTITUTES OF HEALTH | \$ (19,316) |
| 93 | RD | 2002852861 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Johns Hopkins University | 2U41HG00620 | \$ 387,656 |
| 93 | RD | 2002852861 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Johns Hopkins University | 2U41HG00620 | \$ 121,815 |
| 93 | RD | HHSN272201400007C | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Johns Hopkins University | HHSN272201400007C | \$ 17,329 |
| 93 | RD | 219461 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Johns Hopkins University | HHSN272201400007C Y | \$ 196,347 |
| 93 | RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Kaiser Foundation Research Institute | NATIONAL INSTITUTES OF HEALTH | \$ 7,222 |
| 93 | RD | 403029-PSU | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Kent State University | NATIONAL INSTITUTES OF HEALTH | \$ 15,078 |
| 93 | RD | 20CTA-DM0024 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Leidos | NATIONAL INSTITUTE OF ALLERGY | \$ 149,602 |
| 93 | RD | 2050287-PSU-3 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Loma Linda University | 5R01CA209829-04 | \$ 140,560 |
| 93 | RD | 700196-0420-00 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Nationwide Children's Hospital | 1R01HD095976-01A1 | \$ 1,064 |
| 93 | RD | 19-A0-00-1003237 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | New York University | 7UH30D023332-04 | \$ 556,468 |
| 93 | RD | F8621-02 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | New York University | NATIONAL INSTITUTES OF HEALTH | \$ 9,193 |

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, 2020**

| CFDA Number | 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 | AWD00001131-PSU | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Northwell Health | 1R21NR018500-01 | \$ 14,040 |
| 93 | RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Novan, Inc. | NATIONAL INSTITUTES OF HEALTH | \$ 22,920 |
| 93 | RD | 16-143-100551-010 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Old Dominion University Research Foundation | 1R01AA023197-01-A1 | \$ 49,375 |
| 93 | RD | 215880 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Osmic Enterprises | 4R44AG051311-02 REVISIED | \$ 47,464 |
| 93 | RD | PCUSOMMH11347 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Quadrant Biosciences Inc. | 5R42MH111347-03 | \$ 77,286 |
| 93 | RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | RAND Corporation | NATIONAL INSTITUTES OF HEALTH | \$ 3,611 |
| 93 | RD | 1 R41 EY029192-01A | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Skyran Biologics Inc | 1R41EY029192-01 | \$ 63,420 |
| 93 | RD | 79050-1141744-PSU YR2 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | State University of New York, Binghamton | 5P50AA017823 | \$ 2,673 |
| 93 | RD | 86675/2/1158241 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Stony Brook University, State University of New York | 2R01HD07835206A1 | \$ 180,471 |
| 93 | RD | 1132270-2-74838 AMEND 4 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Stony Brook University, State University of New York | 5R01HD07335205 | \$ (1,150) |
| 93 | RD | 080-18007-S23301 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Thomas Jefferson University | 5R01HD086911-04 | \$ 39,151 |
| 93 | RD | 87017-2 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Alabama, The | HHSN2722011000161 | \$ 2,090 |
| 93 | RD | 87017-1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Alabama, The | HHSN2722011000161 | \$ 7,076 |
| 93 | RD | 9891SC | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of California | 5UM1AL1110498-04 | \$ 38,699 |
| 93 | RD | 66764208 PO S9001166 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of California, San Diego | 5U01NS087964-05 | \$ 33,650 |
| 93 | RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Central Florida | NATIONAL INSTITUTES OF HEALTH | \$ 35,084 |
| 93 | RD | FY20.291.002 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Colorado | 1R21HD097450-01A1 | \$ 16,778 |
| 93 | RD | FY20.988.002 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Colorado Denver | 1R01HL146542-01 | \$ 13,669 |
| 93 | RD | UCHC7-67063357 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Connecticut | R01DK103663 | \$ 92,602 |
| 93 | RD | UFDSP00012167 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Florida | R01GM059969 | \$ 176,036 |
| 93 | RD | 216439 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Hong Kong, The | NATIONAL INSTITUTE OF ALLERGY | \$ 26,006 |
| 93 | RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Louisville | NATIONAL INSTITUTES OF HEALTH | \$ 1,658 |
| 93 | RD | F301912-1 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Maryland | R01AG050516-03 | \$ 66,204 |
| 93 | RD | 67923-Z0155203 AMEND A | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Maryland | R21HL135545 | \$ 25,968 |
| 93 | RD | OSP2018039 PO WA00617531 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Massachusetts | 5R01AR072036-03 | \$ 34,166 |
| 93 | RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Massachusetts | NATIONAL INSTITUTES OF HEALTH | \$ 2,517 |
| 93 | RD | SUBK00012128 PO 3005770106 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Michigan | 5U01CA086400-19 | \$ 43,265 |
| 93 | RD | SUBK00012128 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Michigan | 5U01CA086400-20 | \$ 10,904 |
| 93 | RD | SUBK00005527 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Michigan | N/A | \$ 12,614 |
| 93 | RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Michigan | NATIONAL INSTITUTES OF HEALTH | \$ 3,424 |
| 93 | RD | N006269302 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Minnesota | 5U01EB025144-03 | \$ 275,800 |
| 93 | RD | N006925701 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Minnesota | 5U01EB026978-02 | \$ 363,074 |
| 93 | RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Minnesota | NATIONAL INSTITUTES OF HEALTH | \$ 20,667 |
| 93 | RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Nevada, Reno | NATIONAL INSTITUTES OF HEALTH | \$ 30,634 |
| 93 | RD | 5114512 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of North Carolina | 5U24HL138998-03 | \$ 24,596 |
| 93 | RD | 281210C | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Oregon | 1UG3OD023389 | \$ 587,319 |

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, 2020**

| CFDA Number | 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 | 578130 PO 378658 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pennsylvania | 1R01CA236468-01A1 | \$ | 19,441 |
| 93 RD | 572781 PO 4459088 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pennsylvania | 5R01AR070873-03 | \$ | 16,806 |
| 93 RD | 572292 AMEND 1 PO 4128596 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pennsylvania | 5R01HD091350-02 | \$ | (27,415) |
| 93 RD | 572292 PO 4294914 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pennsylvania | 5R01-HD-091350-03 | \$ | 218,586 |
| 93 RD | 577658 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pennsylvania | 5U01DK106892-05 | \$ | 42,629 |
| 93 RD | 577056 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pennsylvania | 5UL1TR001878-04 | \$ | 19,113 |
| 93 RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pennsylvania | NATIONAL INSTITUTES OF HEALTH | \$ | 59,513 |
| 93 RD | RIS#35476 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pennsylvania | NATIONAL INSTITUTES OF HEALTH | \$ | 10,517 |
| 93 RD | CNVA00061839 (130031-3) | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pittsburgh | 4U1QHP287360304 | \$ | 13,111 |
| 93 RD | CNVA00048860(126873-14) | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pittsburgh | 5P2CHD086843-05 | \$ | 50,335 |
| 93 RD | CNVA00050347 (127262-1) | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pittsburgh | 5R01NS096755-04 | \$ | 27,678 |
| 93 RD | 0061271(414279-1) | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pittsburgh | 5U01HL123009-05 | \$ | 28,231 |
| 93 RD | CNVA00046691(133099-3) | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pittsburgh | 5U01HL128954-05 | \$ | 10,920 |
| 93 RD | CNVA00038682(13216-1) | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pittsburgh | 5U01UH123020-06 | \$ | 23,390 |
| 93 RD | AWD00000584 (1329767-1) | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pittsburgh | AWD00000584 (132976-1) | \$ | 78,520 |
| 93 RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pittsburgh | NATIONAL INSTITUTES OF HEALTH | \$ | 41,199 |
| 93 RD | CNVA00057145 (412802-1) | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Pittsburgh | NATIONAL INSTITUTES OF HEALTH | \$ | 21,405 |
| 93 RD | 417413/URFAO;GR510660 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Rochester | NATIONAL INSTITUTES OF HEALTH | \$ | 2,906 |
| 93 RD | 98880674 PO 50674601 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Southern California | 6R01AG047992-02 | \$ | 8,463 |
| 93 RD | 160577/160571 AMEND 3 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Texas at San Antonio, The | R01DK108185 | \$ | 35,347 |
| 93 RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Texas Health Science Center, The | NATIONAL INSTITUTES OF HEALTH | \$ | 13,211 |
| 93 RD | 0000000531 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Wisconsin | 1R34DA050270-01 | \$ | 31,474 |
| 93 RD | ADVANCE | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | University of Wisconsin | NATIONAL INSTITUTES OF HEALTH | \$ | 79,825 |
| 93 RD | 201356-491 09/12/2019 AMEND 3 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Utah State University | 1R01AA025331-01 | \$ | 336,729 |
| 93 RD | 201267-607 HHNSN272201700411 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Utah State University | 201267-607 | \$ | 216,772 |
| 93 RD | NIH 2019-1001 | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Veterans Research Foundation of Pittsburgh | 1R01DC017475-01A1 | \$ | 24,970 |
| 93 RD | GR101891 (CON-80001103) | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Yale University | 5U010HD055925-10 | \$ | 2,763 |
| 93 RD | GR101891 (CON-80001103) | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Yale University | 5U01HD055925-10 REVISED | \$ | 76,640 |
| 93 RD | GR101945 (CON-80001115) | National Institutes of Health - Non-Specified | Research and Development | \$ 33,272,464 | \$ 644,904,305 | N | Yale University | 5U10HD055925-10 | \$ | 91,943 |
| 97 045 | | Cooperating Technical Partners | Research and Development | \$ 18,321 | \$ 644,904,305 | Y | | | \$ | 18,321 |
| 97 061 | | Centers for Homeland Security | Research and Development | \$ 151,143 | \$ 644,904,305 | N | Arizona State University | U.S. DEPARTMENT OF HOMELAND SE | \$ 76,929 | \$ 151,143 |

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, 2020

| CFDA Number | 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 RD | 2014-DN-077-ARI078-05 | Department of Homeland Security - Non-Specified | Research and Development | \$ 14,284 | \$ 644,904,305 | Y | | | | \$ (5,716) |
| 97 RD | 4202016245 | Department of Homeland Security - Non-Specified | Research and Development | \$ 14,284 | \$ 644,904,305 | N | Raytheon Company | U.S. DEPARTMENT OF HOMELAND SE | | \$ 20,000 |
| 98 001 | | USAID Foreign Assistance for Programs Overseas | Research and Development | \$ 381,281 | \$ 644,904,305 | Y | | | \$ 144,497 | \$ 184,320 |
| 98 001 | | USAID Foreign Assistance for Programs Overseas | Research and Development | \$ 381,281 | \$ 644,904,305 | N | National Academy of Sciences | N/A | | \$ 58,739 |
| 98 001 | | USAID Foreign Assistance for Programs Overseas | Research and Development | \$ 381,281 | \$ 644,904,305 | N | Solidarity Center, The | U.S. AGENCY FOR INTERNATIONAL | | \$ 31,557 |
| 98 001 | | USAID Foreign Assistance for Programs Overseas | Research and Development | \$ 381,281 | \$ 644,904,305 | N | University of California, Davis | EPP-A-00-09-00004 | \$ 32,846 | \$ 77,556 |
| 98 001 | | USAID Foreign Assistance for Programs Overseas | Research and Development | \$ 381,281 | \$ 644,904,305 | N | Virginia Polytechnic Institute and State University | AID-OAA-L-15-00001 | | \$ 29,109 |
| 98 RD | S16056 | Agency for International Development - Non-Specified | Research and Development | \$ 363,799 | \$ 644,904,305 | N | Kansas State University | AID-OAA-L-14-00006 | \$ 289,045 | \$ 338,073 |
| 98 RD | SUB00002026 | Agency for International Development - Non-Specified | Research and Development | \$ 363,799 | \$ 644,904,305 | N | University of Georgia | 7200AA18CA00003 - USAID | \$ 11,129 | \$ 25,726 |
| 99 RD | 03200 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 10,628 |
| 99 RD | 10-G-4012/0003 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ (32) |
| 99 RD | 11-G-5134/0005 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | \$ 278,086 | \$ 311,689 |
| 99 RD | 12-G-3050/0015 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ (85) |
| 99 RD | 13-G-2500 DO 0005 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ (5) |
| 99 RD | 13-G-2500/0006 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 216,528 |
| 99 RD | 13-G-2500/0007 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 99,975 |
| 99 RD | 13-G-4323/18F4018 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 181,977 |
| 99 RD | 13-G-4323/18F4027 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 64,924 |
| 99 RD | 14-C-0150 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | \$ 605,443 | \$ 2,728,471 |
| 99 RD | 14-C-0188 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 12,392 |
| 99 RD | 15-G-2529 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | \$ 923,549 | \$ 1,026,384 |
| 99 RD | 15-G-2529/0004 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 1,479,376 |
| 99 RD | 15-G-2529/0005 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 17,276 |
| 99 RD | 15-G-2529/19F2513 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 463,806 |
| 99 RD | 15-G-2529/19F2527 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 38,929 |
| 99 RD | 16-C-0089 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | \$ 1,143,632 | \$ 6,795,838 |
| 99 RD | 16C5317 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ (5,134) |
| 99 RD | 17-G-2163/0001 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ (3,831) |
| 99 RD | 17-G-2163/DO 18F2178 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 292,473 |
| 99 RD | 17G2163/ORDER 20F2223 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 232,364 |
| 99 RD | 17-G-2165/DO 18F2196 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ (787) |
| 99 RD | 18-G-2165/18F2197 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | \$ 3,083 | \$ 3,083 |
| 99 RD | 18-G-2165/19F2201 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | \$ 4,863,994 | \$ 5,369,662 |
| 99 RD | 18-G-2165/19F2202 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | \$ 4,765,647 | \$ 5,278,658 |
| 99 RD | 18-G-2165/19F2203 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 647,374 |
| 99 RD | 18-G-2165/19F2208 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | \$ 558,253 | \$ 617,309 |
| 99 RD | 18-G-2165/DO 18F2182 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ (306) |
| 99 RD | 18-G-2165/ORDER 18F2197 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | \$ 124,374 | \$ 135,115 |
| 99 RD | 18-G-2165/ORDER 20F2028 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 12,490 |
| 99 RD | 18-G-2165/ORDER 20F2029 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 20,617 |
| 99 RD | 19-C-0009 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 94,621 |
| 99 RD | 19-C-3518 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 560,543 |
| 99 RD | 19C5321 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 298,004 |
| 99 RD | 19P5322 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 40,591 |
| 99 RD | 2013324G001 TO 03 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 61 |
| 99 RD | 2013324G001/007 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ (82) |
| 99 RD | 2013324G001/011 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 164,333 |
| 99 RD | 2013324G001/012 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 1,884,129 |
| 99 RD | 2015233G004 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | \$ 87,200 | \$ 95,018 |
| 99 RD | 2016034G004 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ (2,509) |
| 99 RD | 2016-16021000002 TO 001 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ (189) |
| 99 RD | 2016-16021000002/002 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ (151) |
| 99 RD | 2016-16021000002/006 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 94,709 |

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, 2020

| CFDA Number | 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 | 2016-16021000002/007 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 61,826 |
| 99 RD | 2016-16021000002/008 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 1,023,321 |
| 99 RD | 2016-16021000002-005 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 116,261 |
| 99 RD | 2016-1602100002/008 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 574,803 |
| 99 RD | 2018101G001 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | \$ 25,026 | \$ 1,565,834 |
| 99 RD | 20191201 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 9,357 |
| 99 RD | 2019205G003 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | \$ 102,434 | \$ 331,558 |
| 99 RD | 2019290G001 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 502,995 |
| 99 RD | 26539 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 18,425 |
| 99 RD | 27110 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 86,875 |
| 99 RD | 27391 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 79,273 |
| 99 RD | 27552 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 286,607 |
| 99 RD | 27664 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | Y | | | | \$ 77,186 |
| 99 RD | 140900106 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Concurrent Technologies Corporation | 14-C-0144 | | \$ (936) |
| 99 RD | 320265J | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | ITT Inc. | N/A | | \$ 126 |
| 99 RD | 124818/140089 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Johns Hopkins University | 16-G-1512 | | \$ 69,983 |
| 99 RD | U16-002 019 PO 4104400084 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Lockheed Martin Corporation | CUSTOMER (U. S. GOVERNMENT) | | \$ 24,017 |
| 99 RD | U16-002 PA-015 PO 4104001029 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Lockheed Martin Corporation | CUSTOMER (U. S. GOVERNMENT) | | \$ 12,751 |
| 99 RD | G03284 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Miami University | G2021-04-0258 OHIO DEPT OF | | \$ 36,573 |
| 99 RD | 702-111020-3 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | MRIGlobal | 17-84 | | \$ 84,955 |
| 99 RD | P0019419 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | New Mexico Institute of Mining and Technology | 75D30119C06390 | | \$ 15,153 |
| 99 RD | G0183A-B | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Oregon State University | DE-AR0001143 | | \$ 52,283 |
| 99 RD | 19200267-030 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Purdue University | 693JJ31950019 | | \$ 13,001 |
| 99 RD | 4301-84686 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Purdue University | N/A | | \$ (1) |
| 99 RD | L100163644 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Raytheon Company | UNNUMBERED | \$ 22,214 | \$ 71,066 |
| 99 RD | 1356879 PO 2022721 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Sandia National Laboratories | N/A | | \$ 70,000 |
| 99 RD | 19-SUBC-400-SK919003 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Smithsonian Astrophysical Observatory | CUSTOMER (U. S. GOVERNMENT) | | \$ 25,000 |
| 99 RD | 213765 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Terrafugia | N/A | | \$ 5,974 |
| 99 RD | 70081071 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | United States Marine Inc | NS44-2017-012 | | \$ 22,201 |
| 99 RD | A007462903 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | University of Minnesota | N/A | | \$ 97,095 |
| 99 RD | CNVA00062518 (601500-1) | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | University of Pittsburgh | 4400018535 | | \$ 15,000 |
| 99 RD | 090051SC-PSU-ARL-01 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Zeta Associates | 09-C-0051 | | \$ 410,419 |
| 99 RD | 160151-PSU-ARL-01 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Zeta Associates | 16-C-0151 | | \$ 71,189 |
| 99 RD | 369310SC-PSU-ARL-01 | United States Government - Non-Specified | Research and Development | \$ 35,106,391 | \$ 644,904,305 | N | Zeta Associates | 4103369310 | | \$ (15) |
| 84 007 | | Federal Supplemental Educational Opportunity Grant | Student Financial Assistance | \$ 6,060,845 | \$ 597,673,061 | Y | | | | \$ 6,060,845 |
| 84 033 | | Federal Work Study Program | Student Financial Assistance | \$ 2,885,639 | \$ 597,673,061 | Y | | | | \$ 2,885,639 |
| 84 038 | | Federal Perkins Loan Program | Student Financial Assistance | \$ 31,409,513 | \$ 597,673,061 | Y | | | | \$ 31,409,513 |
| 84 063 | | Federal Pell Grant Program | Student Financial Assistance | \$ 81,327,976 | \$ 597,673,061 | Y | | | | \$ 81,327,976 |
| 84 268 | | Federal Direct Loan Program | Student Financial Assistance | \$ 475,984,680 | \$ 597,673,061 | Y | | | | \$ 475,984,680 |
| 93 342 | | Health Professions Student Loan Program | Student Financial Assistance | \$ 4,408 | \$ 597,673,061 | Y | | | | \$ 4,408 |
| 93 558 | | Temporary Assistance for Needy Families | 477 | \$ 30,394 | \$ 30,394 | N | Lehigh Valley Workforce Investment Board | 1701 PA TANF | | \$ 30,394 |
| 93 575 | | Child Care & Development Block Grant | 477/CCDF | \$ 429,748 | \$ 429,748 | N | Berks County Intermediate Unit | N/A | | \$ 459,855 |
| 93 575 | | Child Care & Development Block Grant | 477/CCDF | \$ 429,748 | \$ 429,748 | N | Child Care Consultants, Inc. | U.S. DEPARTMENT OF HEALTH AND | | \$ (30,107) |
| 66 468 | | Capitalization Grants for Drinking Water State Revolving Funds | Clean Water State Revolving Fund | \$ 22,286 | \$ 22,286 | N | Commonwealth of Pennsylvania | 4300621174 | | \$ 22,286 |
| 10 001 | | Agricultural Research Basic and Applied Research | N/A | \$ 1,653,434 | \$ - | N | University of Arkansas | 58-8250-4-002 | | \$ 106,843 |
| 10 025 | | Plant and Animal Disease, Pest Control, and Animal Care | N/A | \$ 1,763,874 | \$ - | Y | | | \$ 26,934 | \$ 1,135,414 |
| 10 103 | | 2009 Aquaculture Grant Program | N/A | \$ (2) | \$ - | N | University of Vermont, The | 2015-38640-23777 | | \$ (2) |
| 10 170 | | Specialty Crop Block Grant Program - Farm Bill | N/A | \$ 585,493 | \$ - | N | Commonwealth of Pennsylvania | 44187273 | | \$ 44,469 |
| 10 175 | | Farmers Market and Local Food Promotion Program | N/A | \$ 4,292 | \$ - | Y | | | | \$ 4,292 |
| 10 207 | | Animal Health and Disease Research | N/A | \$ 11,529 | \$ - | Y | | | | \$ 11,529 |
| 10 215 | | Sustainable Agriculture Research & Education | N/A | \$ 432,432 | \$ - | N | University of Vermont, The | 2018-38640-28415 | | \$ 17,275 |
| 10 309 | | Specialty Crop Research Initiative | N/A | \$ 449,087 | \$ - | N | Cornell University | 2015-51181-24393 | | \$ 5,204 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | N/A | \$ 8,478,617 | \$ - | Y | | | | \$ 31,036 |
| 10 310 | | Agriculture and Food Research Initiative (AFRI) | N/A | \$ 8,478,617 | \$ - | N | Ohio State University, The | 2015-68004-23131 | | \$ 19,727 |

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, 2020**

| CFDA Number | 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 |
|-------------------------------------|---------------------------------|--|--------------|-----------------------|---------------|--------------|------------------------------|--|--|-----------------|
| 10 311 | | Beginning Farmer & Rancher Development Program | N/A | \$ 433,557 | \$ - | Y | | | \$ 29,770 | \$ 139,568 |
| 10 311 | | Beginning Farmer & Rancher Development Program | N/A | \$ 433,557 | \$ - | N | University of Vermont, The | 20157001723898 | | \$ (2,353) |
| 10 328 | | National Food Safety Training, Education, Extension, Outreach, and Technical Assistance Competitive Grants Program | N/A | \$ 30,535 | \$ - | Y | | | | \$ 17,400 |
| 10 328 | | National Food Safety Training, Education, Extension, Outreach, and Technical Assistance Competitive Grants Program | N/A | \$ 30,535 | \$ - | N | University of Vermont, The | USDA NATIONAL INSTITUTE OF FOO | | \$ 13,135 |
| 10 329 | | Crop Protection and Pest Management Competitive Grants Program | N/A | \$ 590,406 | \$ - | Y | | | | \$ 312,599 |
| 10 329 | | Crop Protection and Pest Management Competitive Grants Program | N/A | \$ 590,406 | \$ - | N | University of Vermont, The | 2014-70006-22516 | | \$ 10,706 |
| 10 336 | | Veterinary Services Grant Program | N/A | \$ 42,164 | \$ - | Y | | | | \$ 42,164 |
| 10 351 | | Rural Business Development Grant | N/A | \$ 23,971 | \$ - | Y | | | | \$ 23,971 |
| 10 460 | | Risk Management Education Partnerships | N/A | \$ 51,774 | \$ - | Y | | | | \$ 51,774 |
| 10 500 | | Cooperative Extension Service | N/A | \$ 4,249,981 | \$ - | Y | | | | \$ 104,506 |
| 10 500 | | Cooperative Extension Service | N/A | \$ 4,249,981 | \$ - | N | University of Delaware | USDA NATIONAL INSTITUTE OF FOO | | \$ 15,688 |
| 10 511 | | Smith-Lever Funding (Various Programs) | N/A | \$ 10,884,800 | \$ - | Y | | | | \$ 10,884,800 |
| 10 514 | | Expanded Food and Nutrition Education Program | N/A | \$ 2,374,468 | \$ - | Y | | | | \$ 2,374,468 |
| 10 515 | | Renewable Resources Extension Act and National Focus Fund Projects | N/A | \$ 94,732 | \$ - | Y | | | | \$ 94,732 |
| 10 536 | | CACFP Training Grants | N/A | \$ 60,201 | \$ - | N | Commonwealth of Pennsylvania | 4300610243 | | \$ 60,201 |
| 10 547 | | Professional Standards for School Nutrition Employees | N/A | \$ 4,975 | \$ - | N | Commonwealth of Pennsylvania | 4300621470 | | \$ 4,975 |
| 10 558 | | Child and Adult Care Food Program | N/A | \$ 68,156 | \$ - | N | Commonwealth of Pennsylvania | N/A | | \$ 68,156 |
| 10 559 | | Summer Food Service Program for Children | N/A | \$ 27,607 | \$ - | N | Commonwealth of Pennsylvania | 310-14-000-0 CLAIM | | \$ 21,296 |
| 10 559 | | Summer Food Service Program for Children | N/A | \$ 27,607 | \$ - | N | Commonwealth of Pennsylvania | 377140678 | | \$ 6,311 |
| 10 560 | | State Administrative Expenses for Child Nutrition | N/A | \$ 232,094 | \$ - | N | Commonwealth of Pennsylvania | 4300582087 | | \$ 157,425 |
| 10 560 | | State Administrative Expenses for Child Nutrition | N/A | \$ 232,094 | \$ - | N | Commonwealth of Pennsylvania | 4300591061 | | \$ 39 |
| 10 560 | | State Administrative Expenses for Child Nutrition | N/A | \$ 232,094 | \$ - | N | Commonwealth of Pennsylvania | 4300621401 | | \$ 74,630 |
| 10 575 | | Farm to School Grant Program | N/A | \$ 59,278 | \$ - | N | Commonwealth of Pennsylvania | 4300621447 | | \$ 49,337 |
| 10 575 | | Farm to School Grant Program | N/A | \$ 59,278 | \$ - | N | Commonwealth of Pennsylvania | 4300637992 | | \$ 9,941 |
| 10 674 | | Wood Utilization Assistance | N/A | \$ 129,672 | \$ - | Y | | | | \$ 129,672 |
| 10 675 | | Urban and Community Forestry Program | N/A | \$ 376,282 | \$ - | Y | | | | \$ 376,282 |
| 10 678 | | Forest Stewardship Program | N/A | \$ 130,852 | \$ - | Y | | | | \$ 130,852 |
| 10 868 | | Rural Energy for America Program | N/A | \$ 32,085 | \$ - | Y | | | | \$ 32,085 |
| 10 902 | | Soil and Water Conservation | N/A | \$ 98,967 | \$ - | Y | | | | \$ 7,553 |
| 10 902 | | Soil and Water Conservation | N/A | \$ 98,967 | \$ - | N | University of Minnesota | USDA NATURAL RESOURCES CONSERV | | \$ 11,726 |
| 10 912 | | Environmental Quality Incentives Program | N/A | \$ 76,181 | \$ - | Y | | | | \$ 20,632 |
| 10 U01 44187248 | | Agricultural Marketing Service - Non-Specified | N/A | \$ 98,954 | \$ - | N | Commonwealth of Pennsylvania | 44187248 | | \$ 51,997 |
| 10 U01 C940000024 | | Agricultural Marketing Service - Non-Specified | N/A | \$ 98,954 | \$ - | N | Commonwealth of Pennsylvania | C940000024 | | \$ 46,957 |
| 10 U02 2015-68004-23179 | | Department of Agriculture - Non-Specified | N/A | \$ 442,480 | \$ - | Y | | | | \$ 7,734 |
| 10 U02 2017-41590-27105 | | Department of Agriculture - Non-Specified | N/A | \$ 442,480 | \$ - | Y | | | \$ 36,340 | \$ 158,378 |
| 10 U02 2017-70020-27236 | | Department of Agriculture - Non-Specified | N/A | \$ 442,480 | \$ - | Y | | | | \$ 13,412 |
| 10 U02 44-027-0246000376 | | Department of Agriculture - Non-Specified | N/A | \$ 442,480 | \$ - | Y | | | | \$ 46,621 |
| 10 U02 LDP PROGRAM | | Department of Agriculture - Non-Specified | N/A | \$ 442,480 | \$ - | Y | | | | \$ 181,263 |
| 10 U02 ONE19-339-33243 | | Department of Agriculture - Non-Specified | N/A | \$ 442,480 | \$ - | N | University of Vermont, The | 2018-38640-28415 | | \$ 7,741 |
| 10 U02 SNE19-11-34268 | | Department of Agriculture - Non-Specified | N/A | \$ 442,480 | \$ - | N | University of Vermont, The | 2019-38640-29877 | | \$ 27,331 |
| 10 U03 4300644404 | | Food and Nutrition Service - Non-Specified | N/A | \$ 23,069 | \$ - | N | Commonwealth of Pennsylvania | 4300644404 | \$ 15,922 | \$ 23,069 |
| 11 303 | | Economic Development Technical Assistance | N/A | \$ 98,599 | \$ - | Y | | | | \$ 98,599 |
| 11 U01 ED17HDQ0200061 | | Department of Commerce - Non-Specified | N/A | \$ 81,272 | \$ - | Y | | | | \$ 50,000 |
| 11 U01 INTERNAL SUB AWARD | | Department of Commerce - Non-Specified | N/A | \$ 81,272 | \$ - | Y | | | | \$ 744 |
| 11 U01 YA132318CN0007 | | Department of Commerce - Non-Specified | N/A | \$ 81,272 | \$ - | Y | | | | \$ 30,528 |
| 11 U02 ED16PHI3030065 | | Economic Development Administration - Non-Specified | N/A | \$ 27,055 | \$ - | Y | | | | \$ 27,055 |
| 11 U03 IPA LINDER 2018 | | National Institute of Standards and Technology - Non-Specified | N/A | \$ 141,032 | \$ - | Y | | | | \$ 63,329 |
| 11 U03 IPA LINDER 2019 | | National Institute of Standards and Technology - Non-Specified | N/A | \$ 141,032 | \$ - | Y | | | | \$ 77,703 |
| 12 800 | | Air Force Defense Research Sciences Program | N/A | \$ 5,535,236 | \$ - | Y | | | | \$ 21,787 |
| 12 900 | | Language Grant Program | N/A | \$ 29,966 | \$ - | Y | | | | \$ 29,966 |
| 12 U01 DARPA IPA GALAMBOS 2015-2017 | | Defense Advanced Research Projects Agency - Non-Specified | N/A | \$ 33,528 | \$ - | Y | | | | \$ 33,528 |
| 12 U02 VELEA IPA 2020 | | Defense Intelligence Agency - Non-Specified | N/A | \$ 348,503 | \$ - | Y | | | | \$ 71,648 |
| 12 U02 YENCHKO IPA 2018 | | Defense Intelligence Agency - Non-Specified | N/A | \$ 348,503 | \$ - | Y | | | | \$ 276,855 |
| 12 U03 AF | | Department of the Air Force - Non-Specified | N/A | \$ (602) | \$ - | Y | | | | \$ (602) |
| 12 U04 ARMY ROTC | | Department of the Army - Non-Specified | N/A | \$ (1,652) | \$ - | Y | | | | \$ 7,297 |
| 12 U04 LAWRENCE IPA | | Department of the Army - Non-Specified | N/A | \$ (1,652) | \$ - | N | National Defense University | N/A | | \$ (8,949) |
| 12 U05 IPA AHMED 2019 | | Department of the Navy - Non-Specified | N/A | \$ 1,450,182 | \$ - | Y | | | | \$ 4,984 |

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, 2020**

| CFDA Number | 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 U05 | IPA BREWER 2018 | Department of the Navy - Non-Specified | N/A | \$ 1,450,182 | \$ - | Y | | | | \$ 248,141 |
| 12 U05 | IPA CLINGERMAN 2019 | Department of the Navy - Non-Specified | N/A | \$ 1,450,182 | \$ - | Y | | | | \$ 251,296 |
| 12 U05 | IPA DALY 2017 | Department of the Navy - Non-Specified | N/A | \$ 1,450,182 | \$ - | Y | | | | \$ 26,297 |
| 12 U05 | IPA DALY 2019 | Department of the Navy - Non-Specified | N/A | \$ 1,450,182 | \$ - | Y | | | | \$ 60,195 |
| 12 U05 | IPA KOLLER 2018 | Department of the Navy - Non-Specified | N/A | \$ 1,450,182 | \$ - | Y | | | | \$ 49,622 |
| 12 U05 | IPA LEIBNER 2020 | Department of the Navy - Non-Specified | N/A | \$ 1,450,182 | \$ - | Y | | | | \$ 84,257 |
| 12 U05 | IPA NEIGHBORS 20 | Department of the Navy - Non-Specified | N/A | \$ 1,450,182 | \$ - | Y | | | | \$ 27,723 |
| 12 U05 | IPA NEIGHBORS 2018 | Department of the Navy - Non-Specified | N/A | \$ 1,450,182 | \$ - | Y | | | | \$ 184,389 |
| 12 U05 | IPA PERRAS 2018 | Department of the Navy - Non-Specified | N/A | \$ 1,450,182 | \$ - | Y | | | | \$ 275,331 |
| 12 U05 | NONE | Department of the Navy - Non-Specified | N/A | \$ 1,450,182 | \$ - | Y | | | | \$ 237,947 |
| 12 U06 | LONG IPA 2017 | United States Marine Corps - Non-Specified | N/A | \$ 96,097 | \$ - | Y | | | | \$ 96,097 |
| 16 575 | | Crime Victim Assistance | N/A | \$ 670,203 | \$ - | N | Commonwealth of Pennsylvania | 28904 | | \$ 122,857 |
| 16 575 | | Crime Victim Assistance | N/A | \$ 670,203 | \$ - | N | Commonwealth of Pennsylvania | 28932 | | \$ 547,346 |
| 16 726 | | Juvenile Mentoring Program | N/A | \$ 53,546 | \$ - | N | National 4-H Council | 2019-MU-FX-0002 | | \$ 189 |
| 16 726 | | Juvenile Mentoring Program | N/A | \$ 53,546 | \$ - | N | National 4-H Council | OFFICE OF JUVENILE JUSTICE AND | | \$ 53,357 |
| 16 738 | | Edward Byrne Memorial Justice Assistance Grant Program | N/A | \$ 281,782 | \$ - | N | Commonwealth of Pennsylvania | 4300608825 | | \$ 116,108 |
| 16 738 | | Edward Byrne Memorial Justice Assistance Grant Program | N/A | \$ 281,782 | \$ - | N | Commonwealth of Pennsylvania | 4300646005 | | \$ 35,282 |
| 16 U01 | 2016-NE-BX-K001 | Office of Justice Programs - Non-Specified | N/A | \$ 747,009 | \$ - | Y | | | | \$ 747,009 |
| 17 245 | | Trade Adjustment Assistance | N/A | \$ 733,577 | \$ - | N | Commonwealth of Pennsylvania | PDLI | | \$ 733,577 |
| 17 600 | | Mine Health and Safety Grants | N/A | \$ 411,361 | \$ - | N | Commonwealth of Pennsylvania | 4300614139 | | \$ 303,150 |
| 17 600 | | Mine Health and Safety Grants | N/A | \$ 411,361 | \$ - | N | Commonwealth of Pennsylvania | 4300647207 | | \$ 108,211 |
| 17 603 | | Brookwood-Sago Grant | N/A | \$ 128,734 | \$ - | Y | | | | \$ 128,734 |
| 19 040 | | Public Diplomacy Programs | N/A | \$ 51,144 | \$ - | Y | | | | \$ 48,699 |
| 19 040 | | Public Diplomacy Programs | N/A | \$ 51,144 | \$ - | N | Partners of Americas | SPE5001GR032 | | \$ 2,445 |
| 20 106 | | COVID-19 - Airport Improvement Program | N/A | \$ 1,074,636 | \$ - | Y | | | | \$ 1,072,796 |
| 20 106 | | Airport Improvement Program | N/A | \$ 1,074,636 | \$ - | Y | | | | \$ 1,840 |
| 23 U01 | 226272 | Appalachian Regional Commission - Non-Specified | N/A | \$ 23,994 | \$ - | N | Clearfield County, Pennsylvania | N/A | | \$ 23,994 |
| 39 U01 | 47PA0118C0008 | General Services Administration - Non-Specified | N/A | \$ 517,607 | \$ - | Y | | | | \$ 192,728 |
| 39 U01 | GS-21F-025CA | General Services Administration - Non-Specified | N/A | \$ 517,607 | \$ - | Y | | | | \$ 324,879 |
| 45 312 | | National Leadership Grants | N/A | \$ 121,447 | \$ - | Y | | | \$ 8,331 | \$ 43,206 |
| 45 313 | | Laura Bush 21st Century Librarian Program | N/A | \$ 101,523 | \$ - | Y | | | | \$ 101,523 |
| 45 U01 | 4300649110 | Institute of Museum and Library Services - Non-Specified | N/A | \$ 2,930 | \$ - | N | Commonwealth of Pennsylvania | 4300649110 | | \$ 2,930 |
| 47 049 | | Mathematical and Physical Sciences | N/A | \$ 16,505,285 | \$ - | Y | | | | \$ 74,363 |
| 47 050 | | Geosciences | N/A | \$ 7,640,734 | \$ - | Y | | | | \$ 1,189 |
| 47 074 | | Biological Sciences | N/A | \$ 7,550,155 | \$ - | Y | | | | \$ 32,476 |
| 47 076 | | Education and Human Resources | N/A | \$ 8,837,046 | \$ - | Y | | | \$ (5,966) | \$ 213,710 |
| 47 U01 | AGS 17-23290 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 15,414 |
| 47 U01 | AST 16-14690 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 9,791 |
| 47 U01 | DEB 16-19072 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 5,000 |
| 47 U01 | DEB 19-08538 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 35,135 |
| 47 U01 | DMR 18-42175 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 38,035 |
| 47 U01 | DMS 16-28411 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 20,664 |
| 47 U01 | DMS 18-54107 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 89 |
| 47 U01 | DUE 18-33891 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 70,500 |
| 47 U01 | ICER 17-36333 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 403,980 |
| 47 U01 | MCB 16-15032 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 4 |
| 47 U01 | MCB 16-16316 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 500 |
| 47 U01 | PHY 18-36779 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 6,753 |
| 47 U01 | PHY 18-45141 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | Y | | | | \$ 199 |
| 47 U01 | 230208 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | N | National 4-H Council | 1940300L SCIENCE FOUNDATION | | \$ 8,984 |
| 47 U01 | 181223 PO101204 | National Science Foundation - Non-Specified | N/A | \$ 615,700 | \$ - | N | North Carolina Central University | N/A | | \$ 652 |
| 59 037 | | COVID-19 - Small Business Development Centers | N/A | \$ 167,527 | \$ - | N | Kutztown University of Pennsylvania | SMALL BUSINESS ADMINISTRATION | | \$ 24,186 |
| 59 037 | | Small Business Development Centers | N/A | \$ 167,527 | \$ - | N | Kutztown University of Pennsylvania | SMALL BUSINESS ADMINISTRATION | | \$ 143,341 |
| 63 575 | | Child Care & Development Block Grant | N/A | \$ 27,493 | \$ - | N | Georgia Department of Early Care and Learning | U.S. DEPARTMENT OF HEALTH AND | | \$ 27,493 |
| 64 U01 | NONE | Department of Veterans Affairs - Non-Specified | N/A | \$ 234,490 | \$ - | Y | | | | \$ 6,990 |
| 64 U01 | VA119A-14-D-0029- TO12-36 | Department of Veterans Affairs - Non-Specified | N/A | \$ 234,490 | \$ - | N | Victor 12, Inc | VETERANS ADMINISTRATION | | \$ 227,500 |

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, 2020

| CFDA Number | 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 |
|----------------------------|---------------------------------|--|--------------|-----------------------|---------------|--------------|--|--|--|-----------------|
| 66 436 | | Surveys, Studies, Investigations, Demonstrations, and Training Grants and Cooperative Agreement | N/A | \$ 18,698 | \$ - | N | Rural Community Assistance Partnership, Incorporated | 83938801 | | \$ 18,698 |
| 66 441 | | Healthy Watersheds Consortium Grant Program | N/A | \$ 5,639 | \$ - | N | Commonwealth of Pennsylvania | 4300591051 | | \$ 5,639 |
| 66 466 | | Chesapeake Bay Program | N/A | \$ 407,212 | \$ - | N | Conservation Foundation of Lancaster County | N/A | | \$ 33,859 |
| 66 466 | | Chesapeake Bay Program | N/A | \$ 407,212 | \$ - | N | National Fish And Wildlife Foundation | 0602.15.049722 | \$ 59,440 | \$ 79,144 |
| 66 466 | | Chesapeake Bay Program | N/A | \$ 407,212 | \$ - | N | Sustainable Chesapeake | N/A | | \$ 1,287 |
| 66 708 | | Pollution Prevention Grants Program | N/A | \$ 177,552 | \$ - | Y | | | | \$ 177,552 |
| 66 716 | | Research, Development, Monitoring, Public Education, Outreach, Training, Demonstrations, and Studies | N/A | \$ 14,600 | \$ - | N | Extension Foundation | ENVIRONMENTAL PROTECTION AGENC | | \$ 14,600 |
| 66 U01 215838 | | Environmental Protection Agency - Non-Specified | N/A | \$ 77,906 | \$ - | N | Extension Foundation | ENVIRONMENTAL PROTECTION AGENC | | \$ 9,156 |
| 66 U01 189860 | | Environmental Protection Agency - Non-Specified | N/A | \$ 77,906 | \$ - | N | Sustainable Chesapeake | 0602.16.053565 | | \$ 69,041 |
| 66 U01 4300548732 | | Environmental Protection Agency - Non-Specified | N/A | \$ 77,906 | \$ - | N | Commonwealth of Pennsylvania | 4300548732 | | \$ (291) |
| 81 U01 4300628714 | | Department of Energy - Non-Specified | N/A | \$ 405,167 | \$ - | N | Commonwealth of Pennsylvania | 4300628714 | | \$ 81,225 |
| 81 U01 4300629621 | | Department of Energy - Non-Specified | N/A | \$ 405,167 | \$ - | N | Commonwealth of Pennsylvania | 4300629621 | | \$ 323,942 |
| 84 002 | | Adult Education - Basic Grants to States | N/A | \$ 639,696 | \$ - | N | Commonwealth of Pennsylvania | 064-20-0025 | | \$ 248,341 |
| 84 002 | | Adult Education - Basic Grants to States | N/A | \$ 639,696 | \$ - | N | Commonwealth of Pennsylvania | 099-19-0002 | \$ 14,983 | \$ 17,518 |
| 84 002 | | Adult Education - Basic Grants to States | N/A | \$ 639,696 | \$ - | N | Commonwealth of Pennsylvania | 099-20-0002 | | \$ 148,118 |
| 84 002 | | Adult Education - Basic Grants to States | N/A | \$ 639,696 | \$ - | N | Commonwealth of Pennsylvania | 099-20-0005 | | \$ 225,271 |
| 84 002 | | Adult Education - Basic Grants to States | N/A | \$ 639,696 | \$ - | N | Commonwealth of Pennsylvania | FA-064-19-0025 | | \$ 448 |
| 84 048 | | Career And Technical Education - Basic Grants to States | N/A | \$ 183,359 | \$ - | N | Commonwealth of Pennsylvania | 119-20-0002 | | \$ 194,864 |
| 84 048 | | Career And Technical Education - Basic Grants to States | N/A | \$ 183,359 | \$ - | N | Commonwealth of Pennsylvania | FA-119-19-0001 | | \$ (11,505) |
| 84 103 | | TRIO Staff Training Program | N/A | \$ 261,132 | \$ - | Y | | | | \$ 261,132 |
| 84 126 | | Rehabilitation Services Vocational Rehabilitation Grants to States | N/A | \$ 1,408,071 | \$ - | N | Commonwealth of Pennsylvania | 221760 | | \$ 126,115 |
| 84 126 | | Rehabilitation Services Vocational Rehabilitation Grants to States | N/A | \$ 1,408,071 | \$ - | N | Commonwealth of Pennsylvania | 4300579829 4400015622 | | \$ 1,828 |
| 84 126 | | Rehabilitation Services Vocational Rehabilitation Grants to States | N/A | \$ 1,408,071 | \$ - | N | Commonwealth of Pennsylvania | ADVANCE | | \$ 25,936 |
| 84 126 | | Rehabilitation Services Vocational Rehabilitation Grants to States | N/A | \$ 1,408,071 | \$ - | N | Commonwealth of Pennsylvania | NONE | | \$ 421,126 |
| 84 126 | | Rehabilitation Services Vocational Rehabilitation Grants to States | N/A | \$ 1,408,071 | \$ - | N | Commonwealth of Pennsylvania | PDLI OVR | | \$ 597 |
| 84 126 | | Rehabilitation Services Vocational Rehabilitation Grants to States | N/A | \$ 1,408,071 | \$ - | N | Commonwealth of Pennsylvania | N/A | | \$ 832,469 |
| 84 129 | | Rehabilitation Long-Term Training | N/A | \$ 120,397 | \$ - | Y | | | | \$ 120,397 |
| 84 177 | | Rehabilitation Services Independent Living Services for Older Individuals Who are Blind | N/A | \$ 1,305 | \$ - | N | Commonwealth of Pennsylvania | N/A | | \$ 1,305 |
| 84 305 | | Education Research, Development and Dissemination | N/A | \$ 1,592,681 | \$ - | Y | | | | \$ 616,835 |
| 84 305 | | Education Research, Development and Dissemination | N/A | \$ 1,592,681 | \$ - | N | University of Pennsylvania | R305A160109-19 | | \$ 16,812 |
| 84 325 | | Special Education - Personnel Development to Improve Services and Results for Children with Disabilities | N/A | \$ 551,729 | \$ - | Y | | | | \$ 551,729 |
| 84 335 | | Child Care Access Means Parents in School | N/A | \$ 176,806 | \$ - | Y | | | | \$ 176,806 |
| 84 365 | | English Language Acquisition State Grants | N/A | \$ 369,351 | \$ - | Y | | | \$ 108,347 | \$ 369,351 |
| 84 367 | | Supporting Effective Instruction State Grants | N/A | \$ 16,351 | \$ - | N | Commonwealth of Pennsylvania | 4100081419 | | \$ 14,426 |
| 84 367 | | Supporting Effective Instruction State Grants | N/A | \$ 16,351 | \$ - | N | National Writing Project | U.S. DEPARTMENT OF EDUCATION | | \$ 1,925 |
| 84 425E | | COVID-19 - Education Stabilization Fund | N/A | \$ 24,241,974 | \$ - | Y | | | | \$ 24,241,974 |
| 84 U01 4/1/1998-12/31/2099 | | Department of Education - Non-Specified | N/A | \$ 124,666 | \$ - | Y | | | | \$ 58,660 |
| 84 U01 H325K170130 | | Department of Education - Non-Specified | N/A | \$ 124,666 | \$ - | Y | | | | \$ 66,006 |
| 93 107 | | Area Health Education Centers | N/A | \$ 970,542 | \$ - | Y | | | \$ 742,067 | \$ 970,542 |
| 93 113 | | Environmental Health | N/A | \$ 3,142,020 | \$ - | Y | | | | \$ 27,089 |
| 93 173 | | Research Related to Deafness and Communication Disorders | N/A | \$ 786,237 | \$ - | Y | | | | \$ 56,727 |
| 93 236 | | Grants to States to Support Oral Health Workforce Activities | N/A | \$ 10,000 | \$ - | N | Pennsylvania Coalition for Oral Health | T12HP27539 | | \$ 10,000 |
| 93 241 | | State Rural Hospital Flexibility Program | N/A | \$ 414,945 | \$ - | Y | | | | \$ 414,945 |
| 93 242 | | Mental Health Research Grants | N/A | \$ 6,027,824 | \$ - | Y | | | | \$ 3,598 |
| 93 243 | | Substance Abuse and Mental Health Services Projects of Regional and National Significance | N/A | \$ 666,627 | \$ - | N | York/Adams MH IDD Program | H79SM082107 | | \$ 8,000 |
| 93 262 | | Occupational Safety & Health Program | N/A | \$ 231,018 | \$ - | N | Bassett Healthcare Network | NATIONAL INSTITUTES OF HEALTH | | \$ 23,134 |
| 93 262 | | Occupational Safety & Health Program | N/A | \$ 231,018 | \$ - | N | Marshfield Clinic Research Institute | 5U54OH009568-10-00 | | \$ 25,486 |
| 93 273 | | Alcohol Research Programs | N/A | \$ 2,459,940 | \$ - | Y | | | | \$ 27,352 |
| 93 279 | | Drug Abuse and Addiction Research Programs | N/A | \$ 7,650,835 | \$ - | Y | | | | \$ 3,672 |
| 93 301 | | COVID-19 - Small Rural Hospital Improvement Grant Program | N/A | \$ 2,583,137 | \$ - | Y | | | \$ 2,276,559 | \$ 2,276,559 |

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, 2020**

| CFDA Number | 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 |
|-------------|---------------------------------|--|--------------|-----------------------|---------------|--------------|--|--|--|-----------------|
| 93 354 | | Public Health Emergency Response:Cooperative Agreement for Emergency Response | N/A | \$ 19,074 | \$ - | N | Commonwealth of Pennsylvania | 182225 | | \$ 19,074 |
| 93 398 | | Cancer Research Manpower | N/A | \$ 432,599 | \$ - | Y | | | | \$ 272,220 |
| 93 563 | | Child Support Enforcement | N/A | \$ 3,117,349 | \$ - | N | Commonwealth of Pennsylvania | 4000018811 | | \$ 3,117,349 |
| 93 788 | | Opioid STR | N/A | \$ 1,106,494 | \$ - | Y | | | \$ 16,962 | \$ 468,452 |
| 93 788 | | Opioid STR | N/A | \$ 1,106,494 | \$ - | N | Commonwealth of Pennsylvania | 28768 | | \$ 317,929 |
| 93 837 | | Cardiovascular Diseases Research | N/A | \$ 5,536,559 | \$ - | Y | | | | \$ 52,404 |
| 93 837 | | Cardiovascular Diseases Research | N/A | \$ 5,536,559 | \$ - | N | National Heart, Lung, and Blood Institute | NATIONAL INSTITUTES OF HEALTH | | \$ 1,295 |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | N/A | \$ 7,399,079 | \$ - | Y | | | | \$ 34,087 |
| 93 847 | | Diabetes, Digestive, and Kidney Diseases Extramural Research | N/A | \$ 7,399,079 | \$ - | N | University of South Florida | N/A | | \$ 1,361 |
| 93 853 | | Extramural Research Programs in the Neurosciences and Neurological Disorders | N/A | \$ 4,538,251 | \$ - | Y | | | | \$ 54,633 |
| 93 855 | | Allergy and Infectious Diseases Research | N/A | \$ 9,472,942 | \$ - | Y | | | | \$ 24,872 |
| 93 859 | | Biomedical Research and Research Training | N/A | \$ 16,110,963 | \$ - | Y | | | | \$ 533,299 |
| 93 867 | | Vision Research | N/A | \$ 1,835,406 | \$ - | Y | | | | \$ 16,715 |
| 93 879 | | Medical Library Assistance | N/A | \$ 323,272 | \$ - | Y | | | | \$ 51,432 |
| 93 879 | | Medical Library Assistance | N/A | \$ 323,272 | \$ - | N | University of Pittsburgh | 5UG4LM012342-04 | | \$ 16,107 |
| 93 884 | | Grants for Primary Care Training and Enhancement | N/A | \$ 471,494 | \$ - | Y | | | | \$ 471,494 |
| 93 889 | | COVID-19 - National Bioterrorism Hospital Preparedness Program | N/A | \$ 24,497 | \$ - | N | Hospital and Healthsystem Association of Pennsylvania, The | N/A | | \$ 24,497 |
| 93 913 | | Grants to States for Operation of State Offices of Rural Health | N/A | \$ 174,510 | \$ - | Y | | | | \$ 174,510 |
| 93 940 | | HIV Prevention Activities Health Department Based | N/A | \$ 483,171 | \$ - | N | Commonwealth of Pennsylvania | 4300607159 | | \$ 315,757 |
| 93 940 | | HIV Prevention Activities Health Department Based | N/A | \$ 483,171 | \$ - | N | Commonwealth of Pennsylvania | 4300647087 | | \$ 167,414 |
| 93 959 | | Block Grants for Prevention and Treatment of Substance Abuse | N/A | \$ 324,404 | \$ - | N | Commonwealth of Pennsylvania | 28768 | | \$ 301,013 |
| 93 959 | | Block Grants for Prevention and Treatment of Substance Abuse | N/A | \$ 324,404 | \$ - | N | Commonwealth of Pennsylvania | 4300588345 | | \$ 23,391 |
| 93 968 | | Funding in Support of the Pennsylvania Rural Health Model | N/A | \$ 4,405,743 | \$ - | N | Commonwealth of Pennsylvania | 4300618801 | \$ 2,068,203 | \$ 2,721,524 |
| 93 968 | | Funding in Support of the Pennsylvania Rural Health Model | N/A | \$ 4,405,743 | \$ - | N | Commonwealth of Pennsylvania | 4300642684 | \$ 1,410,371 | \$ 1,684,219 |
| 93 969 | | PPHF Geriatric Education Centers | N/A | \$ 630,500 | \$ - | Y | | | \$ 240,306 | \$ 630,500 |
| 93 976 | | Primary Care Medicine and Dentistry Clinician Educator Career Development Awards | N/A | \$ 171,146 | \$ - | Y | | | | \$ 171,146 |
| 93 991 | | Preventive Health and Health Services Block Grant | N/A | \$ (1,303) | \$ - | N | Commonwealth of Pennsylvania | 4100081397 | | \$ (1,303) |
| 93 U01 | PSU-01-4574 | Centers for Disease Control and Prevention - Non-Specified | N/A | \$ 12,000 | \$ - | N | McKing Consulting Corporation | CENTERS FOR DISEASE CONTROL AN | | \$ 12,000 |
| 93 U02 | ATB-202 | Department of Health and Human Services - Non-Specified | N/A | \$ 3,192,602 | \$ - | N | AtoxBio | U.S. DEPARTMENT OF HEALTH AND | | \$ (951) |
| 93 U02 | 141597-216 | Department of Health and Human Services - Non-Specified | N/A | \$ 3,192,602 | \$ - | N | Commonwealth of Pennsylvania | 141597-216 | | \$ (34) |
| 93 U02 | 5/1/2019-9/30/2019 | Department of Health and Human Services - Non-Specified | N/A | \$ 3,192,602 | \$ - | N | Pennsylvania District Attorneys Institute | U.S. DEPARTMENT OF HEALTH AND | | \$ 21,675 |
| 93 U02 | SUBK00008131-EXT 3 | Department of Health and Human Services - Non-Specified | N/A | \$ 3,192,602 | \$ - | N | University of Michigan | N/A | | \$ 20,621 |
| 93 U02 | UNIV OF PA | Department of Health and Human Services - Non-Specified | N/A | \$ 3,192,602 | \$ - | N | University of Pennsylvania | N/A | | \$ 3,146,092 |
| 93 U02 | ADVANCE | Department of Health and Human Services - Non-Specified | N/A | \$ 3,192,602 | \$ - | N | University of Pittsburgh | SUBSTANCE ABUSE & MENTAL HEALT | | \$ 5,199 |
| 93 U03 | 1 K02 HP30809-01-00 | Health Resources and Services Administration - Non-Specified | N/A | \$ 67,439 | \$ - | Y | | | | \$ 21,077 |
| 93 U03 | 2 H54RH25673-04-00 | Health Resources and Services Administration - Non-Specified | N/A | \$ 67,439 | \$ - | Y | | | | \$ 46,355 |
| 93 U03 | 2 H95RH00125-26-00 | Health Resources and Services Administration - Non-Specified | N/A | \$ 67,439 | \$ - | Y | | | | \$ 7 |
| 93 U04 | 1 F30 CA214010-01 | National Institutes of Health - Non-Specified | N/A | \$ 837,882 | \$ - | Y | | | | \$ 44,933 |
| 93 U04 | 1 F30 ES030607-01 | National Institutes of Health - Non-Specified | N/A | \$ 837,882 | \$ - | Y | | | | \$ 15,529 |
| 93 U04 | 1 F30 HL147489-01A1 | National Institutes of Health - Non-Specified | N/A | \$ 837,882 | \$ - | Y | | | | \$ 27,254 |
| 93 U04 | 1 F31 AA027943-01 | National Institutes of Health - Non-Specified | N/A | \$ 837,882 | \$ - | Y | | | | \$ 27,352 |
| 93 U04 | 1 F31 CA243301-01 | National Institutes of Health - Non-Specified | N/A | \$ 837,882 | \$ - | Y | | | | \$ 29,281 |
| 93 U04 | 1 T32 GM118294-01 | National Institutes of Health - Non-Specified | N/A | \$ 837,882 | \$ - | Y | | | | \$ 340,013 |
| 93 U04 | 1 T32 LM012415-01 | National Institutes of Health - Non-Specified | N/A | \$ 837,882 | \$ - | Y | | | | \$ 196,072 |
| 93 U04 | 1 TL1 TR002016-01 | National Institutes of Health - Non-Specified | N/A | \$ 837,882 | \$ - | Y | | | | \$ 118,722 |
| 93 U04 | 2 R13 DA020334-11 | National Institutes of Health - Non-Specified | N/A | \$ 837,882 | \$ - | Y | | | | \$ 1,826 |
| 93 U04 | 2 U10 CA180886 | National Institutes of Health - Non-Specified | N/A | \$ 837,882 | \$ - | N | Children's Hospital of Philadelphia | NATIONAL INSTITUTES OF HEALTH | | \$ 15,248 |
| 93 U04 | 219446 | National Institutes of Health - Non-Specified | N/A | \$ 837,882 | \$ - | N | Daiichi Sankyo, Inc. | DS1040-A-U103 | | \$ (4,312) |
| 93 U04 | LTS13930 | National Institutes of Health - Non-Specified | N/A | \$ 837,882 | \$ - | N | Genzyme Corporation | CTO1677 | | \$ 11,715 |

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, 2020**

| CFDA Number | 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 | U04 | TRINITY-CLEEX11XUS29 | National Institutes of Health - Non-Specified | \$ 837,882 | \$ - | N | Norvats Pharmaceuticals Corporation | 139556 | | \$ 6,731 |
| 93 | U04 | BRE 15-016 | National Institutes of Health - Non-Specified | \$ 837,882 | \$ - | N | Pfizer Inc | CTO #1825 | | \$ 7,518 |
| 99 | U01 | PC-15-8-067 | Peace Corps - Non-Specified | \$ 19,046 | \$ - | Y | | | | \$ 536 |
| 99 | U01 | ADMENDMENT 007 | Peace Corps - Non-Specified | \$ 19,046 | \$ - | Y | | | | \$ 18,510 |
| 99 | U02 | R2810-ONC-1423 | United State Government - Non-Specified | \$ 22,829 | \$ - | N | Regeneron Pharmaceuticals, Inc | PSHCI 15-053 | | \$ 22,829 |
| 10 | 561 | | State Administrative Matching Grants for the Supplemental Nutrition Assistance Program | \$ 14,956,164 | \$ 14,956,164 | N | Commonwealth of Pennsylvania | 4100069151 | \$ 5,090,928 | \$ 5,893,802 |
| 10 | 561 | | State Administrative Matching Grants for the Supplemental Nutrition Assistance Program | \$ 14,956,164 | \$ 14,956,164 | N | Commonwealth of Pennsylvania | 4100085762 | \$ 6,729,493 | \$ 9,062,362 |
| 84 | 027 | | Special Education Grants to States | \$ 406,511 | \$ 406,511 | N | Commonwealth of Pennsylvania | 062-19-0042 | | \$ 53,169 |
| 84 | 027 | | Special Education Grants to States | \$ 406,511 | \$ 406,511 | N | Commonwealth of Pennsylvania | 062-20-0042 | | \$ 353,342 |
| 84 | 042 | | TRIO Student Support Services | \$ 637,789 | \$ 3,524,332 | Y | | | | \$ 637,789 |
| 84 | 044 | | TRIO Talent Search | \$ 1,055,746 | \$ 3,524,332 | Y | | | | \$ 1,055,746 |
| 84 | 047 | | TRIO Upward Bound | \$ 1,281,264 | \$ 3,524,332 | Y | | | | \$ 1,281,264 |
| 84 | 066 | | TRIO Educational Opportunity Centers | \$ 252,979 | \$ 3,524,332 | Y | | | | \$ 252,979 |
| 84 | 217 | | TRIO McNair Post-Baccalaureate Achievement | \$ 296,554 | \$ 3,524,332 | Y | | | | \$ 296,554 |
| | | | | | | | | | | |
| | | | | | | | | Total | \$ 93,217,871 | \$ 1,336,741,566 |

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, 2020

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, 2020 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 | CFDA No. | Federal Capital Contribution for the Year Ended June 30, 2020 | Loan Expenditures And Disbursements | Outstanding Balance at June 30, 2020 |
|---|----------|--|--|--|
| Federal Perkins Loan Program | 84.038 | \$ - | \$ - | \$ 31,409,513 |
| Health Professions Student Loan Program | 93.342 | - | - | 4,408 |

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 (CFDA No. 84.268) including Federal Stafford Loans and Federal PLUS Loans. Loan disbursements under the program for the year ended June 30, 2020 totaled \$475,984,680.

5. SUMMARY SCHEDULE

| Programs: | CFDA No. | Subrecipient Expenditures | Expenditures |
|--|-------------|------------------------------|-------------------------|
| Research and development cluster: | | | |
| Direct funding | | \$ 72,117,222 | \$ 577,967,267 |
| Direct funding – COVID-19 | | - | 350,488 |
| Pass-through funds – Commonwealth of Pennsylvania | | 337,749 | 3,248,937 |
| Pass-through funds – other institutions | | <u>1,893,910</u> | <u>63,337,613</u> |
| Total research and development cluster | | <u>74,348,881</u> | <u>644,904,305</u> |
| Student financial aid cluster (direct): | | | |
| Department of Education: | | | |
| Federal Supplemental Educational Opportunity Grant | 84.007 | - | 6,060,845 |
| Federal Work Study Program | 84.033 | - | 2,885,639 |
| Federal Perkins Loan Program | 84.038 | - | 31,409,513 |
| Federal Pell Grant Program | 84.063 | - | 81,327,976 |
| Federal Direct Loan Program | 84.268 | - | 475,984,680 |
| Department of Health and Human Services: | | | |
| Health Professions Student Loan Program | 93.342 | - | <u>4,408</u> |
| Total student financial aid cluster | | - | <u>597,673,061</u> |
| Other programs: | | | |
| Smith-Lever Funding (Various Programs) | 10.511 | - | 10,884,800 |
| COVID-19 - Education Stabilization Fund – Higher Education Emergency Relief Fund (HEERF) Student Aid Portion | 84.425E | - | 24,241,974 |
| COVID-19 - Small Rural Hospital Improvement Grant Program | 93.301 | 2,276,559 | 2,276,559 |
| Funding in Support of the Pennsylvania Rural Health Model | 93.968 | 3,478,574 | 4,405,743 |
| SNAP Cluster | | 11,820,421 | 14,956,164 |
| Other direct funding | | 1,203,091 | 21,576,019 |
| Other direct funding – COVID-19 | | - | 1,072,796 |
| Other pass-through funds – Commonwealth of Pennsylvania | | 30,905 | 9,935,023 |
| Other pass-through funds – other institutions | | 59,440 | 4,766,439 |
| Other pass-through funds – other institutions – COVID-19 | | - | <u>48,683</u> |
| Total other programs | | <u>18,868,990</u> | <u>94,164,200</u> |
| Total programs | | <u>\$ 93,217,871</u> | <u>\$ 1,336,741,566</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, 2020, and the related consolidated statement of activities and cash flows for the year then ended, and the related notes to the consolidated financial statements, and have issued our report thereon dated November 4, 2020.

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; and the Milton S. Hershey 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. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the 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*.

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

November 4, 2020



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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, 2020. 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 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; and Penn State Health Life Lion, LLC and 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 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, 2020. Our audit, described below, did not include the operation of PCT because 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, 2020.

Other Matters

The results of our auditing procedures disclosed an instance of noncompliance which is required to be reported in accordance with the Uniform Guidance and which are described in the accompanying schedule of findings and questioned costs as item 2020-001. Our opinion on each major federal program is not modified with respect to this matter.

The University's response to the noncompliance 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 compliance and, accordingly, we express no opinion on the response.

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, 2020, and have issued our report thereon dated November 4, 2020, 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

March 29, 2021

THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF FINDINGS AND QUESTIONED COSTS
FOR THE YEAR ENDED JUNE 30, 2020

| | | |
|--|--|--|
| 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 type="checkbox"/> _yes | <input checked="" type="checkbox"/> _no |
| • Significant deficiency (ies) identified? | <input type="checkbox"/> _yes | <input checked="" type="checkbox"/> _none reported |
| Noncompliance material to financial statements noted? | <input type="checkbox"/> _yes | <input checked="" type="checkbox"/> _no |
| Federal Awards | | |
| Internal control over major federal programs: | | |
| • Material weakness (es) identified? | <input type="checkbox"/> _yes | <input checked="" type="checkbox"/> _no |
| • Significant deficiency (ies) identified? | <input type="checkbox"/> _yes | <input checked="" type="checkbox"/> _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 checked="" type="checkbox"/> _yes | <input type="checkbox"/> _no |
| Identification of major federal programs: | | |
| <ul style="list-style-type: none"> • Student Financial Assistance Cluster - (See “Schedule of Expenditures of Federal Awards” for Cluster CFDA) • Education Stabilization Fund – CFDA 84.425 • State Administrative Matching Grants for the Supplemental Nutrition Assistance Program – CFDA 10.561 • Smith-Lever Funding (Various Programs) – CFDA 10.511 • Funding in Support of the Pennsylvania Rural Health Model Program – CFDA 93.968 • Small Rural Hospital Improvement Grant Program/Coronavirus State Hospital Improvement Program – CFDA 93.301 | | |
| Dollar threshold used to distinguish between Type A and Type B programs: | \$ 4,010,224 | |
| Auditee qualified as low-risk auditee? | <input checked="" type="checkbox"/> _yes | <input type="checkbox"/> _no |

THE PENNSYLVANIA STATE UNIVERSITY

SECTION II — FINANCIAL STATEMENT FINDINGS

No findings reported.

SECTION III—FEDERAL AWARD FINDINGS AND QUESTIONED COSTS

See Pages 104 through 105.

THE PENNSYLVANIA STATE UNIVERSITY

Reference Number: 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

CFDA Number: 93.301

Compliance Requirement: Reporting/ Federal Funding Accountability and Transparency Act

Type of Finding: Deficiency/Non-Compliance

Criteria or specific requirement: Agreement with the *U.S. Department of Health and Human Services/ Health Resources and Services Administration* – As required by the Federal Funding Accountability and Transparency Act (FFATA) of 2006 (Pub. L. 109-282), as amended by section 6202 of Public Law 110-252 (Transparency Act), recipients must report information for each subaward of \$25,000 or more in Federal funds and executive total compensation, as outlined in Appendix A to 2 CFR Part 170. The University is required to submit this information to the FFATA Subaward Reporting System (FSRS) by the end of the month following the month in which the University awarded any subawards. The FFATA reporting requirements apply for the duration of the project period and include all subsequent award actions to aforementioned Health Resources & Services Administration (HRSA) grants and cooperative agreement awards.

Compliance Requirement: Under the requirements of the FFATA that are codified in 2 CFR Part 170, recipients (i.e., direct recipients) of grants or cooperative agreements, who make first tier subawards of \$25,000 or more, are required to register in FSRS and report subaward data through FSRS.

Condition/Context: The University has controls over FFATA reporting. However, we noted that the University did not submit the FFATA subaward report in the FSRS by the end of the month following the month in which the University awarded any subawards to the hospitals.

Cause: The University was unaware of the requirements that subaward reports were required to be filed by the end of the month following the month in which the University awarded any subawards to the hospitals.

Effect: The Federal Awarding Agency did not receive required information timely regarding the subawards to the hospitals.

Questioned costs: None

Repeat Finding: No

THE PENNSYLVANIA STATE UNIVERSITY

Reference Number: 2020-001 (Continued)

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

CFDA Number: 93.301

Compliance Requirement: Reporting/ Federal Funding Accountability and Transparency Act

Type of Finding: Deficiency/Non-Compliance

Recommendation: In order to ensure timely reporting to Federal awarding agencies on a timely basis, we recommend that the University have a centralized policy for the college/departments to report FFATA, when grant and cooperative award agreements have first tier subawards of \$25,000 or more.

Views of responsible officials: The University has a system to identify first tier subawards of \$25,000 or more and report timely in FSRS. This finding relates to a requirement imposed by the specific funding. The University did not previously understand that any entity receiving funding, regardless of the mechanism used to fund that entity, would be considered a subrecipient subject to the FFATA reporting requirement. The University now understands this requirement and has entered all of the identified recipients in FSRS. To ensure future compliance, the University will identify all new agreements under this funding stream and will specifically review the terms for enhanced FFATA reporting requirements. In addition, the University is performing a retroactive review to identify other agreements that might have been subject to this requirement. If the University identifies any additional subrecipients under these agreements, such recipients will immediately be entered into FSRS. This action is anticipated to be completed by April 15, 2021.

THE PENNSYLVANIA STATE UNIVERSITY

SUMMARY SCHEDULE OF PRIOR YEAR AUDIT FINDINGS FOR THE YEAR ENDED JUNE 30, 2020

The following schedule contains the finding reference number and title for the finding(s) included in the June 30, 2019 report and the status of each finding as of June 30, 2020.

| <u>Reference Number</u> | <u>Grant</u> | <u>Corrective Action</u> |
|------------------------------------|--|-------------------------------------|
| 2019-1 | FINANCIAL STATEMENT FINDING - PLEDGES | Corrected |
