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

The Pennsylvania State University Fiscal Year Ended June 30, 2023

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, 2023

TABLE OF CONTENTS

Financial Overview	3
Independent Auditor's Report together with Audited Financial Statements of the University	12
Independent Auditor's Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance	52
Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with <i>Government Auditing Standards</i>	53
Independent Auditor's Report on Compliance for Each Major Federal Program and Report on Internal Control over Compliance Required by the Uniform Guidance	55
Schedule of Expenditures of Federal Awards	58
Notes to Schedule of Expenditures of Federal Awards	86
Schedule of Findings and Questioned Costs	88
Summary Schedule of Prior Year Audit Findings	93

Financial Overview

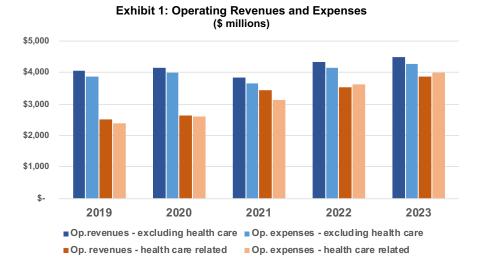
The following section provides summarized results of the financial performance and position of the Pennsylvania State University ("Penn State", or the "University"), and as a result it should be read alongside the accompanying consolidated financial statements and notes to the financial statements. All figures in this section are consolidated and – unless specifically noted – include the University, Penn State Health, and other subsidiaries (see note one to the financial statements).

OPERATING RESULTS

Penn State's net assets increased by \$361 million during the fiscal year ended June 30, 2023 (FY2023), from growth in certain operating revenues, budgetary restraint of operating expenses, and a decline in the valuation of the University's post-retirement liability. A condensed view of the consolidated statement of activities follows:

Condensed Statements of Activities (\$ millions)			
	2023	2022	
Operating revenues			
University – excluding health care related	\$4,488	\$4,339	
Health care related	3,867	3,529	
Total	8,355	7,868	
Operating expenses			
University – excluding health care related	4,272	4,155	
Health care related	3,997	3,615	
Total	8,269	7,770	
Operating income (loss)			
University – excluding health care related	216	184	
Health care related	(130)	(86)	
Total	86	98	
Nonoperating activities			
Related to postretirement benefit expense	211	567	
Related to investments	68	(816)	
Other	65	122	
Total	344	(127)	
Increase (decrease) in net assets – Penn State University	430	(29)	
Less change in noncontrolling interest	(69)	15	
Increase (decrease) in total net assets	361	(14)	
Beginning net assets	12,393	12,407	
Ending net assets	\$12,754	\$12,393	

Exhibit 1, which follows, shows a breakdown of operating expenses and revenues for the last five fiscal years (distinguishing between healthcare related revenues / expenses and the rest of the University).



Operating Revenues

University operating revenues (excluding healthcare related revenues) increased by \$149 million, or 3.4%, in FY2023, with the most significant increases occurring in net tuition/fee revenues (increase of \$80 million, or 4.3%) and auxiliary enterprises (increase of \$58 million, or 11.9%, primarily in housing / food service and athletics).

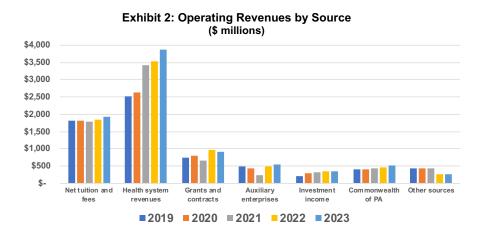
The Board of Trustees approved tuition increases for the 2022-23 academic year of 5% and 6% for University Park campus resident and nonresident undergraduates, respectively, and 2% and 3% for Commonwealth Campus resident and nonresident undergraduates, respectively. The Board also approved a 5% tuition increase for World Campus students and a 6% increase for graduate and professional students, regardless of campus or residency status.

University federal grants and contracts revenues decreased by \$93 million in FY2023, or 11.3%, due to COVID-related funding of \$150 million received in FY2022 that was not awarded in FY2023.

Health system operating revenues increased by \$338 million, or 9.6%, in FY2023. Penn State Health recognized consolidated net patient service revenue of \$3.4 billion for the year ended June 30, 2023, which increased approximately \$203.5 million, or 6.3%, from FY2022. This increase was primarily due to the full year of Hampden Medical Center, which opened in October 2021, and the addition of Lancaster Medical Center which opened October 2022. Consolidated net patient service revenue reflects amounts recognized from all other payors and patients.

Health system other income decreased \$35.1 million, or 10%, in FY2023, mainly due to the lack of COVID-related provider relief funds which were recognized during 2022.

Recent trends in consolidated operating revenues are illustrated below in exhibit 2.

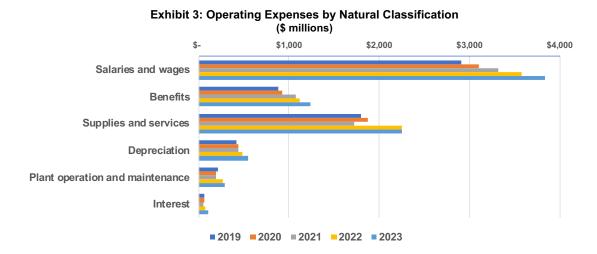


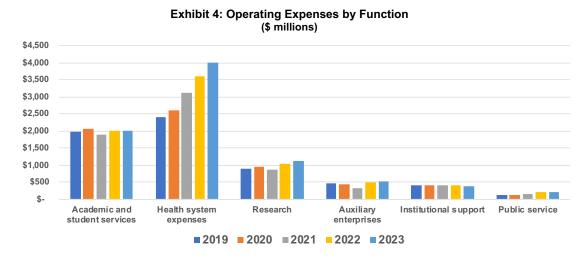
Operating Expenses

University operating expenses (excluding healthcare related expenses) increased by \$117 million, or 2.8%, in FY2023, with most of the increase attributable to personnel costs (increase of \$161 million, or 6%). The growth in personnel costs is due to an across-the-board general salary increase of 2.5%, a modest increase in net FTEs, and increased benefits expense. Depreciation and interest expense increased \$24 million and \$9 million, respectively, while other non-personnel expenses decreased by \$80 million, or 7.5%.

Health system operating expenses increased by \$382 million, or 10.6%, in FY2023. Personnel cost increased by \$216.7 million, or 10.7%, primarily due to the full year of Hampden Medical Center (opened in October 2021) and the addition of Lancaster Medical Center in October 2022. During FY2023, Penn State Health also implemented staff salary increases, retention bonuses, and sign on bonuses to remain competitive in the local market and address staffing challenges. Additionally, Penn State Health purchased services increased by \$51.4 million, or 11.5%; contracted labor for clinical providers and physicians is the major driver of this increase. Lastly, interest expense increased by \$25.4 million, reflecting the interest on both Hampden and Lancaster Medical Center bonds.

Recent trends in consolidated operating expenses are illustrated below in exhibits 3 and 4.





(Note: FY2021 operating expenses in exhibit 4 include adjustments not included in audited financial statements)

Non-Operating Activities

Penn State's increase in net assets in FY2023 is attributable largely to positive non-operating revenues, including non-operating investment return and favorable adjustments to the post-retirement liability. Favorable premium adjustments and resulting future claims assumptions alongside rising interest rates had the combined effect of lowering the valuation of the University's post-retirement liability by \$250 million, of which \$211 million is reflected as non-operating revenue.

FINANCIAL POSITION

Penn State's assets totaled \$19.7 billion at June 30, 2023, increasing by \$264 million, or 1.4%, during FY2023. On the other side of the balance sheet, Penn State's liabilities totaled \$7.0 billion at June 30, 2023, decreasing by \$97 million, or -1.4%, during FY2023.

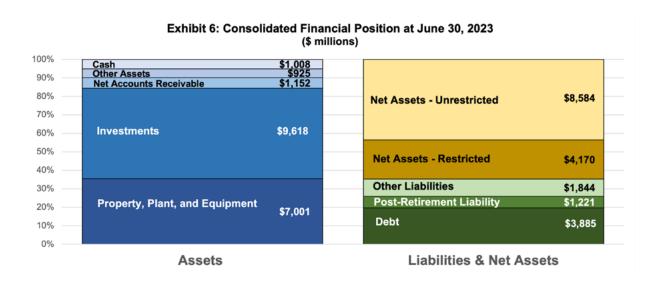
Over the last ten fiscal years, Penn State's consolidated net assets have grown at an annualized rate of 5.8%. Exhibit 5 illustrates ending consolidated net asset balances for the last ten fiscal years.



As described more fully in note two to the financial statements, the University restated beginning net assets for FY2022 (i.e. net assets as of July 1, 2021) and certain FY2022 activity to correct for certain errors related to the classification of net assets. While net assets *in total* were not adjusted as part of this restatement, \$442.3 million was reclassified from without donor restrictions to with donor restrictions as of June 30, 2021; ending FY2022 net assets were adjusted by \$477.6 million from what was previously reported. The funds reclassed and now presented with donor restrictions include (1) commitments made by the University (from institutional reserves) to match donor contributions, (2) funds formed from pooled donor contributions for specific purposes that have been invested long-term at the decision of the University, and (3) unspent distributions from donor-restricted endowments.

A condensed version of Penn State's statement of financial position follows, along with a graphical representation of the consolidated statement of financial position at June 30, 2023 in exhibit 6.

Condensed Statements of Financial Position (\$ millions)						
	June 30, 2023	June 30, 2022				
Assets (Restated						
Cash and cash equivalents	\$1,008	\$1,058				
Receivables, net	1,152	1,070				
Investments	9,618	9,596				
Property, plant, and equipment, net	7,001	6,886				
Other assets	925	830				
Total assets	\$19,704	\$19,440				
Liabilities						
Accounts payable and accrued expenses	\$932	\$984				
Debt	3,885	3,769				
Accrued post-retirement liability	1,221	1,471				
Other liabilities	912	823				
Total liabilities	6,950	7,047				
Net Assets						
Without donor restrictions	8,584	8,379				
With donor restrictions	4,170	4,014				
Total net assets	12,754	12,393				
Total liabilities and net assets	\$19,704	\$19,440				



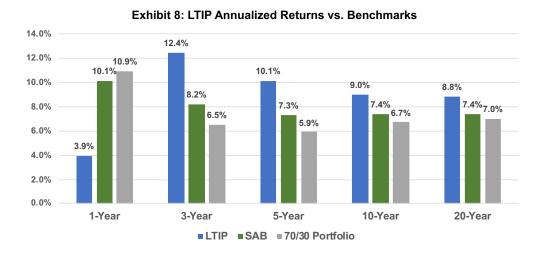
INVESTMENTS

The Office of Investment Management (OIM) is tasked with the day-to-day management and administration of the University's long-term and operating investments. Under the governance and oversight of the Penn State Investment Council (PSIC) and Board of Trustees, OIM executes on the University's investment policy statement, striving for desired risk-adjusted returns to fund short, medium, and long-range liquidity needs.

The Long-Term Investment Pool (LTIP) is the University's investment portfolio containing most of its donor-endowed funds, in addition to other funds functioning as endowments, all with long-term investment objectives. This commingled pool operates similarly to a mutual fund, with each participating fund owning units of the pool.



The LTIP had a one-year return of 3.9% in FY2023 and annualized 3-, 5-,10-, and 20-year returns of 12.4%, 10.1%, 9.0%, and 8.8%, respectively. The 3-, 5-,10-, and 20-year annualized returns all exceed the LTIP's tactical *Strategic Allocation Benchmark* (or "SAB"), as well as a passive composite benchmark consisting of 70% MSCI All Country World Index and 30% Bloomberg US Aggregate Bond Index (a 70/30 stocks/bonds passive portfolio).



¹ SAB consists of index returns representing the following asset classes: public equities (46%), private equity (20%), fixed income (10%), diversifying strategies (12%), and real assets (12%).

CAPITAL ASSETS AND DEBT

In FY2023 the University is nearing the end of a multi-year capital plan, with capital expenditures exceeding \$3.9 billion over the last five years (including outlay for equipment). As of June 30, 2023, there are assets under construction (or construction in progress) of \$771 million, down from a peak of over \$1.5 billion at the end of FY2021.

Exhibit 9 illustrates recent trends in capital expenditures, assets under construction, and depreciation expense.

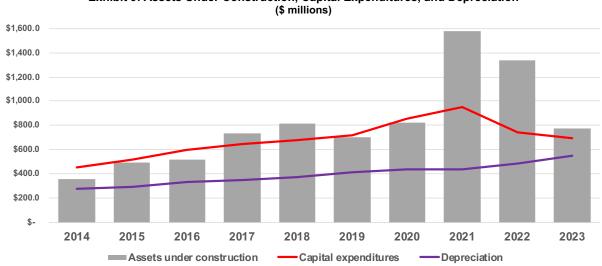


Exhibit 9: Assets Under Construction, Capital Expenditures, and Depreciation

Major capital expenditures in FY2023 included over \$379 million in building construction costs, with the new College of Engineering West building as the highest single project (\$62 million in FY2023, \$117 million total since commencement of project). Improvements to land and infrastructure totaled \$25 million in FY2023, and spend on equipment and information technology capital assets totaled \$82 million.

The University's portfolio of outstanding long-term debt is the result of borrowings to fund capital projects as well as specific borrowing made to prefund a significant portion of the University's unfunded actuarial liability with Commonwealth of Pennsylvania's State Employees' Retirement System (SERS). In April of 2020, the University entered into an agreement with SERS to prefund \$1.061 billion of its unfunded liability in exchange for credits against future contributions (\$93.3 million of credits in both FY2023 and FY2022). The University issued bonds in May of 2020 (series 2020D) in the amount of \$1.065 billion in connection with this prefunding, and the resulting increase in the University's debt load is evident as illustrated on exhibit 10:

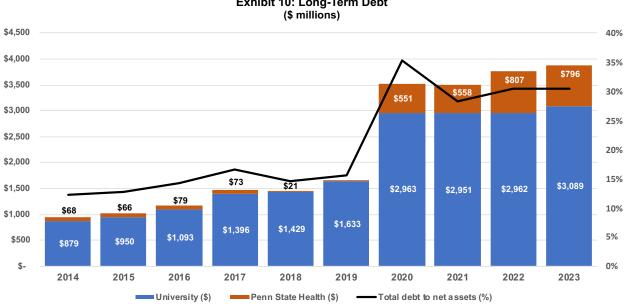


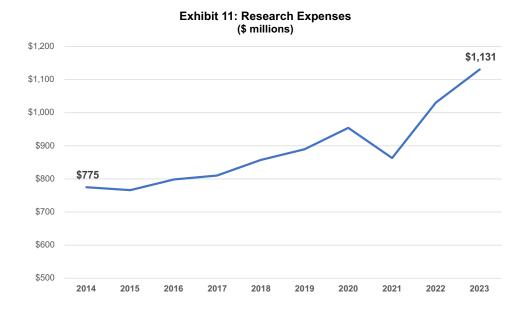
Exhibit 10: Long-Term Debt

The University issued new tax-exempt bonds in June of 2023 (series 2023) in the amount of \$204 million, par, plus a premium of \$27 million, for total proceeds of \$231 million; the all-in cost of capital for the series 2023 bonds is 4.15%. The series 2023 bonds were issued to finance all or a portion of the costs of remaining East Halls renovations, Beaver Stadium renovations, construction and equipping of the Susan Welch Liberal Arts Building, and several other capital projects at University Park and at various Commonwealth Campuses.

RESEARCH AND SPONSORED PROGRAMS

Penn State is a top 30 U.S. research university, as designated by the National Science Foundation's Higher Education Research and Development (HERD) survey, with twelve disciplines - from psychology to atmospheric science and materials engineering – ranking in the top ten for research expenditures.

Exhibit 11 illustrates the growth in research expenditures over the last ten fiscal years.



Over the last ten years, research expenditures have grown at an annualized rate of 4.3%; the annualized growth since fiscal year 2021, however, is 14.4%, with FY2023 research spend exceeding \$1.1 billion.

The University's research expenditures are funded by federal, private, state, and other sources; the largest federal sponsor is the Office of Naval Research (an executive branch agency within the U.S. Department of Defense). The breakdown of FY2023 research funding follows in exhibit 12.

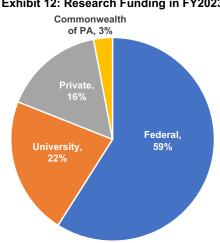


Exhibit 12: Research Funding in FY2023

LOOKING AHEAD

New Budget Model

Beginning with fiscal year 2024, Penn State has rolled out a new, data-driven education and general funds budget allocation model. The University also developed all funds budgets for fiscal years 2024 and 2025, which have been approved by the Board of Trustees.

2024-2028 Capital Plan

The University's 2024-2028 Capital Plan is a maintenance-centric plan focused on system renewals and projects that support student success and enrollment. This plan – totaling \$2.2 billion – is a smaller investment in University general funds resources than the previous capital plan from a sheer dollars perspective, but it includes crucial updates to address aging campus facilities, infrastructure, and building systems.

Presidential Vision and Goals

President Neeli Bendapudi has established a vision for Penn State defined by building steadfastly on Penn State's purpose, enabling agility across the institution to respond to ever-changing needs, and leveraging the University's many strengths to realize strategic opportunities. The University will be working on the following strategic goals over the next five years.

- · Enhance student success
- · Grow interdisciplinary research excellence
- Increase Land-Grant impact
- · Foster diversity, equity, inclusion, and belonging
- Transform internal operations
- · Transform health through academic and clinical synergy



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Independent Auditor's Report

To the Board of Trustees
The Pennsylvania State University

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the 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, 2023 and the related consolidated statements of activities and cash flows for the year then ended, and the related notes to the consolidated financial statements.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the University as of June 30, 2023 and the changes in its net assets and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are required to be independent of the University and to meet our ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Report on Prior Year Consolidated Financial Statements and Restatement

The consolidated financial statements of the University as of June 30, 2022 were audited by other auditors, who expressed an unmodified opinion on those consolidated financial statements on November 21, 2022 prior to the restatement described in Note 2.

As part of our audit of the 2023 consolidated financial statements, we also audited the adjustments described in Note 2 that were applied to restate the 2022 consolidated financial statements. In our opinion, such adjustments are appropriate and have been properly applied. We were not engaged to audit, review, or apply any procedures to the 2022 consolidated financial statements of the University other than with respect to the adjustments, and, accordingly, we do not express an opinion or any other form of assurance on the 2022 consolidated financial statements as a whole.

Responsibilities of Management for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America and for 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.

In preparing the consolidated financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the University's ability to continue as a going concern within one year after the date that the consolidated financial statements are issued or available to be issued.



To the Board of Trustees
The Pennsylvania State University

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and, therefore, is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the consolidated financial statements.

In performing an audit in accordance with GAAS and Government Auditing Standards, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to
 fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include
 examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial
 statements.
- Obtain an understanding of internal control relevant to the audit 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, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the University's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Other Information

Management is responsible for the accompanying financial overview, which is presented for the purpose of additional analysis and is not a required part of the consolidated financial statements. Our opinion on the consolidated financial statements does not cover such information, and we do not express an opinion or any form of assurance thereon.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated November 9, 2023 on our consideration of The Pennsylvania State University's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of The Pennsylvania State University's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering The Pennsylvania State University's internal control over financial reporting and compliance.

Plante & Moran, PLLC

November 9, 2023

Consolidated Financial Statements

THE PENNSYLVANIA STATE UNIVERSITY CONSOLIDATED STATEMENTS OF FINANCIAL POSITION ASSETS JUNE 30, 2023 AND 2022

(in thousands)

	June 30, 2023	June 30, 2022
Current assets:		
Cash and cash equivalents	\$ 1,007,504	\$ 1,058,303
Short-term investments	1,560,597	1,549,884
Deposits held by bond trustees	212,274	91,521
Deposits held for others	38,012	34,460
Accounts receivable, net of allowances	940,216	846,172
Contributions receivable, net	47,701	40,306
Loans to students, net of allowances	3,264	3,952
Inventories	90,572	85,662
Prepaid expenses and other assets	110,579	127,277
Total current assets	4,010,719	3,837,537
Noncurrent assets:		
Deposits held by bond trustees	56,215	100,097
Contributions receivable, net	136,385	152,443
Loans to students, net of allowances	25,474	28,052
Total investment in plant, net	7,001,411	6,885,672
Beneficial interest in perpetual trusts	28,117	26,240
Investments	8,057,417	8,045,673
Operating lease right-of-use assets, net	164,769	172,590
Other assets	223,789	191,385
Total noncurrent assets	15,693,577	15,602,152
Total assets	\$ 19,704,296	\$ 19,439,689

THE PENNSYLVANIA STATE UNIVERSITY CONSOLIDATED STATEMENTS OF FINANCIAL POSITION LIABILITIES AND NET ASSETS (as restated) JUNE 30, 2023 AND 2022

(in thousands)

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	June 30, 2023	(as restated) June 30, 2022
Current liabilities:		
Accounts payable and other accrued expenses	\$ 932,120	\$ 984,226
Deferred revenue	216,382	180,066
Long-term debt	116,498	110,633
Present value of annuities payable	7,871	7,720
Accrued postretirement benefits	53,408	54,119
Refundable United States Government student loans	3,078	3,898
Operating lease liabilities	26,393	21,442
Total current liabilities	1,355,750	1,362,104
Noncurrent liabilities:		
Deposits held in custody for others	27,962	22,269
Deferred revenue	-	563
Long-term debt	3,769,425	3,658,417
Present value of annuities payable	59,702	56,275
Accrued postretirement benefits	1,167,601	1,417,337
Refundable United States Government student loans	13,103	17,233
Operating lease liabilities	144,114	150,800
Other liabilities	412,420	362,071
Total noncurrent liabilities	5,594,327	5,684,965
Total liabilities	6,950,077	7,047,069
Net assets:		
Without donor restrictions	8,584,561	8,379,319
With donor restrictions	4,169,658	4,013,301
Total net assets	12,754,219	12,392,620
Total liabilities and net assets	\$ 19,704,296	\$ 19,439,689

THE PENNSYLVANIA STATE UNIVERSITY CONSOLIDATED STATEMENT OF ACTIVITIES FOR THE YEAR ENDED JUNE 30, 2023

(in thousands)

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	Without Donor Restrictions	With Donor Restrictions	Total
Operating revenues and other support:			
Tuition and fees, net of discounts of \$297,199	\$ 1,917,557	\$ -	\$ 1,917,557
Commonwealth of Pennsylvania -			
Appropriations	326,542	-	326,542
Special contracts	120,341	-	120,341
Department of General Services projects	73,622	-	73,622
United States Government grants and contracts	735,527	-	735,527
Private grants and contracts	163,129	-	163,129
Gifts and pledges	109,920	17,070	126,990
Investment return, net	198,551	137,828	336,379
Sales and services of educational activities	103,804	232	104,036
Auxiliary enterprises	542,730	-	542,730
Health System revenue	3,866,539	-	3,866,539
Other sources	41,581	-	41,581
Net assets released from restrictions	139,999	(139,999)	-
Total operating revenues and other support	8,339,842	15,131	8,354,973
Operating expenses:			
Educational and general -			
Academic and student services	2,011,757	-	2,011,757
Research	1,131,235	-	1,131,235
Public service	213,839	-	213,839
Institutional support	384,503	-	384,503
Total educational and general	3,741,334	-	3,741,334
Auxiliary enterprises	529,924	-	529,924
Health System expense	3,997,337	-	3,997,337
Total operating expenses	8,268,595	-	8,268,595
Increase in net assets from operating activities	71,247	15,131	86,378
Nonoperating activities:			
Gifts and pledges	-	77,118	77,118
Current year investment returns	21,911	45,489	67,400
Changes in funds held by others in perpetuity	-	1,877	1,877
Loss on disposal of assets	(2,329)	-	(2,329)
Nonperiodic change in postretirement benefit plan	189,862	-	189,862
Other components of net periodic postretirement benefit cost	21,313	-	21,313
Actuarial adjustment on annuities payable	-	(11,447)	(11,447)
Net asset transfer due to donor intent	(28,189)	28,189	
Increase in net assets from nonoperating activities	202,568	141,226	343,794
Increase in net assets - The Pennsylvania State University	273,815	156,357	430,172
Noncontrolling interest:			
Excess of expenses over revenues	(68,573)	-	(68,573)
Decrease in net assets - noncontrolling interest	(68,573)	-	(68,573)
Increase in total net assets	205,242	156,357	361,599
	203,272	130,337	301,333
Net assets at the beginning of the year, as restated	8,379,319	4,013,301	12,392,620
Net assets at the end of the year	\$8,584,561	\$4,169,658	\$12,754,219

THE PENNSYLVANIA STATE UNIVERSITY CONSOLIDATED STATEMENT OF ACTIVITIES FOR THE YEAR ENDED JUNE 30, 2022 (as restated)

(in thousands)

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	Without Donor Restrictions	With Donor Restrictions	Total
Operating revenues and other support:	,		
Tuition and fees, net of discounts of \$258,744	\$ 1,837,714	\$ -	\$ 1,837,714
Commonwealth of Pennsylvania -			
Appropriations	323,792	-	323,792
Special contracts	81,408	-	81,408
Department of General Services projects	50,023	-	50,023
United States Government grants and contracts	829,026	-	829,026
Private grants and contracts	141,371	-	141,371
Gifts and pledges	92,849	27,237	120,086
Investment return, net	221,938	112,439	334,377
Sales and services of educational activities	101,041		101,041
Auxiliary enterprises	485,062	_	485,062
Health System revenue	3,528,452	_	3,528,452
Other sources	35,025		35,025
Net assets released from restrictions	169,294	(169,294)	33,023
Total operating revenues and other support	7.896.995	(29,618)	7,867,377
iotal operating revenues and other support	7,830,333	(29,010)	7,807,577
Operating expenses:			
Educational and general -			
Academic and student services	2,013,944	-	2,013,944
Research	1,033,349	-	1,033,349
Public service	202,408	-	202,408
Institutional support	419,691	-	419,691
Total educational and general	3,669,392	-	3,669,392
Auxiliary enterprises	485,294	-	485,294
Health System expense	3,614,830	-	3,614,830
Total operating expenses	7,769,516	-	7,769,516
Increase (decrease) in net assets from operating activities	127,479	(29,618)	97,861
Namenastine activities.			
Nonoperating activities:		127.010	127.010
Gifts and pledges	(470.264)	137,819	137,819
Current year investment returns	(478,361)	(337,832)	(816,193)
Changes in funds held by others in perpetuity	- (5.47.4)	(3,691)	(3,691)
Loss on disposal of assets	(5,174)	-	(5,174)
Nonperiodic change in postretirement benefit plan	627,220	-	627,220
Other components of net periodic postretirement benefit cost	(60,067)	-	(60,067)
Actuarial adjustment on annuities payable	-	(6,802)	(6,802)
Net asset transfer due to donor intent	(20,060)	20,060	-
Increase (decrease) in net assets from nonoperating activities	63,558	(190,446)	(126,888)
Increase (decrease) in net assets - The Pennsylvania State University	191,037	(220,064)	(29,027)
		• • • • •	
Noncontrolling interest:	14.070		14.076
Excess of revenues over expenses	14,976	-	14,976
Increase in net assets - noncontrolling interest	14,976	-	14,976
Increase (decrease) in total net assets	206,013	(220,064)	(14,051)
Net assets at the beginning of the year - as previously stated	8,615,611	3,791,060	12,406,671
	(442.205)	442,305	_
Net asset reclassification	(442,305)	112,505	
Net asset reclassification Net assets at the beginning of the year, as restated	8,173,306	4,233,365	12,406,671

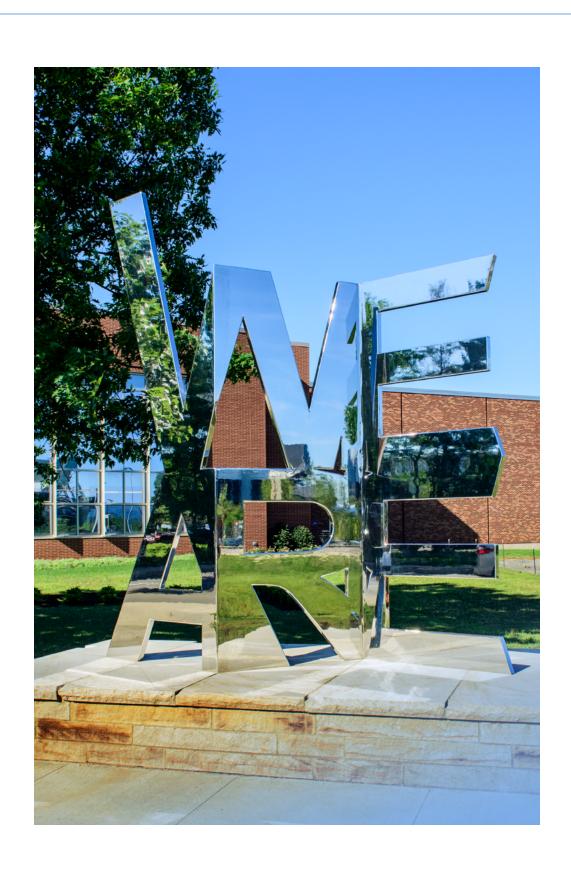
THE PENNSYLVANIA STATE UNIVERSITY CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED JUNE 30, 2023 AND 2022

(in thousands)

	June 30, 2023	June 30, 2022
Cash flows from operating activities:		
ncrease (decrease) in net assets	\$ 361,599	\$ (14,051)
Adjustments to reconcile change in net assets to net cash provided by operating activities -		
Actuarial adjustment on annuities payable	11,454	6,805
Contributions restricted for long-term investment	(104,297)	(166,153)
Interest and dividends restricted for long-term investment	(22,551)	(43,692)
Net realized and unrealized (gains) losses on long-term investments	(301,052)	650,546
Depreciation and amortization expense	549,574	481,589
Noncash lease expense	6,086	(2,187)
Write-offs and disposals of assets	30,334	5,174
Contributions of land, buildings and equipment	(2,045)	(1,419)
Provision for bad debts	44,098	4,451
Decrease (increase) in deposits held for others	6,248	(2,917)
Increase in receivables	(126,565)	(171,305)
Increase in inventories	(4,910)	(13,059)
(Increase) decrease in prepaid expenses and other assets	(17,583)	82,991
Decrease in accounts payable and other accrued expenses	(1,757)	(113,135)
Increase in deferred revenue	35,753	9,97
Decrease in accrued postretirement benefits	(250,446)	(589,228)
Net cash provided by operating activities	213,940	124,381
Cash flows from investing activities: Purchase of land, buildings and equipment	(693,602)	(742,661)
Increase in deposits held by bond trustees	(140,454)	(106,334)
Repayments and advances on student loans	(1,461)	(1,235)
Collections on student loans	4.074	5,145
Purchase of investments	(3,934,661)	(4,076,999)
Proceeds from sale of investments	4,213,256	3,595,795
Net cash used in investing activities	(552,848)	(1,326,289)
Net cash used in investing activities	(552,646)	(1,520,205)
Cash flows from financing activities:		
Contributions restricted for long-term investment	104,297	166,153
Interest and dividends restricted for long-term investment	22,551	43,692
Decrease of acceptance	(7,876)	(7,727)
Payments of annuity obligations	(7,070)	
Proceeds from long-term debt	236,758	514,300
	(, ,	
Proceeds from long-term debt	236,758 (119,885)	(262,580)
Proceeds from long-term debt Principal payments on long-term debt	236,758	(262,580) (7,317)
Proceeds from long-term debt Principal payments on long-term debt Refundable federal student loans	236,758 (119,885) (7,211)	(262,580) (7,317) 446,521
Proceeds from long-term debt Principal payments on long-term debt Refundable federal student loans Net cash provided by financing activities	236,758 (119,885) (7,211) 228,634	514,300 (262,580) (7,317) 446,521 (755,387) 1,904,988

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

See notes to consolidated financial statements



Notes to Consolidated Financial Statements

1. THE UNIVERSITY AND RELATED ENTITIES

The Pennsylvania State University ("University"), which was founded in 1855 as an instrumentality of the Commonwealth of Pennsylvania ("Commonwealth" or "Pennsylvania"), is organized as a non-profit corporation under the laws of the Commonwealth. As Pennsylvania's land grant university, the University is committed to improving the lives of the people of Pennsylvania, the nation and the world through its integrated, tri-part mission of high-quality teaching, research and outreach. In addition to its main campus located in University Park, PA, the University has a physical presence throughout the Commonwealth at its twenty-three commonwealth campuses, and a virtual presence globally via its World Campus.

As a state-related institution, the University receives an annual appropriation from the Commonwealth. The Commonwealth's General Assembly is not obligated to appropriate funding to the University, and there is no assurance that future appropriations will be made at either historical levels or to the extent requested by the University. The University's operating appropriation from the Commonwealth was \$326.5 million and \$323.8 million for the years ended June 30, 2023 and 2022, respectively.

Governance of the University, including oversight of administration and financial operations, is vested solely with the University's Board of Trustees (the "Board"). The Board is comprised of thirty-eight members. Thirty-six of the trustees are voting members, nine of whom are either appointed by the Governor of the Commonwealth or are cabinet-level members of the Governor's administration. The remaining voting members are elected by alumni (nine), elected by agricultural societies active in the Commonwealth (six), elected by the Board representing business and industry (six), elected by the Board as at-large members (three), a student trustee (one), an academic trustee (one), and the immediate past president of the Penn State Alumni Association (one).

BASIS OF PRESENTATION

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

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF ACCOUNTING

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

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

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

Net assets without donor restrictions are net assets not subject to donor-imposed restrictions. These net assets may be designated for specific purposes at the discretion of management or may otherwise be limited by contractual agreements with outside parties. Revenue from donor-restricted sources is reclassified as revenue without donor restrictions when the circumstances of the restriction have been fulfilled. Donor-restricted contributions 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.

RESTATEMENT

The accompanying financial statements for the year ended June 30, 2022 have been restated to correct certain errors related to the classification of certain donor gifts and related matching restrictions that should have been reported as with donor restrictions in prior years. There was no impact to total net assets or to cash flows. The following financial statement line items at were affected by the change:

(in thousands of dollars)	As previously reported		Adjustment		Adjustment		s restated	
Net assets as of July 1, 2021:								
Without donor restrictions	\$ 8,615,611	\$	(442,305)	\$	8,173,306			
With donor restrictions	3,791,060		442,305		4,233,365			
Total	\$ 12,406,671	\$	-	\$	12,406,671			
Fiscal year 2022 activity:								
Operating revenues:								
Gifts and pledges without donor restrictions	\$ 95,753	\$	(2,904)	\$	92,849			
Gifts and pledges with donor restrictions	24,333		2,904		27,237			
Investment return, net without donor restrictions	332,803		(110,865)		221,938			
Investment return, net with donor restrictions	1,574		110,865		112,439			
Net assets released from restrictions without donor restrictions	50,545		118,749		169,294			
Net assets released from restrictions with donor restrictions	(50,545)		(118,749)		(169,294)			
Nonoperating activities:	'							
Current year investment returns without donor restrictions	(458,155)		(20,206)		(478,361)			
Current year investment returns with donor restrictions	(358,038)		20,206		(337,832)			
Net asset transfer due to donor intent without donor restrictions	-		(20,060)		(20,060)			
Net asset transfer due to donor intent with donor restrictions	\$ -	\$	20,060	\$	20,060			
Net assets as of June 30, 2022:								
Without donor restrictions	\$ 8,856,910	\$	(477,591)	\$	8,379,319			
With donor restrictions	3,535,710		477,591		4,013,301			
Total	\$ 12,392,620	\$	-	\$	12,392,620			

RECLASSIFICATION

Certain 2022 revenue amounts have been reclassified to conform to the 2023 presentation to reflect recovery of indirect costs in Commonwealth of Pennsylvania – special contracts, United States Government grants and contracts, and private grants and contracts revenue line items. Additionally, certain 2022 operating expense amounts have been reclassified to conform to the 2023 presentation related to subsidiary eliminations within academic and student services, research, public service, institutional support, and auxiliary enterprises.

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 receipts of \$71.8 million, included in deferred revenue at June 30, 2022, were recognized during the year ended June 30, 2023. Tuition receipts of \$72.0 million, included in deferred revenue at June 30, 2021, were recognized during the year ended June 30, 2022. Institutional financial aid provided by the University for tuition and fees is reflected as a reduction of tuition and fee revenue. As tuition contracts have a duration of one year or less, the University has elected to apply the optional exemption prescribed by ASC 606-10-50-14 and, as such, has not disclosed the aggregate transaction price allocated to unsatisfied performance obligations or the time at which the revenue associated with these unsatisfied performance obligations is expected to be recognized. At June 30, unsatisfied performance obligations under tuition contracts relate solely to summer semester instruction to be provided in July and August of the subsequent year. Transaction prices for tuition and fees are determined and allocated based on the applicable published tuition and fees schedules.

Grants and Contracts

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

Grants and contracts receipts of \$36.9 million, included in deferred revenue at June 30, 2022, were recognized during the year ended June 30, 2023. Grants and contracts receipts of \$32.9 million, included in deferred revenue at June 30, 2021, were recognized during the year ended June 30, 2022. The University has entered into numerous grants and contracts, with periods of performance ending at various dates from July 1, 2023 through December 31, 2050. The estimated performance obligations remaining under these grants and contracts as of June 30, 2023 total \$1.142 billion. 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, 2022 and 2021 were recognized during the years ended June 30, 2023 and 2022. 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

Patient care service revenue is reported at the amount that reflects 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 health insurers and government programs), and others and includes variable consideration for retroactive revenue adjustments due to settlement of audits, reviews, and investigations. Generally, the Health System bills the patients and third-party payors several days after the services are performed or the patient is discharged from the facility. Revenue is 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's hospital receiving inpatient acutecare services or patients receiving services in the Health System's outpatient centers or other clinical settings. The Health System measures the performance obligation from admission into the hospital, or the commencement of an outpatient services or other visit, to the point when it is no longer required to provide services to that patient, which is generally at the time of discharge or completion of the outpatient services or other visit. Revenue for performance obligations satisfied at a point in time is generally recognized when goods are provided to the Health System's patients and customers in a retail setting (for example, pharmaceuticals and medical equipment) and the Health System does not believe it is required to provide additional goods or services related to that sale.

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 determines the transaction price based on standard charges for goods and services provided, reduced by contractual adjustments provided to third-party payers, discounts provided to uninsured patients in accordance with the Health System's policy, and implicit price concessions provided to uninsured patients. The Health System determines its estimates of contractual adjustments and discounts based on contractual agreements, its discount policies, and historical experience. The Health System determines its estimate of implicit price concessions based on its historical collection experience with this class of patients.

Generally, patients who are covered by third-party payors are responsible for related deductibles and coinsurance, which vary in amount. The Health System also provides services to uninsured patients and offers those uninsured patients a discount, either by policy or law, from standard charges. The Health System estimates the transaction price for patients with deductibles and coinsurance and from those who are uninsured based on historical experience and current market conditions. The initial estimate of the transaction price is determined by reducing the standard charge by any contractual adjustments, discounts, and implicit price concessions. Subsequent changes to the estimate of the transaction price are generally recorded as adjustments to patient service revenue in the period of the change. For the years ended June 30, 2023 and 2022, changes in its estimates of implicit price concessions, discounts, and contractual adjustments for performance obligations satisfied in prior years were not significant. Subsequent changes that are determined to be the result of an adverse change in the patient's ability to pay are recorded as bad debt expense.

Consistent with the Health System's mission, care is provided to patients regardless of their ability to pay. Therefore, the Health System has determined it has provided implicit price concessions to uninsured patients and patients with other uninsured balances (for example, copays and deductibles). The implicit price concessions included in estimating the transaction price represent the difference between amounts billed to patients and the amounts the Health System expects to collect based on its collection history with those patients.

Patients who meet the Health System's criteria for charity care are provided care without charge or at amounts less than established rates. Such amounts determined to qualify as charity care are not reported as revenue. The amount of charges foregone under the Health System's charity care policy was \$90.6 million and \$81.9 million for the years ended June 30, 2023 and 2022, respectively. The direct and indirect costs of charity care, based on a ratio of the Health System's operational costs to its gross charges, was \$40.8 million and \$38.6 million for the years ended June 30, 2023 and 2022, respectively.

The Health System has agreements with third party payors that provide for reimbursements at amounts different from its established rates. Cost report settlements result from the adjustment of interim payments to final reimbursement under the Medicare, Medicaid, Blue Cross/Blue Shield, and HMO programs that are subject to audit by fiscal intermediaries.

Laws and regulations concerning government programs, including Medicare and Medicaid, are complex and subject to varying interpretation. As a result of investigations by governmental agencies, various health care entities have received requests for information and notices regarding alleged noncompliance with those laws and regulations, which, in some instances, have resulted in entities entering into significant settlement agreements. Compliance with such laws and regulations may also be subject to future government review and interpretation, as well as significant regulatory action, including fines, penalties, and potential exclusion from the related programs. There can be no assurance that regulatory authorities will not challenge the Health System's compliance with these laws and regulations, and it is not possible to determine the impact (if any) such claims or penalties would have upon the Health System. In addition, the contracts the Health System has with commercial payors also provide for retroactive audit and review of claims.

Settlements with third-party payors for retroactive adjustments due to audits, reviews, or investigations are considered variable consideration and are included in the determination of the estimated transaction price for providing patient care. These settlements are estimated based on the terms of the payment agreement with the payor, correspondence from the payor, and the Health System's historical settlement activity, including an assessment to ensure that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the retroactive adjustment is subsequently resolved. Estimated settlements are adjusted in future periods as adjustments become known (that is, new information becomes available) or as years are settled or are no longer subject to such audits, reviews, and investigations. Adjustments arising from a change in the transaction price were not significant in 2023 or 2022.

Additionally, during 2023 and 2022, the Health System recognized \$6.2 million and \$6.3 million, respectively, of net patient service revenue as a result of Medical Assistance payments made by the Commonwealth of Pennsylvania. These payments are intended to help offset medical education costs.

The Health System recognizes revenue related to retail pharmacy at a point in time. Retail pharmacy sales are recognized within Health System revenue on the accompanying consolidated statements of activities and totaled \$120.6 million and \$90.5 million during the years ended June 30, 2023 and 2022, 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, 2023 and 2022. 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, 2023 and 2022 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:

(in thousands of dollars)	2023	2022
Supplemental reconciliation data:		
Cash and cash equivalents as shown in the statements of financial position	\$ 1,007,504	\$ 1,058,303
Restricted cash and cash equivalents included in deposits held by bond trustees	3,779	67,362
Restricted cash and cash equivalents included in deposits held for others	28,044	23,936
Total unrestricted and restricted cash and cash equivalents as shown in the statements of cash flows	\$ 1,039,327	\$ 1,149,601
Other supplemental data:	2023	2022
Interest paid	\$ 136,092	\$ 115,323

Capitalized costs accrued related to construction are \$84.5 million and \$78.8 million as of June 30, 2023 and 2022, respectively. Taxes paid for 2023 and 2022 are considered immaterial. Cash and cash equivalents include certain investments in highly liquid instruments with remaining maturities of 90 days or less, except for such assets held by the University's investment managers as part of their long-term investment strategies. Short-term investments include other current investments held for general operating purposes with maturities greater than 3 months but less than 12 months.

ACCOUNTS RECEIVABLE

Accounts receivable at June 30 consists of the following:

(in thousands of dollars)	2023		2022
Grants and contracts, net of allowance of \$3,100 and \$2,330	\$ 255,462	\$	212,050
Patient accounts receivable	568,116		531,271
Student receivables, net of allowance of \$63,525 and \$14,845	54,802		49,780
Other, net of allowance of \$12 and \$8,263	61,836		53,071
Total accounts receivable, net	\$ 940,216	\$	846,172

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. During the year ended June 30, 2023, the University changed its process for delinquent student receivable collections, resulting in an increased gross receivable offset by an increased allowance.

LOANS TO STUDENTS

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

Funds advanced by the federal government of \$16.2 million and \$21.1 million at June 30, 2023 and 2022, respectively, are ultimately refundable to the government and are classified as liabilities in the consolidated statements of financial position. The federal liability related to the Perkins loan program will be reduced through the return of funds as required by the Department of Education.

Loans to students consisted of the following at June 30:

(in thousands of dollars)	2023	2022
Loans to students:		
Federal government loan programs:		
Perkins loan program	\$ 14,250	\$ 20,641
Health Professions Student Loans and Loans for Disadvantaged Students	-	1
Federal government loan programs	14,250	20,642
Institutional loan programs	18,411	18,806
	32,661	39,448
Less allowance for doubtful accounts:		
Balance, beginning of year	(7,444)	(3,050)
Provision for doubtful accounts	3,521	(4,394)
Balance, end of year	(3,923)	(7,444)
Loans to students, net	\$ 28,738	\$ 32,004

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:

2023	days less	46-75	days	76-1 day	_	_	ver days	•	Total
Loans to students:									
Federal government loan programs	\$ 13,713	\$	20	\$	16	\$	501	\$	14,250
Institutional loan programs	15,024		17		12		3,358		18,41
Total loans to students	\$ 28,737	\$	37	\$	28	\$	3,859		32,66°
Allowance for doubtful accounts:									
Federal government loan programs									(1,421
Institutional loan programs									(2,502
Total allowance for doubtful accounts									(3,923
Total loans to students, net								\$	28,738
(in thousands of dollars)									
2022	days	46-75	days	76-1 day		_	ver days	-	Total
Loans to students:			\\\\\		'		'		
Federal government loan programs	\$ 17,468	\$	33	\$	30	\$	3,111	\$	20,642
Institutional loan programs	16,485		26		25		2,270		18,806
Total loans to students	\$ 33,953	\$	59	\$	55	\$	5,381		39,448
Allowance for doubtful accounts:									
Federal government loan programs									(4,889
Institutional loan programs									(2,555

INVENTORIES

Total loans to students, net

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 are comprised of the University's endowment and other investments held for general operating purposes. The University's investments are reported at fair value in the accompanying financial statements with gains and losses included in the consolidated statement of activities. The University believes that the estimated fair value is a reasonable estimate of market value as of June 30, 2023 and 2022. The fair value estimations include assumptions and methods that were reviewed by University management. The estimated fair value amounts for public securities held by the University with readily determinable fair values have been based on information as supplied by the various financial institutions that act as trustees or custodians for the University.

32,004

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

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

(in thousands of dollars)	2023	2022
Land	\$ 187,985	\$ 181,833
Buildings	9,243,547	8,892,700
Improvements other than buildings	887,180	807,507
Equipment	2,195,927	2,071,893
Assets under construction	771,342	850,068
Total plant	13,285,981	12,804,001
Less accumulated depreciation	(6,284,570)	(5,918,329)
Total investment in plant, net	\$ 7,001,411	\$ 6,885,672

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 \$549.6 million and \$484.5 million for the fiscal years ended June 30, 2023 and 2022, respectively. The University has certain building and equipment lease agreements in effect which are considered finance leases that are included as long-term debt in the statements of financial position. Buildings and equipment held under finance leases are amortized on a straight-line basis over the shorter of the lease terms or the estimated useful lives of the assets. Total investment in plant associated with these leases was \$42.3 million and \$50.4 million at June 30, 2023 and 2022, respectively.

LEASES

The University determines if an arrangement is or contains a lease at inception of the contract. The right-of-use (ROU) assets represent the right to use the underlying assets for the lease term and the lease liabilities represent the obligation to make lease payments arising from the leases. ROU assets are recognized at commencement date based on the present value of lease payments over the lease term, adjusted for any initial direct costs incurred and lease incentives received, with the subsequent measurement based on lease classification. The lease liability is initially measured as the present value of unpaid lease payments and is subsequently measured using the effective interest method. The value of an option to extend or terminate a lease is reflected to the extent it is reasonably certain the University will exercise that option. The University has used the incremental borrowing rate when measuring its leases as the rate implicit in the lease is not readily determinable. The University's incremental borrowing rate is determined based on the Tax-Exempt Bloomberg Valuation Services (BVAL) Municipal AAA Curves Index Rate. The Index is constructed using hourly trades from the Municipal Securities Rulemaking Board (MSRB) AAA-rated municipal bonds normalized for differences in credit, optionality, and coupon size. ASC 842 defines a short-term lease as a lease with a term of twelve months or less that does not include a purchase option that is reasonably certain of being exercised ("short-term leases"). The University has elected, for all asset classes, the short-term lease recognition exemption

provided in the standard that eliminates the requirement to recognize on the statements of financial position any short-term leases. The lease expense for these short-term leases is recognized on a straight-line basis over the lease term within operating expenses in the consolidated statements of activities and is not considered material to the consolidated financial statements. Finance lease ROU assets are included in total investment in plant, net, with the related liabilities included in current and noncurrent long-term debt in the consolidated statements of financial position. Operating lease ROU assets and related current and long-term liabilities are separately presented in the consolidated statements of financial position. Expenses for operating leases, amortization of assets held under finance leases, and finance lease interest expense are recognized within operating expenses in the consolidated statements of activities.

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

ACCOUNTS PAYABLE AND OTHER ACCRUED EXPENSES

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

(in thousands of dollars)	2023		2022	
Accounts payable (non-Health System)	\$	253,577	\$ 249,140	
Health System accounts payable and other accrued expenses		539,664	535,351	
Health System Medicare APP		-	37,631	
Accrued payroll and other related liabilities		103,583	127,464	
Accrued interest		31,664	30,835	
Student deposits		3,632	3,805	
Total accounts payable and other accrued expenses	\$	932,120	\$ 984,226	

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 statements of financial position. The following table details the change in liabilities:

(in thousands of dollars)	
Balance as of June 30, 2021	\$ 102,925
Adjustment to liability	4,972
Accretion expense	5,697
Liabilities settled	(7,198)
Balance as of June 30, 2022	106,396
Adjustment to liability	5,273
Accretion expense	4,624
Liabilities settled	(6,784)
Balance as of June 30, 2023	\$ 109,509

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:

(in thousands of dollars)			
2023	Without donor restrictions	With donor restrictions	Total
Net assets by category:			
Endowment funds	\$ 851,333	\$ 3,606,007	\$ 4,457,340
University capital activities	1,453,685	19,435	1,473,120
Operating general funds carryforward	818,350	-	818,350
Other unit non-general fund reserves	368,955	206,606	575,561
University other reserves	197,768	-	197,768
Pledges	-	207,022	207,022
Split-interest agreements	-	110,434	110,434
Student loan funds	24,779	20,154	44,933
Net investment in plant	3,727,311	-	3,727,311
Postretirement benefits and pension prefunding	(546,563)	-	(546,563)
Penn State Health operations	1,420,375	-	1,420,375
Non-controlling interest in Penn State Health	268,568	-	268,568
Total net assets	\$ 8,584,561	\$ 4,169,658	\$ 12,754,219

(in thousands of dollars)			
2022 (as restated)	Without donor restrictions	With donor restrictions	Total
Net assets by category:			
Endowment funds	\$ 834,280	\$ 3,460,316	\$ 4,294,596
University capital activities	1,418,581	16,007	1,434,588
Operating general funds carryforward	962,139	-	962,139
Other unit non-general fund reserves	353,498	198,932	552,430
University other reserves	183,404	-	183,404
Pledges	-	214,669	214,669
Split-interest agreements	-	103,775	103,775
Student loan funds	21,302	19,602	40,904
Net investment in plant	3,606,865	-	3,606,865
Postretirement benefits and pension prefunding	(880,161)	-	(880,161)
Penn State Health operations	1,542,270	-	1,542,270
Non-controlling interest in Penn State Health	337,141	-	337,141
Total net assets	\$ 8,379,319	\$ 4,013,301	\$ 12,392,620

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 June 2016, the FASB issued Accounting Standards Update (ASU) No. 2016-13, "Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments." This update includes changes to the accounting and measurement of financial assets, including the University's accounts receivable and loans to students, by requiring the University to recognize an allowance for all expected losses over the life of the financial asset at origination. This differs from the current practice where an allowance is not recognized until the losses are considered probable. Credit losses are recognized through the recording of an allowance rather than as a write-down of the carrying value. This update is effective for the University beginning July 1, 2023. Upon adoption, the ASU will be applied using a modified retrospective transition method to the beginning of the year of adoption. The University is currently evaluating the impact this guidance may have on its consolidated financial statements.

CORONAVIRUS PANDEMIC

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

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

Under CARES, CRRSAA, and ARP, the University received a total allocation of \$131.2 million for emergency aid to students and \$158.8 million for institutional needs. The University distributed student emergency grants of \$76.2 million during 2022, with the disbursement of funds presented within academic and student services expense and the associated revenue captured in United States Government grants and contracts in the consolidated statement of activities. Revenues of \$73.8 million were also recognized as United States Government grants and contracts in the consolidated statement of activities in 2022, related to the institutional portion of the allotted funds. The institutional funds were used to offset lost tuition revenues including student bad debt, refunds for housing and dining services, and COVID testing costs. CARES, CRRSAA, and ARP funding were fully utilized at June 30, 2022.

As allowed by the CARES Act, the University had deferred payment of \$34.0 million for the employer portion of Social Security payroll tax at June 30, 2022, which is included in accounts payable and other accrued expenses and other liabilities in the consolidated statement of financial position. In December 2022, this amount was paid.

During the years ended June 30, 2023 and 2022, the Health System received payments of \$8.1 million and \$8.5 million, respectively, as part of general and targeted distributions of the CARES Act Provider Relief Fund and ARP Rural payments. These payments are not subject to repayment, provided the Health System is able to attest to and comply with the terms and conditions of the funding including demonstrating that the distributions received have been used for health care-related expenses or lost revenue attributed to COVID-19. Based on an analysis of compliance and reporting requirements of the Provider Relief Fund and ARP programs and the impact of the pandemic on the Health System's operating results through June 30, 2023, the Health System believes there is reasonable assurance the applicable terms and conditions required to retain the funds are met as of June 30, 2023 and 2022. The Health System has also received funding from various other grants and had funding sources obligated through the Federal Emergency Management Agency (FEMA). The Health System has recognized \$19.9 million and \$8.5 million for the years ended June 30, 2023 and 2022, respectively, from CARES Act and FEMA funding.

The U.S. Department of Health and Human Services' requirements for the uses of the Provider Relief Fund and the ARP payments are subject to change and are open to interpretation and clarification; therefore, there may be changes in the amounts recognized as revenue during the years ended June 30, 2023 and 2022. If the Health System is unable

to attest to or comply with future terms and conditions, the ability to retain some or all of the distributions received may be impacted. Any changes in amounts recognized as a result of new guidance, interpretation, or clarification will be recognized in the period in which the change occurred.

The CARES Act revised the Medicare accelerated payment program ("Medicare APP"). During the year ended June 30, 2020, the Health System requested accelerated Medicare payments, which allows for eligible health care facilities to request up to six months of advance Medicare payments for acute-care hospitals. Effective October 1, 2020, the repayment terms of the accelerated Medicare payments began one year after the first payment was issued and were recouped at 25 percent of the Medicare payments to the Health System for 11 months. After 11 months, the recoupment increased to 50 percent of the Medicare payments to the Health System for 6 additional months. Unapplied accelerated payment amounts that were unpaid after this 17-month period were due to the Centers for Medicare and Medicaid Services, plus interest at a rate of 4 percent on the outstanding balance. During the year ended June 30, 2020, the Health System received approximately \$160.3 million from these accelerated Medicare payment requests. As of June 30, 2022 and 2021, \$37.6 million and \$117.1 million, respectively, remained as a liability; the remaining outstanding balance was recouped during the year ended June 30, 2023.

The federal COVID-19 Public Health Emergency (PHE) declaration ended on May 11, 2023.

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 anticipates collecting sufficient revenue to cover general expenditures not covered by donor-restricted resources. Refer to the statements of cash flows, which identifies the sources and uses of the University's cash and shows positive cash generated by operations for the years ended June 30, 2023 and 2022.

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

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

The following reflects the University's financial assets as of June 30, 2023 and 2022, 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.

(in thousands of dollars)	2023	2022
Total assets	\$ 19,704,296	\$ 19,439,689
Less:		
Inventories	(90,572)	(85,662)
Prepaid expenses and other assets	(110,579)	(127,277)
Total investment in plant, net	(7,001,411)	(6,885,672)
Beneficial interest in perpetual trusts	(28,117)	(26,240)
Operating lease right-of-use assets	(164,769)	(172,590)
Other assets	(223,789)	(191,385)
Total financial assets	12,085,059	11,950,863
Less:		
Noncurrent investments	(8,057,417)	(8,045,673)
Contractual or donor-imposed restrictions:		
Deposits held by bond trustees	(268,489)	(191,618)
Deposits held for others	(38,012)	(34,460)
Receivables subject to time restrictions	(38,676)	(42,793)
Receivables subject to donor-imposed restrictions	(120,426)	(127,333)
Loans to students, net	(28,738)	(32,004)
Financial assets available to meet cash needs for general expenditures within one year	\$ 3,533,301	\$ 3,476,982

4. INVESTMENTS

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

(in thousands of dollars)	2023	2022
Fixed income	\$ 3,594,516	\$ 3,912,368
Equity investments	4,319,325	4,217,348
Real assets	827,249	642,506
Opportunistic	876,924	823,335
Total	\$ 9,618,014	\$ 9,595,557

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

Equity index futures contracts comprise the University's derivative instruments as of June 30, 2023 and 2022, and are included in the fair value of the University's investments. These contracts are fully cash collateralized and marked to market daily. Futures contracts have minimal credit risk because the counterparties are the exchanges themselves and are employed as a low-cost investment vehicle with daily liquidity which allows the University to maintain desired market exposure considering irregular cash flows. Derivative Securities were immaterial as of June 30, 2023 and 2022.

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 expendable 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, on behalf of the Board, 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.

As a result of the restatement mentioned in Note 2, some of the fiscal year 2022 data below has been restated.

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, 2023 and 2022, funds with an original gift value of \$171.9 million and \$142.1 million were "underwater" by \$12.2 million and \$12.8 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:

(in thousands of dollars)			
2023	Without donor restrictions	With donor restrictions	Total
Donor-restricted endowment funds	\$ -	\$ 3,606,007	\$ 3,606,007
Funds functioning as endowments	851,333	-	851,333
Total net assets	\$ 851,333	\$ 3,606,007	\$ 4,457,340

(in thousands of dollars)			
2022 (restated)	Without donor restrictions	With donor restrictions	Total
Donor-restricted endowment funds	\$ -	\$ 3,460,316	\$ 3,460,316
Funds functioning as endowments	834,280	-	834,280
Total net assets	\$ 834,280	\$ 3,460,316	\$ 4,294,596

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

(in thousands of dollars)			
2023	Without donor restrictions	With donor restrictions	Total
Endowment net assets, beginning of the year	\$ 834,280	\$ 3,460,316	\$ 4,294,596
Endowment return, net	38,994	175,086	214,080
Contributions	-	86,928	86,928
Endowment spending	(29,644)	(134,066)	(163,710)
Transfers to create funds functioning as endowments	7,703	-	7,703
Net asset transfer due to donor intent	-	17,743	17,743
Endowment net assets, end of the year	\$ 851,333	\$ 3,606,007	\$ 4,457,340

(in thousands of dollars)					
2022 (restated)	Without donor restrictions	With donor restrictions	Total		
Endowment net assets, beginning of the year	\$ 902,974	\$ 3,621,975	\$ 4,524,949		
Endowment return, net	(68,638)	(204,962)	(273,600)		
Contributions	-	144,044	144,044		
Endowment spending	(25,210)	(110,170)	(135,380)		
Transfers to create funds functioning as endowments	25,154	-	25,154		
Net asset transfer due to donor intent	-	9,429	9,429		
Endowment net assets, end of the year	\$ 834,280	\$ 3,460,316	\$ 4,294,596		

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 investment objective for the University's pooled endowment funds is to grow the real (inflation adjusted) purchasing power of the assets through a prudent long-term investment strategy. To satisfy its long-term objective, the University relies on a total return strategy in which investment returns are achieved through both capital appreciation and income. The University targets a diversified asset allocation, with prudent risk constraints, which places a greater emphasis on equity-based investments to achieve its long-term return objectives.

The University expects the spending policy to allow its endowment to provide generous current spending while preserving "intergenerational equity". The spending amount for fiscal year 2023 and 2022 was based on 5.0% and 4.5%, respectively, of the endowment plan's average fair market value over the prior twenty quarters preceding the fiscal year in which the distribution was planned and was net of administrative expenses.

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 about the University's financial assets and liabilities, as categorized by level of the fair value hierarchy according to the lowest level of inputs significant to each measurement or net asset value (NAV) per share as of June 30, 2023 and 2022:

(in thousands of dollars)					
2023	Level 1	Level 2	Level 3	NAV	Total
Assets:					
Long-term Investment Pool:					
Fixed income					
Public separate accounts	\$ -	\$ 366,126	\$ -	\$ -	\$ 366,126
Public funds	110,730	-	-	-	110,730
Private funds	-	-	-	424,446	424,446
Equity investments					
Public separate accounts	1,145,174	-	-	-	1,145,174
Private funds	-	-	-	2,763,331	2,763,331
Real assets					
Public separate accounts	71,129	-	-	-	71,129
Public funds	153,350	-	-	-	153,350
Private funds	-	-	-	601,042	601,042
Opportunistic					
Private funds	-	-	-	606,237	606,237
Total	\$ 1,480,383	\$ 366,126	\$ -	\$ 4,395,056	\$ 6,241,565
Operating Investments:					
Fixed income					
Public separate accounts	\$ 173	\$ 2,423,970	\$ -	\$ -	\$ 2,424,143
Public funds	174,186	Ψ 2,423,370			174,186
Private funds	174,100	_		94,885	94,885
Equity investments				34,003	34,003
Public separate accounts	35,633	_		_	35,633
Private separate accounts	-	-	3,125	_	3,125
Public funds	281,855	-		_	281,855
Private funds		-	4,284	85,923	90,207
Real assets			1,201	00,320	30,207
Public funds	1,039	_		_	1,039
Private funds	,000	-	7	682	689
Opportunistic			· · ·	552	
Public funds	68	-		_	68
Private funds	-	-	_	270,619	270,619
Total	\$ 492,954	\$ 2,423,970	\$ 7,416	\$ 452,109	\$ 3,376,449
Deposits held by bond trustees:					
Fixed income					
Public funds	\$ 264,710	\$ -	\$ -	\$ -	\$ 264,710
Deposits held for others	\$ -	\$ 9,968	\$ -	\$ -	\$ 9,968
Beneficial interest in perpetual trusts	\$ -	\$ -	\$ 28,117	\$ -	\$ 28,117
Liabilities:					
Present value of annuities payable	\$ -	\$ -	\$ 67,573	\$ -	\$ 67,573

(in thousands of dollars)					
2022	Level 1	Level 2	Level 3	NAV	Total
Assets:					
Long-term Investment Pool:					
Fixed income					
Public separate accounts	\$ 173	\$ 493,275	\$ -	\$ -	\$ 493,448
Public funds	210,562	-	-	-	210,562
Private funds	-	-	-	328,267	328,267
Equity investments					
Public separate accounts	572,676	-	-	-	572,676
Private separate accounts	-	-	1,525	-	1,525
Public funds	79,326	-	-	-	79,326
Private funds	-	-	-	3,200,355	3,200,355
Real assets			·		
Public funds	88,306	-	-	-	88,306
Private funds	-	-	-	552,442	552,442
Opportunistic		•			
Private funds	-	-	-	561,089	561,089
Total	\$ 951,043	\$ 493,275	\$ 1,525	\$ 4,642,153	\$ 6,087,996
Operating Investments:					
Fixed income					
Public separate accounts	\$ 4,792	\$ 2,519,101	\$ -	\$ -	\$ 2,523,893
Public funds	259,562	-	-	-	259,562
Private funds	-	-	-	96,636	96,636
Equity investments					
Public separate accounts	31,065	1	-	-	31,066
Private separate accounts	388	-	136	-	524
Public funds	250,165	-	-	-	250,165
Private funds	-	-	4,452	77,079	81,531
Real assets					
Public funds	1,586	-	-	-	1,586
Private funds	-	-	7	165	172
Opportunistic					
Public funds	74	-	-	-	74
Private funds	-	-	-	262,172	262,172
Total	\$ 547,632	\$ 2,519,102	\$ 4,595	\$ 436,052	\$ 3,507,381
Deposits held by bond trustees:					
Fixed income					
Public funds	\$ 124,256	\$ -	\$ -	\$ -	\$ 124,256
Deposits held for others	\$ -	\$ 10,524	\$ -	\$ -	\$ 10,524
Beneficial interest in perpetual trusts	\$ -	\$ -	\$ 26,240	\$ -	\$ 26,240
Liabilities:					
Present value of annuities payable	\$ -	\$ -	\$ 63,995	\$ -	\$ 63,995

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

The Long-Term Investment Pool (LTIP) is a mutual fund-like vehicle used for investing the University's endowment funds, funds functioning as endowments, and other operating funds that are expected to be held long-term. A unit method of accounting for the LTIP is utilized by the University. Each participating fund enters and withdraws from the LTIP based on monthly unit values.

The following tables present information related to changes in Level 3 for each category of financial assets and liabilities for years ended June 30, 2023 and 2022:

(in thousands of dollars)	Long-Term Investment Pool		Operating Investments		eficial est in etual ists
Assets:					
Balance as of June 30, 2021	\$ 1,30	8 \$	4,791	\$	29,931
Purchases		-	136		-
Total realized and unrealized (losses) gains	21	7	(332)		(3,691)
Balance as of June 30, 2022	1,52	5	4,595		26,240
Gifts		-	-		1,029
Total realized and unrealized (losses) gains		-	1,296		848
Net transfers in (out)	(1,525	5)	1,525		-
Balance as of June 30, 2023	\$	- \$	7,416	\$	28,117

	Present Value of Annuities Payable	
Liabilities:		
Balance as of June 30, 2021	\$ 64,917	
Actuarial adjustment of liability	1,726	
Gifts	772	
Sales	(3,420)	
Balance as of June 30, 2022	63,995	
Actuarial adjustment of liability	1,551	
Gifts	2,904	
Sales	(877)	
Balance as of June 30, 2023	\$ 67,573	

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

		Fair \	V alu	ıe		Unfunded Commitments	Redemption	Redemption	
(in thousands of dollars)		2023		2022		June 30, 2023	Frequency	Notice Period	
Private Funds With Redemption Ability:									
Fixed income investments	\$	393,545	\$	247,426	\$	59,812	Various	2-90 days	
Equity investments		1,273,408		1,661,652		-	Various	2-90 days	
Real asset investments		256,643		237,814		81,803	Various	2-90 days	
Opportunistic investments		750,127		730,960		-	Various	2-90 days	
Subtotal	\$	2,673,723	\$	2,877,852	\$	141,615			
Private Funds Without Redemption	n Ab	ility:							
Fixed income investments	\$	125,786	\$	177,477	\$	80,973			
Equity investments		1,575,846		1,615,782		461,384			
Real asset investments		345,081		314,793		237,842			
Opportunistic investments		126,729		92,301		108,667			
Subtotal	\$	2,173,442	\$	2,200,353	\$	888,866			
Total	\$	4,847,165	\$	5,078,205	\$	1,030,481			

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

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

Unfunded commitments represent remaining commitments of the LTIP's Private Funds as of June 30, 2023 that are due to be invested in the future.

7. CONTRIBUTIONS RECEIVABLE

Contributions receivable are summarized as follows as of June 30:

(in thousands of dollars)	2023		2	2022	
In one year or less	\$	50,316	\$	42,361	
Between one year and five years		54,756		68,283	
More than five years		131,382		133,463	
Contributions receivable, gross		236,454		244,107	
Less allowance		(1,757)		(1,656)	
Less discount		(50,611)		(49,702)	
Contributions receivable, net	\$	184,086	\$	192,749	

Contributions received during the years ended June 30, 2023 and 2022 are discounted at rates ranging from 3.96% to 5.40% and 2.80% to 3.18%, respectively. The discount rates for prior periods ranged from 0.11% to 6.28%.

At June 30, 2023 and 2022 the University has received bequest intentions of \$865.1 million and \$797.5 million, respectively, and certain other conditional promises to give of \$59.7 million and \$65.5 million, respectively. These intentions and conditional promises to give are not included in the consolidated financial statements.

8. LONG-TERM DEBT

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

(in thousands of dollars)	2023	2022
The Pennsylvania State University Bonds		
Series 2023	\$ 203,990	\$ -
Series 2022A	125,450	125,450
Series 2022B	26,500	26,500
Series 2020A	78,045	79,300
Series 2020B	303,795	314,675
Series 2020D	1,013,920	1,039,685
Series 2020E	47,585	52,330
Series 2019A	102,030	103,770
Series 2019B	111,165	113,835
Series 2018	60,025	61,140
Series 2017A	143,920	146,780
Series 2017B	111,260	114,115
Series 2016A	104,730	107,995
Series 2016B	169,050	180,645
Series 2015A	53,990	55,820
Series 2015B	83,345	87,965
Series 2007B	26,875	31,455
Pennsylvania Higher Educational Facilities Authority University Revenue Bonds (issued for The Pennsylvania State University)		
Series 2006	1,015	1,320
Series 2004	820	1,200
Penn State Health Taxable Bonds		
Series 2019	200,000	200,000
Cumberland County Municipal Authority Revenue Bonds (issued for Penn State Health)		
Series 2019	222,000	222,000
Lancaster County Hospital Authority Revenue Bonds (issued for Penn State Health)		
Series 2021	288,840	288,840
Lycoming County Authority College Revenue Bonds (issued for Penn College)		
Series 2021A	26,305	28,025
Series 2021B	21,180	21,980
Series 2016	42,735	44,865
Series 2015	1,090	1,700
Total bonds payable	3,569,660	3,451,390
Unamortized bond premiums	256,979	247,135
Unamortized deferred bond costs	(16,847)	(16,526)

(in thousands of dollars)	2023	2022
Notes payable and finance leases		
Notes payable	36,958	41,968
Finance lease obligations	39,173	45,083
Total notes payable and finance leases	76,131	87,051
Total long-term debt	\$ 3,885,923	\$ 3,769,050

Debt issuance	Interest rate mode	Interest rates	Payment ranges and maturity (in thousands of dollars)		
The Pennsylvania S	tate Unive	rsity Bonds			
Series 2023	Fixed	5.00% - 5.25%	\$2,985 to \$7,715 through September 2043 with \$45,220 and \$58,795 due September 2048 and 2053, respectively		
Series 2022A	Fixed	5.00% - 5.25%	\$1,845 to \$4,770 through September 2042 with \$27,765 and \$35,890 due September 2047 and 2052, respectively		
Series 2022B	Fixed	2.773% - 4.673%	\$890 to \$1,550 through September 2037 with \$8,940 due September 2042		
Series 2020A	Fixed	4.00% - 5.00%	\$1,320 to \$3,090 through September 2040 with \$17,980 and \$22,490 due September 2045 and 2050, respectively		
Series 2020B	Fixed	1.587% - 2.888%	\$5,895 to \$13,910 through September 2035 with \$67,170 and \$89,310 due September 2040 and 2050, respectively		
Series 2020D	Fixed	1.353% - 2.84%	\$26,085 to \$33,545 through September 2035 with \$304,225 and \$328,000 due September 2043 and 2050, respectively		
Series 2020E	Fixed	5.00%	\$4,985 to \$7,010 through March 2031		
Series 2019A	Fixed	5.00%	\$1,830 to \$6,720 through September 2049		
Series 2019B	Fixed	2.20% - 3.50%	\$2,735 to \$3,720 through September 2034 with \$20,455 and \$52,515 due September 2039 and September 2049, respectively		
Series 2018	Fixed	5.00%	\$1,155 to \$2,320 through September 2037 with \$16,650 and \$18,255 due September 2043 and September 2048, respectively		
Series 2017A	Fixed	5.00%	\$2,965 to \$5,965 through September 2037 with \$34,750 and \$44,620 due September 2042 and September 2047, respectively		
Series 2017B	Fixed	2.416% - 3.793%	\$2,920 to \$3,830 through September 2032 with \$21,305 and \$56,595 due September 2037 and September 2047, respectively		
Series 2016A	Fixed	5.00%	\$3,430 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%	\$1,920 to \$3,445 through September 2035 with \$20,000 due September 2040		
Series 2015B	Fixed	5.00%	\$4,860 to \$8,435 through September 2035		
Series 2007B	Fixed	5.25%	\$4,825 to \$5,955 through August 2027		
Pennsylvania Higher Educational Facilities Authority University Revenue Bonds					
Series 2006	Fixed	5.125%*	\$1,610 due September 2025		
Series 2004	Fixed	5.00%*	\$1,905 due September 2024		
*Annual interest costs to the University for interest rates greater than 3.00% are subsidized by PHEFA.					

Debt issuance	Interest rate mode	Interest rates	Payment ranges and maturity (in thousands of dollars)			
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			
Lancaster County H	ospital Aut	hority Revenue Bo	nds			
Series 2021	Fixed	5.00%	\$5,780 to \$13,690 through November 2041 with \$79,750 and \$152,421 due November 2046 and November 2051, respectively			
Lycoming County A	uthority Co	llege Revenue Bor	nds			
Series 2021A	Fixed	5.00%	\$2,015 to \$4,565 through July 2030			
Series 2021B	Fixed	0.782% - 3.014%	\$835 to \$1,930 through January 2038			
Series 2016	Fixed	2.125% - 5.00%	\$1,545 to \$4,075 through October 2037			
Series 2015	Fixed	2.75% - 5.00%	\$465 to \$625 through January 2025			

The Series 2023 Bonds are general obligation bonds issued in June 2023 for the purpose of financing various construction and renovation projects. The Series 2023 Bonds are subject to early redemption provisions, at the option of the University, beginning September 2033. The bonds maturing September 2048 and September 2053 are subject to mandatory sinking fund redemption.

The University believes it has complied with all financial debt covenants for the years ended June 30, 2023 and 2022.

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

Year	Annual Installments (in thousands of dollars)			
2024	\$ 91,085			
2025	96,885			
2026	105,690			
2027	109,270			
2028	113,105			
Thereafter	3,053,625			
Total	\$ 3,569,660			

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, 2023, the carrying value and estimated fair value of the University's bonds payable, including issuance premiums and deferred bond costs, are \$3.810 billion and \$3.297 billion, respectively. At June 30, 2022, the carrying value and estimated fair value of the University's bonds payable, including issuance premiums and deferred bond costs, are \$3.682 billion and \$3.289 billion, respectively. Certain bond issues have associated issuance premiums; these issuance premiums total \$257.0 million and \$247.1 million at June 30, 2023 and 2022, respectively, and are presented within the statements 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 \$16.8 million and \$16.5 million at June 30, 2023 and 2022, respectively, and are presented within the statements 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

The University has five notes payable included within the consolidated statements of financial position at June 30, 2023 with balances of \$1.2 million, \$2.5 million, \$3.7 million, \$5.8 million, and \$23.8 million. These notes have payments due through June 2024, June 2025, March 2026, August 2039, and September 2040 and bear interest at 2.60%, 2.85%, 2.80%, 2.65%, and 2.65%, respectively.

Maturities on notes payable for each of the next five fiscal years and thereafter are summarized as follows:

Year	Annual Installments (in thousands of dollars)			
2024	\$	5,148		
2025		4,029		
2026		2,515		
2027		1,518		
2028		1,559		
Thereafter		22,189		
Total	\$	36,958		

9. LEASES

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

Future maturities of lease liabilities at June 30, 2023 are as follows:

(in thousands of dollars)							
Year	Finance	Leases	Operati	ng Leases			
2024	\$	8,720	\$	31,406			
2025		7,525		28,333			
2026		6,078		24,447			
2027		5,433		22,587			
2028		1,760		17,647			
Thereafter		17,930		76,865			
Total lease payments		47,446		201,285			
Less amount representing interest		(8,273)		(30,778)			
Total lease obligations		39,173		170,507			
Current portion		7,541		26,393			
Long-term portion	\$	31,632	\$	144,114			

Supplemental lease activity for the years ended June 30 is as follows:

(in thousands of dollars)	20)23	20	022
Components of Lease Expense				
Finance lease expense:				
Amortization of ROU assets	\$	9,133	\$	7,573
Interest on lease liabilities		1,465		1,762
Total finance lease expense		10,598		9,335
Operating lease expense		35,969		41,959
Total lease expense	\$	46,567	\$	51,294

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

	Weighted-Average Remaining Lease Term (Years)		Dis	d-Average count late			
	2023	2022	2023	2022			
University:							
Finance leases	10.97	12.17	3.81%	4.10%			
Operating leases	4.99	5.62	2.89%	3.62%			
Health System:							
Finance leases	3.50	3.90	3.20%	3.30%			
Operating leases	10.90	11.70	4.00%	4.30%			

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

(in thousands of dollars)	1	2023 2022			
ROU assets acquired in exchange for finance lease liabilities	\$	7,400	\$	8,553	
ROU assets acquired in exchange for operating lease liabilities		20,491		51,793	
Cash paid for amounts included in the measurement of lease liabilities:					
Operating cash outflows from finance leases		1,465		1,762	
Operating cash outflows from operating leases		34,163		30,459	
Financing cash outflows from finance leases		8,305		8,161	

10. FUNCTIONAL AND NATURAL CLASSIFICATION OF EXPENSES

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

(in thousands of dollars)	Educational	Auxiliary	Health		
2023	and General	Enterprises	System	Total	
Salaries and wages	\$ 1,910,640	\$ 150,200	\$ 1,779,513	\$ 3,840,353	
Benefits	708,108	70,482	455,531	1,234,121	
Depreciation	322,697	46,617	180,260	549,574	
Plant operations and maintenance	181,584	24,745	78,714	285,043	
Other components of net periodic postretirement benefit cost	(21,313)	-	-	(21,313)	
Interest	45,160	33,456	28,697	107,313	
Supplies, services, and other	573,145	204,424	1,474,622	2,252,191	
Total	\$ 3,720,021	\$ 529,924	\$ 3,997,337	\$ 8,247,282	

(in thousands of dollars)	Educational	Auxiliary	Health		
2022	and General	Enterprises	System	Total	
Salaries and wages	\$ 1,828,618	\$ 139,481	\$ 1,612,756	\$ 3,580,855	
Benefits	642,514	66,767	405,583	1,114,864	
Depreciation	304,081	41,942	138,456	484,479	
Plant operations and maintenance	149,085	18,997	96,458	264,540	
Other components of net periodic postretirement benefit cost	60,067	-	-	60,067	
Interest	37,510	30,654	9,345	77,509	
Supplies, services, and other	707,584	187,453	1,352,232	2,247,269	
Total	\$ 3,729,459	\$ 485,294	\$ 3,614,830	\$ 7,829,583	

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

11. RETIREMENT BENEFITS

The University provides retirement benefits for substantially all regular employees, primarily through either contributory defined benefit plans administered by the Commonwealth of Pennsylvania State Employees' Retirement System (SERS) and The Public School Employees' Retirement System (PSERS) or defined contribution plans administered by the Teachers Insurance and Annuity Association (TIAA). The University is billed for its share of the estimated actuarial cost of the defined benefit plans (\$44.4 million and \$38.0 million, net of applied setoff credits of \$93.3 million for the years ended June 30, 2023 and 2022). 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 \$240.7 million and \$224.1 million for the years ended June 30, 2023 and 2022, 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. 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 University's contributions to this plan for the years ended June 30, 2023 and 2022 were \$39.5 million and \$34.1 million, respectively (net of applied setoff credits of \$93.3 million) and represent approximately 5.9% and 5.8% of total contributions to the plan based on projections for fiscal years 2023 and 2022, respectively. The funded ratio of the plan was 68.0% as of December 31, 2022.

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.

Non-union employees retiring on or before December 31, 2020 received a \$5,000 term life insurance policy benefit at no cost to the employee. For certain union employees, a \$5,000 term life insurance policy is provided at no cost to the employee regardless of their retirement date.

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

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

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

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

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:

(in thousands of dollars)		
Change in benefit obligation:	2023	2022
Benefit obligation at beginning of year	\$ 1,471,456	\$ 2,060,684
Service cost	16,947	31,758
Interest cost	60,115	59,566
Actuarial gain	(204,940)	(185,469)
Benefits paid	(56,219)	(53,834)
Plan assumptions	(66,350)	(441,249)
Benefit obligation at end of year	\$ 1,221,009	\$ 1,471,456
Change in plan assets:		
Fair value of plan assets at beginning of year	\$ -	\$ -
Employer contributions	56,219	53,834
Benefits paid	(56,219)	(53,834)
Fair value of plan assets at end of year	\$ -	\$ -
Funded status	\$ (1,221,009)	\$ (1,471,456)
Unrecognized prior service cost (benefit)	-	-
Unrecognized net actuarial loss	-	-
Accrued postretirement benefit expense	\$ (1,221,009)	\$ (1,471,456)

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

(in thousands of dollars)				
Operating expenses:	2	023	2	022
Service cost	\$	16,947	\$	31,758
Nonoperating activities:				
Interest cost		60,115		59,566
Amortization of prior service cost		-		(4)
Amortization of unrecognized net loss		(81,428)		505
Net periodic postretirement cost	\$	(4,366)	\$	91,825

The assumed healthcare cost trend rate used in measuring the accumulated postretirement benefit obligation was 7.40% and 7.60% for the years ended June 30, 2023 and 2022, respectively, reduced to an ultimate level of 4.50% and 4.50%, respectively. The postretirement benefit obligation discount rate was 5.20% and 4.87% for the years ended June 30, 2023 and 2022, respectively. During 2023, the plan had favorable claims experience compared to assumptions, and the liability decreased due to the increase in discount rates. During 2022, the plan had favorable claims experience compared to assumptions, and the liability decreased significantly due to the increase in discount rates.

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:

	(in thousands of dollars)		
2024	\$	53,408	
2025		57,594	
2026		61,401	
2027		65,070	
2028		68,202	
2029-33		377,486	

13. PENN STATE HEALTH

Penn State Health was organized exclusively to promote, support and further the charitable, educational, and scientific purposes of the University. These purposes are defined and limited by Section 501(c)(3) of the Internal Revenue Code of 1986. The Health System is controlled by the University with a 20% membership by Highmark Health (HH). The University recorded noncontrolling interest related to this membership. Total noncontrolling interest is recorded in net assets without donor restrictions within the consolidated statements of financial position with a value at June 30, 2023 and 2022 of \$268.6 million and \$337.1 million, respectively.

The wholly owned subsidiaries of the Health System include the Milton S. Hershey Medical Center (MSHMC), Saint Joseph's Regional Health Network and Medical Group (SJRHN/SJMG), Penn State Community Medical Group (PSCMG), Holy Spirit Medical Center (HSMC), Nittany Health, Inc. ("Nittany"), Central PA Health Network (CIN), Penn State Health Hampden Medical Center ("Hampden") which opened in October 2021, Penn State Health Lancaster Medical Center (LMC) which opened in October 2022, and Penn State Health Life Lion, LLC (PSHLL). The subsidiaries provide a variety of health care services in the Dauphin, Centre, Berks, Cumberland, and Lancaster county regions of Pennsylvania.

The Health System, through its medical groups, operates a non-acute and ambulatory network which consists of a number of patient care sites in nine counties. The Heath System, through Nittany, jointly holds ownership interest in ambulatory surgical centers.

During 2023 and 2022, the Health System recorded \$854.2 million and \$659.8 million, respectively, of net patient service revenue received from HH. During 2022, the Health System received cash contributions of \$30.0 million from HH related to the Community Health Reinvestment Act. Additionally, in 2023, the Health System transferred \$10.7 million of net assets to HH. During 2023 and 2022, the Health System paid HH \$272.7 million and \$243.2 million, respectively, of employee benefits expense. As of June 30, 2023 and 2022, the Health System has a liability due to HH in the amount of \$13.8 million and \$3.1 million, respectively. This liability is included in accounts payable and other accrued expenses in the consolidated statements of financial position.

14. CONTINGENCIES AND COMMITMENTS

CONTRACTUAL OBLIGATIONS

The University has contractual obligations for the construction of new buildings and for additions to existing buildings in the amount of \$1.719 billion, of which \$1.358 billion has been paid or accrued as of June 30, 2023. 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 \$33.5 million and \$38.4 million as of June 30, 2023 and 2022, 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, 2023 and 2022, of the medical malpractice claims liability in the amount of \$212.7 million and \$186.4 million is recorded as of June 30, 2023 and 2022, 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 \$40.2 million and \$33.6 million at June 30, 2023 and 2022, 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 \$6.3 million and \$5.8 million, discounted at 4.13% and 3.01%, respectively, is recorded as of June 30, 2023 and 2022, respectively. The University has established a trust fund, in the amount of \$13.8 million and \$13.9 million at June 30, 2023 and 2022, respectively, as required by PA-DLI, to collateralize and to provide for the payment of claims under this self-insurance program. The Health System is self-insured for workers' compensation claims and has purchased excess policies through commercial insurers which cover individual claims in excess of \$750,000 per incident for workers' compensation claims.

The University and the Health System are self-insured for certain health care benefits provided to employees. The University and the Health System have purchased excess insurance policies which cover employee health benefit claims in excess of \$750,000 per employee per year. The University and the Health System provide for reported claims and claims incurred but not reported.

RELATED PARTY TRANSACTIONS

During 2023 and 2022, the University paid HH, a related party as defined in Note 13, \$162.6 million and \$36.6 million, respectively, of employee benefits expense. As of June 30, 2023, the University has a liability due to HH in the amount of \$24.7 million.

LITIGATION AND CONTINGENCIES

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

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

15. SUBSEQUENT EVENTS

The University has evaluated subsequent events through November 9, 2023, 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.





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

Independent Auditor's Report

To the Board of Trustees
The Pennsylvania State University

We have audited the consolidated financial statements of The Pennsylvania State University (the "University") as of and for the year ended June 30, 2023 and have issued our report thereon dated November 9, 2023, 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. We have not performed any procedures with respect to the audited consolidated financial statements subsequent to November 9, 2023.

The University's consolidated financial statements include the operations of Penn State Health, a Pennsylvania nonprofit corporation, and The Pennsylvania College of Technology, a wholly owned subsidiary of the University. The schedule of expenditures of federal awards excludes those operations because they receive a separate financial statement audit and a separate single audit when required by the Uniform Guidance.

The accompanying schedule of expenditures of federal awards is presented for the purpose 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 information is fairly stated in all material respects in relation to the consolidated financial statements as a whole.

Plante & Moran, PLLC

March 7, 2024



Plante & Moran, PLLC



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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*

Independent Auditor's Report

To Management and the Board of Trustees The Pennsylvania State University

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 (the "University"), which comprise the consolidated statements of financial position as of June 30, 2023 and the related consolidated statements 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 9, 2023.

Report on 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 University's consolidated 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 preceding paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies, and, therefore, material weaknesses or significant deficiencies may exist that were not identified. We identified a certain deficiency in internal control, described in the accompanying schedule of findings and questioned costs as Finding 2023-001, that we consider to be a material weakness.

Report on 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*.



To Management and the Board of Trustees The Pennsylvania State University

The University's Response to the Finding

Government Auditing Standards requires the auditor to perform limited procedures on the University's response to the finding identified in our audit and described in the accompanying schedule of findings and responses. The University's response was not subjected to the other auditing procedures applied in the audit of the consolidated financial statements, and, accordingly, we express no opinion on it.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the University's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Plante & Moran, PLLC

November 9, 2023

Plante & Moran, PLLC



Suite 100 1111 Michigan Ave. East Lansing, MI 48823 Tel: 517.332.6200 Fax: 517.332.8502 plantemoran.com

Report on Compliance for Each Major Federal Program and Report on Internal Control Over Compliance Required by the Uniform Guidance

Independent Auditor's Report

To the Board of Trustees
The Pennsylvania State University

Report on Compliance for Each Major Federal Program

Opinion on Each Major Federal Program

We have audited The Pennsylvania State University's (the "University") compliance with the types of compliance requirements identified as subject to audit in the U.S. Office of Management and Budget (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, 2023. 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.

In our opinion, the University complied, in all material respects, with the compliance requirements referred to above that could have a direct and material effect on each of the major federal programs for the year ended June 30, 2023.

Basis for Opinion on Each Major Federal Program

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America (GAAS); 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 (the "Uniform Guidance"). Our responsibilities under those standards and the Uniform Guidance are further described in the Auditor's Responsibilities for the Audit of Compliance section of our report.

We are required to be independent of the University and to meet our other ethical responsibilities in accordance with relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on compliance for each major federal program. Our audit does not provide a legal determination of the University's compliance with the compliance requirements referred to above.

Other Matter - Federal Expenditures Not Included in the Compliance Audit

The University's consolidated financial statements include the operations of Penn State Health, a Pennsylvania nonprofit corporation, and The Pennsylvania College of Technology, a wholly owned subsidiary of the University, which are not included in the University's schedule of expenditures of federal awards during the year ended June 30, 2023. Our compliance audit, described in the *Opinion on Each Major Federal Program* paragraph, does not include the operations of Penn State Health and The Pennsylvania College of Technology because they receive a separate financial statement audit and a separate single audit when required by Uniform Guidance.

Responsibilities of Management for Compliance

Management is responsible for compliance with the requirements referred to above and for the design, implementation, and maintenance of effective internal control over compliance with the requirements of laws, statutes, regulations, rules, and provisions of contracts or grant agreements applicable to the University's federal programs.



Auditor's Responsibilities for the Audit of Compliance

Our objectives are to obtain reasonable assurance about whether material noncompliance with the compliance requirements referred to above occurred, whether due to fraud or error, and express an opinion on the University's compliance based on our audit. Reasonable assurance is a high level of assurance but is not absolute assurance and, therefore, is not a guarantee that an audit conducted in accordance with GAAS, *Government Auditing Standards*, and the Uniform Guidance will always detect material noncompliance when it exists. The risk of not detecting material noncompliance resulting from fraud is higher than for that resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Noncompliance with the compliance requirements referred to above is considered material if there is a substantial likelihood that, individually or in the aggregate, it would influence the judgment made by a reasonable user of the report on compliance about the University's compliance with the requirements of each major federal program as a whole.

In performing an audit in accordance with GAAS, Government Auditing Standards, and the Uniform Guidance, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material noncompliance, whether due to fraud or error, and design and perform
 audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence
 regarding the University's compliance with the compliance requirements referred to above and performing such
 other procedures as we considered necessary in the circumstances.
- Obtain an understanding of the University's internal control over compliance relevant to the audit in order to
 design audit procedures that are appropriate in the circumstances 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 the University's internal control over compliance. Accordingly, no such opinion is
 expressed.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and any significant deficiencies and material weaknesses in internal control over compliance that we identified during the audit.

Other Matter

The results of our auditing procedures disclosed an instance of noncompliance that is required to be reported in accordance with the Uniform Guidance and is described in the accompanying schedule of findings and questioned costs as Finding 2023-003. Our opinion on each major federal program is not modified with respect to this matter.

Government Auditing Standards requires the auditor to perform limited procedures on the University's response to the noncompliance finding identified in our compliance audit and described in the accompanying schedule of findings and questioned costs. The University's response was not subjected to the other auditing procedures applied in the audit of compliance, and, accordingly, we express no opinion on it.

Report on Internal Control Over Compliance

Our consideration of internal control over compliance was for the limited purpose described in the *Auditor's Responsibilities for the Audit of Compliance* section above and was not designed to identify all deficiencies in internal control over compliance, and, therefore, material weaknesses or significant deficiencies may exist that were not identified. However, as discussed below, we did identify a certain deficiency in internal control over compliance that we consider to be a material weakness and another deficiency that we consider to be a significant deficiency.

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 a combination of deficiencies, in internal control over compliance such that there is 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. We consider the deficiency in internal control over compliance described in the accompanying schedule of findings and questioned costs as Finding 2023-003 to be a material weakness.

To the Board of Trustees
The Pennsylvania State University

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. We consider the deficiency in internal control over compliance described in the accompanying schedule of findings and questioned costs as Finding 2023-002 to be a significant deficiency.

Our audit was not designed for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, no such opinion is expressed.

Government Auditing Standards requires the auditor to perform limited procedures on the University's responses to the internal control over compliance findings identified in our compliance audit and described in the accompanying schedule of findings and questioned costs. The University's responses were not subjected to the other auditing procedures applied in the audit of compliance, and, accordingly, we express no opinion on them.

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.

Plante & Moran, PLLC

March 7, 2024

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Direct			R ENDED JUNE 30, 2023		Subrecipient	
Federal Agency Research and Development Cluster	Award	ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
U.S. Department of Agriculture	Y	10.001	Agricultural Research Basic and Applied Research			\$ -	\$ 1,490,328
U.S. Department of Agriculture	Y	10.025	COVID-19 - Plant and Animal Disease, Pest Control, and Animal Care			-	140,381
U.S. Department of Agriculture U.S. Department of Agriculture		10.025 10.028	Plant and Animal Disease, Pest Control, and Animal Care COVID-19 - Wildlife Services			-	371,775 112,260
U.S. Department of Agriculture		10.028	Wildlife Services				101,832
U.S. Department of Agriculture		10.202	Cooperative Forestry Research			-	697,546
U.S. Department of Agriculture U.S. Department of Agriculture		10.203 10.207	Payments to Agricultural Experiment Stations Under the Hatch Act Animal Health and Disease Research			-	7,472,463 59,076
U.S. Department of Agriculture		10.207	Higher Education – Graduate Fellowships Grant Program			-	156.471
U.S. Department of Agriculture	Y	10.217	Higher Education - Institution Challenge Grants Program			-	23,811
U.S. Department of Agriculture U.S. Department of Agriculture		10.250 10.253	Agricultural and Rural Economic Research, Cooperative Agreements and Collaborati Consumer Data and Nutrition Research			-	138,639 18,633
U.S. Department of Agriculture U.S. Department of Agriculture		10.253	Integrated Programs			36.827	918 820
U.S. Department of Agriculture		10.307	Organic Agriculture Research and Extension Initiative			295,951	881,703
U.S. Department of Agriculture		10.309	Specialty Crop Research Initiative			1,222,986	2,792,162
U.S. Department of Agriculture U.S. Department of Agriculture		10.310 10.329	Agriculture and Food Research Initiative (AFRI) Crop Protection and Pest Management Competitive Grants Program			1,782,888 39.851	8,993,316 324.646
U.S. Department of Agriculture	Y	10.500	Cooperative Extension Service			249,113	4,960,654
U.S. Department of Agriculture		10.516	Rural Health and Safety Education Competitive Grants Program			-	55,343
U.S. Department of Agriculture U.S. Department of Agriculture		10.519 10.680	Equipment Grants Program (EGP) Forest Health Protection				85,455 49,513
U.S. Department of Agriculture		10.707	Research Joint Venture and Cost Reimbursable Agreements			-	98,151
U.S. Department of Agriculture		10.777	Norman E. Borlaug International Agricultural Science and Technology Fellowship			-	36,768
U.S. Department of Agriculture U.S. Department of Agriculture		10.902 10.912	Soil and Water Conservation Environmental Quality Incentives Program			-	252,462 157,113
U.S. Department of Agriculture	Y	10.960	Technical Agricultural Assistance			-	57,698
U.S. Department of Agriculture		10.RD	U.S. Department of Agriculture Research and Development			-	20,971
U.S. Department of Agriculture U.S. Department of Agriculture		10.RD	U.S. Department of Agriculture Research and Development U.S. Department of Agriculture Research and Development			-	5,586 429
U.S. Department of Agriculture U.S. Department of Agriculture		10.001	O.S. Department or Agriculture Research and Development Agricultural Research Basic and Applied Research	Geisinger Clinic	646515PSU01		30,248
U.S. Department of Agriculture		10.001	Agricultural Research Basic and Applied Research	Oregon State University OREGON STATE UNIVERSITY OFFICE OF	R0777A-A	-	18,971
U.S. Department of Agriculture U.S. Department of Agriculture		10.001 10.001	Agricultural Research Basic and Applied Research Agricultural Research Basic and Applied Research	Research Corporation for Science Advancement Research Corporation for Science Advancement	28359 28375	-	14,663 14.026
U.S. Department of Agriculture U.S. Department of Agriculture		10.001	Agricultural Research Basic and Applied Research Agricultural Research Basic and Applied Research	Research Corporation for Science Advancement University of Arkansas	28375 UA AES 05665-02	-	14,026 60.555
U.S. Department of Agriculture	N	10.025	Plant and Animal Disease, Pest Control, and Animal Care	Bioprodex, Inc.	225377	-	37,091
U.S. Department of Agriculture		10.025	Plant and Animal Disease, Pest Control, and Animal Care	Bioprodex, Inc.	245486 44229530	-	24,656
U.S. Department of Agriculture U.S. Department of Agriculture		10.025	Plant and Animal Disease, Pest Control, and Animal Care Plant and Animal Disease, Pest Control, and Animal Care	COP Department of Agriculture COP Department of Agriculture	44229530 44229916		62,480
U.S. Department of Agriculture	N	10.025	Plant and Animal Disease, Pest Control, and Animal Care	Georgia, University of	SUB00002241	-	7,034
U.S. Department of Agriculture		10.025	Plant and Animal Disease, Pest Control, and Animal Care	State of Minnesota	244327 193081	-	5,373
U.S. Department of Agriculture U.S. Department of Agriculture		10.069 10.170	Conservation Reserve Program Specialty Crop Block Grant Program - Farm Bill	Ducks Unlimited Carnegie Mellon University	US-RS-55-1 (PSU) 1060162-440846		5,330 (4,535)
U.S. Department of Agriculture	N	10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	44187029	8,286	8,131
U.S. Department of Agriculture		10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	44187030	24,514	23,045
U.S. Department of Agriculture U.S. Department of Agriculture		10.170 10.170	Specialty Crop Block Grant Program - Farm Bill Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture COP Department of Agriculture	44219435 C94000031	-	92,117 38,128
U.S. Department of Agriculture		10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	C940000037		29,310
U.S. Department of Agriculture	N	10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	C940000523	-	30,070
U.S. Department of Agriculture U.S. Department of Agriculture		10.170 10.170	Specialty Crop Block Grant Program - Farm Bill Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture COP Department of Agriculture	C940000524 C940000525	-	29,053 15,264
U.S. Department of Agriculture		10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture COP Department of Agriculture	C9400000525 C9400000527		17,609
U.S. Department of Agriculture		10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	C9400000528		7,218
U.S. Department of Agriculture		10.170 10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	C940000530	-	25,990
U.S. Department of Agriculture U.S. Department of Agriculture		10.170	Specialty Crop Block Grant Program - Farm Bill Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture COP Department of Agriculture	C940000532 C94000775		26,272 70,189
U.S. Department of Agriculture	N	10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	C940000819	-	25,036
U.S. Department of Agriculture	N N	10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	C940000820	-	10,050
U.S. Department of Agriculture U.S. Department of Agriculture		10.170 10.170	Specialty Crop Block Grant Program - Farm Bill Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture COP Department of Agriculture	C940000823 C940000824		72,716 43,244
U.S. Department of Agriculture		10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	C94000024 C940000973	-	34,108
U.S. Department of Agriculture		10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	C940000977	-	17,433
U.S. Department of Agriculture U.S. Department of Agriculture		10.170 10.170	Specialty Crop Block Grant Program - Farm Bill Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture COP Department of Agriculture	C94000978 C94000979	-	37,395 140,619
U.S. Department of Agriculture	N	10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	C940001096		9,339
U.S. Department of Agriculture	N	10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	C940001101	-	25,343
U.S. Department of Agriculture U.S. Department of Agriculture		10.170 10.170	Specialty Crop Block Grant Program - Farm Bill Specialty Crop Block Grant Program - Farm Bill	Pennsylvania Co-Operative Potato Growers , Inc. University of Florida	258531 SUB00002346 P0175090	-	49,998 156,245
U.S. Department of Agriculture U.S. Department of Agriculture		10.170	Specialty Crop Block Grant Program - Farm Bill Specialty Crop Block Grant Program - Farm Bill	University of New Hampshire	L0071		4,202
U.S. Department of Agriculture		10.170	Specialty Crop Block Grant Program - Farm Bill	Washington State University	137512 SPC002135	-	107,729
U.S. Department of Agriculture U.S. Department of Agriculture		10.200 10.200	Grants for Agricultural Research, Special Research Grants Grants for Agricultural Research, Special Research Grants	University of Maine University of Maine	UMS1240 UMS1314	-	(276) 4,513
U.S. Department of Agriculture		10.200	Grants for Agricultural Research, Special Research Grants Grants for Agricultural Research, Special Research Grants	University of Maryland Eastern Shore	2021-34383-34848	-	13.334
U.S. Department of Agriculture	N	10.200	Grants for Agricultural Research, Special Research Grants	University of Maryland Eastern Shore	IR4SZ4327370BRUNHAROPENN	-	2,000
U.S. Department of Agriculture		10.200	Grants for Agricultural Research, Special Research Grants	University of Maryland Eastern Shore	IR4SZ4327370DEMCHAKPENN	-	5,111
U.S. Department of Agriculture U.S. Department of Agriculture		10.215 10.215	Sustainable Agriculture Research and Education Sustainable Agriculture Research and Education	Vermont, University of Vermont, University of	GNE19-215-33243 GNE20-227-34268		3,007 2,263
U.S. Department of Agriculture		10.215	Sustainable Agriculture Research and Education	Vermont, University of	GNE20-227-34268		2,731
U.S. Department of Agriculture		10.215	Sustainable Agriculture Research and Education	Vermont, University of	GNE20-234-34268	-	9,568
U.S. Department of Agriculture U.S. Department of Agriculture		10.215 10.215	Sustainable Agriculture Research and Education Sustainable Agriculture Research and Education	Vermont, University of Vermont. University of	GNE20-237-34268 GNE20-239-34268	-	2,852 1.955
U.S. Department of Agriculture U.S. Department of Agriculture		10.215 10.215	Sustainable Agriculture Research and Education Sustainable Agriculture Research and Education	Vermont, University of Vermont. University of	GNE20-239-34268 GNE20-243-34268	-	1,955 1,899
U.S. Department of Agriculture	N	10.215	Sustainable Agriculture Research and Education	Vermont, University of	GNE21-258-35383	-	2,181
U.S. Department of Agriculture		10.215	Sustainable Agriculture Research and Education	Vermont, University of	GNE21-261-35383	-	6,883
U.S. Department of Agriculture		10.215 10.215	Sustainable Agriculture Research and Education Sustainable Agriculture Research and Education	Vermont, University of Vermont. University of	GNE21-262-35383 GNE21-263-35383	-	(314) 8.993
U.S. Department of Agriculture U.S. Department of Agriculture		10.215	Sustainable Agriculture Research and Education Sustainable Agriculture Research and Education	Vermont, University of Vermont, University of	GNE21-263-35383 GNE21-266-35383		8,993 8,763
U.S. Department of Agriculture	N	10.215	Sustainable Agriculture Research and Education	Vermont, University of	GNE21-267-35383	-	8,348
U.S. Department of Agriculture		10.215	Sustainable Agriculture Research and Education	Vermont, University of	GNE21-270-35383	-	6,612
U.S. Department of Agriculture U.S. Department of Agriculture		10.215 10.215	Sustainable Agriculture Research and Education Sustainable Agriculture Research and Education	Vermont, University of Vermont. University of	GNE21-274-35383 GNE22-275-AWD00000495	-	7,802 4,257
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SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Direct		TOR THE TEAR ERDED CORE SO, 2020		Subrecipient	
Federal Agency	Award ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
U.S. Department of Agriculture	N 10.215	Sustainable Agriculture Research and Education	Vermont. University of	GNE22-276-AWD00000495		8.209
U.S. Department of Agriculture	N 10.215	Sustainable Agriculture Research and Education	Vermont, University of	GNE22-278-AWD00000495	-	13,892
U.S. Department of Agriculture	N 10.215	Sustainable Agriculture Research and Education	Vermont, University of	GNE22-280-AWD00000495		4,787
U.S. Department of Agriculture	N 10.215	Sustainable Agriculture Research and Education	Vermont, University of	GNE22-282-AWD00000495	-	10,286
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.215 N 10.215	Sustainable Agriculture Research and Education Sustainable Agriculture Research and Education	Vermont, University of Vermont, University of	GNE22-285-AWD00000495 GNE22-287-AWD00000495	-	5,525 6.799
			Vermont, University of Vermont. University of		-	
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.215 N 10.215	Sustainable Agriculture Research and Education Sustainable Agriculture Research and Education	Vermont, University of Vermont. University of	GNE22-293-AWD00000495 GNE22-296-AWD00000495		5,245 3,355
U.S. Department of Agriculture	N 10.215	Sustainable Agriculture Research and Education	Vermont, University of	GNE22-298-AWD00000495		2,684
U.S. Department of Agriculture	N 10.215	Sustainable Agriculture Research and Education	Vermont, University of	GNE22-302-AWD00000495		362
U.S. Department of Agriculture	N 10.215	Sustainable Agriculture Research and Education	Vermont, University of	LNE19-378-33243		51,041
U.S. Department of Agriculture	N 10.215	Sustainable Agriculture Research and Education	Vermont, University of	LNE19-389R-33243	1,095	20,140
U.S. Department of Agriculture	N 10.215	Sustainable Agriculture Research and Education	Vermont, University of	LNE20-404-34268	53,362	116,660
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.215	Sustainable Agriculture Research and Education Sustainable Agriculture Research and Education	Vermont, University of Vermont. University of	LNE22-447-AWD00000495 ONE21-382-35383	-	86,483 9.558
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.215 N 10.217	Higher Education - Institution Challenge Grants Program	Vermont, University of California Polytechnic State University	ONE21-382-35383 2022-5-53734		9,558 40,289
U.S. Department of Agriculture	N 10.217	Higher Education - Institution Challenge Grants Program	Purdue University	F0003792902017		5.494
U.S. Department of Agriculture	N 10.253	Consumer Data and Nutrition Research	RTI International	1-312-0217652-66074L	40,182	62,318
U.S. Department of Agriculture	N 10.307	Organic Agriculture Research and Extension Initiative	Cornell University	90033-20656	-	14,578
U.S. Department of Agriculture	N 10.309	Specialty Crop Research Initiative	Cornell University	92884-20620	-	60,170
U.S. Department of Agriculture	N 10.309	Specialty Crop Research Initiative	North Carolina State University	2016-1498-10	-	(66)
U.S. Department of Agriculture	N 10.309	Specialty Crop Research Initiative	Texas A&M University	M1900058	-	55,036
U.S. Department of Agriculture	N 10.309 N 10.309	Specialty Crop Research Initiative	Texas A&M University	M2002891		68,528
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.309 N 10.309	Specialty Crop Research Initiative Specialty Crop Research Initiative	University of California at Riverside Washington State University	S-001490 133321-SPC001388	-	17,079 27,870
U.S. Department of Agriculture	N 10.309	Specialty Crop Research Initiative	Washington State University	140349 SPC004077		27,379
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	Alabama A&M University	A18-0315-S001		9.013
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	Colorado School of Mines	401541-5802		1,058
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	Connecticut, University of	413623	-	64,250
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	Cornell University	84041-11058	-	(6,328)
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	Delaware, University of	UDR0000221	-	14,885
U.S. Department of Agriculture	N 10.310 N 10.310	Agriculture and Food Research Initiative (AFRI)	lowa State University	022496C H008728802	-	901,862
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.310 N 10.310	Agriculture and Food Research Initiative (AFRI) Agriculture and Food Research Initiative (AFRI)	Minnesota, University of North Carolina State University	H008728802 2019-1507-17		(1,975) 67.093
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	Ohio State University	60066131 PO RF01572582		15.866
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	Pennsylvania. University of	580961		36.633
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	Pennsylvania, University of	584753		12,197
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	Purdue University	F0013585302011	-	82,979
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	Purdue University	F0016275102011	-	35,824
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	Purdue University	F1000224802008	-	(2,205)
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI) Agriculture and Food Research Initiative (AFRI)	Tufts University	AG9046 AWD-100319-04		58,028
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.310 N 10.310	Agriculture and Food Research Initiative (AFRI) Agriculture and Food Research Initiative (AFRI)	University of Arkansas University of Arkansas	UA2022-315	-	(4,451) 228,925
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	University of California at Davis	A18-1616-S004		220,923
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	University of California at Davis	A21-0187-S003		21,651
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	University of Florida	SUB00002415	-	233
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	University of Wisconsin-Madison	0000002723		11,552
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	West Virginia University	20-182-PSU PO MM000338770	-	252,272
U.S. Department of Agriculture	N 10.320	Sun Grant Program	South Dakota State University	3TD372	-	1,252
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.320 N 10.500	Sun Grant Program Cooperative Extension Service	University of Tennessee Minnesota, University of	9500098679 A007363501	135,995	18,960 214,888
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.500 N 10.500	Cooperative Extension Service Cooperative Extension Service	Minnesota, University of Minnesota, University of	H010225601	135,995	214,888 94,347
U.S. Department of Agriculture	N 10.500	Cooperative Extension Service Cooperative Extension Service	Nebraska, University of	35-5420-2004-003		94,347
U.S. Department of Agriculture	N 10.902	Soil and Water Conservation	Colorado State University	G-70444-03		9,080
U.S. Department of Agriculture	N 10.RD	U.S. Department of Agriculture Research and Development	Children's Hospital of Philadelphia	3201480822		296
U.S. Department of Agriculture	N 10.RD	U.S. Department of Agriculture Research and Development	Commonwealth of Pennsylvania Pennsylvania Department of Education	4300644404	10,250	10,893
U.S. Department of Agriculture	N 10.RD	U.S. Department of Agriculture Research and Development	COP Department of Agriculture	C940000777	-	(1,302)
U.S. Department of Agriculture	N 10.RD	U.S. Department of Agriculture Research and Development	COP Department of Agriculture	C940001087	-	15,763
U.S. Department of Agriculture	N 10.RD	U.S. Department of Agriculture Research and Development	Mississippi State University	254709	-	18,481
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.RD N 10.RD	U.S. Department of Agriculture Research and Development U.S. Department of Agriculture Research and Development	University of Illinois University of Massachusetts Amherst	094525-17306 22-016782 A 00	-	180,070 14,244
U.S. Department of Agriculture	N 10.RD	U.S. Department of Agriculture Research and Development	University of Misconsin-Madison	000000154	-	5 566
U.S. Department of Agriculture Total	10.10	2.2. 2 -p-1411011 of righted the control and Development	Chirology of Thousand Haddison	230000101	3,901,300	5,566 35,104,835
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U.S. Department of Commerce	Y 11.417	Sea Grant Support			99,760	1,633,276
U.S. Department of Commerce	Y 11.431	Climate and Atmospheric Research			69,458	283,137
U.S. Department of Commerce	Y 11.457	Chesapeake Bay Studies			-	80,336 74,729
U.S. Department of Commerce	Y 11.459 Y 11.482	Weather and Air Quality Research			-	
U.S. Department of Commerce U.S. Department of Commerce	Y 11.482 Y 11.609	Coral Reef Conservation Program Measurement and Engineering Research and Standards			-	233,119 761,197
U.S. Department of Commerce	Y 11.RD	U.S. Department of Commerce Research and Development				1 1
U.S. Department of Commerce	Y 11.RD	U.S. Department of Commerce Research and Development			-	47,641
U.S. Department of Commerce	Y 11.RD	U.S. Department of Commerce Research and Development			-	39,650
U.S. Department of Commerce	Y 11.RD	U.S. Department of Commerce Research and Development			-	10,724
U.S. Department of Commerce	Y 11.RD	U.S. Department of Commerce Research and Development			-	1
U.S. Department of Commerce	Y 11.RD	U.S. Department of Commerce Research and Development			-	67,164
U.S. Department of Commerce U.S. Department of Commerce	Y 11.RD Y 11.RD	U.S. Department of Commerce Research and Development U.S. Department of Commerce Research and Development			-	2,804 37 094
U.S. Department of Commerce U.S. Department of Commerce	N 11.RD	U.S. Department of Commerce Research and Development Sea Grant Support	Minnesota, University of	D007941106	-	2,993
U.S. Department of Commerce	N 11.417 N 11.417	Sea Grant Support	Purdue University	F0008309702056		60,361
U.S. Department of Commerce	N 11.417	Sea Grant Support	Purdue University	F0008309702080		102,021
U.S. Department of Commerce	N 11.417	Sea Grant Support	University of Illinois	097126-17812	-	7,927
U.S. Department of Commerce	N 11.431	Climate and Atmospheric Research	RAND Corporation	SCON-00000037	-	421
U.S. Department of Commerce	N 11.431	Climate and Atmospheric Research	RAND Corporation	SCON-00000444	-	177,860
U.S. Department of Commerce	N 11.431	Climate and Atmospheric Research	The Regents of the University of Michiga	SUBK00012213 PO 3005773548	-	17,188
U.S. Department of Commerce	N 11.432 N 11.459	National Oceanic and Atmospheric Administration (NOAA) Cooperative Instit		A22-0307-S003	-	170,527
U.S. Department of Commerce U.S. Department of Commerce	N 11.459 N 11.472	Weather and Air Quality Research Unallied Science Program	Texas Tech University SECORE International. Inc.	21B053-02 SECORE PENNST SUBAWARD2022	-	100,057 20,227
U.S. Department of Commerce U.S. Department of Commerce	N 11.472 N 11.478	Center for Sponsored Coastal Ocean Research Coastal Ocean Program	SECORE International, Inc. Rhode Island, University of	0009205/110221 PSU	-	104,200
U.S. Department of Commerce	N 11.481	Educational Partnership Program	Howard University	0009203/110221730		5,361
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SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

			FOR THE YEAR	R ENDED JUNE 30, 2023			
	Direct					Subrecipient	
Federal Agency	Award		Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
U.S. Department of Commerce		11.481	Educational Partnership Program	Howard University	0008971-1000088506	-	12,060
U.S. Department of Commerce U.S. Department of Commerce		11.481 11.609	Educational Partnership Program Measurement and Engineering Research and Standards	Howard University American Bureau of Shipping	GRT000392 -10012446 4646169	-	31,671 153,264
U.S. Department of Commerce		11.619	Arrangements for Interdisciplinary Research Infrastructure	Delaware, University of	PC4 1-105		67,421
U.S. Department of Commerce		11.619	Arrangements for Interdisciplinary Research Infrastructure	The Regents of the University of Michiga	SUBK00015959		68.388
U.S. Department of Commerce	N	11.RD	U.S. Department of Commerce Research and Development	Synoptic Data	S2020-142	-	55,213
U.S. Department of Commerce Total				, ,		169,218	4,428,033
U.S. Department of Defense U.S. Department of Defense	Y	12.300 12.330	Basic and Applied Scientific Research Science, Technology, Engineering & Mathematics (STEM) Education, Outreach and Wo			828,811	9,420,316 58.128
U.S. Department of Defense		12.351	Scientific Research - Combating Weapons of Mass Destruction			4,563,797	6 142 333
U.S. Department of Defense		12.420	Military Medical Research and Development			326,488	4,142,473
U.S. Department of Defense	Ý	12.431	COVID-19 - Basic Scientific Research			-	32,624
U.S. Department of Defense		12.431	Basic Scientific Research			319,870	1,524,336
U.S. Department of Defense		12.556	Competitive Grants: Promoting K-12 Student Achievement at Military-Connected Sch				777,419
U.S. Department of Defense U.S. Department of Defense		12.598 12.599	Centers for Academic Excellence Congressionally Directed Assistance			56,517 133,580	1,294,636 247.507
U.S. Department of Defense		12.599	Basic Applied and Advanced Research in Science and Engineering			2.849.169	3.584.561
U.S. Department of Defense		12.800	COVID-19 - Air Force Defense Research Sciences Program			2,010,100	4.878
U.S. Department of Defense	Ý	12.800	Air Force Defense Research Sciences Program			1,913,089	6,032,732
U.S. Department of Defense		12.902	Information Security Grants			-	534,961
U.S. Department of Defense		12.910	COVID-19 - Research and Technology Development			-	696
U.S. Department of Defense		12.910	Research and Technology Development			513,257	1,475,129
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			1.171.899	128,609 6,529,568
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			7,171,899	6,529,568 813.012
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			5,348,306	5,927,676
U.S. Department of Defense	Y	12.RD	U.S. Department of Defense Research and Development			5,759,069	6,360,666
U.S. Department of Defense	Y	12.RD	U.S. Department of Defense Research and Development			-	55,298
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	491,212
U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	391,350
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				8,718 1,376
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	617,459
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			788,948	4,022,399
U.S. Department of Defense	Y	12.RD	U.S. Department of Defense Research and Development				81,233
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			165,876	1,349,719
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			1,351,326	3,574,756
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	938,135 (3,418)
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			80,023	964,082
U.S. Department of Defense	Ý	12.RD	U.S. Department of Defense Research and Development				254,027
U.S. Department of Defense	Y	12.RD	U.S. Department of Defense Research and Development			-	1,451,335
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	(71,863)
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	162,135
U.S. Department of Defense U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	62,272 207,148
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development				25,962
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development				(155)
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	(42,350)
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	(3,859)
U.S. Department of Defense U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	969
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	(9) (13,374)
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development				(5,874)
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development				(9.096)
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	18,077
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	65,915
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	59
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	159 102
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				102 649
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development				(22,333)
U.S. Department of Defense	Υ	12.RD	U.S. Department of Defense Research and Development			-	98,469
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	60,115
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	167,739
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	179,242 20,625
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	20,625 125,000
U.S. Department of Defense	Ý	12.RD	U.S. Department of Defense Research and Development				15,141
U.S. Department of Defense	Y	12.RD	U.S. Department of Defense Research and Development			-	1,194,926
U.S. Department of Defense	Y	12.RD	U.S. Department of Defense Research and Development			-	252
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	43,793
U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	80 67
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				685.093
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development				5,354
U.S. Department of Defense	Y	12.RD	U.S. Department of Defense Research and Development			-	299,171
U.S. Department of Defense	Y	12.RD	U.S. Department of Defense Research and Development			-	89,291
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	47,343
U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	268,844 543,908
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	543,908 218,064
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development				30,522
U.S. Department of Defense	Ý	12.RD	U.S. Department of Defense Research and Development			-	243,829
U.S. Department of Defense	Y	12.RD	U.S. Department of Defense Research and Development			-	1,296,395
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	981,776
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	504,887
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	148,128 174,204
0.5. Department of Delense	Y	ız.KU	o.s. Department of Defense Research and Development			-	1/4,204

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Federal Agency	Direct Award	ALN	Federal Program Name	Pass-Through Entity Pass-Through Entity	Subrecipion Subrecipion Identifying Number Expenditure	ent	Expenditures
Comment of Comment o					Pass-Inrough Entity Pass-Inrough Entity	dentifying Number Expenditu	res -	
1.0 Section of Section							-	
100 Destroy of Charter 100 100 Destroy of Charter Marchen State 100 10							-	
100 100	U.S. Department of Defense	Y 1	12.RD				-	12,057
10 September Personne Per				U.S. Department of Defense Research and Development			-	
10 Section of Section 1	U.S. Department of Defense			U.S. Department of Defense Research and Development			-	
Column							-	
10 10 10 10 10 10 10 10						36	6 789	
10. Department Chabers V 1900 10. Department Chabers V	U.S. Department of Defense			U.S. Department of Defense Research and Development		1,678	8,033	4,491,925
10	U.S. Department of Defense			U.S. Department of Defense Research and Development				
1. 1. 1. 1. 1. 1. 1. 1.				U.S. Department of Defense Research and Development		26	6,850	
1.0 2.0							-	
10. Experient of Column 1. Column							-	
1.5 September of Chaines 1.5 1.5 September of Chaines 1.5 Se	U.S. Department of Defense			U.S. Department of Defense Research and Development		7	7,940	
1.0. Descriptions of Delitions 1.0.	U.S. Department of Defense							
1.5 Septement of Theorem 1.5 Septemen				U.S. Department of Defense Research and Development			-	(2,217)
Description of Desc							-	2
1.0. Experiment of Cholese V 150 1.0. Experiment of Cholese Company Co							- 1	
1.0. Descriptioned of Definement of Marchaeles 1.0. 1.0.	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development			-	29,106
1.6. Description of Challens V 120 120 120 Description of Challens 120 1	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development			-	639,155
1.0. Experiment of Education 1.0. 1.0. Experiment of Science 1.0. 1.0. 1.0. Experiment of Science 1.0. 1.0								
1.6. Department of Rebottes V 1750 U Department of Charles V 1750 U Departme								
1.0. 1.0.						822	2,752	
16. Department of Orbitions V 125	U.S. Department of Defense						-	
1.5 Department of Debress 7 280 1.5	U.S. Department of Defense							
1. Department of Bennes	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development			-	908,846
1.6. Displanet of Delines 1.60 1.0						400	-	
1.5 Department of Defence 1.30 2.50						182	2,923	
1.5 Department of Defense Y 1.5	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development		1,382	2,540	3,188,453
1. Descriptions of Delinea V 1286 128 Descriptions of Delinea Relations had Development 128 Descriptions of Delinea							-	
1.5 Septiment of Debroes 1 1260 12.5 Septiment of Debroes Research and Designated 12.7 12.7 12.5							-	
U.S. Department of Defense							-	
S. Department of Defense Y 1260 U.S. Department of Defense Research on Development	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development		211	1,767	306,613
1.5. Dispatiment of befores V	U.S. Department of Defense					268	8,000	
U.S. Digariment of Defense V 1280 U.S. Digariment of Obstance Company Comp				U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	
1. 1. 1. 1. 1. 1. 1. 1.	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development			-	
U.S. Department of Defense V 12, RD U.S. Department of Defense							-	
1.5 Department of Defense Y 1.5 De 1.5 Department of Defense Season hand Development 1.5 Department of Defense Y 1.5								
S. Degarthment of Defense Y 12/80 U.S. Degarthment of Defense Research and Development G. Defense	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development			-	(1,585)
1.5. Department of Defense 1.2. 2.2. 2.5.							-	7
U.S. Dispatrment of Defense Y 12.0 U.S. Dispatrment of Defense Y 12.0 1.5. Expatrment of Defense Y 12.0 U.S. Dispatrment of Defense Y							-	
S. Department of Defense Y 12-80 D. Separtment of Defense Research and Development - (4.238) Companient of Defense Y 12-80 D. Separtment of Defense Research and Development D. Separtment of Defense Research and Developm								
1.5. Department of Defense 1.5. 2.5.	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development			-	(4,238)
U.S. Department of Defense							-	
U.S. Department of Defense							-	
U.S. Department of Defense Y 12RD U.S. Department of Defense - 314,988 U.S. Department of Defense Y 12RD U.S. Department of Defense - 30,000 U.S. Department of Defense Y 12RD U.S. Department of Defense - 30,000 U.S. Department of Defense Y 12RD U.S. Department of Defense - 30,000 U.S. Department of Defense Y 12RD U.S. Department of Defense - 20,000 U.S. Department of Defense Y 12RD U.S. Department of Defense - 30,000 U.S. Department of Defense Y 12RD U.S. Department of Defense - 30,000 U.S. Department of Defense Y 12RD U.S. Department of Defense - 30,000 U.S. Department of Defense Y 12RD U.S. Department of Defense - 30,000 U.S. Department of Defense Y 12RD U.S. Department of Defense - 30,000 U.S. Department of Defense Y 12RD U.S. Department of Defense - 30,000 U.S. Department of Defense Y 12RD U.S. Department of Defense - 30,000 U.S. Department of Defense Y 12RD U.S. Department of Defense - 30,000	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development			-	20,994
U.S. Department of Defense Y 12RD U.S. Department of Defense Y 12RD<							-	
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development 24.007.0 107.458-64 U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development 0.7.376 U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Depart	U.S. Department of Defense						-	
S. Department of Defense	U.S. Department of Defense			U.S. Department of Defense Research and Development				(25,234)
U.S. Department of Defense	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development		240	0,070	1,074,554
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 16.79 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 18.719 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - (8.820) U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 18.542 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 3.832 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 5.86 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 5.86 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 3.80 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 3.80 U.S. Department of Defense Y 12RD U.S							-	
U.S. Department of Defense Y 12RD U.S. Department of Defense Y 12RD 1.8. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Researc	U.S. Department of Defense	7 1 Y 1	12.RD					
U.S. Department of Defense Y 12.RD U.S. Department of Defense Y	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development			-	
U.S. Department of Defense Y 12.RD U.S. Department of Defense Y		Y 1	2.RD	U.S. Department of Defense Research and Development			-	(929)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development 9.80.095 Y 12.RD U.S. Department of Defense Research and Development 9.80.095 Y 12.RD U.S. Department of Defense Research and Development 9.80.095 Y 12.RD U.S. Department of Defense Research and Development 9.80.095 Y 12.RD U.S. Department of Defense Research and Development 9.80.095 Y 12.RD U.S. Department of Defense Research and Development 9.80.095 Y 12.RD U.S. Department of Defense Research and Development 9.80.095 Y 12.RD U.S. Department of Defense Research and Development 9.80.095 Y 12.RD U.S. Department of Defense Research and Development 9.80.095 Y								(6,820) 18,542
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 233 610 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 233 <	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development			-	30
U.S. Department of Defense Y 12RD U.S. Department of Defense Pessearch and Development - 2,360,095 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 2,361 U.S. Department of Defense Y 12RD U.S. Department of Defense - 2,282 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 2,283 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 15,481 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 5,77 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 6,27 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 6,27 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 6,28 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 6,28 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 6,38 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 6,38	U.S. Department of Defense						-	
U.S. Department of Defense Y 12RD U.S. Department of Defense Pessearch and Development - 3,610 U.S. Department of Defense Y 12RD U.S. Department of Defense - 3,610 U.S. Department of Defense Y 12RD U.S. Department of Defense Pessearch and Development - 1,850 U.S. Department of Defense Y 12RD U.S. Department of Defense Pessearch and Development - 3,461 U.S. Department of Defense Y 12RD U.S. Department of Defense Pessearch and Development - 4,461 U.S. Department of Defense Y 12RD U.S. Department of Defense Pessearch and Development - 4,451 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805	U.S. Department of Defense						-	2 360 005
U.S. Department of Defense Y 12RD U.S. Department of Defense Pesearch and Development - 223 U.S. Department of Defense Y 12RD U.S. Department of Defense Pesearch and Development - 154,81 U.S. Department of Defense Y 12RD U.S. Department of Defense Pesearch and Development - 154,81 U.S. Department of Defense Y 12RD U.S. Department of Defense - 154,81 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 423 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 805 <td>U.S. Department of Defense</td> <td></td> <td></td> <td>U.S. Department of Defense Research and Development</td> <td></td> <td></td> <td></td> <td>3,610</td>	U.S. Department of Defense			U.S. Department of Defense Research and Development				3,610
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development 9.80 <td>U.S. Department of Defense</td> <td>Y 1</td> <td>2.RD</td> <td>U.S. Department of Defense Research and Development</td> <td></td> <td></td> <td>-</td> <td>223</td>	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development			-	223
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 57 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 62 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 62 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 62 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 62 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 84 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 84 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 84 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 84 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 84 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 84 U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - 84							-	
U.S. Department of Defense Y 12.RD U.S. Department of Defense 9.7 12.RD U.S. Department of Defense 9.8 1.8 <td>U.S. Department of Defense</td> <td>7 1 Y 1</td> <td>12.RD</td> <td>U.S. Department of Defense Research and Development</td> <td></td> <td></td> <td>- 1</td> <td>154,461</td>	U.S. Department of Defense	7 1 Y 1	12.RD	U.S. Department of Defense Research and Development			- 1	154,461
U.S. Department of Defense Y 12RD U.S. Department of Defense 9 12RD U.S. Department of Defense desearch and Development 9 13RD 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of Defense desearch and Development 9 12RD U.S. Department of	U.S. Department of Defense	Y 1	2.RD	U.S. Department of Defense Research and Development			-	(423)
U.S. Department of Defense Y 1.2 RD U.S. Department of Defense Research and Development - 3,867 U.S. Department of Defense Y 1.2 RD U.S. Department of Defense Research and Development - 40.7 U.S. Department of Defense Y 1.2 RD U.S. Department of Defense Research and Development - 4.7 U.S. Department of Defense Y 1.2 RD U.S. Department of Defense Research and Development - 4.7 U.S. Department of Defense Y 1.2 RD U.S. Department of Defense Research and Development - 6.013							-	
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development 407 U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development 5 U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development 5 U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development 5 U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development 6,013							- :	
U.S. Department of Defense Y 12.RD U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development - 143 U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development - 2,78 U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development - 6,013	U.S. Department of Defense			U.S. Department of Defense Research and Development				407
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development - 2,783 U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development - (6,013)	U.S. Department of Defense						-	133,696
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development - (6,013)	U.S. Department of Defense			U.S. Department of Defense Research and Development			-	
							- 1	2,783 (6.013)
							-	

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

1. September 1.	P_4	Direct Award	ALN		OR THE YEAR ENDED JUNE 30, 2023	Deer Through Francisco	Subrecipient Expenditures	Francis d'Arres
10 State of State					Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures (7,723)
								(3,408)
10 Superment of Chabers 1 150 Superment of Charter Charter Number of Chabers 1 150 Superment of Charter Charter Number of Charter Char							-	(507)
10. September Charters 1 100	U.S. Department of Defense	Y	12.RD	U.S. Department of Defense Research and Development			-	(4,891) 7,462
10. Septement of Montes Y 1965 196				U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				7,462 685
	U.S. Department of Defense	Υ .	12.RD	U.S. Department of Defense Research and Development			-	34,478
1. Section of Children							-	(708)
1.5. September of Delivers V 1750 1.5. Comment of Description V 1750							-	12 (20,232)
1.5 Department of Subman							-	(8,773)
1.6. Suprimer of Enforce 1.5	U.S. Department of Defense			U.S. Department of Defense Research and Development			-	1,041
1.5 September Propose 1.5 Experiented Propose 1.				U.S. Department of Defense Research and Development			-	(36) 665
							8.786	25.624
1.5 September of Performs V 15 1.5 September of Performs September 1.5 September of Performs September 1.5 September of Performs Septe	U.S. Department of Defense						-	132
10.5 Septement of Debutes 1.5 Septement of Debutes Between the Observation of Confession of	U.S. Department of Defense			U.S. Department of Defense Research and Development			-	1,235 3,475,164
Mathematical Mechanics V 150 150 Supermort of Mechanics and Decorptions 170 180	U.S. Department of Defense						:	27.237
1.5. Department of Indoors 1.5. 1.5. 1.5. Department of Officer Region and Opposition of Management of Device Plant of Device Plant of Management of Device Plant of Device Plant of Management of Device Plant of				U.S. Department of Defense Research and Development			-	1,825,043
1.5. Department of Chebrons 1.5 1.								196
U.S. Department of Indusers V. 1970 U.S. Department of Information and Information Control Contr								20,190 766.925
16. Suppressed of Schelbers Y 150,							40,790	136.195
	U.S. Department of Defense	Υ .	12.RD	U.S. Department of Defense Research and Development			-	(188)
1. 1. 1. 1. 1. 1. 1. 1.							-	3,106,349
1.5 Department of Defence Y 1280 U.S. Department of Defence Resourch and Development 219,107 U.S. Department of Development 117,776 U.							-	4,410,712 33.269
1.5. Department of Debtesse	U.S. Department of Defense	Y ·	12.RD	U.S. Department of Defense Research and Development			219,167	907,946
1.5 Department of Columns Y 1260 U.S. Department of Columns Research and Development 172,772 U.S. Department of Liberts Research and Development 172,772 U.S. Department of Liberts Research and Development 126,772 U.S. Department of Li	U.S. Department of Defense							48,754
U.S. Department of Debroes Y 1256 U.S. Experiment of Lebers Y 1256 U.S. Exper	U.S. Department of Defense						-	(27)
U.S. Degramment of Debrame Workshop				U.S. Department of Defense Research and Development			172.786	11,274,837
U.S. Degament of Defense U.S. Degament of Defense Research and Development U.S. Degament of Defense Research and Development U.S. Degament of Defense U.S. Degament of Defe	U.S. Department of Defense	Υ .	12.RD	U.S. Department of Defense Research and Development				2,585
U.S. Degarined of Defense V. 1250 U.S. D							-	369
U.S. Degament of Defense V. 1250				U.S. Department of Defense Research and Development			991 021	1,136 24,682,138
U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Experiment of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Degarement of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Degarement of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Degarement of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Degarement of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Degarement of Cohesions Resiscant and Development U.S. Degarement of Defense V. 1280 U.S. Degarement of Cohesions Resiscant and	U.S. Department of Defense			U.S. Department of Defense Research and Development				2,905
U.S. Department of Defense	U.S. Department of Defense			U.S. Department of Defense Research and Development				(59)
U.S. Department of Defense							-	30,036
U.S. Department of Deferse	U.S. Department of Defense	Y	12.KD 12.RD					16 8
U.S. Department of Defense	U.S. Department of Defense	Υ .	12.RD	U.S. Department of Defense Research and Development			-	68,887
1.5. Department of Defense	U.S. Department of Defense			U.S. Department of Defense Research and Development			-	45,619
1.5. Department of Defense Y 12/80 U.S. Department of Defense Research and Development 1.5.							-	27,844 53,195
U.S. Department of Defense								5.218
U.S. Department of Defense							-	82,945
U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Research	U.S. Department of Defense						-	34,282
U.S. Department of Defense	U.S. Department of Defense			U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				(294) 2,547
U.S. Department of Defense							-	90,244
U.S. Department of Defense							-	135,335
U.S. Department of Defense	U.S. Department of Defense	Y .	12.RD	U.S. Department of Defense Research and Development			-	44 1,113
U.S. Department of Defense				U.S. Department of Defense Research and Development			-	229,536
U. S. Department of Defense Y 12 RD U. S. Department of Defense Research and Development U. S. Department of Defense V. V. 12 RD U. S. Department of Defense Research and Development U. S. Dep							-	(1,869)
U.S. Department of Defense							-	5,459 (6,510)
U.S. Department of Defense								1,324
U.S. Department of Defense Y 1 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Researc	U.S. Department of Defense	Υ .	12.RD	U.S. Department of Defense Research and Development			-	(1,876)
U.S. Department of Defense Y 12.RD U.S. Department of Defense - U.S. Department of Defense Y 12.RD U.S. Department of Defense - U.S. Department of Defense Y 12.RD U.S. Department of Defense - U.S. Department of Defense Y 12.RD U.S. Department of Defense - U.S. Department of Defense Y 12.RD U.S. Department of Defense - U.S. Department of Defense Y 12.RD U.S. Department of Defense - U.S. Department of Defense Y 12.RD U.S. Department of Defense - U.S. Department of Defense Y 12.RD U.S. Department of Defense - U.S. Department of Defense Y 12.RD U.S. Department of Defense - U.S. Department of Defense Y 12.RD U.S. Department of Defense - U.S. Department of Defense Y 12.RD U.S. Department of Defense Y 12.RD U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development <	U.S. Department of Defense			U.S. Department of Defense Research and Development			-	39,975
U.S. Department of Defense							-	(9,707)
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Resea	U.S. Department of Defense	Y	12.RD	U.S. Department of Defense Research and Development				826
U.S. Department of Defense Y 12RD U.S. Department of Defense Sessarch and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development U.S. Department of Defense V 12RD U.S. Department of Defense Research and Development U.S. Department of Defense V 12RD U.S. Department of Defense Research and Development U.S. Department of Defense V 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Research and Deve	U.S. Department of Defense	Y ·	12.RD				-	26
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development P -	U.S. Department of Defense			U.S. Department of Defense Research and Development			-	(1,266) (614)
U.S. Department of Defense Y 12 RD U.S. Department of Defense - U.S. Department of Defense Y 12 RD U.S. Department of Defense - U.S. Department of Defense Y 12 RD U.S. Department of Defense - U.S. Department of Defense Y 12 RD U.S. Department of Defense - U.S. Department of Defense Y 12 RD U.S. Department of Defense - U.S. Department of Defense Y 12 RD U.S. Department of Defense - U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development - U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development - U.S. Department of Defense Y 12 RD U.S. Department of Defense - U.S. Department of Defense Y 12 RD U.S. Department of Defense - U.S. Department of Defense Y 12 RD U.S. Department of Defense Y 12 RD U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development - U.S. Department of Defe	U.S. Department of Defense			U.S. Department of Defense Research and Development				254
U.S. Department of Defense	U.S. Department of Defense	Υ .	12.RD	U.S. Department of Defense Research and Development			-	52,015
U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development -							-	(22,267) 59.216
U.S. Department of Defense Y 12 RD U.S. Department of Defense Y 12 RD U.S. Department of Defense Y 12 RD U.S. Department of Defense desearch and Development 275,13 U.S. Department of Defense Y 12 RD U.S. Department of Defense desearch and Development - U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development - U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development - - U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development - - U.S. Department of De								167,646
U.S. Department of Defense Y 12.RD U.S. Department of Defense descarch and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense descarch and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense descarch and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense - U.S. Department of Defense Y 12.RD U.S. Department of Defense descarch and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense descarch and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense descarch and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense descarch and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense descarch and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense descarch and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense descarch and Development -	U.S. Department of Defense	Υ .	12.RD	U.S. Department of Defense Research and Development			-	(4,896)
U.S. Department of Defense Y 12.RD U.S. Department of Defense of Personer of Personer of Defense of Personer of	U.S. Department of Defense			U.S. Department of Defense Research and Development			275,135	1,520,215 (22,293)
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - U.S. Department of Defense Y 12RD U.S. Department of Defense Y 12RD U.S. Department of Defense - U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development - U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development -							- :	(22,293) 162,230
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defense Research and Development P 12.RD U.S. Department of Defe	U.S. Department of Defense	Y ·	12.RD	U.S. Department of Defense Research and Development				174
U.S. Department of Defense Y 12.RD U.S. Department of Defense department of Defense Y 12.RD U.S. Department of Defense department of Defense Research and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development -	U.S. Department of Defense	Υ	12.RD	U.S. Department of Defense Research and Development			-	(43,744)
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department Of Defense Research							-	3,042,653 103,380
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development - U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development -							-	103,380 287
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development	U.S. Department of Defense	Υ .	12.RD	U.S. Department of Defense Research and Development				(232)
							-	23
	U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	(1,949) 20
U.S. Department of Defense Y 12.RU U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RU U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	U.S. Department of Defense							(2,373)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development	U.S. Department of Defense	Υ .	12.RD	U.S. Department of Defense Research and Development			-	167,329
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development							-	9,821 2.791
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development -	o.o. Department of Delense	Y '	ız.KU	0.5. Department of Defense Research and Development			-	2,791

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development	Through Entity Identifying Number Expenditures Separate Separates	- (1,323)
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development	354,50	- 48 - 99 - 27,771 - 36,568 - 302,082 - 143,917 - 7,054,920 - 17,63,643 - 575 - 27,713 3,305,290 - (1,323)
U.S. Department of Defense Y 12,RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12,RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12,RD U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development U.S. Department of Defense Y 12,RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12,RD U.S. Department of Defense Research and Development	354,500	- 99 - 27,771 - 36,568 - 302,082 - 143,917 - 7,054,920 - 17,633,643 - 575 - 27,713 3,305,290 - (1,323)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Assearch and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development	354,50	- 27,771 36,568 - 302,082 - 143,917 - 7,054,920 - 17,633,643 - 575 - 27,713 3 3,305,290 - (1,323)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Y 12.RD U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development	354,50	- 36,568 - 302,082 - 143,917 - 7,054,920 - 17,633,643 - 575 - 27,713 3 3,305,290 - (1,323)
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development	354,50	- 143,917 - 7,054,920 - 17,633,643 - 575 - 27,713 3 3,305,290 - (1,323)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development	354,50	- 7,054,920 - 17,633,643 - 575 - 27,713 3 3,305,290 - (1,323)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development	354,50	- 17,633,643 - 575 - 27,713 3 3,305,290 - (1,323)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development	354,50	- 27,713 3 3,305,290 - (1,323)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development	354,50	3 3,305,290 - (1,323)
0.5. Department of Defense 1 12.RD 0.5. Department of Defense Research and Development	354,30	- (1,323)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- (7,541)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 10,381
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 53 - (863)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- (4,460)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 33,300
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- (544) - 407
U.S. Department of Defense Y 12.RU U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RU U.S. Department of Defense Research and Development		- 407 - 687,259
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 195
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- (5,474)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- (2,676) - (973)
U.S. Department of Defense Y 12.RU U.S. Department of Defense Kesearch and Development U.S. Department of Defense Y 12.RU U.S. Department of Defense Kesearch and Development		- (973) - 1,754
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 432,725
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 1
U.S. Department of Defense Y 12,RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12,RD U.S. Department of Defense Research and Development		- (150) - (763)
U.S. Department of Defense 17 12.RU U.S. Department of Defense Research and Development		- 341,698
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 353,792
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development		- (3,630)
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development		- 20,784 - 148.602
U.S. Department of Defense Y 12.Pb U.S. Department of Defense Research and Development		- (2,931)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- (15,503)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development	53,96	3 511,848 - 85,543
U.S. Department of Defense 17 12.RU U.S. Department of Defense Research and Development		- 102,987
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development	69,60	8 229,343
U.S. Department of Defense Y 12,RD U.S. Department of Defense Research and Development		- 8,763
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- (19,684) - 33,128
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development		- 298,542
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 591,450
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 1,067,579
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense search and Development		- 391,726 - 323,527
U.S. Department of Defense Y 12 RD U.S. Department of Defense Research and Development		- 190
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 186
U.S. Department of Defense Y 12,RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12,RD U.S. Department of Defense Research and Development		- 764,350 - 4,153,413
U.S. Department of Defense Y 12.Pb U.S. Department of Defense Research and Development		- 1,051,593
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 914,422
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development	42,65	- 279,143 9 1,251,011
U.S. Department of Defense Y 12.RU U.S. Department of Defense Kesearch and Development U.S. Department of Defense Y 12.RU U.S. Department of Defense Research and Development	42,65	9 1,251,011 - 88,062
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- (90)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 1,849
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense search and Development		- 402,103 - (2,237)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 457,812
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development		- 504,233
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 17,810 - 2.148
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 117,843
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 127,283
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense search and Development		- 68,101
U.S. Department of Defense Y 12.RU U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RU U.S. Department of Defense seesarch and Development		- 9 - (1,154)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 17
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 16,180
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense search and Development		- 479,434 - 22,245
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 227,658
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 1,288,612
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense search and Development		- 175,622
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense search and Development		- 4,832 - 27,840
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 924,793
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 6,769
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense search and Development		- 274,182
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 329,083 - (118)
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- (232)
U.S. Department of Defense Y 12RD U.S. Department of Defense Research and Development		- 46,774
U.S. Department of Defense Y 12.RD U.S. Department of Defense Research and Development		- 44,788

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Direct	FC	OR THE YEAR ENDED JUNE 30, 2023		Subrecipient	
Federal Agency	Award ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development	• •	<u> </u>	-	(1,722)
U.S. Department of Defense U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				288,160 3.159.523
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				3,159,523 71,914
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			203,785	422,596
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			174,158	791,106 38,708
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				38,708
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				53,730
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	690,937 4.402.690
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				4,402,690
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	574,651
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			20.375	284,871 10,684,764
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			20,373	2,651,260
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	121,889
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	4,772 368,956
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				115,752
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	(172)
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				206,431 728.065
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			131,839	956,072
U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development			-	429,877 96,820
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	96,820 289,299
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	1,069,856
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	810,442
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			160,449	1,445,752 461.387
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	433,819
U.S. Department of Defense U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			738,249	2,316,381
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	651,243 348.202
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	529,358
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	1,505,217 1,659,424
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				1,276,573
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	150,400
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	57,554 1,077,531
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				1,261,607
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	111,000
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				68,014 150,923
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				448,823
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	816,888
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				2,192,434 865.605
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	992,784
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			537.738	630,917 1.905.601
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			557,736	3,528,735
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	855,240
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	1,719,752 466.526
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				145,595
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	264,831
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	146,729 1,299,987
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	23,811
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	90,830
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	1,237,865 1,439,009
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				149,196
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	15,928,417 661.396
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	661,396 4,657,354
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	199,525
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	316,114 104,345
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				250,107
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	1,225,932
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	214,856 136,587
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	262,246
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	29,779
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	88,285 2.319.277
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			83,858	5,308,543
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			48,206	4,488,441
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	1,082,376 111,164
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			148,324	752,536
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				201,204
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			103,017	2,048,552 1,027,192
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	141,466
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	29,110

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Direct	FOR THE	YEAR ENDED JUNE 30, 2023		Cubaccialcat	
Federal Agency	Direct Award ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Subrecipient Expenditures	Expenditures
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development	1 do Hirodgi Endy	r doo r mough Endry identifying rumber		1,570,868
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			174,521	1,616,954
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			135,911	494,961 103,612
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				104,686
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	76,560
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	190,970 700.305
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				195.509
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				484,793
U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	279,547 338.670
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				1,718,095
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				1,648,044
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	250,491 326,786
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				174,750
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				715,344
U.S. Department of Defense U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				207,062
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				842,593 102,860
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	1,620,521
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				320,112
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				449,090 93,146
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	51,573
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	181,496
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	247,128 24,886
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				492,883
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	3,427,590
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	154,472 215.180
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				428,386
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	256
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	488,513 1.419.289
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				369,235
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	150,294
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	321,792
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			22,892	83,652 348.342
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	190,663
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	382,502 91.083
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				209.283
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	156,644
U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	14,568 34.122
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				34,122 169.877
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	75,114
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	91,929 43.856
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				1,574
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				214,595
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	307,772 111.124
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				52.223
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				59,566
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	4,532
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	195,412 120.415
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				235,283
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	17,523 389,639
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				389,639 241,173
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	16,644
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	34,891
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	24,891 63.468
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				15,423
U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	10,534 31.957
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				53,982
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development				7,442
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	1,103 308 689
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	308,689 (1.389)
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	268,471
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	1,848
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	269,954 129,965
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	253,827
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	75,231
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	344,506 99.144
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	94,762
U.S. Department of Defense	Y 12.RD	U.S. Department of Defense Research and Development			-	290,750
U.S. Department of Defense U.S. Department of Defense	Y 12.RD Y 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	20,361 27,717
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SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Direct			EAR ENDED JUNE 30, 2023		Subrecipient	
Federal Agency U.S. Department of Defense	Award	ALN 12.RD	Federal Program Name U.S. Department of Defense Research and Development	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures 26,043
U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development				26,043 268,700
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	67,720
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	240,002
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				307,209 252,133
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development				664.633
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	29,507
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	2,491 200,209
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development				200,209
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	295,808
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	23,149
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development				17,079 271.254
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	865,438
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development				152,081
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			33,165	102,885 118 467
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development				938,764
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development			-	982,521
U.S. Department of Defense U.S. Department of Defense		12.RD 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development			-	9,884 81,163
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development				7 495
U.S. Department of Defense	N	12.300	Basic and Applied Scientific Research	Duke University	313-1092		446,158
U.S. Department of Defense		12.300	Basic and Applied Scientific Research	Houston, University of	R-22-0074	-	216,152
U.S. Department of Defense U.S. Department of Defense		12.300 12.300	Basic and Applied Scientific Research Basic and Applied Scientific Research	Minnesota, University of New Mexico, University of University of New Mexico Health Sciences	A005988203 133755-873B	-	27,419 107.836
U.S. Department of Defense		12.300	Basic and Applied Scientific Research	North Carolina State University	2015-1959-04		(33)
U.S. Department of Defense	N	12.300	Basic and Applied Scientific Research	Oregon, University of	234640B	-	333,851
U.S. Department of Defense U.S. Department of Defense		12.300 12.300	Basic and Applied Scientific Research Basic and Applied Scientific Research	Purdue University Purdue University	13000647-004 13001044-017		115,885 25,000
U.S. Department of Defense		12.300	Basic and Applied Scientific Research	Purdue University	40001859-027		198,329
U.S. Department of Defense		12.300	Basic and Applied Scientific Research	University of California at San Diego	705713	-	31,048
U.S. Department of Defense U.S. Department of Defense		12.300 12.300	Basic and Applied Scientific Research Basic and Applied Scientific Research	University of Illinois University of Southern California	099963-17891 141252736	-	101,987 30,722
U.S. Department of Defense		12.300	Basic and Applied Scientific Research	Vanderbilt University	OSA0000076		53,722
U.S. Department of Defense		12.300	Basic and Applied Scientific Research	Virginia Polytechnic Institute and State University	418305-19079	-	64,842
U.S. Department of Defense		12.300	Basic and Applied Scientific Research	Washington, University of	UWSC11269 PO 41707	-	28,652
U.S. Department of Defense U.S. Department of Defense		12.351	Scientific Research - Combating Weapons of Mass Destruction Scientific Research - Combating Weapons of Mass Destruction	Minnesota, University of University of Texas at Austin	H006536504 UTAUS-SUB00000288AM2		(1,647) 103,850
U.S. Department of Defense		12.420	Military Medical Research and Development	Drexel University	940009		50.361
U.S. Department of Defense		12.420	Military Medical Research and Development	Iowa State University	019123A	-	28,345
U.S. Department of Defense		12.420 12.431	Military Medical Research and Development Basic Scientific Research	Microbiotix, Inc. Carnegie Mellon University	PSEFTU2019 1130288-463192	-	(57) 36,328
U.S. Department of Defense U.S. Department of Defense		12.431	Basic Scientific Research	General Opto Solutions, LLC	261682		181.307
U.S. Department of Defense	N	12.431	Basic Scientific Research	Michigan State University	RC113209-PSU	-	258,372
U.S. Department of Defense		12.431	Basic Scientific Research	North Carolina State University	2016-1652-04	-	219,103
U.S. Department of Defense U.S. Department of Defense		12.431 12.431	Basic Scientific Research Basic Scientific Research	Princeton University Office of Research & Project Administrat Purdue University	SUB0000634 13000802-017	-	222,063 16,969
U.S. Department of Defense		12.431	Basic Scientific Research	University of California at Berkeley	00010732	-	147,631
U.S. Department of Defense		12.431	Basic Scientific Research	University of Missouri	C00076207-3	-	35,200
U.S. Department of Defense U.S. Department of Defense		12.431	Basic Scientific Research Basic, Applied, and Advanced Research in Science and Engineering	University of Southern California	SCON-00004292 222202 TASK ORDER 20-11-13	-	66,151 2,486
U.S. Department of Defense		12.630	Basic, Applied, and Advanced Research in Science and Engineering Basic, Applied, and Advanced Research in Science and Engineering	Texas A&M Engineering Experiment Station	M2000357		11.328
U.S. Department of Defense	N	12.630	COVID-19 - Basic, Applied, and Advanced Research in Science and Engineering	University of Iowa	S02280-01	-	26,974
U.S. Department of Defense		12.630 12.630	Basic, Applied, and Advanced Research in Science and Engineering	University of Maryland	111161-Z8481201	-	48,500
U.S. Department of Defense U.S. Department of Defense		12.630	Basic, Applied, and Advanced Research in Science and Engineering Air Force Defense Research Sciences Program	Utah, University of Applied Optimization	10028801-PENN-APP 2101AMTAPSU01		24,300 62
U.S. Department of Defense		12.800	Air Force Defense Research Sciences Program	Applied Optimization	2206AMRMPSU01	-	20,666
U.S. Department of Defense		12.800	Air Force Defense Research Sciences Program	Case Western Reserve University	RES600322	-	89,681
U.S. Department of Defense U.S. Department of Defense		12.800 12.800	Air Force Defense Research Sciences Program Air Force Defense Research Sciences Program	Delaware State University Directed Energy Professional Society	23-335HEH 980158	-	45,018 5.615
U.S. Department of Defense		12.800	Air Force Defense Research Sciences Program Air Force Defense Research Sciences Program	Directed Energy Professional Society Directed Energy Professional Society	982890		16,019
U.S. Department of Defense	N	12.800	Air Force Defense Research Sciences Program	Florida International University	800011034-02UG	-	121,185
U.S. Department of Defense		12.800	Air Force Defense Research Sciences Program	GE Global Research Center	401159717 27453	42.704	26,969
U.S. Department of Defense U.S. Department of Defense		12.800 12.800	Air Force Defense Research Sciences Program Air Force Defense Research Sciences Program	National Center for Defense Manufacturin g & Machining National Center for Defense Manufacturin g & Machining	2/453 980212	13,704 144	25,421 7.472
U.S. Department of Defense	N	12.800	COVID-19 - Air Force Defense Research Sciences Program	National Center for Defense Manufacturin g & Machining	982512	4,532	4,868
U.S. Department of Defense		12.800	COVID-19 - Air Force Defense Research Sciences Program	National Center for Defense Manufacturin g & Machining	982529	48,840	52,454
U.S. Department of Defense U.S. Department of Defense		12.800 12.800	COVID-19 - Air Force Defense Research Sciences Program COVID-19 - Air Force Defense Research Sciences Program	National Center for Defense Manufacturin g & Machining National Center for Defense Manufacturin g & Machining	983078 983079		29,901 71,375
U.S. Department of Defense		12.800	Air Force Defense Research Sciences Program	Purdue University	13000716-052		278,692
U.S. Department of Defense	N	12.800	Air Force Defense Research Sciences Program	Purdue University	13000716-060	-	465,443
U.S. Department of Defense U.S. Department of Defense		12.800 12.800	Air Force Defense Research Sciences Program Air Force Defense Research Sciences Program	The Board of Trustees of the Leland Stan ford Junior University (Stanford Univer The Research Foundation for SUNY on beha If of the University at Buffalo	62680282-227888 R1304011	-	34,635 269.723
U.S. Department of Defense		12.800	Air Force Defense Research Sciences Program	University of California at Merced CAMPUS CASHIERING SERVICES	A21-0047-S001	-	189.065
U.S. Department of Defense	N	12.800	Air Force Defense Research Sciences Program	University of California at San Diego	KR-705478		195,407
U.S. Department of Defense		12.800	Air Force Defense Research Sciences Program	University of Tennessee - Knoxville	A22-0890-S001	-	75,433
U.S. Department of Defense U.S. Department of Defense		12.800 12.800	COVID-19 - Air Force Defense Research Sciences Program Air Force Defense Research Sciences Program	University of Texas at Arlington University of Wisconsin-Madison	2016GC8246 0000000220	-	15,836 67,453
U.S. Department of Defense U.S. Department of Defense		12.800	Air Force Defense Research Sciences Program Air Force Defense Research Sciences Program	University of Wisconsin-Madison Utah, University of	10059059-PENN	- :	126.494
U.S. Department of Defense	N	12.800	Air Force Defense Research Sciences Program	Washington, University of	UWSC12793		108,138
U.S. Department of Defense		12.900	Language Grant Program	University of North Georgia	451031-01	-	28,377
U.S. Department of Defense U.S. Department of Defense		12.910 12.910	Research and Technology Development Research and Technology Development	Center for Open Science Montana State University	250929 G169-19-W7329	-	6,043 (340)
U.S. Department of Defense		12.910	Research and Technology Development	Virginia Polytechnic Institute and State University	450393-19079		124,450
U.S. Department of Defense	N	12.RD	U.S. Department of Defense Research and Development	4D Tech Solutions	2181	-	(266)
U.S. Department of Defense		12.RD	U.S. Department of Defense Research and Development	Actuated Medical, Inc.	233337	-	(129)
U.S. Department of Defense	N	12.RD	U.S. Department of Defense Research and Development	Advanced Cooling Technologies, Inc.	270259	-	3,808

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

		FO	R THE YEAR ENDED JUNE 30, 2023			
	Direct				Subrecipient	
Federal Agency	Award ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Advanced Cooling Technologies, Inc.	270262	-	1,173
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Advanced Cooling Technologies, Inc. Advanced Technology International	41768 2012532 TO 007	-	(1,946) 5.019
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Advanced Technology International Advanced Technology International	2012-332 10 007		(36.430)
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Advanced Technology International	2018-457 TO 002		299,724
U.S. Department of Defense	N 12.RD	COVID-19 - U.S. Department of Defense Research and Development	Advanced Technology International	2018-457 TO 003		190,254
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Advanced Technology International	2018-867 TO #CWMD1907-001	-	147,345
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Advanced Technology International	2019467 TO 001	-	140,456
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Advanced Technology International	2019-482-01 2019685 TO 001	-	129
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Advanced Technology International Advanced Technology International	2019685 TO 001 2019685 TO 002		8,415 31,283
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Advanced Technology International	2021-378 TO 1 NSTIC-20-01-041		271,905
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Advanced Technology International	2021-378 TO 2 NSTIC-20-01-055		709.016
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Advanced Technology International	2022301 TO 001	-	291,698
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	AeroDynamic Solutions, Inc.	265579	-	16,298
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Alion Science and Technology Corporation	P000036707	-	292
U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development	American Lightweight Materials Manufactu ring Innovation Institute AnalySwift	K00401	-	480,168
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Applied Optimization	267251 1902084PSU01	-	49,072 (191)
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Applied Optimization	1910086PSU01		17,832
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Applied Optimization	2106022PSU01		24,181
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Applied Optimization	2201074PSU01	-	33,568
U.S. Department of Defense	N 12.RD	COVID-19 - U.S. Department of Defense Research and Development	Applied Physical Sciences Corporation	980976 APS2020	-	8,515
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Arete Associates	AZ-401724	-	40,531
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Arrow Tech Associates, Inc.	PO 19006 & PO 28318	-	39,993
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Assurance Technology Corporation AVX Aircraft Company	911175 413	-	7,732 62,381
U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development	AVX Aircraft Company	413		179.751
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	AVX Aircraft Company	443	-	59 204
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Azimuth Corporation	292001PSU		6,924
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	BAE Systems	1124569	-	18,723
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	BAM Technologies LLC	2021-8-12	-	142,721
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Battelle (Ohio)	PO US001-0000812865	-	(16,668)
U.S. Department of Defense U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Bechtel Plant Machinery, Inc.	G301665 0000010360	-	211,677
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	BlueHalo BlueHalo	227838	-	19,168 5,733
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Boeing Company	2166311		67,366
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Bolder Flight Systems, Inc.	255466		180,013
U.S. Department of Defense	N 12.RD	COVID-19 - U.S. Department of Defense Research and Development	Carnegie Mellon University	1990682-437338		344
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Carnegie Mellon University	1990792-455728	-	122,525
U.S. Department of Defense	N 12.RD	COVID-19 - U.S. Department of Defense Research and Development	Carnegie Mellon University	23-00079-SUB-000 / PO 466279	-	89,447
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Cascade Technologies	237696	-	161,308
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	CEPEDA Associates, Inc. CEPEDA Associates, Inc.	982466 982931	-	5 10,550
U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development	CFD Research Corporation	0000003143		42.969
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	CFD Research Corporation	20200658		91,706
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Charles River Analytics, Inc.	SC2114503		140,765
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	ChromoLogic LLC	266253	-	6,678
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Clarkson Aerospace Corporation	PSU 21-1-0460	-	114,154
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Colorado School of Mines	237314	-	(39,344)
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Colorado School of Mines Computer Sciences Corporation	401733-5801 982633	-	64,931 80,897
U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development	Continuum Dynamics, Inc.	22-014		192,687
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Continuum Dynamics, Inc.	22-062B		37.202
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Corvid Technologies	247806		(1,164)
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Craft Tech	19-C-0189/C802	-	88,200
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	D#Angelo Technologies, LLC	982543	-	66,239
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Denver Research Institute	MSRC-FY19-04	-	109,734
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	EC Power	239972 249232	-	(345) 53 503
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Farragut Technical Analysis Center	249232 OF69 DATED 13-APR-22		53,503 82,229
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Galois, Inc.	2019-021		(15,969)
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Galois, Inc.	2019-021 MOD 9, 11, 12	-	263,180
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Gear Research Institute	26977	-	48,266
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Gear Research Institute	980734	-	143,830
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Gear Research Institute	982256	-	8,020
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Gear Research Institute Gear Research Institute	982834 983013	-	72,093 87.838
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Gear Research Institute Gear Research Institute	983013 983034	-	87,838 921
U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development	General Dynamics Electric Boat	1000035342		40.829
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	General Dynamics Electric Boat	1000046124		89,366
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	General Dynamics Electric Boat	SNG227017	-	116,554
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	General Electric Co. [MP]	PO# 401105828	-	88,781
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Georgia Institute of Technology	AWD-103015-S2 PO-5287291	-	30,841
U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development	Global Point Consulting LLC	RSA 983029	-	21,397 42
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	HAMR, Industries LLC HAMR, Industries LLC	26625 982357	-	42 301,253
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	HAMR, Industries LLC HAMR, Industries LLC	982357 982509		301,253
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	HAMR. Industries LLC	983014		89.708
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	HAMR, Industries LLC	983026	-	52,762
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Harmony Aeronautics LLC	257004	-	127,246
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	H-Nu Systems LLC	201826	-	(99)
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	IBM Watson Research Center	CW3033969	-	13,427
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	II-VI Aerospace & Defense	110637	-	28,977
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Innovative Scientific Solutions, Inc. Innoveering, LLC	SB20265 5230-01	-	17,751 25 497
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Innoveering, LLC Intelligent Automation, Inc.	5230-01 2532-1	-	25,497 14.693
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	intelligent Automation, Inc. Karagozian & Case, Inc.	2532-1 PSU 200474.000		95,385
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	KCF Technologies, Inc.	25294 174037		27
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Kitware, Inc.	K004015-00-S01	-	60,313

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

The content of Market Mark		Direct		F	OR THE YEAR ENDED JUNE 30, 2023			Cubus siniant	
10 Comment of States	Federal Agency		ALN	Federal Program Name	Pass-	Through Entity	Pass-Through Entity Identifying Number	Subrecipient Expenditures	Expenditures
Description of Charles 1								-	429
								-	(11,242)
10 September of Colories 1 1 1 1 1 1 1 1 1								-	5,000
10 Septement of Column 1	S. Department of Defense			U.S. Department of Defense Research and Development		ratorios	PO10203201 PO 4105271280		48,748 45,225
10 September of Charges 1 10 10 10 10 10 10 10				U.S. Department of Defense Research and Development	Lockheed Martin Corporation, Inc. [MP]	ratories	U16-002 PO 4104511686 022		(7.773)
1.0. 1						ns.			95.116
10 September of Performs 1 15 10 10 September of Performs 10 September							PO 41005571951		47,853
1.0 Experience of Perinas 1.0 1.0 1.0 Experiment of Perinas Research of Characteristics 1.0 1.0 Experiment of Perinas Research of Development 1.0 1.0 Experiment of Perinas Research of Development 1.0 1.0 Experiment of Perinas Research of Development 1.0 Experiment of Development 1.0 Experiment of Perinas Research of Development 1.0 Experiment of Development 1.0 Experiment of De	.S. Department of Defense	N 12	2.RD	U.S. Department of Defense Research and Development	Lockheed Martin Space Systems Company				3,331
1. 2. Department of Information of Configuration 1. 1. 1. 1. 1. 1. 1. 1					Lockheed Martin Space Systems Company			-	8,204
1.0 Department of Policies 1.0 1.0 1.0 Department of Policies 1.0 Department o							U16-002 TASK ORDER 022	-	7,773
M. Department of Enforcement of Enforcement of Enforcement Learning Section Learnin	.S. Department of Defense			U.S. Department of Defense Research and Development	LP Resilient Services JV LLC		981476 (PHASE II)	-	235,250 44,089
1. De Companient of Defender 1 1 10 10 1. Companient of Defender Report and Servicion 1. Companient of Defender Report and Servicion 1. Companient of Defender Report and Servicion 1. Companient of Defender Report 1. Companient of Defender				U.S. Department of Defense Research and Development				-	44,089 39,499
1.5 September of Delations 1 120									39,499 628
10.5 Department of Debuts N 1780 U. S. Department of Debuts Debuts N 1780 U. S. Department of Debuts N 1									85.827
U.S. Department of Definence N 1270 U.S. Department of Definence Reports and Development Marchanes Engineering Corporation 5000	.S. Department of Defense	N 12	2.RD	U.S. Department of Defense Research and Development	Mainstream Engineering Corporation		982417		(1,669)
1.5 September of Politons 1.7 1.5 1.5 1.5 September of Politons Numer and P	.S. Department of Defense	N 1	2.RD	U.S. Department of Defense Research and Development	Mainstream Engineering Corporation		982993 (PO #0673822)	-	216,163
1.5. Seguinated of Debutes				U.S. Department of Defense Research and Development				-	34,206
1.5. Speciment of Debress N 120								-	32,268
1.0. 1.0.								-	7,406 92 410
1.5 Department of Obertse 1 2.10 1.5 Expertment of Obertse Research and Development MoD Company Co									92,410 12.350
15. Department of Debrese									70.880
1.6. Department of Enders 1.25	S. Department of Defense								214,292
1.5 Department of Debress 1.2 2.5 1.2 2.5	.S. Department of Defense			U.S. Department of Defense Research and Development	NanoSonic, Inc.			-	5,275
S. Department of Defense No. 12.00 U.S. Department of Defense Research and Development No.		N 1	2.RD	U.S. Department of Defense Research and Development			982679	-	7,730
U.S. Department of Edelman N. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman N. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S. Department of Edelman Resourch and Development Nacionals, No. 1 280 U.S								-	44,689
U.S. Department of Defense M. 1250 U.S. Expartment of Defense Research and Development Naciona: Naciona	S. Department of Defense							-	44,865
U.S. Department of Defender V.S.	S. Department of Defense							-	38,575
U.S. Department of Defense								-	34,511
U.S. Department of Defense				U.S. Department of Defense Research and Development				-	187,370 5.906
U.S. Department of Oberinary W. 12.60 U.S. D									17 485
U.S. Department of Defense									66.660
U.S. Department of Defense		N 12	2.RD				PO 21-01		363,076
U.S. Degariment of Defense	.S. Department of Defense			U.S. Department of Defense Research and Development	Northrop Grumman Defense Systems		MP00302615		(7,542)
U.S. Department of Defense N 1 2,870 S. Department of Defense N 1 2,870 S. Department of Defense N 1 2,870 U.S. Department								-	3,008
U.S. Department of Defense Personal Policy of Superiment of Defense Research and Development Policy of Super								-	55,129
U.S. Department of Defense N 12/RD U.S. Department of Defense Research and Development Personal Empiricary Inc. Po. (2007) Possible 1997-1992 Possible 1997-1992 Possible 1997-1993								-	54,793
U.S. Department of Defense								-	146,380
U.S. Department of Defense				U.S. Department of Defense Research and Development			PO-0018619 PHASE 2	73,690	4,114 318.062
U.S. Department of Defense	S. Department of Defense							73,090	416
U.S. Department of Defense		N 1	2.RD	U.S. Department of Defense Research and Development			PO-0028863		(2,797)
U.S. Department of Defense N 12 PD U.S. Department of Defense Research and Development Passed-Aircraft Corporation Po 68629 U.S. Department of Defense Research and Development Po 61 Industries [MP] 255006 U.S. Department of Defense Research and Development Po 61 Industries [MP] 255006 U.S. Department of Defense Research and Development Po 61 Industries [MP] 255006 U.S. Department of Defense Research and Development Po 61 Industries [MP] 255006 U.S. Department of Development Po 61 Industries [MP] 255006 U.S. Department of Development Po 61 Industries [MP] 255006 U.S. Department of Development Po 61 Industries [MP] 255006 U.S. Department of Development Po 61 Industries [MP] 255006 U.S. Department of Development U.S. Depa	.S. Department of Defense				Perspecta, Inc.		PO-0018619 PHASE 2	-	33,424
U.S. Department of Defense								-	142
U.S. Department of Defense								-	197,399
U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Pratt and Whitney 22205 TASK CROBER 15	.S. Department of Defense				Piasecki Aircraft Corporation			-	122,322
U.S. Department of Defense	S. Department of Defense			U.S. Department of Defense Research and Development	PPG Industries [MP]			-	90,161
U.S. Department of Defense							22205 TASK ORDER 145	-	46,372 174 944
U.S. Department of Defense									31.235
U.S. Department of Defense N 12/R U.S. Department of Defense Research and Development QuesTek Innovations LLC 2701 U.S. Department of Defense N 12/R U.S. Department of Defense Research and Development QuesTek Innovations LLC 2701 U.S. Department of Defense N 12/R U.S. Department of Defense Research and Development QuesTek Innovations LLC 3704 U.S. Department of Defense N 12/R U.S. Department of Defense Research and Development Raytheon Company 1274/44 U.S. Department of Defense N 12/R U.S. Department of Defense Research and Development Raytheon Company 1274/44 U.S. Department of Defense N 12/R U.S. Department of Defense Research and Development Raytheon Company 1274/44 U.S. Department of Defense N 12/R U.S. Department of Defense Research and Development Raytheon Company 1274/44 U.S. Department of Defense N 12/R U.S. Department of Defense Research and Development Ref. U.S. Department of Defense Research and Development Sabre Systems, Inc.									42,800
U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development QuesTek Innovations LLC 9201 U.S. Department of Defense Research and Development QuesTek Innovations LLC 982844 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Raytheon Company 1227406 U.S. Department of Defense Research and Development Raytheon Mellingence & Space 4202551104 U.S. Department of Defense Research and Development Raytheon Mellingence & Space 4202551104 U.S. Department of Defense Research and Development Raytheon Mellingence & Space 4202474469 U.S. Department of Defense Research and Development Raytheon Mellingence & Space 4202474469 U.S. Department of Defense Research and Development Raytheon Mellingence & Space 4202474469 U.S. Department of Defense Research and Development Research	S. Department of Defense			U.S. Department of Defense Research and Development	QuesTek Innovations LLC		1875		74,789
U.S. Department of Defense N 1 2,70 U.S. Department of Defense Research and Development Raythorn Intelligence & Space 420251104 U.S. Department of Defense N 1 2,70 U.S. Department of Defense Research and Development Raythorn Intelligence & Space 4202474469 U.S. Department of Defense Research and Development Raythorn Missiles & Defense (1255)1104 U.S. Department of Defense Research and Development Raythorn Intelligence & Space 4202474469 U.S. Department of Defense Research and Development Raythorn Technologies Research Center 1255063.METOMENT 2 U.S. Department of Defense Research and Development REM Surface Engineering 82247 U.S. Department of Defense Research and Development REM Surface Engineering 82247 U.S. Department of Defense Research and Development Sabre Systems, Inc. 24266 U.S. Department of Defense Research and Development Sabre Systems, Inc. 24266 U.S. Department of Defense Research and Development Sand-Cobain Crystals 922717 U.S. Department of Defense Research and Development Sand-Cobain Crystals 922717 U.S. Department of Defense Research and Development Sand-Cobain Crystals 92278 U.S. Department of Defense Research and Development Sand-Cobain Crystals 92278 U.S. Department of Defense Research and Development Sand-Cobain Crystals 922278 U.S. Department of Defense Research and Development Sand-Cobain Crystals 922278 U.S. Department of Defense Research and Development Sand-Cobain Crystals 922278 U.S. Department of Defense Research and Development Sand-Cobain Crystals 922278 U.S. Department of Defense Research and Development 922279 U.S. Department of Defense Research and Development 922299 U.S. Department of Defense Research and Development 9222999 U.S. Department of Defense Research and Development 9222999 U.S. Department of Defense Research and Development 9222999 U.S.								-	168
U.S. Department of Defense N 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development (Person No. 12 RD U.S. Department of Defense Research and Development				U.S. Department of Defense Research and Development				-	45,484
U. S. Department of Defense N 12, N D. S. Department of Defense Research and Development Raytheon Missales & Defense 4202474469								-	(782)
U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development RRM Strate Engineering 82747 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development RMD, Inc. C21-27 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development RMD, Inc. C42966 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Salve Systems, Inc. 24296 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Salve Systems, Inc. 24296 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Salve Systems, Inc. 24296 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Salve Systems, Inc. 24296 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Salve Systems, Inc. 24296 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Salve Systems, Inc. 24296 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Salve Systems, Inc. 2422F-0037-04 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Salve Systems, Inc. 2422F-0037-04 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Salve Systems Inc. 2422F-0037-04 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Size Systems Inc. 2422F-0037-04 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Size Systems Inc. 2425F-0037-04 U.S. Department of Defense Research and Development Size Systems Inc. 2425F-0037-04 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Size Systems Inc. 2425F-0037-04 U.S. Department of Defense Research and Development Size Systems Inc. 2425F-0037-04 U.S. Department of Defense Research and Development Size Systems Inc. 2425F-0037-04 U.S. Department of Defense Research and Development Systems Inc. 2425F-0037-04 U.S. Depa								-	19,823
U.S. Department of Defense N 1 2 RD U.S. Department of Defense Research and Development RMD, Inc. C2.127 U.S. Department of Defense N 1 2 RD U.S. Department of Defense Research and Development RMD, Inc. C2.127 U.S. Department of Defense N 1 2 RD U.S. Department of Defense Research and Development Saint-Gobain Crystals 982717 U.S. Department of Defense N 1 2 RD U.S. Department of Defense Research and Development Saint-Gobain Crystals 982717 U.S. Department of Defense N 1 2 RD U.S. Department of Defense Research and Development Saint-Gobain Crystals C3.788 U.S. Department of Defense N 1 2 RD U.S. Department of Defense Research and Development Saint-Gobain Crystals C3.788 U.S. Department of Defense N 1 2 RD U.S. Department of Defense Research and Development Saint-Gobain Crystals C3.788 U.S. Department of Defense N 1 2 RD U.S. Department of Defense Research and Development Saron-Glass Technologies, Inc. 24227-0037-04 U.S. Department of Defense N 1 2 RD U.S. Department of Defense Research and Development Scrick Services, Inc. 24227-0037-04 U.S. Department of Defense N 1 2 RD U.S. Department of Defense Research and Development Services, Inc. SCRICK Services, Inc. SC									141,660 321,207
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U.S. Department of Defense N 12.RD U.S. Department of Defense N. 12.RD U.S. Department of Defense Research and Development Sam Glass Technologies, Inc. 282-27-0037-04 U.S. Department of Defense N. 12.RD U.S. Department of Defense Research and Development Scriech Services, Inc. 23-22-F-0037-04 U.S. Department of Defense N. 12.RD U.S. Department of Defense Research and Development Scriech Services, Inc. 23-22-F-0037-04 U.S. Department of Defense N. 12.RD U.S. Department of Defense Research and Development Scriech Services, Inc. SCITECH 21-21-F-0027-04 U.S. Department of Defense N. 12.RD U.S. Department of Defense Research and Development Scriech Services, Inc. Scriech Services, Inc. SCITECH 21-21-F-0027-04 U.S. Department of Defense N. 12.RD U.S. Department of Defense Research and Development Scriech Services, Inc. Scrie	S. Department of Defense			U.S. Department of Defense Research and Development	RMD. Inc.				(194)
U. S. Department of Defense U.									9,331
U.S. Department of Defense N 12.RD U.S. Department of Defense (N 12.RD U.S. Department of Defense (N N 12.RD U.S. Department of Defense (N 12.RD								-	144,632
U.S. Department of Defense N 12.RD U.S. Department of Defense (present of Defense (present) and Development (present) and Deve	S. Department of Defense				Saint-Gobain Crystals			-	24
U.S. Department of Defense N 12.RD U.S. Department of Defense (Proposition of Proposition of Proposition of Defense (Proposition of Proposition of Proposition of Propositio				U.S. Department of Defense Research and Development	Saxon Glass Technologies, Inc.		264205		4,811
U.S. Department of Defense N 1 2RD U.S. Department of Defense Research and Development Summer Corporation, Corporate Technolog y S21401 U.S. Department of Defense N 1 2RD U.S. Department of Defense Research and Development Southwest Range Services, LLC 222595 U.S. Department of Defense N 1 2RD U.S. Department of Defense Research and Development Stevens Institute of Technology 2103399-01 U.S. Department of Defense N 1 12RD U.S. Department of Defense Research and Development Stevens Institute of Technology 2103399-01 U.S. Department of Defense N 1 12RD U.S. Department of Defense Research and Development Stevens Institute of Technology 2103399-01 U.S. Department of Defense N 1 12RD U.S. Department of Defense Research and Development Stevens Institute of Technology 2103399-01 U.S. Department of Defense N 1 12RD U.S. Department of Defense Research and Development Stevens Institute of Technology 2103399-01 U.S. Department of Defense N 1 12RD U.S. Department of Defense Research and Development Stevens Institute of Technology 2103399-01 U.S. Department of Defense N 1 12RD U.S. Department of Defense Research and Development Systems Innovation Engineering Company, LLC 236587 U.S. Department of Defense N 1 12RD U.S. Department of Defense Research and Development Systems Technology, Inc. 236587 U.S. Department of Defense N 1 12RD U.S. Department of Defense Research and Development TE Connectivity LTD 2003093 U.S. Department of Defense N 1 12RD U.S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M2200343 U.S. Department of Defense N 1 12RD U.S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M22003083	S. Department of Defense							-	38,972
U.S. Department of Defense N 1 2.RD U.S. Department of Defense Southwest Range Services; LLC R02953 U.S. Department of Defense N 1 2.RD U.S. Department of Defense Sevens Institute of Technology 2103269-01 U.S. Department of Defense N 1 2.RD U.S. Department of Defense Sevens Institute of Technology 2103399-01 U.S. Department of Defense N 1 2.RD U.S. Department of Defense Sevens Institute of Technology 2103399-01 U.S. Department of Defense N 1 2.RD U.S. Department of Defense Sevens Institute of Technology 2103399-01 U.S. Department of Defense N 1 2.RD U.S. Department of Defense Sevens Institute of Technology 2103399-01 U.S. Department of Defense N 1 2.RD U.S. Department of Defense Research and Development Systems Inchnology 2205601 U.S. Department of Defense N 1 2.RD U.S. Department of Defense Research and Development Systems Technology, Inc. 2305637 U.S. Department of Defense N 1 2.RD U.S. Department of Defense Research and Development Systems Technologies, Inc. 208699 U.S. Department of Defense N 1 2.RD U.S. Department of Defense Researc				U.S. Department of Defense Research and Development	Screech Services, Inc.			-	50,127 38.823
U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development spotLESS Materials LLC 222595 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Stevens Institute of Technology 2103399-01 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development SURVICE Engineering Company, LLC S21-095001 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development SURVICE Engineering Company, LLC S21-095001 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Systems Technology, Inc. 236587 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Systems Technology, Inc. 236587 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development TE Connectivity LTD 982682 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development TE Connectivity LTD 982682 U.S. Department of Defense N 12.RD					Southwest Rance Services LLC	7		-	38,823 1,017
U. S. Department of Defense N 12.RD U. S. Department of Defense Pesearch and Development Stevens Institute of Technology 2103269-01 U. S. Department of Defense N 12.RD U.S. Department of Defense Pesearch and Development Stevens Institute of Technology 2103399-01 U. S. Department of Defense N 12.RD U. S. Department of Defense Pesearch and Development SURVICE Engineering Company, LLC S21-095001 U. S. Department of Defense N 12.RD U. S. Department of Defense Pesearch and Development Systems Inchnology, Inc. 2305687 U. S. Department of Defense N 12.RD U. S. Department of Defense Pesearch and Development Systems Technologies, Inc. 200699 U. S. Department of Defense N 12.RD U. S. Department of Defense Pesearch and Development TE Connectivity LTD 982682 U. S. Department of Defense N 12.RD U. S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M2200284 (37,3)									2.873
U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Stevens Institute of Technology 2103399-01 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development SuRVICE Engineering Company, LLC S21-095001 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Systems Innovation Engineering 982623 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Systems Technology, Inc. 236587 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development TE Connectivity LTD 982682 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development TE Connectivity LTD 982682 U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M2200284 (37,3) U.S. Department of Defense N 12RD U.S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M22003083				U.S. Department of Defense Research and Development	Stevens Institute of Technology		2103269-01	-	111,601
U.S. Department of Defense N 1 2.RD U.S. Department of Defense (Page 2014) SURVICE Engineering Company, LLC \$21-095001 U.S. Department of Defense N 1 2.RD U.S. Department of Defense (Page 2014) Systems Technology, Inc. 236587 U.S. Department of Defense N 1 2.RD U.S. Department of Defense (Page 2014) Systems Technology, Inc. 236587 U.S. Department of Defense N 1 2.RD U.S. Department of Defense (Page 2014) Systems Technology, Inc. 200699 U.S. Department of Defense N 1 2.RD U.S. Department of Defense (Page 2014) Technologies, Inc. 200699 U.S. Department of Defense N 1 2.RD U.S. Department of Defense (Page 2014) Technologies, Inc. 200699 U.S. Department of Defense N 1 2.RD U.S. Department of Defense (Page 2014) Texas A&M Engineering Experiment Station M220024 (37,3) U.S. Department of Defense (Page 2014) U.S. Department of Defense (Page 2014) Texas A&M Engineering Experiment Station M2200284 (37,3)	.S. Department of Defense	N 12	2.RD	U.S. Department of Defense Research and Development	Stevens Institute of Technology		2103399-01	-	33,877
U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Systems Technology, Inc. 236567 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Systems Technologies, Inc. 208699 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development TE Connectivity UTD 982682 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M2200284 (37.3) U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M22003083	.S. Department of Defense			U.S. Department of Defense Research and Development	SURVICE Engineering Company, LLC		S21-095001	-	(412)
U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Systima Technologies, Inc. 208699 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development TE Connectivity LTD 982682 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M2200284 (37,3) U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M2200383								-	121,565
U.S. Department of Defense N 1.2.RD U.S. Department of Defense Research and Development TE Connectivity LTD 982682 U.S. Department of Defense N 1.2.RD U.S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M2200284 (37.3 U.S. Department of Defense N 1.2.RD U.S. Department of Defense search and Development Texas A&M Engineering Experiment Station M220083								-	7,108
U.S. Department of Defense N 1 2.RD U.S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M200284 (37,3 U.S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M200383								-	(154)
U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Texas A&M Engineering Experiment Station M2203083	S. Department of Defense			U.S. Department of Defense Research and Development	Teyas A&M Engineering Eventiment Station			(37,342)	2,258 135,335
				U.S. Department of Defense Research and Development	Texas A&M Engineering Experiment Station			(31,342)	2.469
0.0. Department of Defende IN 12.ND 0.0. Department of Defende No. Dep	S. Department of Defense		2.RD	U.S. Department of Defense Research and Development		cs Laboratory LLC	168340		92,086
U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development The Johns Hopkins University Applied Phys sics Laboratory LLC 178730							178730	-	334,379
U.S. Department of Defense N 12 RD U.S. Department of Defense Research and Development The Johns Hopkins University Apolied Phy sics Laboratory LLC 181172					The Johns Hopkins University Applied Phy si	cs Laboratory LLC	181172	-	15,387
U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Toyon Research Corporation SC22C288-1-P4061					Toyon Research Corporation		SC22C288-1-P4061	-	41,816
U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Trident Systems, inc. ICS2103 DO 001				U.S. Department of Defense Research and Development				-	173,687
U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Trident Systems, Inc. (CS-21-04 DO 001 U.S. Department of Defense N 12.RD U.S. Department of Defense Research and Development Trident Systems Inc. (CS-201 DO 001	S. Department of Defense				Trident Systems, Inc.		ICS-21-04 DO 001	-	261,391
U.S. Department of Defense N 1 2.RD U.S. Department of Defense Research and Development Trident Systems, Inc. ICS2201 DO 001 U.S. Department of Defense N 1 2.RD U.S. Department of Defense Research and Development Trident Systems, Inc. ICS2201 DO 002	S. Department of Defense							-	50,963 5,240
U.S. Department of Defense N 12.RU U.S. Department of Defense Research and Development Indent Systems, inc. ISSZ201 DO U02 U.S. Department of Defense N 12.RU U.S. Department of Defense Research and Development Trident Systems, inc. ISEG1802 DO 001								-	5,240 (270)
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SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Direct	TOK THE T	LAN LINDLD CONL CO, LOLD		Subrecipient	
Federal Agency	Award ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Triton Systems, Inc.	TSI-2666-20-20201708	-	8
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Triton Systems, Inc.	TSI-5033-21-20207194	-	228,003
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	Triton Systems, Inc. UES. Inc.	TSI51082320210837 S163001001	-	49,612 277
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	UES, Inc.	\$192000001		205.278
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	UES, Inc.	S-210-212-001		6,969
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Ultramet	19061	-	160,930
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	United Technologies Research Center University of Central Florida	1254302 16308A23	-	24,454 108,426
U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	University of Central Florida University of Dayton Research Institute	16308A23 RSC20079		41.061
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	University of Hawaii	982901 PO Z10258939	-	17,118
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	University of Miami	OS00000984 PO-SPC-002846		595,148
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	University of Pittsburgh Medical Center	AWD00005595 (418902-1)	-	16,437
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	University of Texas at Austin	2023C00740 PSU2022-0790-01		19,704 182,534
U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	UtopiaCompression Corporation Vector Atomic Inc.	PSU2U22-0790-01 980575		72,213
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Viele Exploratory Sustainable Solutions LLC	983116		47,274
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	Virginia Polytechnic Institute and State University	450487-19079	-	(2,971)
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	VRC Metal Systems, LLC	27918 (N68335-19-C-0558-S)		81,460
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	VRC Metal Systems, LLC	982429 W912HZ21C0017-19.08		282
U.S. Department of Defense U.S. Department of Defense	N 12.RD N 12.RD	U.S. Department of Defense Research and Development U.S. Department of Defense Research and Development	VRC Metal Systems, LLC Xact Metal. Inc.	983050 (W912HZ22C0042-19.12) 983002		41,082 19.295
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	X-Hab 3D, Inc.	260481		64,993
U.S. Department of Defense	N 12.RD	U.S. Department of Defense Research and Development	ZETA Associates Inc.	220046SC-PSU-ARL-01		132,001
U.S. Department of Defense Total					36,739,135	381,543,082
Central Intelligence Agency	N 13 RD	Central Intelligence Agency Research and Development	DEFENSEWERX	RDA DATED 1/10/22	_	174 391
Central Intelligence Agency Central Intelligence Agency	N 13.RD	Central Intelligence Agency Research and Development	DEFENSEWERX	RDA DATED 1/10/22 RDA DATED 1/31/22		441,478
Central Intelligence Agency	N 13.RD	Central Intelligence Agency Research and Development	DEFENSEWERX	RDA DATED 1/3/1/23		381,961
Central Intelligence Agency Total						997,830
U.S. Department of Housing and Urban Development	N 14.906	Healthy Homes Technical Studies Grants	George Washington University	20-M02		(2.960)
U.S. Department of Housing and Urban Development		rieality fromes recrinical studies Grants	George Washington University	20-1002		(2,960)
U.S. Department of the Interior	Y 15.232	Wildland Fire Research and Studies				16,067
U.S. Department of the Interior U.S. Department of the Interior	Y 15.662 Y 15.805	Great Lakes Restoration Assistance to State Water Resources Research Institutes			248,093	832,660 125,273
U.S. Department of the Interior U.S. Department of the Interior	Y 15.805 Y 15.808	U.S. Geological Survey Research and Data Collection				71.819
U.S. Department of the Interior	Y 15.812	Cooperative Research Units				708,194
U.S. Department of the Interior	Y 15.923	National Center for Preservation Technology and Training				(9,046)
U.S. Department of the Interior	Y 15.945	Cooperative Research and Training Programs – Resources of the National Park Syst			19,024	326,464
U.S. Department of the Interior	Y 15.RD	U.S. Department of Interior Research and Development				11,395
U.S. Department of the Interior	Y 15.RD	U.S. Department of Interior Research and Development			-	7,761
U.S. Department of the Interior	Y 15.RD	U.S. Department of Interior Research and Development				23,557
U.S. Department of the Interior	Y 15.RD	U.S. Department of Interior Research and Development			-	13,333
U.S. Department of the Interior U.S. Department of the Interior	Y 15.RD Y 15.RD	U.S. Department of Interior Research and Development U.S. Department of Interior Research and Development			-	(5,422) 19,190
U.S. Department of the Interior	N 15.RD	Fish and Wildlife Management Assistance	COP: Fish & Boat Commission	4100086809		7,323
U.S. Department of the Interior	N 15.608	Fish and Wildlife Management Assistance	COP: Fish & Boat Commission	4100089233		31,618
U.S. Department of the Interior	N 15.608	Fish and Wildlife Management Assistance	COP: Fish & Boat Commission	4100090436	6,493	40,240
U.S. Department of the Interior	N 15.634	State Wildlife Grants	COP: Fish & Boat Commission	4100084552		21,791
U.S. Department of the Interior	N 15.808	U.S. Geological Survey Research and Data Collection	Michigan Technological University	2108003Z1 AMENDMENT 1	-	12,484
U.S. Department of the Interior	N 15.815	National Land Remote Sensing Education Outreach and Research	California University of Pennsylvania	2122ST001-S3	-	3,999
U.S. Department of the Interior	N 15.945	Cooperative Research and Training Programs – Resources of the National Park Syst	Boise State University	9906-PO139230	-	28,659
U.S. Department of the Interior U.S. Department of the Interior	N 15.RD N 15.RD	U.S. Department of Interior Research and Development U.S. Department of Interior Research and Development	COP: Game Commission Resource Systems Group, Inc.	RES PROJ 30 248635		3,493 23.390
U.S. Department of the Interior	N 15.RD	0.5. Department of interior Research and Development	Resource Systems Group, Inc.	240033	273,610	2,314,242
		Note that the state of the stat			,	
U.S. Department of Justice U.S. Department of Justice	Y 16.560 N 16.560	National Institute of Justice Research, Evaluation, and Development Project Gran National Institute of Justice Research, Evaluation, and Development Project Gran	Iowa State University	021595A	151,329	420,509 54,619
U.S. Department of Justice	N 16.560	National Institute of Justice Research, Evaluation, and Development Project Gran	University of Texas at San Antonio	1000003945		212,132
U.S. Department of Justice	N 16.738	Edward Byrne Memorial Justice Assistance Grant Program	COP: State Police	234434		64,990
U.S. Department of Justice	N 16.754	Harold Rogers Prescription Drug Monitoring Program	PA Prescription Drug Monitoring Programs	4300682773		26,874
U.S. Department of Justice	N 16.754	Harold Rogers Prescription Drug Monitoring Program	PA Prescription Drug Monitoring Programs	4300704173	17,140	27,060
U.S. Department of Justice	N 16.RD	U.S. Department of Justice Research and Development	COP: Board of Probation and Parole	4300727362	-	24,638
U.S. Department of Justice	N 16.RD	U.S. Department of Justice Research and Development	COP: Department of Corrections	4300727370	-	74,119
U.S. Department of Justice U.S. Department of Justice Total	N 16.RD	U.S. Department of Justice Research and Development	YWCA of Greater Pittsburgh	2019-VT-BX-0109	168 469	4,335
G.S. Department of Justice Fotal					100,409	909,276
U.S. Department of Labor	N 17.401	International Labor Programs	Solidarity Center	202214-38256	-	120,125
U.S. Department of Labor	N 17.RD	U.S. Department of Labor Research and Development	ICF Incorporated LLC	53556		98,594
U.S. Department of Labor Total						218,719
U.S. Department of State	Y 19.040	Public Diplomacy Programs				2,749
U.S. Department of State	Y 19.RD	U.S. Department of State Research and Development			-	12,022
U.S. Department of State	N 19.040	Public Diplomacy Programs	American Councils	254389		6,205
U.S. Department of State	N 19.900	AEECA/ESF PD Programs	American Councils	254435		17,708
U.S. Department of State Total						38,684
U.S. Department of Transportation	Y 20.108	Aviation Research Grants				166,374
U.S. Department of Transportation	Y 20.109	Air Transportation Centers of Excellence			211,697	1,563,043
U.S. Department of Transportation	Y 20.529	Bus Testing			38,352	2,287,279
U.S. Department of Transportation	Y 20.701	University Transportation Centers Program			1,498,492	2,172,549
U.S. Department of Transportation	Y 20.RD	U.S. Department of Transportation Research and Development			-	29,815
U.S. Department of Transportation	Y 20.RD	U.S. Department of Transportation Research and Development			-	11,848
U.S. Department of Transportation U.S. Department of Transportation	Y 20.RD Y 20.RD	U.S. Department of Transportation Research and Development U.S. Department of Transportation Research and Development			-	157,647 40,325
U.S. Department of Transportation U.S. Department of Transportation	Y 20.RD Y 20.RD	U.S. Department of Transportation Research and Development U.S. Department of Transportation Research and Development			-	40,325 35.733
U.S. Department of Transportation	Y 20.RD	U.S. Department of Transportation Research and Development			-	2.210.179
U.S. Department of Transportation	N 20.200	Highway Research and Development Program	National Cooperative Highway Research Pr ogram	HR 24-49	22,195	165,924
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SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

			FOR THE YEAR E	NDED JUNE 30, 2023			
Federal Agency	Direct Award	ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Subrecipient Expenditures	Expenditures
U.S. Department of Transportation	N	20.205	Highway Planning and Construction	Montana Department of Transportation	9932-820 CONTRACT #314039	-	9.839
U.S. Department of Transportation	N	20.205	Highway Planning and Construction	PennDOT	4300730112	-	77,539
U.S. Department of Transportation	N	20.205	Highway Planning and Construction	PennDOT	4300732731	-	51,849
U.S. Department of Transportation U.S. Department of Transportation	N N	20.205	Highway Planning and Construction Highway Planning and Construction	PennDOT PennDOT	4300740444 4300740455	-	76,797 83 469
U.S. Department of Transportation	N N	20.205	Highway Planning and Construction	PennDOT	4300740464		76.153
U.S. Department of Transportation	N	20.205	Highway Planning and Construction	PennDOT	4300740472	-	46,049
U.S. Department of Transportation		20.205	Highway Planning and Construction	PennDOT	4300740978	-	78,839
U.S. Department of Transportation		20.205	Highway Planning and Construction	PennDOT	4300741101 4300743883	-	74,525
U.S. Department of Transportation U.S. Department of Transportation	N N	20.205	Highway Planning and Construction Consolidated Rail Infrastructure and Safety Improvements	PennDOT Kansas State University	4300743883 A20-0537-S001		32,898 243,766
U.S. Department of Transportation		20.701	University Transportation Centers Program	Missouri University of Science and Technology	00076844-01	-	10,088
U.S. Department of Transportation	N	20.701	University Transportation Centers Program	Missouri University of Science and Technology	00076848-01	-	26,747
U.S. Department of Transportation		20.RD	U.S. Department of Transportation Research and Development	Acrow Corporation of America	981735	-	717
U.S. Department of Transportation	N N	20.RD 20.RD	U.S. Department of Transportation Research and Development U.S. Department of Transportation Research and Development	Callentis Consulting Group, LLC	261411 228213	-	70,850 588
U.S. Department of Transportation U.S. Department of Transportation		20.RD 20.RD	U.S. Department of Transportation Research and Development U.S. Department of Transportation Research and Development	FBS, Inc. (Feature Based Systems) PennDOT	PENNSTATEADS2021	-	235,876
U.S. Department of Transportation	N	20.RD	U.S. Department of Transportation Research and Development	Purdue University	19200267-030		90,160
U.S. Department of Transportation		20.RD	U.S. Department of Transportation Research and Development	Vanasse Hangen Brustlin, Inc.	39541-12		(3)
U.S. Department of Transportation Total						1,770,736	10,127,462
General Services Administration	N	39.RD	General Services Administration Research and Development	COP: Department of General Services	2016-OCC7209	_	78,704
General Services Administration	N	39.RD	General Services Administration Research and Development	COP: Department of General Services	4300556762		23,431
General Services Administration	N	39.RD	General Services Administration Research and Development	COP: Department of General Services	4400016637		11,401
General Services Administration Total							113,536
Library of Congress	N	42.RD	Library of Congress Research and Development	Waynesburg University	235563		2,957
Library of Congress Total							2,957
National Aeronautics and Space Administration		43.001	Science			2,533,220	9,987,812
National Aeronautics and Space Administration	Y	43.002	Aeronautics			882,446	1,660,995
National Aeronautics and Space Administration		43.007	Space Operations			-	9,970
National Aeronautics and Space Administration		43.008	Education			267,877	764,092
National Aeronautics and Space Administration National Aeronautics and Space Administration	Ý	43.012 43.RD	Space Technology National Aeronautics and Space Administration Research and Development			94,691	811,889 (719)
National Aeronautics and Space Administration	Ý	43.RD	National Aeronautics and Space Administration Research and Development				7,294
National Aeronautics and Space Administration		43.RD	National Aeronautics and Space Administration Research and Development			-	(1)
National Aeronautics and Space Administration		43.RD	National Aeronautics and Space Administration Research and Development			-	1,389
National Aeronautics and Space Administration	Y	43.RD	National Aeronautics and Space Administration Research and Development			-	11,209
National Aeronautics and Space Administration National Aeronautics and Space Administration	Ý	43.RD 43.RD	National Aeronautics and Space Administration Research and Development National Aeronautics and Space Administration Research and Development				12,969 2,681
National Aeronautics and Space Administration		43.RD	National Aeronautics and Space Administration Research and Development				149,771
National Aeronautics and Space Administration	Y	43.RD	National Aeronautics and Space Administration Research and Development			-	3,282
National Aeronautics and Space Administration		43.RD	National Aeronautics and Space Administration Research and Development			-	124,383
National Aeronautics and Space Administration	Y	43.RD	National Aeronautics and Space Administration Research and Development			-	4,999
National Aeronautics and Space Administration National Aeronautics and Space Administration	Y	43.RD 43.RD	National Aeronautics and Space Administration Research and Development National Aeronautics and Space Administration Research and Development			-	10,000 10,000
National Aeronautics and Space Administration	Ý	43.RD	National Aeronautics and Space Administration Research and Development				17,915
National Aeronautics and Space Administration	Y	43.RD	National Aeronautics and Space Administration Research and Development				11,199
National Aeronautics and Space Administration	Y	43.RD	National Aeronautics and Space Administration Research and Development			980,711	1,986,421
National Aeronautics and Space Administration	N	43.001	Science	CARLETON COLLEGE Attn: Business Office	PSU-0298 138591-21054	-	32,334
National Aeronautics and Space Administration National Aeronautics and Space Administration	N N	43.001 43.001	Science Science	Cornell University Cornell University	91922-20470		26,798 9.591
National Aeronautics and Space Administration		43.001	Science	Georgetown University	AWD7773186-GR205805	-	140.633
National Aeronautics and Space Administration	N	43.001	Science	Georgia, University of	SUB00002227	-	32,925
National Aeronautics and Space Administration		43.001	Science	Ohio State University	SPC-1000007126 GR127925	-	7,930
National Aeronautics and Space Administration National Aeronautics and Space Administration	N N	43.001 43.001	Science Science	Ohio State University PRESIDENT AND FELLOWS OF HARVARD COLLEGE HARVARD UNIVERSITY	SPC-1000007144 GR129438 131605-5120713		12,091 83.925
National Aeronautics and Space Administration National Aeronautics and Space Administration		43.001	Science	Smithsonian Astrophysical Observatory (The)	AR1-22006X		26.298
National Aeronautics and Space Administration	N	43.001	Science	Smithsonian Astrophysical Observatory (The)	AR1-22000X AR1-22008X		(1,347)
National Aeronautics and Space Administration		43.001	Science	Smithsonian Astrophysical Observatory (T he)	AR3-24003B	-	2,176
National Aeronautics and Space Administration	N	43.001	Science	Smithsonian Astrophysical Observatory (The)	DDO-21113X	-	15,012
National Aeronautics and Space Administration National Aeronautics and Space Administration		43.001 43.001	Science Science	Smithsonian Astrophysical Observatory (T he) Smithsonian Astrophysical Observatory (T he)	GO0-21049X GO0-21064B	-	9,798 20,404
National Aeronautics and Space Administration National Aeronautics and Space Administration	N N	43.001	Science	Smithsonian Astrophysical Observatory (The) Smithsonian Astrophysical Observatory (The)	GOU-21064B GO1-22037X		20,404
National Aeronautics and Space Administration		43.001	Science	Smithsonian Astrophysical Observatory (The)	GO1-22055C	-	17,430
National Aeronautics and Space Administration		43.001	Science	Smithsonian Astrophysical Observatory (T he)	GO2-23003X	-	20,369
National Aeronautics and Space Administration		43.001 43.001	Science	Smithsonian Astrophysical Observatory (The)	GO2-23041X	-	2,176
National Aeronautics and Space Administration National Aeronautics and Space Administration	N N	43.001	Science Science	Smithsonian Astrophysical Observatory (T he) Smithsonian Astrophysical Observatory (T he)	GO2-23046X GO2-23083X	-	15,103 5,002
National Aeronautics and Space Administration		43.001	Science	Smithsonian Astrophysical Observatory (The)	GO3-24053X		1.740
National Aeronautics and Space Administration	N	43.001	Science	Smithsonian Astrophysical Observatory (T he)	GO9-20011X	-	55,789
National Aeronautics and Space Administration	N	43.001	Science	Smithsonian Astrophysical Observatory (T he)	GO9-20051A	-	8,512
National Aeronautics and Space Administration	N	43.001	Science	Smithsonian Astrophysical Observatory (T he)	GO9-20099X	-	11,228
National Aeronautics and Space Administration National Aeronautics and Space Administration	N N	43.001 43.001	Science Science	Smithsonian Astrophysical Observatory (T he) Smithsonian Astrophysical Observatory (T he)	SV9-89016 SV9-89025	-	33,946 22,583
National Aeronautics and Space Administration National Aeronautics and Space Administration		43.001	Science	Southwest Research Institute	M99031CEP	-	(4,339)
National Aeronautics and Space Administration		43.001	Science	Space Telescope Science Institute	HST-AR-16146.008-A	-	200
National Aeronautics and Space Administration	N	43.001	Science	Space Telescope Science Institute	HST-GO-16064.001-A	-	13,687
National Aeronautics and Space Administration	N	43.001	Science	Space Telescope Science Institute	HST-GO-16200.003-A	-	1,083
National Aeronautics and Space Administration National Aeronautics and Space Administration	N N	43.001 43.001	Science Science	Texas A&M University University of Chicago	M2101865 AWD101560 (SUB00000391)	-	86,335 204 417
National Aeronautics and Space Administration National Aeronautics and Space Administration		43.001	Science	University of Chicago University of Chicago	AWD101960 (SUB00000391) AWD101921 (SUB00000467)		204,417 353.148
National Aeronautics and Space Administration	N	43.001	Science	University of Iowa	\$03065-01	-	156,484
National Aeronautics and Space Administration		43.001	Science	University of Maryland	121334-Z6500201	-	7,690
National Aeronautics and Space Administration	N	43.001	Science	University of Maryland Baltimore County	NASA0015-01	-	60,784
National Agronautics and Space Administration		43.001 43.001	Science	Vanderbilt University Washington University in St. Louis	OSA00000130 WU-23-0279	-	4,225 83,295
National Aeronautics and Space Administration National Aeronautics and Space Administration		43.001	Science Aeronautics	Washington University in St. Louis Brown University	WU-23-0279 00001765	-	83,295 163.109
National Aeronautics and Space Administration National Aeronautics and Space Administration		43.002	Aeronautics Aeronautics	University of Tennessee - Knoxville	A18-0139-S002		105,255
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SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Direct	•	OK THE TEAK ENDED CONE CO, 2020		Subrecipient	
Federal Agency	Award ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
National Aeronautics and Space Administration	N 43.008	Education	Florida International University	000061	-	91,548
National Aeronautics and Space Administration	N 43.008	Education	National Institute of Aerospace	C20-201030-PSU	-	14,917
National Aeronautics and Space Administration National Aeronautics and Space Administration	N 43.008 N 43.012	Education	National Institute of Aerospace Clarkson University	C20-202010-PSU SUPPL 4, 5 102453-1	-	31,551 5.590
National Aeronautics and Space Administration National Aeronautics and Space Administration	N 43.012 N 43.012	Space Technology Space Technology	Clarkson University Michigan Technological University	102453-1 160706078	-	5,590 26,627
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Advanced Cooling Technologies, Inc.	254787	-	17.624
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	American GNC Corporation	PSU072522		29,298
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Ballydel Technologies, Inc	981089		84
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Blue Ridge Research and Consulting	220299F-501	-	52,255
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Colorado, University of	1559104	-	(2)
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Continuum Dynamics, Inc.	21-067	-	112,300
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Continuum Dynamics, Inc.	22-109	-	21,781
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Continuum Dynamics, Inc.	PO 21-013A DP-PSU-072522-C	-	137,189
National Aeronautics and Space Administration	N 43.RD N 43.RD	National Aeronautics and Space Administration Research and Development National Aeronautics and Space Administration Research and Development	D&P, LLC	DP-PSU-0/2522-C 252606	-	26,600 49,336
National Aeronautics and Space Administration National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Innovative Dynamics Inc. Innovative Scientific Solutions. Inc.	SB20277	-	49,336 46,055
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	JPL Integrated Communications, Inc.	1651833		146
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Masten Space Systems	235820		43,920
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Masten Space Systems	MSS-AGM-1716-005		4,025
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Nokomis, Inc.	257204	-	37,498
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Phoenix Analysis & Design Technologies	250566	-	92,207
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	PhotonFoils	258958	-	31,901
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Pratt and Whitney	22205 TASK 146	-	851,116
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Smithsonian Astrophysical Observatory (The)	GO0-21079A	-	158
National Aeronautics and Space Administration	N 43.RD N 43.RD	National Aeronautics and Space Administration Research and Development	Smithsonian Astrophysical Observatory (The) Smithsonian Astrophysical Observatory (The)	GO0-21080X SV4-74018	-	49,644 303,386
National Aeronautics and Space Administration National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development National Aeronautics and Space Administration Research and Development	Space Telescope Science Institute	HST-AR-15005.001-A		6,309
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Space Telescope Science Institute	HST-AR-16607.001-A		43,492
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Space Telescope Science Institute	HST-GO-15705.003-A		4.878
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Space Telescope Science Institute	JWST-GO-01810.004-A	-	14,404
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Space Telescope Science Institute	JWST-GO-02635.001-A	-	5,439
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	Systems Technology, Inc.	261976	-	57,701
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	The Johns Hopkins University Applied Phy sics Laboratory LLC	145170	-	(26,011)
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	The Johns Hopkins University Applied Phy sics Laboratory LLC	147577	-	(16,024)
National Aeronautics and Space Administration	N 43.RD	National Aeronautics and Space Administration Research and Development	The Johns Hopkins University Applied Phy sics Laboratory LLC	174395	-	790,702
National Aeronautics and Space Administration National Aeronautics and Space Administration	N 43.RD N 43.RD	National Aeronautics and Space Administration Research and Development National Aeronautics and Space Administration Research and Development	UES, Inc. University of Texas at Dallas	S-196-000-001 2109377 (S372440)	-	223,639 13.689
National Aeronautics and Space Administration National Aeronautics and Space Administratio		National Aeronautics and Space Administration Research and Development	University of Texas at Dallas	2109377 (5372440)	4.758.945	20.650.804
					1,1.00,010	
National Endowment for the Arts	Y 45.024	Promotion of the Arts Grants to Organizations and Individuals			-	4,879
National Endowment for the Arts Total					-	4,879
National Endowment for the Humanities	Y 45 161	Promotion of the Humanities Research			36,950	240.592
National Endowment for the Humanities National Endowment for the Humanities	Y 45.161 Y 45.163	Promotion of the Humanities Research Promotion of the Humanities Professional Development			36,950	70,711
National Endowment for the Humanities	Y 45.169	Promotion of the Humanities Office of Digital Humanities				19.064
National Endowment for the Humanities Total	1 40.100	1 formulation of the framaniaes office of Digital Framaniaes			36.950	330,367
					,	
The Institute of Museum and Library Services	Y 45.301	Museums for America			-	21,442
The Institute of Museum and Library Services	Y 45.312	National Leadership Grants			17,242	43,370
The Institute of Museum and Library Services	N 45.312	National Leadership Grants	Middle Country Library Foundation	264764	-	63,784
The Institute of Museum and Library Services	N 45.313	Laura Bush 21st Century Librarian Program	University of Pittsburgh	AWD00001158 (415653-3)	-	14,177
The Institute of Museum and Library Services	Total				17,242	142,773
National Science Foundation	Y 47.041	Engineering			524,275	14,311,028
National Science Foundation	Y 47.049	COVID-19 - Mathematical and Physical Sciences			324,273	71.779
National Science Foundation	Y 47.049	Mathematical and Physical Sciences			680,219	19,713,178
National Science Foundation	Y 47.050	COVID-19 - Geosciences				698,771
National Science Foundation	Y 47.050	Geosciences			759,175	8,725,742
National Science Foundation	Y 47.070	COVID-19 - Computer and Information Science and Engineering			-	62,856
National Science Foundation	Y 47.070	Computer and Information Science and Engineering			80,416	12,716,612
National Science Foundation	Y 47.074	COVID-19 - Biological Sciences				337,841
National Science Foundation	Y 47.074 Y 47.075	Biological Sciences Social, Behavioral, and Economic Sciences			642,129 229,487	9,712,748 2,197,922
National Science Foundation National Science Foundation	Y 47.075 Y 47.076	Education and Human Resources			229,487 164.160	10,563,883
National Science Foundation National Science Foundation	Y 47.076 Y 47.078	COVID-19 - Polar Programs			104,100	35,432
National Science Foundation	Y 47.078	Polar Programs			315,688	1,148,078
National Science Foundation	Y 47.079	Office of International Science and Engineering			35,987	328,225
National Science Foundation	Y 47.083	COVID-19 - Integrative Activities			57,126	57,211
National Science Foundation	Y 47.083	Integrative Activities			127,883	1,017,942
National Science Foundation	Y 47.084	NSF Technology, Innovation, and Partnerships			11,316	197,516
National Science Foundation	Y 47.RD	National Science Foundation Research and Development			-	(289,337)
National Science Foundation	Y 47.RD	National Science Foundation Research and Development			-	108,464
National Science Foundation	Y 47.RD	National Science Foundation Research and Development			-	169,075
National Science Foundation National Science Foundation	Y 47.RD Y 47.RD	National Science Foundation Research and Development National Science Foundation Research and Development			-	242,140 217,718
National Science Foundation	Y 47.RD	National Science Foundation Research and Development			-	130.019
National Science Foundation National Science Foundation	Y 47.RD	National Science Foundation Research and Development				93.520
National Science Foundation	Y 47.RD	National Science Foundation Research and Development			-	3,214
National Science Foundation	Y 47.RD	National Science Foundation Research and Development			-	102,773
National Science Foundation	Y 47.RD	National Science Foundation Research and Development			-	9,596
National Science Foundation	Y 47.RD	National Science Foundation Research and Development			-	8,914
National Science Foundation	N 47.041	Engineering	Chromatir Technologies, LLC	264125 PD 1994		31,381
National Science Foundation	N 47.041	Engineering	Florida Atlantic University	PR-K301	-	20,916
National Science Foundation National Science Foundation	N 47.041 N 47.041	Engineering	Louisville, University of Michiaan Technological University	ULRF_22-0394-01 1603040Z2	-	9,897 48.692
National Science Foundation National Science Foundation	N 47.041 N 47.041	Engineering Engineering	Michigan Technological University North Carolina State University	1603040Z2 2012-1067-01 AMEND 4	-	48,692 239,079
National Science Foundation National Science Foundation	N 47.041 N 47.041	Engineering	North Carolina State University Ohio State University	2012-1067-01 AMEND 4 60078805 PO RF01616347		239,079 82,753
National Science Foundation	N 47.041	Engineering	Ohio State University	GR122545		52,665
National Science Foundation	N 47.041	Engineering	Ohio State University	GR125415 SPC-1000006646		41,105
National Science Foundation	N 47.041	Engineering	spotLESS Materials LLC	218110	-	(176)

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

		FC	OR THE YEAR ENDED JUNE 30, 2023			
Federal Agency	Direct Award A	.N Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Subrecipient Expenditures	Expenditures
National Science Foundation	N 47.0		spotLESS Materials LLC	237140	Exponuntaroo	71.321
National Science Foundation	N 47.0		Texas Tech University	21P680-01		29.879
National Science Foundation	N 47.0		The Trustees of the University of Pennsy Ivania	570440 PO 4580783	17.523	65.988
National Science Foundation	N 47.0		Trinity University	250762		44.796
National Science Foundation	N 47.0	1 Engineering	University of Maryland	104749-Z3822201	-	291,402
National Science Foundation	N 47.0	1 Engineering	University of Texas at Austin	UTAUS-SUB00000838	-	102,045
National Science Foundation	N 47.0		VentureWell	2220329-1		12,629
National Science Foundation	N 47.0		Virginia Polytechnic Institute and State University	445588-19079	-	45,088
National Science Foundation National Science Foundation	N 47.0- N 47.0-		Virginia Polytechnic Institute and State University Virginia Polytechnic Institute and State University	445588-19079A 480359-19079	-	110,745 33 147
National Science Foundation	N 47.0		Virginia Polytechnic institute and State Oniversity Virginia, University of	GR012362.SUB00000285		75.032
National Science Foundation	N 47.0		Colorado School of Mines	402135-5802		79,069
National Science Foundation	N 47.0		Florida International University	000543		32,734
National Science Foundation	N 47.0		Missouri University of Science and Technology	00068654-01		29,913
National Science Foundation	N 47.0	9 Mathematical and Physical Sciences	National Radio Astronomy Observatory	PO 372390	-	18,413
National Science Foundation	N 47.0		Norfolk State University	F1040101	-	(2,272)
National Science Foundation	N 47.0		North Carolina Central University	A21-0013-S001	-	38,364
National Science Foundation	N 47.0		University Auxiliary Services, Inc. (Cal ifornia State University)	PSU231221	-	21,128
National Science Foundation National Science Foundation	N 47.0 N 47.0		University of Arkansas University of Illinois at Urbana-Champai gn	UA2022-292 101433-18143	-	77,754 80.427
National Science Foundation	N 47.0		University of Nebraska Lincoln	25-1125-0048-002		11.245
National Science Foundation	N 47.0		University of Pittsburgh	AWD00002876 (2036164-1)		21.204
National Science Foundation	N 47.0		University of Tennessee	A22-0253-S002		67.336
National Science Foundation	N 47.0	9 Mathematical and Physical Sciences	University of Wisconsin-Madison	0000000032		103,681
National Science Foundation	N 47.0		University of Wisconsin-Madison	000000453	-	171,732
National Science Foundation	N 47.0		University of Wisconsin-Madison	0000001204	-	23,819
National Science Foundation	N 47.0		University of Wisconsin-Madison	0000002388	-	55,098
National Science Foundation	N 47.0		University of Wisconsin-Milwaukee	223405530	-	228,650
National Science Foundation	N 47.0		Consortium of Universities for the Advan cement of Hydrologic Science, Inc.	EAR-2012893 - 1 2105003Z5 AMENDMENT 2	-	170,422
National Science Foundation National Science Foundation	N 47.0		Michigan Technological University		-	46,584
National Science Foundation National Science Foundation	N 47.0 N 47.0		New York University Rutgers-The State University of New Jersey	F0691-03 PO IB00505421 1953	-	106,265 128,489
National Science Foundation	N 47.0		University of Colorado at Boulder	1559669 PO 1001413789		31.197
National Science Foundation	N 47.0		University of Colorado at Boulder	1560925		3,334
National Science Foundation	N 47.0		Vermont. University of	AWD00000206SUB00000111		121,574
National Science Foundation	N 47.0	O Computer and Information Science and Engineering	Board of Regents of The University of Wi sconsin System	203405438		1,384
National Science Foundation	N 47.0		University of Cincinnati	014678-00003 PO# 4600014440	-	90,183
National Science Foundation	N 47.0		Virginia Commonwealth University	FP00014908_SA001	-	28,449
National Science Foundation	N 47.0		Yale University	GR109665(CON-80002380)	-	45,149
National Science Foundation	N 47.0 N 47.0		Cornell University	145157-21992	-	2,478
National Science Foundation National Science Foundation	N 47.0 N 47.0		Michigan State University Minnesota, University of	RC108280PSU P007478102	-	52,286 14,984
National Science Foundation	N 47.0		Oklahoma State University	1-505352 PENN STATE		14,964 34.570
National Science Foundation	N 47.0		Purdue University	10001383-003		38.291
National Science Foundation	N 47.0		Saint Louis University	ERS#RD45339		28,638
National Science Foundation	N 47.0	4 Biological Sciences	The Regents of the Úniversity of Califor nia	00011116	-	6,529
National Science Foundation	N 47.0		University of California at Los Angeles	0830 G XB618	-	4,174
National Science Foundation	N 47.0		University of Colorado at Boulder	1559643	-	201,001
National Science Foundation	N 47.0		University of Pittsburgh	AWD00004485 (012686-9)	-	138,588
National Science Foundation National Science Foundation	N 47.0		Virginia Institute of Marine Science Virginia Polytechnic Institute and State University	721653-712683 480146-19079	-	8,807 183.460
National Science Foundation	N 47.0		City University of New York	CM00007584-00	-	32.872
National Science Foundation	N 47.0		Indiana University (State of Indiana)	18-027-2		1.471
National Science Foundation	N 47.0		Ohio State University	60068034-PSU		10,931
National Science Foundation	N 47.0		San Diego State University	SA0000655 59475A P3541 7802211		119,143
National Science Foundation	N 47.0	6 Education and Human Resources	Board of Regents of the University Syste m of Georgia	SUB00002988	-	15,486
National Science Foundation	N 47.0		Concord Consortium (The)	327.18.03	-	92,858
National Science Foundation	N 47.0		Concord Consortium (The)	341.21.01	-	131,545
National Science Foundation	N 47.0		Concord Consortium (The)	353.21.02	-	95,139
National Science Foundation	N 47.0 N 47.0		Louisville, University of	ULRF_22-0557-01	-	48,269
National Science Foundation National Science Foundation	N 47.0 N 47.0		Norfolk State University North Carolina State University	F1040086 2018-0676-01		25,000 29,647
National Science Foundation	N 47.0		North Carolina State Oniversity Northern Arizona University	1003968-01		3.837
National Science Foundation	N 47.0		Pasadena City College	B210057	-	163,917
National Science Foundation	N 47.0	6 Education and Human Resources	The Research Foundation for SUNY on behalf of the University at Buffalo	R1340095	-	37,494
National Science Foundation	N 47.0		UNIVERSITY OF ARIZONA	680650	-	16,644
National Science Foundation	N 47.0		University of Illinois	083962-18471	-	22,171
National Science Foundation	N 47.0		University of Puerto Rico	SA-2021-22-002UPRAG	-	33,530
National Science Foundation	N 47.0		University of Texas at Arlington	2022GC1101	-	18,814
National Science Foundation National Science Foundation	N 47.0 N 47.0		Virginia Polytechnic Institute and State University Virginia Polytechnic Institute and State University	480801-19079 480801-19079A	-	14,463 13.816
National Science Foundation	N 47.0		Washington State University	140262-SPC003496	-	11.327
National Science Foundation	N 47.0		Ohio State University	238472 PO# RF01620872		1,935
National Science Foundation	N 47.0		University of Wisconsin-Madison	0000001311		920
National Science Foundation	N 47.0	3 Integrative Activities	Boise State University	6800-PO124294		3,825
National Science Foundation	N 47.0	NSF Technology, Innovation, and Partnerships	Astrabeam LLC	264208	-	48,819
National Science Foundation	N 47.0		Kansas, University of	FY2023-005	-	7,914
National Science Foundation	N 47.0		Kansas, University of	FY2023-086	-	6,959
National Science Foundation	N 47.R N 47.R		American Sociological Association	257021	-	13,723
National Science Foundation National Science Foundation	N 47.R N 47.R		Amgen Association of Public and Land Grant Uni versities	IIP-1841474 PO 3056166 214173	-	287,869 15,977
National Science Foundation National Science Foundation	N 47.R N 47.R		Association of Public and Land Grant Uni versities International Business Machines Corporat ion	214173 CW3563975		15,977 99.594
National Science Foundation National Science Foundation	N 47.R N 47.R		International Business Machines Corporation Nebraska, University of	25-6238-0918-002	-	99,594 31,192
National Science Foundation	N 47.R		North Carolina Central University	181223 PO101204		(240)
National Science Foundation	N 47.R		North Carolina State University	2020-0856-01	-	37,700
National Science Foundation	N 47.R	National Science Foundation Research and Development	Purdue University	10001564-008	-	9,668
National Science Foundation	N 47.R		Rutgers-The State University of New Jersey	00002240	-	17,523
National Science Foundation	N 47.R		Rutgers-The State University of New Jersey	2229	-	167,971
National Science Foundation	N 47.R		UNIVERSITY OF ARIZONA	694407	-	146,117
National Science Foundation	N 47.R	National Science Foundation Research and Development	University of Florida	SUB00002345	-	12,157

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Direct		FOR THE TE	EAR ENDED JUNE 30, 2023		Subrecipient	
Federal Agency	Award		Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
National Science Foundation	N	47.RD	National Science Foundation Research and Development	University of Wisconsin-Madison	0000000533		5 420
National Science Foundation	N	47.RD	National Science Foundation Research and Development	Utah. University of	10061920-01-PSU	_	90.749
National Science Foundation	N	47.RD	National Science Foundation Research and Development	Virginia Commonwealth University	FP0001220 SA001		(4.674)
National Science Foundation	N	47.RD	National Science Foundation Research and Development	Virginia Commonwealth University Virginia Polytechnic Institute and State University	480167-19079		3,327
National Science Foundation	N	47.RD	National Science Foundation Research and Development	Virginia Polytechnic Institute and State University	480963-19079		15,439
National Science Foundation Total		47.10	National ocience i ocinication research and Development	Vilginia i diviccimio institute and diate. Oniversity	400303-13073	3.645.384	88,604,633
Small Business Administration	N	59.RD	U.S. Small Business Administration Research and Development	GaNify, LLC	266952	-	18,765
Small Business Administration Total							18,765
Environmental Protection Agency	Y	66.436	Surveys, Studies, Investigations, Demonstrations, and Training Grants and Cooper			-	124,894
Environmental Protection Agency	Y	66.466	Chesapeake Bay Program			-	206,349
Environmental Protection Agency	N	66.456	National Estuary Program	Partnership for the Delaware Estuary	PDE-384-03	-	5,032
Environmental Protection Agency	N N	66.466 66.511	Chesapeake Bay Program	COP Department of Agriculture	44209123 16200038-032	-	112,017 188.629
Environmental Protection Agency Environmental Protection Agency	N N	66.RD	Office of Research and Development Consolidated Research/Training/Fellowships Environmental Protection Agency Research and Development	Purdue University COP: Department of Environmental Protect ion	4300640900		(1,205)
Environmental Protection Agency	N	66 RD	Environmental Protection Agency Research and Development	COP: Department of Environmental Protect ion	4300754297		35,000
Environmental Protection Agency	N	66.RD	Environmental Protection Agency Research and Development	Health Effects Institute	4989-RFA E20-2/21-12	6,667	118,590
Environmental Protection Agency	N N	66.RD	Environmental Protection Agency Research and Development	Wood Environment & Infrastructure Soluti ons. Inc.	TTR2021-006	0,007	9.289
Environmental Protection Agency Total	.,	00.110	Environmental Frederick Agency Resocutor and Development	Trood Environment & minderacture country, inc.	1112021 000	6,667	798,595
Nuclear Regulatory Commission	Y	77.008	U.S. Nuclear Regulatory Commission Scholarship and Fellowship Program				291,435
Nuclear Regulatory Commission	Y	77.RD	U.S. Nuclear Regulatory Commission Research and Development			-	89,536
Nuclear Regulatory Commission	N	77.008	U.S. Nuclear Regulatory Commission Scholarship and Fellowship Program	Texas A&M University	M2100412	-	65,830
Nuclear Regulatory Commission	N	77.008	U.S. Nuclear Regulatory Commission Scholarship and Fellowship Program	The Regents of the University of Michiga n	SUBK00013077		101,090
Nuclear Regulatory Commission Total							547,891
II S. Donortmont of Energy:	Υ	01.040	Office of Science Financial Assistance Program			2 400 000	15,972,569
U.S. Department of Energy U.S. Department of Energy	Ť	81.049 81.057	Office of Science Financial Assistance Program University Coal Research			3,169,663	15,972,569 29.560
U.S. Department of Energy U.S. Department of Energy	Y	81.057 81.086	University Coal Research Conservation Research and Development			662.737	29,560 2 472 867
U.S. Department of Energy		81.087	Renewable Energy Research and Development			107.660	1.043.222
U.S. Department of Energy	Ý	81.089	Fossil Energy Research and Development			2,314,587	4.454.086
U.S. Department of Energy	·	81.117	Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Trai			209,964	650,828
U.S. Department of Energy	·	81.121	Nuclear Energy Research, Development and Demonstration			795,966	2,542,535
U.S. Department of Energy	Ý	81.135	Advanced Research Projects Agency - Energy			803.911	1.870.039
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	91,412
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	101,422
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development				34,671
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	(2,588)
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	106,702
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	68,255
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	15,702
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development				37,202
U.S. Department of Energy	Y	81.RD 81.RD	U.S. Department of Energy Research and Development				42,678
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	734 27 164
U.S. Department of Energy U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	(27)
U.S. Department of Energy	, ,	81 RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development				44,198
U.S. Department of Energy	,	81.RD	U.S. Department of Energy Research and Development				96,742
U.S. Department of Energy	·	81.RD	U.S. Department of Energy Research and Development				515
U.S. Department of Energy	·	81.RD	U.S. Department of Energy Research and Development				1.279
U.S. Department of Energy	Ý	81.RD	U.S. Department of Energy Research and Development				24.240
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	69,893
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development				41,525
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	(23,684)
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	48,737
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development				69,603
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	119,688
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	795
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	17,802
U.S. Department of Energy U.S. Department of Energy	Y V	81.RD 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development			-	45,983 150,204
U.S. Department of Energy U.S. Department of Energy	, , , , , , , , , , , , , , , , , , ,	81.RD 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development			-	150,204 270.926
U.S. Department of Energy	Ý	81.RD	U.S. Department of Energy Research and Development			-	15.757
U.S. Department of Energy	Ý	81.RD	U.S. Department of Energy Research and Development				(908)
U.S. Department of Energy	Ý	81.RD	U.S. Department of Energy Research and Development				387
U.S. Department of Energy	Ý	81.RD	U.S. Department of Energy Research and Development			-	189,267
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	283,827
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development				92,073
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	10,399
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	17,884
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	69,532
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	102,405
U.S. Department of Energy	Y	81.RD 81.RD	U.S. Department of Energy Research and Development				28,241 62 434
U.S. Department of Energy	Y		U.S. Department of Energy Research and Development			-	
U.S. Department of Energy U.S. Department of Energy	Y	81.RD 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development			-	73,829 106,771
U.S. Department of Energy U.S. Department of Energy	Ý	81.RD 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development			-	106,771
U.S. Department of Energy	·	81.RD	U.S. Department of Energy Research and Development				(38)
U.S. Department of Energy U.S. Department of Energy	Ÿ	81.RD	U.S. Department of Energy Research and Development				71,814
U.S. Department of Energy	Ý	81.RD	U.S. Department of Energy Research and Development			-	145.973
U.S. Department of Energy	Ý	81.RD	U.S. Department of Energy Research and Development				20,000
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	46,759
U.S. Department of Energy	Υ	81.RD	U.S. Department of Energy Research and Development			-	82,190
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	19,797
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	15,279
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	9,079
U.S. Department of Energy	Υ	81.RD	U.S. Department of Energy Research and Development			-	2
U.S. Department of Energy	Y	81.RD	U.S. Department of Energy Research and Development			-	413,300
U.S. Department of Energy	N	81.041	State Energy Program	COP: Department of Environmental Protect ion	4300748299	-	18,265

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

			FOR THE YEAR ENDED JUNE 30, 2023			
	Direct				Subrecipient	
Federal Agency	Award ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
U.S. Department of Energy	N 81.049		Altex Technologies Corporation	DE-SC0022939-PSU-001	-	36,417
U.S. Department of Energy U.S. Department of Energy	N 81.049 N 81.049	Office of Science Financial Assistance Program Office of Science Financial Assistance Program	Arizona State University Arizona State University	17-108 ASUB00001287	-	149,221 42,685
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Carnegie Mellon University	1070142-450640		42,005 89.865
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Cornell University	85989-22285		55.493
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Dartmouth College	R1703	-	42,333
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Duryea Technologies	235822	-	8,838
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Energy Driven Technologies, LLC.	272121	-	465
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Energy Driven Technologies, LLC.	ARL982410 AWD-100498-G6 AMENDMENT 4	-	25,009
U.S. Department of Energy U.S. Department of Energy	N 81.049 N 81.049	Office of Science Financial Assistance Program Office of Science Financial Assistance Program	Georgia Institute of Technology H Quest Vanguard Inc.	249786		79,767 20,038
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Ionomer Solutions LLC	250741	-	29,407
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Johns Hopkins University	2004000674	-	3,097
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Louisiana State University	PO-0000184816	-	226,021
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Luna Innovations, Inc.	357901PSU	-	28,844
U.S. Department of Energy	N 81.049 N 81.049	Office of Science Financial Assistance Program	Luna Innovations, Inc.	367802/PSU FN1-2597	-	98,647 40,000
U.S. Department of Energy U.S. Department of Energy	N 81.049 N 81.049	Office of Science Financial Assistance Program Office of Science Financial Assistance Program	NanoSonic, Inc. NanoSonic, Inc.	EN1-2597 EN2-9844	-	40,000 187,883
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	North Carolina Agricultural & Technical State University	270197D		32,750
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Ohio State University	60057542 PO RF01459797		(634)
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Pennsylvania, University of	578218	-	43,435
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Quantum Ventura Inc.	260986	-	249,268
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Rensselaer Polytechnic Institute	A08-0003-S001	-	114,421
U.S. Department of Energy U.S. Department of Energy	N 81.049 N 81.049	Office of Science Financial Assistance Program Office of Science Financial Assistance Program	Rutgers-The State University of New Jersey The Board of Trustees of the Leland Stan ford Junior University (Stanford Univer	SUB00002555 AMENDMENT 1 61351724-124215	152,837	3,679 1,379,709
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	The Board of Trustees of the Leland Stan ford Junior University (Stanford Univer	62690786-226486	152,637	1,379,709
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	THE RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK	88828/2/1162931		35,217
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	The Trustees of Columbia University in the City of New York	1(GG018299-01)	-	33,267
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	Ultramet	983147 (PO 19835)	-	5,688
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	University of California at Davis	A17-0309-S002 (201603457-02)	-	22,938
U.S. Department of Energy	N 81.049 N 81.049	Office of Science Financial Assistance Program Office of Science Financial Assistance Program	University of California at Davis University of California at San Diego	A23-1053-S004 KR 704574	-	131,741 20.931
U.S. Department of Energy U.S. Department of Energy	N 81.049 N 81.049	Office of Science Financial Assistance Program	University of Colorado at Boulder	1563093 PO 1001731752	:	20,931 45,100
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	University of Delaware	51542	-	3,339
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	University of Illinois	088955-16609	-	239,913
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	University of Illinois	090634-17760	-	53,256
U.S. Department of Energy	N 81.049	Office of Science Financial Assistance Program	University of Texas at Dallas	1301151	-	66,217
U.S. Department of Energy	N 81.049 N 81.086	Office of Science Financial Assistance Program	Utah, University of	10049491-PENN PO U000154267	-	84,522
U.S. Department of Energy U.S. Department of Energy	N 81.086 N 81.086	Conservation Research and Development Conservation Research and Development	Louisiana State University Metropolitan Energy Center, Inc.	PO-0000192171 S-EVST07	-	125,596 104,711
U.S. Department of Energy	N 81.086	Conservation Research and Development	Metropolitan Energy Center, Inc.	S-OEV05		44.765
U.S. Department of Energy	N 81.086	Conservation Research and Development	The Regents of the University of Michiga	SUBK00013989		88,408
U.S. Department of Energy	N 81.086	Conservation Research and Development	University of Colorado at Boulder	1562473	-	303,159
U.S. Department of Energy	N 81.087	Renewable Energy Research and Development	Arizona State University	ASUB00001127	-	122,794
U.S. Department of Energy	N 81.087 N 81.087	Renewable Energy Research and Development	Forest Concepts, LLC	210246 255177 PO 4301458996	-	38,383
U.S. Department of Energy U.S. Department of Energy	N 81.087 N 81.087	Renewable Energy Research and Development Renewable Energy Research and Development	General Motors Company Oklahoma, University of	255177 PO 4301458996 2019-64	-	76,792 12.316
U.S. Department of Energy	N 81.087	Renewable Energy Research and Development	Okanoma, University of Rensselaer Polytechnic Institute	A22-0034-S001		(1)
U.S. Department of Energy	N 81.087	Renewable Energy Research and Development	The REMADE Institute	SA-20-08		76,137
U.S. Department of Energy	N 81.087	Renewable Energy Research and Development	UHV Technologies, Inc.	252827	-	77,705
U.S. Department of Energy	N 81.087	Renewable Energy Research and Development	University of California at Davis	A22-1852-S006	-	55,235
U.S. Department of Energy U.S. Department of Energy	N 81.087 N 81.087	Renewable Energy Research and Development Renewable Energy Research and Development	University of California at Los Angeles	4550 G YA100 10039612-PSU-5-2419-AF1	168,571	259,660 272,008
U.S. Department of Energy U.S. Department of Energy	N 81.087 N 81.089	Fossil Energy Research and Development	Utah, University of H Quest Vanguard Inc.	10039612-PSU-5-2419-AF1 231217	-	272,008 59.781
U.S. Department of Energy	N 81.089	Fossil Energy Research and Development	Illinois Institute of Technology Research Institute	SA21-0045-S002		101 893
U.S. Department of Energy	N 81.089	Fossil Energy Research and Development	Rice University	X03017142	-	131,044
U.S. Department of Energy	N 81.089	Fossil Energy Research and Development	Susteon Inc.	PO SUST000052	-	8,889
U.S. Department of Energy	N 81.089	Fossil Energy Research and Development	University of Texas at Austin	UTA19-000910	-	126,610
U.S. Department of Energy	N 81.089 N 81.113	Fossil Energy Research and Development Defense Nuclear Nonproliferation Research	Wyoming, University of The Regents of the University of Michiga	1005037-PSU SUBK00009799 PO 3005799149	-	57,829 197 439
U.S. Department of Energy U.S. Department of Energy	N 81.113 N 81.113	Defense Nuclear Nonproliferation Research Defense Nuclear Nonproliferation Research	The Regents of the University of Michiga	SUBK00009799 PO 3005799149 SUBK00016733		197,439
U.S. Department of Energy	N 81.113	Nuclear Energy Research, Development and Demonstration	Massachusetts Institute of Technology	S5885 PO #831321	-	71.649
U.S. Department of Energy	N 81.121	Nuclear Energy Research, Development and Demonstration	Texas A&M University	M2100511	-	64,890
U.S. Department of Energy	N 81.135	Advanced Research Projects Agency - Energy	Board of Regents of The University of Wi sconsin System	0000002446	-	117,147
U.S. Department of Energy	N 81.135	Advanced Research Projects Agency - Energy	Energy Trading Analytics, LLC	238198	-	276,685
U.S. Department of Energy U.S. Department of Energy	N 81.135 N 81.RD	Advanced Research Projects Agency - Energy	Virginia Polytechnic Institute and State University Alliance for Sustainable Energy, LLC	429424-19079 SUB-2021-10566	-	16,115 4,629
U.S. Department of Energy U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development	Alliance for Sustainable Energy, LLC Battelle	B626737	- :	(2.601)
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Bettis Atomic Power Laboratory	137358		184,895
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Chattanooga Area Regional Transportation Authority (CARTA)	266475	-	122,733
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Fluor Corporation	132121	-	149,333
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC	138219	-	437,951
U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC Fluor Marine Propulsion. LLC	140424 141967	-	189,254 92.055
U.S. Department of Energy U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC Fluor Marine Propulsion, LLC	141967 142087		92,055 53,011
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC	142711		170,296
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC	144548 RELEASE ORDER 1	-	58,695
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC	144548 RELEASE ORDER 12	-	7,697
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC	144548 RELEASE ORDER 2	-	77,131
U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC Fluor Marine Propulsion, LLC	144548 RELEASE ORDER 3 144548 RELEASE ORDER 7	-	221,133 62.841
U.S. Department of Energy U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC Fluor Marine Propulsion, LLC	144548 RELEASE ORDER / 145306	-	62,841 141.451
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC	149104		2.467
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC	149434	-	75,719
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC	149732	-	74,580
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Fluor Marine Propulsion, LLC	RELEASE 13	-	581
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Honeywell Federal Manufacturing & Technologies, LLC	N000441593	-	38,207
U.S. Department of Energy U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development	Honeywell Federal Manufacturing & Technologies, LLC Honeywell Federal Manufacturing & Technologies, LLC	N000441594 N000480909	-	35,902 11.054
U.S. Department of Energy U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development	Honeywell Federal Manufacturing & Technologies, LLC Honeywell Federal Manufacturing & Technologies, LLC	N000480909 N000481598	- :	11,054 25,086
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SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Direct		AR LINDLD GORL GO, LOLG		Subrecipient	
Federal Agency	Award ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	InnoSys, Inc.	265711	-	73,984
U.S. Department of Energy U.S. Department of Energy	N 81.RD N 81.RD	COVID-19 - U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development	Leidos, Inc. Leidos. Inc.	P010221754 TASK 13 P010221754 TASK ORDER 1	-	63,000 14,975
U.S. Department of Energy	N 81.RD	COVID-19 - U.S. Department of Energy Research and Development	Leidos, Inc. Leidos. Inc.	P010221754 TASK ORDER 1 P010221754 TASK ORDER 10		40,000
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Leidos, Inc.	P010221754 TASK ORDER 10	-	22,998
U.S. Department of Energy	N 81.RD	COVID-19 - U.S. Department of Energy Research and Development	Leidos, Inc.	P010221754 TASK ORDER 11	-	42,000
U.S. Department of Energy U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development COVID-19 - U.S. Department of Energy Research and Development	Leidos, Inc. Leidos, Inc.	P010221754 TASK ORDER 11 P010221754 TASK ORDER 12	-	34,988 42,000
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Leidos, Inc.	P010221754 TASK ORDER 12		19,516
U.S. Department of Energy	N 81.RD	COVID-19 - U.S. Department of Energy Research and Development	Leidos, Inc.	P010221754 TASK ORDER 14	-	35,231
U.S. Department of Energy	N 81.RD	COVID-19 - U.S. Department of Energy Research and Development	Leidos, Inc.	P010221754 TASK ORDER 15	-	1,523
U.S. Department of Energy U.S. Department of Energy	N 81.RD N 81.RD	COVID-19 - U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development	Leidos, Inc. Leidos, Inc.	P010221754 TASK ORDER 4 P010221754 TASK ORDER 4	-	7,450 23,315
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Leidos, Inc.	P010221754 TASK ORDER 5		(551)
U.S. Department of Energy	N 81.RD	COVID-19 - U.S. Department of Energy Research and Development	Leidos, Inc.	P010221754 TASK ORDER 9	-	1,622
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Littoral Power Systems, Inc.	LPS-22831-001	-	139,349
U.S. Department of Energy U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development	Luna Innovations, Inc. Materia USA, LLC	7064-DOE-1S 239439	-	64,020 (12,089)
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Mission Support and Test Services, LLC	215257 TASK ORDER 02		2,407
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Mission Support and Test Services, LLC	215257 TASK ORDER 03	-	154,886
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Mission Support and Test Services, LLC	215257/01	-	(39,908)
U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development	Ohio State University	231898 60076652/GR119343	-	36,126
U.S. Department of Energy U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development	Pacific Ocean Energy Trust Texas Mineral Resources Corp.	ARL PENN STATE_4_PTEROFIN 239441	-	125,277 25,910
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Thar Energy, LLC	246540	-	(440)
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	The Regents of the University of Michiga	SUBK00008626 PO 3004992137	-	8,981
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	The REMADE Institute	20-01-RR-4034	18,375	630,543
U.S. Department of Energy U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development	Triad National Security, LLC (was LANL) Triad National Security, LLC (was LANL)	20487 CW20487 293402 WO 424285	-	106,676 (14,709)
U.S. Department of Energy	N 81.RD	COVID-19 - U.S. Department of Energy Research and Development	Triad National Security, LLC (was LANL)	293402 WG 424265 293402 585371 CW15988		16,576
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Triad National Security, LLC (was LANL)	587178 13088	-	293,393
U.S. Department of Energy	N 81.RD	U.S. Department of Energy Research and Development	Triad National Security, LLC (was LANL)	587178 C2032	-	343,676
U.S. Department of Energy U.S. Department of Energy	N 81.RD N 81.RD	U.S. Department of Energy Research and Development U.S. Department of Energy Research and Development	ULC Technologies, LLC University of Illinois Board of Trustees	980550 265054 232912 P2408679	-	94,958 15,045
U.S. Department of Energy Total	N 01.ND	0.3. Department of Energy Research and Development	Offiversity of fillinois Board of Trustees	203034 232912 F2408019	8,404,271	43,923,369
U.S. Department of Education U.S. Department of Education	Y 84.002 Y 84.015	Adult Education - Basic Grants to States			-	12,406 205.026
U.S. Department of Education	Y 84.015A	National Resource Centers Program for Foreign Language and Area Studies or Forei National Resource Centers Program for Foreign Language and Area Studies or Forei				193.529
U.S. Department of Education	Y 84.015B	National Resource Centers Program for Foreign Language and Area Studies or Forei				15,400
U.S. Department of Education	Y 84.016A	Undergraduate International Studies and Foreign Language Programs			-	34,980
U.S. Department of Education	Y 84.017 Y 84.021	International Research and Studies			-	84,566 46,000
U.S. Department of Education U.S. Department of Education	Y 84.021 Y 84.200	Overseas Programs - Group Projects Abroad Graduate Assistance in Areas of National Need			-	46,000 15.027
U.S. Department of Education	Y 84.229	Language Resource Centers			9.463	36.654
U.S. Department of Education	Y 84.229A	Language Resource Centers			16,926	98,023
U.S. Department of Education	Y 84.305	Education Research, Development and Dissemination			72,043	959,410
U.S. Department of Education U.S. Department of Education	Y 84.305A Y 84.324	Education Research, Development and Dissemination Research in Special Education			176,754	868,126 593.183
U.S. Department of Education	Y 84.324A				118,094	306.669
U.S. Department of Education	Y 84.327	Special Education Educational Technology Media, and Materials for Individuals wi			-	371,127
U.S. Department of Education	N 84.305A		Portland State University	100018	-	64,439
U.S. Department of Education U.S. Department of Education	N 84.305A N 84.324	Education Research, Development and Dissemination Research in Special Education	WestEd The University of Texas Health Science Center at San Antonio	S-00019391 SA0000787	-	64,973 4.582
U.S. Department of Education Total	N 04.324	Nesearch in Special Education	The University of Texas Fleatili Science Center at San Antonio	SAUGUOTOT	393,280	3,974,120
U.S. Agency for Global Media, BBG U.S. Agency for Global Media, BBG Total	N 90.500	International Broadcasting Independent Grantee Organizations	Radio Free Asia	1002-2019-026		40 40
	V 02.077	Family Consider Description and Tabanas Control Art Bandatan Descript				1 100 220
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	Y 93.077 Y 93.085	Family Smoking Prevention and Tobacco Control Act Regulatory Research Research on Research Integrity			19,133	1,108,226 113,347
U.S. Department of Health and Human Services	Y 93.103	Food and Drug Administration Research			19,100	254,664
U.S. Department of Health and Human Services	Y 93.110	Maternal and Child Health Federal Consolidated Programs			-	171,045
U.S. Department of Health and Human Services	Y 93.113	Environmental Health			243,454	2,237,410
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	Y 93.121 Y 93.172	Oral Diseases and Disorders Research Human Genome Research			259,929 1,718,013	1,809,803 3,414,954
U.S. Department of Health and Human Services	Y 93.173	Research Related to Deafness and Communication Disorders			1,767	642,676
U.S. Department of Health and Human Services	Y 93.186	National Research Service Award in Primary Care Medicine			-	395,562
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	Y 93.213 Y 93.226	Research and Training in Complementary and Integrative Health Research on Healthcare Costs, Quality and Outcomes			350,136 23.767	1,148,753 764,844
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	Y 93.226 Y 93.233	National Center on Sleep Disorders Research			23,767	764,844 388.450
U.S. Department of Health and Human Services	Y 93.242	Mental Health Research Grants			1,044,377	5,704,563
U.S. Department of Health and Human Services	Y 93.243	Substance Abuse and Mental Health Services Projects of Regional and National Sig			108,651	936,816
U.S. Department of Health and Human Services	Y 93.262	Occupational Safety and Health Program Alcohol Research Programs			ee7 000	52,842
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	Y 93.273 Y 93.279	Alcohol Research Programs Drug Abuse and Addiction Research Programs			657,930 696,468	3,736,727 5,397,177
U.S. Department of Health and Human Services	Y 93.286	Discovery and Applied Research for Technological Innovations to Improve Human He			276,094	2,234,759
U.S. Department of Health and Human Services	Y 93.301	Small Rural Hospital Improvement Grant Program				312,234
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	Y 93.307 Y 93.310	Minority Health and Health Disparities Research Trans-NIH Research Support			350,500 85,413	1,253,781 361,519
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	Y 93.310 Y 93.315	Rare Disorders: Research, Surveillance, Health Promotion, and Education			00,413	361,519 67,791
U.S. Department of Health and Human Services	Y 93.350	National Center for Advancing Translational Sciences			32,651	4,371,325
U.S. Department of Health and Human Services	Y 93.351	Research Infrastructure Programs			126,653	1,304,012
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	Y 93.361 Y 93.393	Nursing Research Cancer Cause and Prevention Research			- 449,319	165,155 4,834,034
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	Y 93.393 Y 93.394	Cancer Cause and Prevention Research Cancer Detection and Diagnosis Research			234,501	4,834,034 710.845
U.S. Department of Health and Human Services	Y 93.395	Cancer Treatment Research			90,362	659,051
U.S. Department of Health and Human Services	Y 93.396	Cancer Biology Research			545,324	3,208,149
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	Y 93.398 Y 93.433	Cancer Research Manpower ACL National Institute on Disability, Independent Living, and Rehabilitation Res			290.441	316,170 1.039.753
C.C. Department of Frealth and Flurham Services	1 30.400	A DE TRADOTRA TROUBLE ON DISABILITY, INDEPENDENT LIVING, AND INCIDENTIALISM INCES			230,441	1,000,100

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Fordered Assessment	Direct			ENDED JUNE 30, 2023		Subrecipient	
U.S. Department of Health and Human Services	Award	93.516	Federal Program Name COVID-19 - Public Health Training Centers Program	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures 48,653	Expenditures 150,506
U.S. Department of Health and Human Services		93.732	Mental and Behavioral Health Education and Training Grants			40,000	442,440
U.S. Department of Health and Human Services		93.738	COVID-19 - PPHF: Racial and Ethnic Approaches to Community Health Program financed solely b				412,527
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.738 93.788	PPHF: Racial and Ethnic Approaches to Community Health Program financed solely b Opioid STR			168,205	726,899 277,819
U.S. Department of Health and Human Services	Y	93.837	Cardiovascular Diseases Research			1,096,781	11,821,338
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.838 93.839	Lung Diseases Research Blood Diseases and Resources Research			94,916	867,793 1.365,446
U.S. Department of Health and Human Services		93.846	Arthritis. Musculoskeletal and Skin Diseases Research			852.757	4.290.080
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research			2,330,036	13,631,579
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.853 93.855	Extramural Research Programs in the Neurosciences and Neurological Disorders COVID-19 - Allergy and Infectious Diseases Research			987,642	9,857,635 22,987
U.S. Department of Health and Human Services	Y	93.855	Allergy and Infectious Diseases Research			1,572,816	13,091,366
U.S. Department of Health and Human Services		93.859	Biomedical Research and Research Training			417,743	22,195,869
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.860 93.865	Emerging Infections Sentinel Networks Child Health and Human Development Extramural Research			39,399 906.971	691,636 8.513.149
U.S. Department of Health and Human Services		93.866	Aging Research			2,342,027	13,700,990
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.867 93.879	Vision Research Medical Library Assistance			272,523	2,136,572 182,511
U.S. Department of Health and Human Services		93.884	Grants for Primary Care Training and Enhancement				17,280
U.S. Department of Health and Human Services		93.918	Grants to Provide Outpatient Early Intervention Services with Respect to HIV Dis				400,500
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.976 93.989	Primary Care Medicine and Dentistry Clinician Educator Career Development Awards International Research and Research Training			45,481	105,717 60,689
U.S. Department of Health and Human Services	Y	93.RD	U.S. Department of Health and Human Services Research and Development			-	93,556
U.S. Department of Health and Human Services		93.RD 93.RD	U.S. Department of Health and Human Services Research and Development			-	5,577
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.RD 93.RD	U.S. Department of Health and Human Services Research and Development			62,249	63,863 372,815
U.S. Department of Health and Human Services	Y	93.RD	U.S. Department of Health and Human Services Research and Development			-	78,989
U.S. Department of Health and Human Services		93.RD	U.S. Department of Health and Human Services Research and Development			-	91,272
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.RD 93.RD	U.S. Department of Health and Human Services Research and Development U.S. Department of Health and Human Services Research and Development			-	309,925 43.560
U.S. Department of Health and Human Services	Y	93.RD	U.S. Department of Health and Human Services Research and Development			-	(6,252)
U.S. Department of Health and Human Services		93.RD	COVID-19 - U.S. Department of Health and Human Services Research and Development			-	369,387
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.RD 93.080	U.S. Department of Health and Human Services Research and Development Blood Disorder Program: Prevention, Surveillance, and Research	Lehigh Valley Health Network	ATHN 22 23 011	:	29,214 22.838
U.S. Department of Health and Human Services		93.110	Maternal and Child Health Federal Consolidated Programs	Lehigh Valley Hospital, Inc.	HRSA_22_23_008	-	38,407
U.S. Department of Health and Human Services		93.110	Maternal and Child Health Federal Consolidated Programs	Lehigh Valley Hospital, Inc.	HRSA_23_24_008	-	3,462
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.110 93.113	Maternal and Child Health Federal Consolidated Programs Environmental Health	The Regents of the University of Califor nia, Los Angeles Brigham & Women's Hospital	1638 G WA051 121157	-	38,711 23,539
U.S. Department of Health and Human Services		93.113	Environmental Health	Children's Hospital of Philadelphia	GRT-00002160/PO#20383118	-	14,451
U.S. Department of Health and Human Services		93.113	Environmental Health Environmental Health	Michigan State University	RC109570PSU	-	47,254
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.113 93.113	Environmental Health Environmental Health	Pennsylvania, University of PRESIDENT AND FELLOWS OF HARVARD COLLEGE HARVARD UNIVERSITY	577005 112560-5104916 AMEND 2	-	(20,516) 20.195
U.S. Department of Health and Human Services	N	93.121	Oral Diseases and Disorders Research	Icahn School of Medicine at Mount Sinai	0255-F431-4609	-	237,991
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.121 93.121	Oral Diseases and Disorders Research Oral Diseases and Disorders Research	Phoenix Children's Hospital Phoenix Children's Hospital	SITZMAN-20-07 SITZMAN-20-07 AMEND 1	-	24,953
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.121	Oral Diseases and Disorders Research	University of Pittsburgh	CNVA00055576 (134310-1)		(51) 90 948
U.S. Department of Health and Human Services	N	93.137	COVID-19 - Community Programs to Improve Minority Health Grant Program	City of Reading	001-002	-	233,217
U.S. Department of Health and Human Services		93.172 93.172	Human Genome Research Human Genome Research	Johns Hopkins University	2003978433 AMENDMENT 1 2003978433 AMENDMENT 6	-	(120,709) 226,259
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.172	Human Genome Research Human Genome Research	Johns Hopkins University Northwestern University	60059128 PSU A01,A02		52,404
U.S. Department of Health and Human Services	N	93.173	Research Related to Deafness and Communication Disorders	Veterans Health Foundation	NIH 2019-1001	-	32,212
U.S. Department of Health and Human Services		93.213 93.213	Research and Training in Complementary and Integrative Health	Georgetown University Mount Sinai Medical Center	425188_GR411710_PSU	-	24,355 162
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.213	Research and Training in Complementary and Integrative Health Research and Training in Complementary and Integrative Health	Mount Sinal Medical Center The Regents of the University of Michiga n	TACT2 SUBK00014654		191,764
U.S. Department of Health and Human Services	N	93.226	Research on Healthcare Costs, Quality and Outcomes	Vanderbilt University Medical Center	VUMC87503	-	1,174
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.242 93.242	Mental Health Research Grants Mental Health Research Grants	Actuated Medical, Inc. Boston Medical Center	5082-S01 04 PSU 04141 PROJ #4300335001	-	17,153 (1)
U.S. Department of Health and Human Services		93.242	Mental Health Research Grants	Colorado, University of	1562735		25,921
U.S. Department of Health and Human Services		93.242	Mental Health Research Grants	DePaul University	501455SG173-55	-	33,276
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.242 93.242	Mental Health Research Grants Mental Health Research Grants	McLean Hospital North Carolina, University of	401643 5121314	-	31,713 43.343
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.242	Mental Health Research Grants Mental Health Research Grants	Quadrant Biosciences Inc.	5121314 1293481860000		43,343 17,531
U.S. Department of Health and Human Services	N	93.242	Mental Health Research Grants	University of Illinois at Chicago	19125	-	61,751
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.242 93.242	Mental Health Research Grants Mental Health Research Grants	University of Massachusetts University of Texas	SUB00000252 (POWA01353608) 2109586	-	7,571 32,648
U.S. Department of Health and Human Services		93.242	Mental Health Research Grants	University of Texas at Arlington	2020GC0825		36,077
U.S. Department of Health and Human Services	N	93.242	Mental Health Research Grants	University of Texas at Dallas	2109521	-	237
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.242 93.242	Mental Health Research Grants Mental Health Research Grants	Washington University in St. Louis Weill Cornell Medicine	WU-19-103 PO ST00000471 192499	-	95,995 91,482
U.S. Department of Health and Human Services		93.243	Substance Abuse and Mental Health Services Projects of Regional and National Sig	Cen-Clear Child Services, Inc.	233453	-	62,495
U.S. Department of Health and Human Services		93.243	Substance Abuse and Mental Health Services Projects of Regional and National Sig	Child Health and Development Institute of Connecticut, Inc.	221-580	-	76,310
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.243 93.243	Substance Abuse and Mental Health Services Projects of Regional and National Sig Substance Abuse and Mental Health Services Projects of Regional and National Sig	COP: Department of Drug and Alcohol Prog ram York/Adams Mental Health Intellectual an d Developmental Disabilities Program	4300655082 270055 178623	-	(575) 7,999
U.S. Department of Health and Human Services	N	93.262	Occupational Safety and Health Program	Icahn School of Medicine at Mount Sinai	0255-F921-4609	-	18,889
U.S. Department of Health and Human Services		93.262 93.262	Occupational Safety and Health Program	Mary Imogene Bassett Hospital	6 U54OH007542-20-01-PSU 6U54OH007542-21GB	-	11,743 19,159
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.262	Occupational Safety and Health Program Occupational Safety and Health Program	Mary Imogene Bassett Hospital PolyK Technologies, LLC	6U54UHUU7542-21GB PK-S22B	9,696	19,159
U.S. Department of Health and Human Services	N	93.262	Occupational Safety and Health Program	University of Iowa	S02874-01	-	3,645
U.S. Department of Health and Human Services	N	93.273	Alcohol Research Programs	State University of New York - Binghamto n	92036-1169863-PSU	-	27,706
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.273 93.273	Alcohol Research Programs Alcohol Research Programs	State University of New York - Binghamto n The Regents of the University of Michiga	95308-1177353-PSU SUBK00014961 PO 3006465570	-	46,668 8,612
U.S. Department of Health and Human Services	N	93.273	Alcohol Research Programs	University of California at San Francisc o	12773SC		187,526
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.273 93.273	Alcohol Research Programs	Utah State University Utah State University	201356-491 204328-818	-	3,669 64 428
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.273	Alcohol Research Programs Drug Abuse and Addiction Research Programs	Emory University	204328-818 A756929	- :	64,428 8,785
U.S. Department of Health and Human Services	N	93.279	Drug Abuse and Addiction Research Programs	Indiana University (State of Indiana)	9403	-	279,913
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.279 93.279	Drug Abuse and Addiction Research Programs	Massachusetts General Hospital New York University School of Medicine	240567 22-A0-R2-003671	-	20,629 136,162
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.279	Drug Abuse and Addiction Research Programs Drug Abuse and Addiction Research Programs	North Carolina, University of	5114624		136,162 66,328
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SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	D:		FOR THE YEA	FOR THE YEAR ENDED JUNE 30, 2023									
Federal Agency	Direct Award	ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Subrecipient Expenditures	Expenditures						
U.S. Department of Health and Human Services	N S	93.279	Drug Abuse and Addiction Research Programs	Northwestern University	60058507 PSU	-	98,222						
U.S. Department of Health and Human Services		93.279	Drug Abuse and Addiction Research Programs	Purdue University	11001159-010	-	70,576						
U.S. Department of Health and Human Services		93.279	Drug Abuse and Addiction Research Programs	RTI International	9-312-0216924-66743L	-	14,205						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N S	93.279 93.279	Drug Abuse and Addiction Research Programs Drug Abuse and Addiction Research Programs	The Regents of the University of Michiga The University of Texas Health Science Center at San Antonio	SUBK00013923 SA0000341		8,132 440,110						
U.S. Department of Health and Human Services	N 9	93.279	Drug Abuse and Addiction Research Programs	University of California at San Diego	705048	4,476	47,518						
U.S. Department of Health and Human Services		93.279	Drug Abuse and Addiction Research Programs	University of Rochester University of Texas at Dallas	417871-G /UR FAO GR511145	-	24,015						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.279 93.286	Drug Abuse and Addiction Research Programs Discovery and Applied Research for Technological Innovations to Improve Human He	University of Texas at Dallas Aleo BME, Inc.	2109182 ALEOEB030462	-	15,958 540						
U.S. Department of Health and Human Services		93.286	Discovery and Applied Research for Technological Innovations to Improve Human He	Minnesota, University of	N006925701		(5,638)						
U.S. Department of Health and Human Services		93.286	Discovery and Applied Research for Technological Innovations to Improve Human He	University of Illinois at Urbana-Champai gn	107837-18883	-	68,203						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 9	93.307 93.307	Minority Health and Health Disparities Research Minority Health and Health Disparities Research	South Carolina, University of UNIVERSITY OF ARIZONA	21-4269 458879	-	68,548 24,232						
U.S. Department of Health and Human Services		93.307	Minority Health and Health Disparities Research	University of Central Florida	26036A01-03		4.951						
U.S. Department of Health and Human Services		93.307	Minority Health and Health Disparities Research	University of Chicago	AWD101843 (SUB00000451)	-	76,446						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.307 93.310	Minority Health and Health Disparities Research COVID-19 - Trans-NIH Research Support	Virginia Polytechnic Institute and State University Central Michigan University	432098-19079 F64627	-	43,275 283						
U.S. Department of Health and Human Services		93.310	COVID-19 - Trans-NIH Research Support	Central Michigan University	F65066		114,772						
U.S. Department of Health and Human Services		93.310	Trans-NIH Research Support	Central Michigan University	F65066	-	38,808						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.310 93.310	COVID-19 - Trans-NIH Research Support Trans-NIH Research Support	Central Michigan University Columbia University	F65409 1(GG016281-02)	-	25,089 3,221						
U.S. Department of Health and Human Services		93.310	Trans-NIH Research Support	Drexel University	900245		7,020						
U.S. Department of Health and Human Services	N 9	93.310	Trans-NIH Research Support	Duke University	303-001157		54,453						
U.S. Department of Health and Human Services		93.310 93.310	Trans-NIH Research Support Trans-NIH Research Support	Duke University Duke University	A03-5233 A03-5268	-	4,272 432						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.310	Trans-NIH Research Support	New York University	19-A0-00-1003237 PROJ #114579		432 (89)						
U.S. Department of Health and Human Services		93.310	Trans-NIH Research Support	New York University School of Medicine	19-A0-00-1003237 PROJ#114579	-	208,880						
U.S. Department of Health and Human Services		93.310	Trans-NIH Research Support	Oregon, University of	281210C AMENDMENT NO. 8	-	205,292						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.310 93.310	Trans-NIH Research Support COVID-19 - Trans-NIH Research Support	Oregon, University of University of Florida	281210C AMENDMENT NO. 9 SUB00003082	-	813,008 95.568						
U.S. Department of Health and Human Services		93.310	Trans-NIH Research Support	Yale University	CON-80003956 (GR118087)	-	145,701						
U.S. Department of Health and Human Services		93.323	Epidemiology and Laboratory Capacity for Infectious Diseases (ELC)	COP Department of Agriculture	4300739474	-	51,979						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.323 93.350	Epidemiology and Laboratory Capacity for Infectious Diseases (ELC) National Center for Advancing Translational Sciences	COP: Department of Health Clinical and Translational Science Institute	4300735795 2 UL1TR002014-05A1	-	259,225 214 772						
U.S. Department of Health and Human Services		93.350	National Center for Advancing Translational Sciences National Center for Advancing Translational Sciences	Columbia University	1(GG019007-01)		2,976						
U.S. Department of Health and Human Services	N 9	93.350	National Center for Advancing Translational Sciences	Oregon State University OREGON STATE UNIVERSITY OFFICE OF	P0500A-B		482,332						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.350 93.350	National Center for Advancing Translational Sciences National Center for Advancing Translational Sciences	Research Foundation for Mental Hygiene I nc. Research Foundation for Mental Hygiene I nc.	PO 152541 PO 152541 2925D	-	728 68,021						
U.S. Department of Health and Human Services		93.360	Biomedical Advanced Research and Development Authority (BARDA), Biodefense Medic	Microbiotix, Inc.	PENNSCARBXTT2019	-	(26)						
U.S. Department of Health and Human Services	N 9	93.361	Nursing Research	Duke University	A03-5516		187,316						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.361 93.391	Nursing Research Activities to Support State, Tribal, Local and Territorial (STLT) Health Departm	Emory University COP: Department of Health	A679203 4300745903	- 14.944	21,930 121,814						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.391	Cancer Cause and Prevention Research	Geisinger Clinic	4300745903 646031PSU02	14,944	121,814						
U.S. Department of Health and Human Services		93.393	Cancer Cause and Prevention Research	H. Lee Moffitt Cancer Center and Researc h Institute	10-21752-99-01-G1	-	20,711						
U.S. Department of Health and Human Services		93.393	Cancer Cause and Prevention Research	Thomas Jefferson University UNIVERSITY OF ARIZONA	080-27000-S47401	-	129,081						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.393 93.393	Cancer Cause and Prevention Research Cancer Cause and Prevention Research	University of Hawaii	627155 KA1754		41,918 8.609						
U.S. Department of Health and Human Services		93.393	Cancer Cause and Prevention Research	University of North Carolina Chapel Hill	5123629	-	62,677						
U.S. Department of Health and Human Services		93.393	Cancer Cause and Prevention Research	University of Pittsburgh	AWD00003953 (135993-1)	-	5,602						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.393 93.394	Cancer Cause and Prevention Research Cancer Detection and Diagnosis Research	University of Pittsburgh Carnegie Mellon University	AWD00006749 (138927-1) 1090613-434032		112,313 47,323						
U.S. Department of Health and Human Services	N 9	93.394	Cancer Detection and Diagnosis Research	Carnegie Mellon University	1090614-435042	-	13,597						
U.S. Department of Health and Human Services		93.394	Cancer Detection and Diagnosis Research	Johns Hopkins University	2005175844	-	45,823						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.394 93.394	Cancer Detection and Diagnosis Research Cancer Detection and Diagnosis Research	The Regents of the University of Michiga The Regents of the University of Michiga	SUBK00011540 SUBK00012128		32,123 4,297						
U.S. Department of Health and Human Services	N S	93.394	Cancer Detection and Diagnosis Research	University of Pittsburgh	AWD00006737 (138883-1)		128,742						
U.S. Department of Health and Human Services		93.394	Cancer Detection and Diagnosis Research	University of Pittsburgh	AWD00006914 (138979-3)	-	17,295						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.395 93.395	Cancer Treatment Research Cancer Treatment Research	Children's Hospital of Philadelphia FCOG-ACRIN Medical Research Foundation. Inc.	BIQSFP-COG AALL1131 11XS1 177860 U10CA180820	-	4,445 40.546						
U.S. Department of Health and Human Services		93.395	Cancer Treatment Research	ECOG-ACRIN Medical Research Foundation, Inc.	U10CA180820-06-PSCI1A		16,028						
U.S. Department of Health and Human Services		93.395	Cancer Treatment Research	Icahn School of Medicine at Mount Sinai	0255-C921-4609	-	23,692						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.395 93.395	Cancer Treatment Research Cancer Treatment Research	NRG Oncology Rector and Visitors of the University of Virginia	NRG-MACHTAY-GY7 GB10832 / PO2323865	-	73,554 324.247						
U.S. Department of Health and Human Services		93.395	Cancer Treatment Research	Texas A&M University	M2102794		199,292						
U.S. Department of Health and Human Services		93.396	Cancer Biology Research	Case Western Reserve University	RES517178	-	8,378						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.396 93.396	Cancer Biology Research Cancer Biology Research	Cleveland Clinic Lerner College of Medic ine Cleveland Clinic Lerner College of Medic ine	CCF21143188 CCF22762337	-	(89,439) 26,616						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N S	93.396	Cancer Biology Research Cancer Biology Research	Cieveland Clinic Lerner College of Medic Ine Loma Linda University	2150287-PSU-4		(304)						
U.S. Department of Health and Human Services	N 9	93.396	Cancer Biology Research	Oregon Health & Sciences University	1013137 PENNSTATE	-	56,777						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.396 93.396	Cancer Biology Research Cancer Biology Research	University of Pittsburgh University of Pittsburgh	AWD00003405 (135524-2) AWD00004233 (136288-2)	-	5,783 14 097						
U.S. Department of Health and Human Services		93.396	Cancer Biology Research	Virginia. University of	GB10274 150997	-	18 443						
U.S. Department of Health and Human Services	N S	93.433	ACL National Institute on Disability, Independent Living, and Rehabilitation Res	Utah State University	204517-824		50,341						
U.S. Department of Health and Human Services		93.680	Medical Student Education	Oklahoma Health Sciences Center, University of	RS20192426-03	-	10,346						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.788 93.788	Opioid STR Opioid STR	COP: Commission on Crime and Delinquency COP: Department of Drug and Alcohol Prog ram	28768 4300703501	1,472,386	20,085 2,251,067						
U.S. Department of Health and Human Services	N S	93.788	Opioid STR	COP: Department of Health	4100085796	-,,000	2,760						
U.S. Department of Health and Human Services		93.837	Cardiovascular Diseases Research	Des Moines University	02-20-02 SUB2	-	5,039						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.837 93.837	Cardiovascular Diseases Research Cardiovascular Diseases Research	Duke University Kansas State University	2037894 A22-0645-S001	-	1,539 159,846						
U.S. Department of Health and Human Services	N 9	93.837	Cardiovascular Diseases Research	Kentucky, University of	3200004236-22-019		45,488						
U.S. Department of Health and Human Services	N 9	93.837	Cardiovascular Diseases Research	Minnesota, University of	N007979201	-	194,233						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.837 93.837	Cardiovascular Diseases Research Cardiovascular Diseases Research	The Regents of the University of Michiga University of California at Davis	SUBK00016700 A21-1682-S002	-	1,096 6,391						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N S	93.837	Cardiovascular Diseases Research Cardiovascular Diseases Research	University of California at Davis University of Massachusetts	A21-1682-S002 SUB00000209		51,126						
U.S. Department of Health and Human Services	N 9	93.837	Cardiovascular Diseases Research	University of Pittsburgh	AWD00004314 (137168-3)	-	1,405						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.837 93.837	Cardiovascular Diseases Research	University of Pittsburgh University of Pittsburgh	AWD00004314 (138609-3) AWD00004314 (139454-30A)	-	49,273 3,634						
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.837	Cardiovascular Diseases Research Cardiovascular Diseases Research	University of Pittsburgh University of Pittsburgh	AWD00004314 (139454-30A) AWD00004406 (136498-1)		3,634 64,543						
U.S. Department of Health and Human Services		93.837	Cardiovascular Diseases Research	University of Texas at Arlington	2021GC1903	-	142,885						

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

FOR THE YEAR ENDED JUNE 30, 2023									
Federal Agency	Direct Award	ALN	Federal Program Name	Pass-Through Entity		Subrecipient Expenditures	Expenditures		
U.S. Department of Health and Human Services		93.837	Cardiovascular Diseases Research		UTA16-000756	Experialtures			
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.837	Cardiovascular Diseases Research Cardiovascular Diseases Research	University of Texas at Austin Vermont. University of	AWD0000123SUB0000060	-	43 166,825		
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.837	Cardiovascular Diseases Research	Wayne State University	WSU21073 GRANT INDEX:340655	-	53.730		
U.S. Department of Health and Human Services		93.838	Lung Diseases Research	Brigham & Women's Hospital	WS021073 GRANT INDEX.340033	-	53,730		
U.S. Department of Health and Human Services		93.838	Lung Diseases Research	Sage Bionetworks	239077 2022.02, 2022.01		92,710		
U.S. Department of Health and Human Services		93.838	Lung Diseases Research	The Regents of the University of Michiga	SUBK00015550	-	778		
U.S. Department of Health and Human Services		93.838	Lung Diseases Research	University of Colorado Denver	FY20.988.002	_	11,603		
U.S. Department of Health and Human Services		93.838	Lung Diseases Research	University of Pittsburgh	AWD00005589 (418897-1)		31,333		
U.S. Department of Health and Human Services	N 9	93.838	COVID-19 - Lung Diseases Research	University of Pittsburgh	CNVA00038682(134369-1)		(34.653)		
U.S. Department of Health and Human Services	N 9	93.839	Blood Diseases and Resources Research	Actuated Medical, Inc.	5075-S01	-	74,500		
U.S. Department of Health and Human Services	N 9	93.839	Blood Diseases and Resources Research	Actuated Medical, Inc.	5075-S02		33,304		
U.S. Department of Health and Human Services		93.839	Blood Diseases and Resources Research	Children's Hospital of Philadelphia	GRT-00002850	-	22,892		
U.S. Department of Health and Human Services		93.839	Blood Diseases and Resources Research	HMH Hospitals Corporation	2203-G10159	-	181,246		
U.S. Department of Health and Human Services		93.839	Blood Diseases and Resources Research	The University of Texas Health Science Center at San Antonio	166829/165808	-	148,445		
U.S. Department of Health and Human Services		93.846	Arthritis, Musculoskeletal and Skin Diseases Research	Columbia University	2(GG012259)	-	139		
U.S. Department of Health and Human Services		93.846	Arthritis, Musculoskeletal and Skin Diseases Research	New York University Medical Center	19-A1-00-1000432; PROJ#113189	-	22,979		
U.S. Department of Health and Human Services		93.846	Arthritis, Musculoskeletal and Skin Diseases Research	University of Alabama at Birmingham	000517922-SC002	-	18,439		
U.S. Department of Health and Human Services		93.846	Arthritis, Musculoskeletal and Skin Diseases Research	University of Massachusetts	OSP2018039 PO WA00617531	-	(235)		
U.S. Department of Health and Human Services		93.846 93.846	Arthritis, Musculoskeletal and Skin Diseases Research	University of Nebraska Medical Center	34-5360-2202-101 CON-80003783 (GR117196)	-	12,393 109,788		
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.846	Arthritis, Musculoskeletal and Skin Diseases Research Diabetes, Digestive, and Kidney Diseases Extramural Research	Yale University Aleo BME, Inc.	PSU-DK130756	-	41,263		
U.S. Department of Health and Human Services		93.047 93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Arizona State University	ASUB0000567	-	41,263 36,089		
U.S. Department of Health and Human Services		93.047 93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Board of Regents of the University Syste m of Georgia	SUB00003371	-	15.021		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Carnegie Mellon University	1090670-449374	-	5,993		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Children's Hospital of Philadelphia	204010521 PO 20193097	-	(14,687)		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Children's Hospital of Philadelphia	GRT-00002004		183.414		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Columbia University	1(GG016477-07) PO G16475		56,754		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Duke University	A03-4702	-	71,823		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Georgia State University	SP00014262-01		13,544		
U.S. Department of Health and Human Services	N 9	93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Icahn School of Medicine at Mount Sinai	0255-7170-4609	-	1,128		
U.S. Department of Health and Human Services	N 9	93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Kaiser Foundation Research Institute	OOS030544-PSU	-	(10,740)		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	McLean Hospital	401536	-	43,170		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Princeton University Office of Research & Project Administrat	SUB0000507	-	12,034		
U.S. Department of Health and Human Services	N 9	93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Temple University	265300-PSU	-	37,754		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	The University of Texas Health Science Center at San Antonio	171154 / 1171153	-	58,702		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	The University of Toledo	N-2023-19	-	101,121		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	University of California at San Francisc o	12271SC	-	23,014		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	University of South Florida	1204	-	388		
U.S. Department of Health and Human Services		93.847	Diabetes, Digestive, and Kidney Diseases Extramural Research	Yale University	GR108900 (CON-80002282)	-	85,143		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Actuated Medical, Inc.	5070-S02	-	10,644		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Actuated Medical, Inc.	5080-\$01 5080-\$02	-	36,914		
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.853 93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Actuated Medical, Inc. Columbia University	2(GG010847-01)	-	10,314 (6.379)		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders Extramural Research Programs in the Neurosciences and Neurological Disorders	Drexel University	900009-3	-	(6,379) 8.381		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders Extramural Research Programs in the Neurosciences and Neurological Disorders	Icahn School of Medicine at Mount Sinai	0255-G621-4609		110.277		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Johns Hopkins University	2005543037	-	25,991		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Massachusetts General Hospital	232380		(40.663)		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Mayo Clinic	BER-224063-03 /PO 6663812		27.218		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Mayo Clinic	HMC-224063	_	523		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Mayo Clinic	HMC-224063-04	_	95		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Mayo Clinic	HMC-224063-05	-	(606)		
U.S. Department of Health and Human Services	N 9	93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Mayo Clinic Jacksonville	BER-290195-01	-	300		
U.S. Department of Health and Human Services	N 9	93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Pennsylvania, University of	585719		33,542		
U.S. Department of Health and Human Services	N 9	93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Quadrant Biosciences Inc.	2020-NS119119		(4,353)		
U.S. Department of Health and Human Services	N 9	93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	Rutgers-The State University of New Jersey	1803	-	(1,981)		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	SUNY Upstate Medical University	1174786-94259	-	72,929		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	University of Cincinnati	011337-140228	-	12,350		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	University of Florida	SUB00003122	-	34,958		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	University of Rochester	SUB00000410/UR FAO: GR533048	-	68,467		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	University of Southern California	SCON-00004427	-	31,766		
U.S. Department of Health and Human Services		93.853	Extramural Research Programs in the Neurosciences and Neurological Disorders	University of Texas at Dallas	22010311	-	12,552		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	Abigail Wexner Research Institute at Nationwide Childrens	700246-0322-00	-	79,025		
U.S. Department of Health and Human Services		93.855 93.855	Allergy and Infectious Diseases Research	Abigail Wexner Research Institute at Nationwide Childrens	700246-0323-00 EV23/TN/48	-	39,511		
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.855 93.855	Allergy and Infectious Diseases Research Allergy and Infectious Diseases Research	Benaroya Research Institute at Virginia Mason Boston Children's Hospital	FY22ITN448 GENFD0002201917	-	19,137 41,424		
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research Allergy and Infectious Diseases Research	Boston Children's Hospital Boston Children's Hospital	GENFD0002201917 GENFD0002340605	-	123,003		
U.S. Department of Health and Human Services		93.655	Allergy and Infectious Diseases Research Allergy and Infectious Diseases Research	Boston Children's Hospital	PO # GENFD0002044872	-	1.250		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	Carnegie Mellon University	1090598-425264		51.382		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	Colorado State University	G-45094-01	-	50.995		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	Cornell University	81060-10895		(2.071)		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	FHI 360	PO21001645		12.439		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	Hennepin Healthcare Research Institute	14384-15 18X107CF9 STRIVE		6,390		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	Johns Hopkins University	2002753700	-	(17)		
U.S. Department of Health and Human Services	N 9	93.855	Allergy and Infectious Diseases Research	Johns Hopkins University	2005681817	-	13,803		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	North Carolina, University of	5124364	-	19,310		
U.S. Department of Health and Human Services	N 9	93.855	COVID-19 - Allergy and Infectious Diseases Research	Purdue University	11001048-006	-	675,418		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	Respana Therapeutics, Inc.	PSU-RESAI162590	-	130,826		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	Rutgers-The State University of New Jersey	1949	-	105,171		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	Sanaria	242188	-	29,997		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	Sanaria	266022	-	60,000		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	Stanford Medicine	62402848-165639	-	304,510		
U.S. Department of Health and Human Services		93.855	COVID-19 - Allergy and Infectious Diseases Research	The Jackson Laboratory	210310-0223-10	-	129,500		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research	The Jackson Laboratory	210310-0223-10	-	1,465		
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.855 93.855	COVID-19 - Allergy and Infectious Diseases Research Allergy and Infectious Diseases Research	The Jackson Laboratory The Regents of the University of Michiga	210310-0224-10	-	100,692		
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.855 93.855	Allergy and Infectious Diseases Research Allergy and Infectious Diseases Research		SUBK00009188 PO 3005415261 18076	-	10,550 27		
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.855 93.855		University of Illinois at Chicago University of North Carolina Chapel Hill	18076 5117468	-	27 269		
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.855 93.855	Allergy and Infectious Diseases Research Allergy and Infectious Diseases Research	University of North Carolina Chapel Hill University of North Carolina Chapel Hill	511/468 5120489	-	269 46,023		
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research Allergy and Infectious Diseases Research	University of North Carolina Chapel Hill University of Pittsburgh Medical Center	AWD00005335 (137255-1)	-	46,023 20.762		
U.S. Department of Health and Human Services		93.855	Allergy and Infectious Diseases Research Allergy and Infectious Diseases Research	Utah, University of	10054720-02 PENN	-	13 488		
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SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

			FOR THE YEAR ENDED JUNE 30, 2023			
	Direct				Subrecipient	
Federal Agency		ALN Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.		Worcester Polytechnic Institute Florida State University	10853-GR R000002901		20,590 20.656
U.S. Department of Health and Human Services	N 93.		Georgetown University	AWD7772899-GR205577	:	6.514
U.S. Department of Health and Human Services	N 93.		Minnesota, University of	N007645301		82.874
U.S. Department of Health and Human Services	N 93.	Biomedical Research and Research Training	University of Florida	UFDSP00012167		46,701
U.S. Department of Health and Human Services	N 93.		Virginia, Üniversity of	AWD-004661.GR101363	-	124,689
U.S. Department of Health and Human Services	N 93.		Actuated Medical, Inc.	5073-S02	-	90,267
U.S. Department of Health and Human Services	N 93.		Arizona State University	ASUB00000125 700001045	-	73,429
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.		Baylor University Boston Children's Hospital	7000001045 GENED0001754391		54,728 8.516
U.S. Department of Health and Human Services	N 93.		Children's Hospital of Philadelphia	GRT-00001754391		30.525
U.S. Department of Health and Human Services	N 93.		Colorado State University	G-63798-02		7,255
U.S. Department of Health and Human Services	N 93.	365 Child Health and Human Development Extramural Research	Colorado, University of	FY20.812.002	-	9,194
U.S. Department of Health and Human Services	N 93.		Georgetown University	412457_GR412396-PSU	-	50,704
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.		Georgia, University of Lundquist Institute for Biomedical Innov ation	SUB00003091	-	4,832
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.		Lundquist Institute for Biomedical Innov ation Lundquist Institute for Biomedical Innov ation	MR-32035 PO# 23005000 PO 22003494		62,585
U.S. Department of Health and Human Services	N 93.		New York University	F0998-01	:	(5,139) 57.074
U.S. Department of Health and Human Services	N 93.		New York University School of Medicine	22-A1-00-1006710 PRJ ID 260679		36.094
U.S. Department of Health and Human Services	N 93.	365 Child Health and Human Development Extramural Research	North Carolina State University	2021-1051-01		17,429
U.S. Department of Health and Human Services	N 93.		Northwestern University	60056369 PSU	-	87,509
U.S. Department of Health and Human Services	N 93.		Syracuse University Office of Sponsored Programs	31095-05456-S01	-	2,149
U.S. Department of Health and Human Services	N 93.		The Regents of the University of Califor nia, Los Angeles	1644 GVA369	-	1,421
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.		THE RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK University of Massachusetts Amherst	86675/2/1158241 20-015667		105,187 6,020
U.S. Department of Health and Human Services	N 93.		University of North Carolina Chapel Hill	5124162	:	25.894
U.S. Department of Health and Human Services	N 93.		University of Pittsburgh	AWD00001006 (133613-14)		4,348
U.S. Department of Health and Human Services	N 93.		University of Texas Medical Branch at Ga Iveston	23-86262-06		12,002
U.S. Department of Health and Human Services	N 93.		University of Wisconsin-Madison	0000001938	-	10,538
U.S. Department of Health and Human Services	N 93.		Utah, University of	10058860-23-PENN	-	(924)
U.S. Department of Health and Human Services	N 93.		Yale University	CON-80003642 (GR116282)	-	29,880
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.		Yale University Albert Einstein College of Medicine	CON-80004163 (GR119247) 311216		39,832 7,288
U.S. Department of Health and Human Services	N 93		Albert Einstein College of Medicine Albert Einstein College of Medicine	311437		306.441
U.S. Department of Health and Human Services	N 93.		Albert Einstein College of Medicine	312121		30.511
U.S. Department of Health and Human Services	N 93.	366 Aging Research	Albert Einstein College of Medicine	31229A		47,586
U.S. Department of Health and Human Services	N 93.	366 Aging Research	Albert Einstein College of Medicine	31229C	-	45,433
U.S. Department of Health and Human Services	N 93.		Albert Einstein College of Medicine	31229D	-	99,039
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.	366 Aging Research	Albert Einstein College of Medicine Albert Einstein College of Medicine	31229G 31229H	-	596,494 214,590
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.		Albert Einstein College of Medicine Ann & Robert H. Lurie Children's Hospital of Chicago	AWD001614 - PENN STATE		214,590 185.394
U.S. Department of Health and Human Services	N 93.		Beth Israel Deaconess Medical Center	01028856		120,523
U.S. Department of Health and Human Services	N 93.		Beth Israel Deaconess Medical Center	GRT65005		30.115
U.S. Department of Health and Human Services	N 93.	366 Aging Research	Board of Regents of The University of Wi sconsin System	000000785	9,092	45,769
U.S. Department of Health and Human Services	N 93.		Brown University	00001381	-	44,702
U.S. Department of Health and Human Services	N 93.		Clemson University	2299-209-2014440	-	89,302
U.S. Department of Health and Human Services	N 93.		Clemson University Clemson University	2316-209-2014348 2466-209-2015467	-	13,319 129,932
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.		Clemson University Elon University	OVERMAN 21-002	-	129,932
U.S. Department of Health and Human Services	N 93.		Kent State University	403029-PSU		124,597
U.S. Department of Health and Human Services	N 93.	366 Aging Research	Klein Buendel, Inc.	0327-0177-000		195,396
U.S. Department of Health and Human Services	N 93.	366 Aging Research	Klein Buendel, Inc.	0336-0183-000	-	111,726
U.S. Department of Health and Human Services	N 93.		Miami University (of Ohio)	G03767	-	10,010
U.S. Department of Health and Human Services	N 93.		Michigan State University	RC113018D	-	114,588
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.8 N 93.8		Proactive Life, Inc. Syracuse University Office of Sponsored Programs	234190 30917-05467-S23	-	448,546 7,394
U.S. Department of Health and Human Services	N 93.		The Regents of the University of Michiga n	SUBK00017880	:	7,394 35.300
U.S. Department of Health and Human Services	N 93.		The Trustees of the University of Pennsy Ivania	583553		2.378
U.S. Department of Health and Human Services	N 93.	366 Aging Research	Tulane University	TUL-SCC-560062-22/23	-	14,165
U.S. Department of Health and Human Services	N 93.		Tulane University	TUL-SCC-560973-22/23	-	5,042
U.S. Department of Health and Human Services	N 93.		University of California at Riverside	S-000961	-	16,824
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.8 N 93.8		University of Illinois University of Kentucky Research Foundation	17783-00 3200001467-21-046	-	61,274 24,295
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.		University of Kentucky Research Foundation University of Maryland	98717-Z0406201	-	24,295 83.589
U.S. Department of Health and Human Services	N 93.	366 Aging Research	University of Maryland	F301912-1		155,367
U.S. Department of Health and Human Services	N 93.		University of Southern California	115487434 PO 10782313	-	177,494
U.S. Department of Health and Human Services	N 93.	366 Aging Research	University of Southern California	SCON-00003492	-	5,867
U.S. Department of Health and Human Services	N 93.		University of Wisconsin-Madison	0000002492	20,201	297,748
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.8 N 93.8		Yale University	CON-80004270(GR119693) 259297	-	34,141 50.000
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.1 N 93.1		PolyK Technologies, LLC Praetego, LLC	259297 PSU-R41EY034725	-	50,000 20.642
U.S. Department of Health and Human Services	N 93.		Skyran Biologics, Inc.	2R42EY029192-02A1A	-	95.008
U.S. Department of Health and Human Services	N 93.		THE RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK	87527/2/1159967	-	56,279
U.S. Department of Health and Human Services	N 93.		COP: Commission on Crime and Delinquency	28768	-	(17,691)
U.S. Department of Health and Human Services	N 93.		COP: Department of Drug and Alcohol Prog ram	4300736720	-	106,393
U.S. Department of Health and Human Services	N 93.I N 93.I		American College of Radiology	1831 ACURDO001305	-	26,058 34,999
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.1 N 93.1		Arizona State University evelopment Benaroya Research Institute at Virginia Mason	ASUB00001305 FY21ITN448	-	34,999 (18,181)
U.S. Department of Health and Human Services	N 93.1		evelopment Benaroya Research Institute at Virginia Mason Boston Children's Hospital	GENED0002047665	-	678.588
U.S. Department of Health and Human Services	N 93.1		Boston Children's Hospital	GENFD0002153621	-	388
U.S. Department of Health and Human Services	N 93.I	RD U.S. Department of Health and Human Services Research and Development	Boston Children's Hospital	GENFD0002168556	-	347,714
U.S. Department of Health and Human Services	N 93.		Children's Hospital of Philadelphia	139164 R01 CA212190-01A1	-	3,018
U.S. Department of Health and Human Services	N 93.1		Children's Hospital of Philadelphia	143322 COG ANBL 1531	-	(156)
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.1 N 93.1		Children's Hospital of Philadelphia Children's Hospital of Philadelphia	ADVANCE GRANTID 3201710624/PO NO.	-	9,144 988
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.1 N 93.1		Children's Hospital of Philadelphia Cleveland Clinic Lerner College of Medic ine	GRANTID 3201/10624/PO NO. CCF21143188		988 109.090
U.S. Department of Health and Human Services	N 93.1		Cleveland Clinic Lerner College of Medic ine	CCF22607970	-	289.042
U.S. Department of Health and Human Services	N 93.I	RD U.S. Department of Health and Human Services Research and Development	Columbia University	13(GG015997-01)	-	(16)
U.S. Department of Health and Human Services	N 93.I	RD U.S. Department of Health and Human Services Research and Development	Columbia University	264781	-	3,319
U.S. Department of Health and Human Services	N 93.I	RD U.S. Department of Health and Human Services Research and Development	COP: Department of Human Services Room 832 Health and Welfare Building	4300707421	-	39,604

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Fortunal Assessment	Direct		N ENDED CONE CO, ECC.		Subrecipient	5
U.S. Department of Health and Human Services	Award ALN N 93.RD	Federal Program Name U.S. Department of Health and Human Services Research and Development	Pass-Through Entity	Pass-Through Entity Identifying Number 4300743303	Expenditures	Expenditures 219,896
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development U.S. Department of Health and Human Services Research and Development	COP: Department of Human Services Room 832 Health and Welfare Building COP: Insurance Department	4300743303 4300719108	-	219,896 98.081
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Duke Clinical Research Institute	129210 NICHD-2019-POP02		11.961
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Duke Clinical Research Institute	203-7903		19.642
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Duke Clinical Research Institute	215359 NICHD-2019-POP02	-	10,400
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Emory University	269237	-	11,801
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.RD N 93.RD	COVID-19 - U.S. Department of Health and Human Services Research and Development COVID-19 - U.S. Department of Health and Human Services Research and Development	Emory University Emory University	A373595 A496021	-	28,229 1.486
U.S. Department of Health and Human Services	N 93.RD	COVID-19 - U.S. Department of Health and Human Services Research and Development	Emory University Emory University	A697575		152.570
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Emory University	A874316 75N93021C00017 COA #1		47.014
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Emory University	IRB00101506 STUDY14730		13,690
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Family Health Council of Central PA	225529		673,075
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Geisinger Clinic	646031PSU01		1,138
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development U.S. Department of Health and Human Services Research and Development	Genesis Laboratories, Inc. Hoosier Cancer Research Network	243824 BRF 15-016		9,811 1,008
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Houston, University of	R-22-0070	:	44,123
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Idaho Department of Health and Welfare	RC085400		333,915
U.S. Department of Health and Human Services	N 93.RD	COVID-19 - U.S. Department of Health and Human Services Research and Development	Johns Hopkins University	HHSN272201400007C	5,639	390
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Kaiser Foundation Research Institute	OOS030544-PSU	-	69,905
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Lundquist Institute for Biomedical Innov ation	PSU-32131	-	45,321
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development COVID-19 - U.S. Department of Health and Human Services Research and Development	Massachusetts General Hospital Massachusetts Institute of Technology	RTB-004 S5491		17,214 195,135
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Massachusetts Institute of Technology	S5491		76,051
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Massachusetts Institute of Technology	S5889		60,680
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	McKing Consulting Corporation	#PSU-02-4577	-	33,486
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	McKing Consulting Corporation	#PSU-02-4577 MOD #01	-	48,234
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development U.S. Department of Health and Human Services Research and Development	McKing Consulting Corporation Minnesota. University of	20066-02D N006269302	-	3,527 860
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development U.S. Department of Health and Human Services Research and Development	Minnesota, University of Minnesota, University of	N006269302 N006925701	-	98,190
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	National Opinion Research Center	8622.PSU.01		83,779
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	New Mexico Institute of Mining and Techn ology	P0019419	-	118,201
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	New Mexico Institute of Mining and Techn ology	P0023541	-	15,728
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	New York University School of Medicine	NYU ACTIV4	-	411
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Pennsylvania, University of	572292 PO 4989941		15,716
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development U.S. Department of Health and Human Services Research and Development	Pennsylvania, University of Pennsylvania, University of	578130 AMENDMENT 3 585496 PO 4963997		21,783 4,853
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Pennsylvania, University of	ADVANCE		1,967
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	RAND Corporation	SCON-00000119		20,362
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Reading Area Community College	268253	-	6,208
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Task Force for Global Health, Inc.	239503	-	51,832
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development U.S. Department of Health and Human Services Research and Development	The Regents of the University of Califor nia The Regents of the University of Michiga	11954SC SUBK00005527		4,488 54,599
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development U.S. Department of Health and Human Services Research and Development	The Regents of the University of Michiga The Regents of the University of Michiga	SUBK00005527 SUBK00008131-EXT 3		54,599 170
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	The Trustees of the University of Pennsy Ivania	577005		188,712
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	The Trustees of the University of Pennsy Ivania	584874 PO 4918118		5,547
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	The Trustees of the University of Pennsy Ivania	RIS#35476 AMENDMENT 5	-	4,496
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Triad National Security, LLC (was LANL)	587178 SUB 614004	-	13,938
U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development	University of California at Los Angeles	1685 G LB959 233513		67,531
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development U.S. Department of Health and Human Services Research and Development	University of Chicago University of Maryland	5 R01 HD092489-003		14,410 7.440
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	University of Maryland Baltimore	20929 (PO 1000015390)		27,268
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	University of Pittsburgh	AWD00002374 (137893-1)		17,440
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	University of Southern California	98880674 PO 50674601	-	1,520
U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development	University of Tennessee Health Science C enter	21-4803-PSU 23-0049-PSU		(24)
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development U.S. Department of Health and Human Services Research and Development	University of Tennessee Health Science C enter University of Texas at San Antonio	160577/160571 AMEND 3		1,814
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	University of Texas at Sail Antonio University of Texas Health Science Center at Houston	SA0001044		6.906
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Utah State University	201267-770	-	209,585
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Utah, University of	10050533-04 PO# U000404383		54,488
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Utah, University of	10058860-23-PENN		31,765
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development U.S. Department of Health and Human Services Research and Development	Vanderbilt University Medical Center Vermont. University of	VUMC87503 AWD00000483SUB00000228	-	9,316 22.067
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Wake Forest University Attn: Grants Accounting	21-032	-	82,259
U.S. Department of Health and Human Services	N 93.RD	COVID-19 - U.S. Department of Health and Human Services Research and Development	Wayne State University	WSU22014		107,536
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Wayne State University	WSU22014-A1	-	12,898
U.S. Department of Health and Human Services	N 93.RD	U.S. Department of Health and Human Services Research and Development	Wayne State University	WSU22014-A2	-	164,741
U.S. Department of Health and Human Services	N 93.RD N 93.RD	U.S. Department of Health and Human Services Research and Development	Weill Cornell Medicine	220367-6	-	51,195
U.S. Department of Health and Human Services U.S. Department of Health and Human Services		U.S. Department of Health and Human Services Research and Development	Yale University	CON-80003412 (GR114888)	20,379,516	4,636 182,381,845
C.C. Doparation of Floater and Flathan Corvices	· otal				20,010,010	102,001,010
U.S. Department of Homeland Security	Y 97.077	Homeland Security Research, Development, Testing, Evaluation, and Demonstration			47,217	130,552
U.S. Department of Homeland Security	Y 97.RD	U.S. Department of Homeland Security Research and Development			-	64,947
U.S. Department of Homeland Security U.S. Department of Homeland Security	N 97.047 N 97.061	Pre-Disaster Mitigation	COP: Emergency Management Agency University of Nebraska Omaha	4300767554 44-0108-1001-417	-	8,092
U.S. Department of Homeland Security U.S. Department of Homeland Security	N 97.061 N 97.061	Centers for Homeland Security Centers for Homeland Security	University of Nebraska Omaha University of North Carolina Chapel Hill	44-0108-1001-417 5122044 AMENDMENT #1,#2		72,612 70,171
U.S. Department of Homeland Security	N 97.RD	U.S. Department of Homeland Security Research and Development	COP: Emergency Management Agency	4300703457		67,582
U.S. Department of Homeland Security	N 97.RD	U.S. Department of Homeland Security Research and Development	Dayton, University of	RSC22031 SUB-22-000033	-	86,576
U.S. Department of Homeland Security	N 97.RD	U.S. Department of Homeland Security Research and Development	George Mason University	E206378B	-	169,873
U.S. Department of Homeland Security	N 97.RD	U.S. Department of Homeland Security Research and Development	Southern Mississippi, University of	8006828-02.01 PSU	47.047	229,602
U.S. Department of Homeland Security Total					47,217	900,007
Agency for International Development	Y 98.001	USAID Foreign Assistance for Programs Overseas			727,314	1,507,011
Agency for International Development	N 98.001	USAID Foreign Assistance for Programs Overseas	Kansas State University	A21-0346-S004		11,268
Agency for International Development	N 98.001	USAID Foreign Assistance for Programs Overseas	National Academy of Sciences	2000010563	-	1,528
Agency for International Development Agency for International Development	N 98.001 N 98.007	USAID Foreign Assistance for Programs Overseas Food for Peace Development Assistance Program (DAP)	The University of Tennessee Institute of Agriculture Catholic Relief Services	9500096166 NE23 SUBAGR 20611.65348.010.00	-	33,679 23,157
Agency for International Development Agency for International Development	N 98.007 N 98.RD	U.S. Agency for International Development Research and Development	Catnolic Relief Services Georgia, University of	NE23 SUBAGR 20611.65348.010.00 SUB00002026	60,001	203,522
Agency for International Development Total	30.110	a.a gay .or mannanonar povolopmont reposition and povolopmont	and a surface of the	5555555555	787,315	1,780,165
U.S. Government	Y 99.RD	USG Awards Research and Development			-	227,777

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Federal Agency	Direct Award	l ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Subrecipient Expenditures	Expenditures
U.S. Government	Υ	99.RD	USG Awards Research and Development	•	<u> </u>	-	(1,402)
U.S. Government	Υ	99.RD	USG Awards Research and Development			-	(435)
U.S. Government U.S. Government	Y	99.RD 99.RD	USG Awards Research and Development USG Awards Research and Development			114,634	(13) 130,759
U.S. Government U.S. Government	Y	99.RD 99.RD	USG Awards Research and Development USG Awards Research and Development			114,634	130,759
U.S. Government	Y	99.RD	USG Awards Research and Development			-	136,370
U.S. Government		99.RD	USG Awards Research and Development			-	58,397
U.S. Government U.S. Government	Y	99.RD 99.RD	USG Awards Research and Development USG Awards Research and Development			-	2,628,341 38,310
U.S. Government	Ϋ́	99.RD	USG Awards Research and Development			473,895	534,741
U.S. Government	Υ	99.RD	USG Awards Research and Development			-	25,843
U.S. Government	Y	99.RD 99.RD	USG Awards Research and Development				12,881
U.S. Government U.S. Government	Ý	99.RD	USG Awards Research and Development USG Awards Research and Development			37,307	42,072 145,428
U.S. Government	Ý	99.RD	USG Awards Research and Development			-	12,987
U.S. Government	Y	99.RD	USG Awards Research and Development			-	53,688
U.S. Government U.S. Government	Y	99.RD 99.RD	USG Awards Research and Development USG Awards Research and Development			31,297	962,756 81,154
U.S. Government	Ý	99.RD	USG Awards Research and Development			-	417,567
U.S. Government		99.RD	USG Awards Research and Development	L3Harris Technologies, Inc.	060201492	-	269
U.S. Government U.S. Government Total	N	99.RD	USG Awards Research and Development	ZETA Associates Inc.	090051SC-PSU-ARL-01	657,133	758,873 6,462,502
Research and Development Cluster Total	1					82,156,388	786,316,451
Student Financial Assistance Cluster U.S. Department of Education	Υ	84 007	Federal Supplemental Educational Operations Counts				5 966 462
U.S. Department of Education U.S. Department of Education		84.007	Federal Supplemental Educational Opportunity Grants Federal Work-Study Program			-	5,966,462 2,479,723
U.S. Department of Education	Ý	84.038	Federal Perkins Loan Program			-	14,249,790
U.S. Department of Education	Υ	84.063	Federal Pell Grant Program			-	81,041,925
U.S. Department of Education Student Financial Assistance Cluster Tota	Υ	84.268	Federal Direct Student Loans				455,180,826 558,918,726
Otadent i mancial Assistance States Tota	uı						330,310,720
SNAP Cluster							
U.S. Department of Agriculture SNAP Cluster Total	N	10.561	State Administrative Matching Grants for the Supplemental Nutrition Assistance P	COP: Department of Human Services Room 832 Health and Welfare Building	4100088743	17,802,485 17,802,485	20,986,983
SNAF Cluster Total						17,002,403	20,900,903
Economic Development Cluster							
U.S. Department of Commerce U.S. Department of Commerce	N N	11.307 11.307	Economic Adjustment Assistance COVID-19 - Economic Adjustment Assistance	Advanced Robotics for Manufacturing Catalyst Connection	268057 ARM-RMH-22-F-04 267417	-	21,150 22.010
U.S. Department of Commerce U.S. Department of Commerce		11.307	COVID-19 - Economic Adjustment Assistance COVID-19 - Economic Adjustment Assistance	Catalyst Connection Southwestern Pennsylvania Commission	267417 22-15316-11		22,010 39,225
U.S. Department of Commerce	N	11.307	COVID-19 - Economic Adjustment Assistance	Southwestern Pennsylvania Commission	22-15316-19		36,696
Economic Development Cluster Total							119,081
CDBG - Entitlement Grants Cluster							
U.S. Department of Housing and Urban Development	N	14.218	Community Development Block Grants/Entitlement Grants	COP: Emergency Management Agency	PEMA-2022-006		99,999
CDBG - Entitlement Grants Cluster Total							99,999
Fish and Wildlife Cluster							
U.S. Department of the Interior	N	15.611	Wildlife Restoration and Basic Hunter Education	COP: Game Commission	4300716716		91,151
Fish and Wildlife Cluster Total							91,151
WIOA Cluster							
U.S. Department of Labor		17.259	WIOA Youth Activities	Corry Higher Education Council	261205	-	4,341
U.S. Department of Labor	N	17.259	WIOA Youth Activities	Delaware County Workforce Development Board	PSU-BRANDYWINE 265429		43,649
WIOA Cluster Total							47,990
Special Education (IDEA) Cluster							
U.S. Department of Education		84.027	Special Education Grants to States	COP: Bureau of Special Education	062-22-0042	-	247,360
U.S. Department of Education U.S. Department of Education		84.027 84.027	Special Education Grants to States Special Education Grants to States	COP: Bureau of Special Education COP: Bureau of Special Education	062-23-0042 260923	-	396,417 11,236
Special Education (IDEA) Cluster Total	IN	04.027	Special Education Grants to States	COP. Bureau of Special Education	260923	<u>:</u>	655,013
TRIO Cluster U.S. Department of Education	Y	04.040*	Office of Postsoconday Education (ORE): Student Comment Comment				721.903
U.S. Department of Education U.S. Department of Education	Y	84.042A 84.044	Office of Postsecondary Education (OPE): Student Support Services Program TRIO Talent Search				721,903 1,082,087
U.S. Department of Education	Y	84.047	TRIO Upward Bound				1,372,204
U.S. Department of Education U.S. Department of Education	Y	84.217 84.047	TRIO McNair Post-Baccalaureate Achievement TRIO Upward Bound	Northwest Tri-County Intermediate Unit	70465	-	310,009 (4.844)
TRIO Cluster Total	N	04.047	TRIO Opward Bound	Northwest Tr-County Intermediate Offic	70465		3,481,359
Other Federal Programs	.,	00 1104	D O Oll				40.400
Peace Corps	Y	08.U01	Peace Corps Other				10,402
U.S. Department of Agriculture	Y	10.025	Plant and Animal Disease, Pest Control, and Animal Care				373,247
U.S. Department of Agriculture	N	10.025	Plant and Animal Disease, Pest Control, and Animal Care	COP Department of Agriculture	44209067		31,065
10.025 Total							404,312
U.S. Department of Agriculture	Υ	10.163	Market Protection and Promotion				41,126
·							
U.S. Department of Agriculture	N N	10.170 10.170	Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture	C940000024	-	(3)
U.S. Department of Agriculture U.S. Department of Agriculture		10.170	Specialty Crop Block Grant Program - Farm Bill Specialty Crop Block Grant Program - Farm Bill	COP Department of Agriculture COP Department of Agriculture	C940000531 C94000818	-	5,247 19,961
10.170 Total	•••		, , , , ==============================				25,205
II.C. Department of Aminute		10.171	Acces Accesses Devictores and December	Okia Chata University	CDC 4000004007 CD447005		4.000
U.S. Department of Agriculture	N	10.174	Acer Access Development Program	Ohio State University	SPC-1000004087 GR117635		4,233
U.S. Department of Agriculture	Υ	10.175	Farmers Market and Local Food Promotion Program				77,826
U.S. Department of Agriculture	N	10.176	Dairy Business Innovation Initiatives	University of Tennessee	9500096725		24,036

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Direct		K LINDLD GOILL GO, LOLG		Subrecipient
Federal Agency	Award ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures Expenditures
U.S. Department of Agriculture	N 10.215	Sustainable Agriculture Research and Education	Connecticut, University of	438741	- 7,878
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.215 N 10.215	Sustainable Agriculture Research and Education Sustainable Agriculture Research and Education	University of Scranton Vermont, University of	121606 ONE19-339-33243	- 1,173 - 2,278
U.S. Department of Agriculture	N 10.215	Sustainable Agriculture Research and Education	Vermont, University of	SNE20-011-PA-35383	- 55.135
10.215 Total		·	•		- 66,464
U.S. Department of Agriculture	Y 10.217	Higher Education - Institution Challenge Grants Program			- 4,135
U.S. Department of Agriculture	N 10.226	Secondary and Two-Year Postsecondary Agriculture Education Challenge Grants	Idaho, University of	AE5629-850937	- 79,756
U.S. Department of Agriculture	N 10.229	Extension Collaborative on Immunization Teaching & Engagement (EXCITE)	eXtension Foundation Grafton & Associates PC	EXC2-2021-2110	- (13,431)
U.S. Department of Agriculture 10.229 Total	N 10.229	Extension Collaborative on Immunization Teaching & Engagement (EXCITE)	eXtension Foundation Grafton & Associates PC	EXC3-2022-2240	- 10,000 - (3,431)
U.S. Department of Agriculture	Y 10.303	Integrated Programs			- 189,920
U.S. Department of Agriculture	N 10.304	Homeland Security Agricultural	Michigan State University	RC112910E	- 8,502
U.S. Department of Agriculture	N 10.304	Homeland Security Agricultural	University of Maine	UMS1424	- 13,504
10.304 Total					- 22,006
U.S. Department of Agriculture	Y 10.310	Agriculture and Food Research Initiative (AFRI)			92,231 280,499
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	Connecticut, University of	149538888 PO# 457404	- 2,048
U.S. Department of Agriculture	N 10.310	Agriculture and Food Research Initiative (AFRI)	West Virginia University	21-921-PSU	- 19,091
10.310 Total					92,231 301,638
U.S. Department of Agriculture	Y 10.311	Beginning Farmer and Rancher Development Program			2,420 3,280
U.S. Department of Agriculture	N 10.319 N 10.319	Farm Business Management and Benchmarking Competitive Grants Program	Minnesota, University of Minnesota, University of	P009577105 P010062905	- 15,704
U.S. Department of Agriculture 10.319 Total	N 10.319	Farm Business Management and Benchmarking Competitive Grants Program	Millinesola, University of	P010062905	- 25,956 - 41,660
U.S. Department of Agriculture	N 10.326	Capacity Building for Non-Land Grant Colleges of Agriculture (NLGCA)	University of Tennessee Martin	UTM-2022-70001-37582	- 7,534
			•		-
U.S. Department of Agriculture	N 10.328	National Food Safety Training, Education, Extension, Outreach, and Technical Ass	Vermont, University of	AWD00000639SUB00000273	- 12,725
U.S. Department of Agriculture U.S. Department of Agriculture	Y 10.329 N 10.329	Crop Protection and Pest Management Competitive Grants Program Crop Protection and Pest Management Competitive Grants Program	Ohio State University	GR124290 / SPC-1000005247	- 103,505 - 21,392
10.329 Total	10.020	orap i recoder and i sec management compositio oranie i regram	one cate oursely	GREEZES / GF S 1000000217	- 124,897
U.S. Department of Agriculture	Y 10.336	Veterinary Services Grant Program			- 26,958
U.S. Department of Agriculture	Y 10.351	Rural Business Development Grant			- 47,518
U.S. Department of Agriculture	Y 10.500	Cooperative Extension Service			90,855 203,180
U.S. Department of Agriculture	N 10.500	Cooperative Extension Service	Delaware, University of	58999	- 15,674
U.S. Department of Agriculture	N 10.500	Cooperative Extension Service	Delaware, University of	UDR0000164	- 46,080
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.500 N 10.500	Cooperative Extension Service	eXtension Foundation Grafton & Associates PC eXtension Foundation Grafton & Associates PC	NTAE-2021-2136 NTAE-2021-2137	- 12,520 9,452 52,167
U.S. Department of Agriculture	N 10.500	Cooperative Extension Service	eXtension Foundation Grafton & Associates PC	NTAE-2022-2239	- 6,735
U.S. Department of Agriculture	N 10.500	Cooperative Extension Service	Nebraska, University of	35-5420-2009-001	- 5,115
U.S. Department of Agriculture 10.500 Total	N 10.500	Cooperative Extension Service	Nebraska, University of	35-5420-2009-002	- 14,295 100,307 355,766
10.500 Total					100,307 355,766
U.S. Department of Agriculture	Y 10.511	Smith-Lever Special Needs			- 9,368,346
U.S. Department of Agriculture	Y 10.514	Expanded Food and Nutrition Education Program			- 1,943,541
U.S. Department of Agriculture	Y 10.515	Renewable Resources Extension Act			- 89,565
U.S. Department of Agriculture	N 10.520	Agriculture Risk Management Education Partnerships Competitive Grants Program	Delaware, University of	UDR0000356	- 6,460
U.S. Department of Agriculture	N 10.558	COVID-19 - Child and Adult Care Food Program	Commonwealth of Pennsylvania Pennsylvania Department of Education	COP - Food and Nutrition	- 1,754
U.S. Department of Agriculture 10.558 Total	N 10.558	Child and Adult Care Food Program	Commonwealth of Pennsylvania Pennsylvania Department of Education	COP - Food and Nutrition	- 96,137 - 97,891
U.S. Department of Agriculture	N 10.560	State Administrative Expenses for Child Nutrition	Commonwealth of Pennsylvania Pennsylvania Department of Education	4300702619	- 182,309
U.S. Department of Agriculture	N 10.560	State Administrative Expenses for Child Nutrition	Commonwealth of Pennsylvania Pennsylvania Department of Education	4300727899	- 38.435
U.S. Department of Agriculture	N 10.560	State Administrative Expenses for Child Nutrition	Commonwealth of Pennsylvania Pennsylvania Department of Education	4300727920	- 6,178
10.560 Total					- 226,922
U.S. Department of Agriculture	N 10.574	Team Nutrition Grants	Commonwealth of Pennsylvania Pennsylvania Department of Education	4300739633	82,060 286,488
U.S. Department of Agriculture	N 10.575	Farm to School Grant Program	Commonwealth of Pennsylvania Pennsylvania Department of Education	4300702622	- 91,879
U.S. Department of Agriculture 10.575 Total	N 10.575	Farm to School Grant Program	Commonwealth of Pennsylvania Pennsylvania Department of Education	4300745854	- 21,297 - 113,176
U.S. Department of Agriculture	N 10.645	Farm to School State Formula Grant	Commonwealth of Pennsylvania Pennsylvania Department of Education	4300763531	- 7,381
U.S. Department of Agriculture	Y 10.674	Wood Utilization Assistance			- 14,909
U.S. Department of Agriculture	Y 10.675	Urban and Community Forestry Program			- 509,820
U.S. Department of Agriculture	Y 10.678	Forest Stewardship Program			- 127,785
U.S. Department of Agriculture	N 10.902	Soil and Water Conservation	National Fish and Wildlife Foundation	0407.19.066280	- 34,636
U.S. Department of Agriculture	Y 10.912	Environmental Quality Incentives Program			- 10.942
U.S. Department of Agriculture 10.912 Total	N 10.912	Environmental Quality Incentives Program Environmental Quality Incentives Program	North Jersey RC&D	238145	- 1,154
10.912 Total					- 12,096

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

FOR THE YEAR ENDED JUNE 30, 2023

	Direct		·		Subrecipient	
Federal Agency	Award AL Y 10.U0	· · · · · · · · · · · · · · · · · · ·	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures 57.507
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.00		Commonwealth of Pennsylvania Pennsylvania Department of Education	4300702374		6.542
U.S. Department of Agriculture	N 10.U0	1 U.S. Department of Agriculture Other	Delaware, University of	UDR0000157	-	26,032
U.S. Department of Agriculture U.S. Department of Agriculture	N 10.U0 N 10.U0		National 4-H Council University of Maryland	2023-224 99698-Z5188202	-	794 69,337
10.U01 Total		· · · · · - · · · · · · · · · · · · · ·	,,			160,212
U.S. Department of Commerce	Y 11.02	4 Build to Scale				190,294
U.S. Department of Commerce	Y 11.30	3 Economic Development Technical Assistance				145,853
U.S. Department of Commerce	N 11.45	7 Chesapeake Bay Studies	Stroud Water Research Center	380254-55900		11,604
U.S. Department of the Interior	Y 15.23					13,790
U.S. Department of the Interior	N 15.60	·	COP: Fish & Boat Commission	4100094320		10,816
U.S. Department of the Interior	Y 15.66					,
U.S. Department of the Interior	Y 15.94					25,079
U.S. Department of Justice U.S. Department of Justice	N 16.57 N 16.57		COP: Commission on Crime and Delinquency COP: Commission on Crime and Delinquency	2020-VF-05-37702 28932	-	101,071 12,932
U.S. Department of Justice	N 16.57		COP: Commission on Crime and Delinquency	33287		99,152
16.575 Total						213,155
U.S. Department of Justice	Y 16.58	•				214,785
U.S. Department of Justice U.S. Department of Justice	N 16.72 N 16.72		National 4-H Council National 4-H Council	2020-JU-FX-0031 247546	-	4,686 (2,683)
U.S. Department of Justice 16.726 Total	N 16.72	S Juvenile Mentoring Program	National 4-H Council	258895		37,978 39,981
U.S. Department of Labor	N 17.24	5 Trade Adjustment Assistance	COP: Department of Labor and Industry	COP - TAA		231,993
U.S. Department of Labor	Y 17.28	WIOA Dislocated Worker National Reserve Demonstration Grants				551,148
U.S. Department of Labor	N 17.U0	1 U.S. Department of Labor Other	COP: Department of Environmental Protect ion	4300736950		204,647
U.S. Department of State U.S. Department of State 19.010 Total	N 19.01 N 19.01		Institute of International Education Institute of International Education	3000224518 3000259164		(2,440) 259,478 257,038
U.S. Department of Transportation U.S. Department of Transportation 20.106 Total	Y 20.10 Y 20.10				<u> </u>	137,953 6,238,893 6,376,846
U.S. Department of Transportation	N 20.U0	1 U.S. Department of Transportation Other	Michigan Technological University	2009035Z2		33,921
U.S. Department of the Treasury U.S. Department of the Treasury 21.027 Total	N 21.02 N 21.02		Commonwealth of Pennsylvania Pennsylvania Department of Education COP: Emergency Management Agency	COP - SLFRF COP - PEMA	-	12,105,200 37,237 12,142,437
U.S. Department of the Treasury	N 21.02	OCOVID-19 - Coronavirus Capital Projects Fund	COP: Dep. Community & Economic Develop.	4300758349		221,175
Appalachian Regional Commission	Y 23.00	2 Appalachian Area Development			444,591	972,352
Appalachian Regional Commission Appalachian Regional Commission 23.U01 Total	Y 23.U0 N 23.U0		Clearfield County Commissioners	226272	<u>-</u>	622,862 158,226 781,088
General Services Administration	Y 39.U0	1 General Services Administration Other				245,909
National Endowment for the Arts	Y 45.02	Promotion of the Arts Grants to Organizations and Individuals				25,000
National Endowment for the Arts	N 45.02	5 Promotion of the Arts Partnership Agreements	Mid-Atlantic Arts Foundation	2023-2754		12,000
National Endowment for the Humanities	N 45.16	Promotion of the Humanities Teaching and Learning Resources and Curriculum Devel	The Teagle Foundation	2005501		124,309
The Institute of Museum and Library Services	Y 45.30	1 Museums for America				2,584
The Institute of Museum and Library Services	N 45.31	Grants to States	Commonwealth of Pennsylvania Pennsylvania Department of Education	4100092327		48,471
The Institute of Museum and Library Services	Y 45.31					9,449
Small Business Administration Small Business Administration Small Business Administration 59.037 Total	N 59.03 N 59.03 N 59.03	7 Small Business Development Centers	Kutztown University of Pennsylvania Kutztown University of Pennsylvania Kutztown University of Pennsylvania	SBA20220507 SBA20230106 SBACARES20200507	-	92,602 87,915 36,766 217,283
U.S. Department of Veterans Affairs U.S. Department of Veterans Affairs 64.U01 Total	Y 64.U0 N 64.U0		Cathexis Corporation	VAAASCMS-41-PSU-20-0001		12,317 370,838 383,155
Environmental Protection Agency Environmental Protection Agency 66.436 Total	N 66.43 N 66.43		Rural Community Assistance Partnership Rural Community Assistance Partnership	237971 250245	-	26 10,224 10,250
Environmental Protection Agency Environmental Protection Agency	N 66.46 N 66.46		Conservation Foundation of Lancaster County National Fish and Wildlife Foundation	260063 0602.19.065295	69,666	17,707 238,678

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Direct	FUR THE TEA	R ENDED JUNE 30, 2023		Subrecipient	
Federal Agency	Award ALN		Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
Environmental Protection Agency 66.466 Total	N 66.466	Chesapeake Bay Program	Pennsylvania Association for Sustainable Agriculture	235709	69.666	7,803 264,188
					69,000	
Environmental Protection Agency	Y 66.708	Pollution Prevention Grants Program				278,386
Environmental Protection Agency	N 66.U01		COP: Department of Environmental Protect ion	4300732903	-	47,396
Environmental Protection Agency Environmental Protection Agency	N 66.U01 N 66.U01	Environmental Protection Agency Other Environmental Protection Agency Other	COP: Department of Environmental Protect ion eXtension Foundation Grafton & Associates PC	4300744857 SA-2022-38	-	32,732 10,160
66.U01 Total	N 66.001	Environmental Protection Agency Other	extension Poundation Granton & Associates PC	SA-2022-36		90,288
U.S. Department of Energy	N 81.041	State Energy Program	COP: Department of Environmental Protect ion	4300714902		34,961
			OOT . Department of Environmentary rotect for	43007 14302		
U.S. Department of Energy U.S. Department of Energy	Y 81.U01 Y 81.U01				(80,099)	11,974 (24,296)
U.S. Department of Energy 81.U01 Total	N 81.U01	U.S. Department of Energy Other	The Regents of the University of Califor nia	4550 G ZA366	(80,099)	210,883 198,561
U.S. Department of Education	N 84.002	Adult Education - Basic Grants to States	Commonwealth of Pennsylvania Pennsylvania Department of Education	099-22-0002	15,015	15,155
U.S. Department of Education	N 84.002	Adult Education - Basic Grants to States	Commonwealth of Pennsylvania Pennsylvania Department of Education	099-22-0005		(3)
U.S. Department of Education	N 84.002		Commonwealth of Pennsylvania Pennsylvania Department of Education	099-22-0007	5,928	5,933
U.S. Department of Education U.S. Department of Education	N 84.002 N 84.002		Commonwealth of Pennsylvania Pennsylvania Department of Education Commonwealth of Pennsylvania Pennsylvania Department of Education	FA-064-23-0025 FA-099-23-0002	-	489,310 150,869
U.S. Department of Education	N 84.002		Commonwealth of Pennsylvania Pennsylvania Department of Education	FA-099-23-0002		263.155
U.S. Department of Education	N 84.002		Commonwealth of Pennsylvania Pennsylvania Department of Education	FA-099-23-0007		56,458
84.002 Total					20,943	980,877
U.S. Department of Education	N 84.031	Higher Education Institutional Aid	UNIVERSITY OF ARIZONA	596336		10,166
U.S. Department of Education	N 84.048	Career and Technical Education Basic Grants to States	Commonwealth of Pennsylvania Pennsylvania Department of Education	FA-119-23-0001		176,190
U.S. Department of Education	Y 84.103	TRIO Staff Training Program				63,691
U.S. Department of Education	N 84.126	Rehabilitation Services Vocational Rehabilitation Grants to States	COP: Office of Vocational Rehabilitation	4300772740	_	34.561
U.S. Department of Education	N 84.126	Rehabilitation Services Vocational Rehabilitation Grants to States	COP: Office of Vocational Rehabilitation	4300773751	-	63,509
U.S. Department of Education	N 84.126	Rehabilitation Services Vocational Rehabilitation Grants to States	COP: Office of Vocational Rehabilitation	COP - OVR		1,913,443
84.126 Total						2,011,513
U.S. Department of Education	Y 84.129	Rehabilitation Long-Term Training				48,276
U.S. Department of Education	N 84.295	Ready-To-Learn Television	Corporation for Public Broadcasting	35357-EDU		10,000
U.S. Department of Education	Y 84.325				-	611,942
U.S. Department of Education 84.325 Total	N 84.325	Special Education - Personnel Development to Improve Services and Results for Ch	Michigan State University	RC114207 - PSU		46,180 658,122
U.S. Department of Education	Y 84.335					204,389
U.S. Department of Education	Y 84.365				41,022	47,921
U.S. Department of Education	N 84.367	Supporting Effective Instruction State Grants	Commonwealth of Pennsylvania Pennsylvania Department of Education	524-23-0005		4,284
U.S. Department of Education	N 84.425		Pennsylvania Academic Library Consortium Inc.	GRANT 51	-	3,777
U.S. Department of Education 84.425 Total	N 84.425	U COVID-19 - Education Stabilization Fund	Stroud Water Research Center	380245-55900		4,426 8,203
110 B	N 93 070	5	COP: Department of Health	4300714241	-	2.322
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.070 N 93.070		COP: Department of Health COP: Department of Health	4300714241		2,322 42,672
93.070 Total	14 33.070	Environmentary doller realist and Enregency response	oor . Beparaner or realar	4300133233		44,994
U.S. Department of Health and Human Services	Y 93.107	Area Health Education Centers			781,954	986,863
U.S. Department of Health and Human Services	Y 93.155	Rural Health Research Centers				(1,061)
U.S. Department of Health and Human Services	N 93.236	Grants to States to Support Oral Health Workforce Activities	PA Coalition for Oral Health	214728		1,333
U.S. Department of Health and Human Services	N 93.236		PA Coalition for Oral Health	266007 AMENDMENT 1		12,500
93.236 Total						13,833
U.S. Department of Health and Human Services	Y 93.241	State Rural Hospital Flexibility Program				405,828
U.S. Department of Health and Human Services	Y 93.247	· · · · · · · · · · · · · · · · · · ·				608,440
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.262 N 93.262		Mary Imogene Bassett Hospital Mary Imogene Bassett Hospital	56U54OH007542-21PS5 U54OH007542-22PS1	:	2,172 20,590
93.262 Total	11 55.252	Cocapational Cartoy and Floranti Fogram	mary integerio decede i respitali	001011001012 221 01		22,762
U.S. Department of Health and Human Services	N 93.318	Protecting and Improving Health Globally: Building and Strengthening Public Heal	National Association of County & City He alth Officials	(2021-051301) 2021-060302		53,527
U.S. Department of Health and Human Services	N 93.323	COVID-19 - Epidemiology and Laboratory Capacity for Infectious Diseases (ELC)	COP: Department of Health	4100090875		3,613,003
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.391 N 93.391	COVID-19 - Activities to Support State, Tribal, Local and Territorial (STLT) Health Departm COVID-19 - Activities to Support State, Tribal, Local and Territorial (STLT) Health Departm	COP: Department of Health COP: Department of Health	4100090128 4100090744	972,163	3,159,042 1,292,520
93.391 Total	IN 33.391	OOVID-10 - AMINIMO TO SUPPORT STATE, THOU, EUGALAND TETHIORIAI (STET) FREARIN DEPARTIN	COL : Doparation of Fredrich	T-100030744	972,163	4,451,562
U.S. Department of Health and Human Services	N 93.563	Child Support Enforcement	COP: Department of Human Services Room 832 Health and Welfare Building	4000024443		3,010,070
U.S. Department of Health and Human Services	N 93.788		COP: Commission on Crime and Delinquency	2022-OG-OM039136	-	191,994
U.S. Department of Health and Human Services U.S. Department of Health and Human Services	N 93.788 N 93.788		COP: Commission on Crime and Delinquency COP: Commission on Crime and Delinquency	33795 35680	-	123,774 11.585
0.5. Department of Health and Human Services 93.788 Total	14 93.788	Ορισία στι τ	COL. COMMISSION ON CHINE and Demiquency	33000		327,353
00.700 10101						021,000

THE PENNSYLVANIA STATE UNIVERSITY SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Direct					Subrecipient	
Federal Agency	Award	ALN	Federal Program Name	Pass-Through Entity	Pass-Through Entity Identifying Number	Expenditures	Expenditures
U.S. Department of Health and Human Services	Υ	93.913	Grants to States for Operation of State Offices of Rural Health				231,051
U.S. Department of Health and Human Services	N	93.959	Block Grants for Prevention and Treatment of Substance Abuse	COP: Commission on Crime and Delinquency	0	-	75,000
U.S. Department of Health and Human Services	N	93.959	COVID-19 - Block Grants for Prevention and Treatment of Substance Abuse	COP: Commission on Crime and Delinquency	2022-DZ-01-37645	-	146,569
U.S. Department of Health and Human Services		93.959	Block Grants for Prevention and Treatment of Substance Abuse	COP: Commission on Crime and Delinquency	33795		201,852
U.S. Department of Health and Human Services	N	93.959	Block Grants for Prevention and Treatment of Substance Abuse	COP: Commission on Crime and Delinquency	37644		122,549
U.S. Department of Health and Human Services 93.959 Total	N	93.959	Block Grants for Prevention and Treatment of Substance Abuse	COP: Department of Drug and Alcohol Prog ram	4300703336		47,224 593,194
U.S. Department of Health and Human Services	Υ	93.969	PPHF Geriatric Education Centers			267,945	698,911
U.S. Department of Health and Human Services 93.969 Total	N	93.969	PPHF Geriatric Education Centers	Virginia Commonwealth University	FP00009788_SA008	267,945	89,543 788,454
U.S. Department of Health and Human Services U.S. Department of Health and Human Services 93.991 Total		93.991 93.991	Preventive Health and Health Services Block Grant Preventive Health and Health Services Block Grant	Borough of Susquehanna Depot PA Coalition for Oral Health	223809 261716	-	4,626 2,500 7,126
U.S. Department of Health and Human Services	N	93.U01	U.S. Department of Health and Human Services Other	The Pennsylvania Coalition Against Domes tic Violence	255484		85,821
U.S. Department of Homeland Security Other Federal Programs Total	N	97.036	Disaster Grants - Public Assistance	COP: Emergency Management Agency	COP - PEMA	2,795,203	1,289,731 60,223,430
Total Federal Expenditures						\$ 102,754,076	\$ 1,430,940,183

THE PENNSYLVANIA STATE UNIVERSITY NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS FOR THE YEAR ENDED JUNE 30, 2023

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, 2023, 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.

The University's consolidated financial statements include the operations of Penn State Health and its subsidiaries and The Pennsylvania College of Technology. The Schedule excludes those operations because they receive a separate financial statement audit and a separate Single Audit as required by Uniform Guidance.

Expenditures for federal awards are determined using the cost principles contained in Uniform Guidance. 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

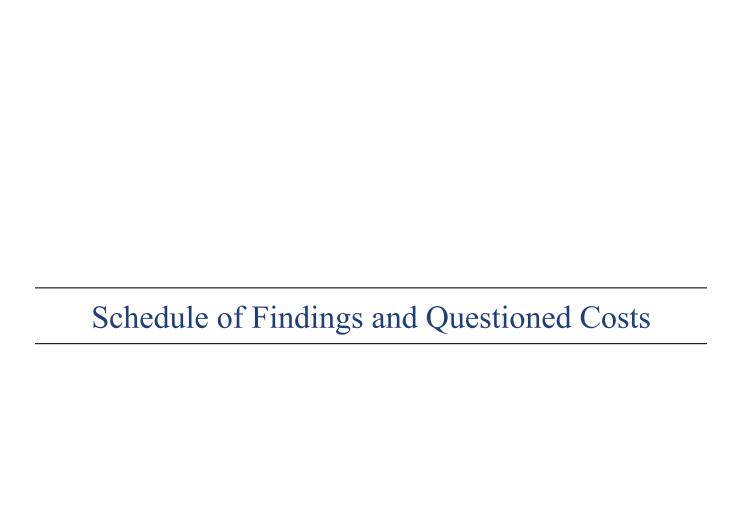
The University has not elected to use the 10% de minimis indirect cost rate.

3. FEDERAL LOAN PROGRAMS

The University administers the following federal loan program:

Title	ALN	Federal Capital Contribution for the Year Ended June 30, 2023	Loan Expenditures And Disbursements	Outstanding Balance at June 30, 2023
Federal Perkins Loan Program	84.038	\$ -	\$ -	\$ 14,249,790

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.



Schedule of Findings and Questioned Costs

Year Ended June 30, 2023

Section I - Summary of Auditor's Results

Financial Statemen	ts					
Type of auditor's report issued:			Unmodified			
Internal control over financial reporting:						
Material weakness(es) identified?			_Yes		_ No	
 Significant deficiency(ies) identified that are not considered to be material weaknesses? 			_Yes	X	_ None reported	
Noncompliance material to financial statements noted?			_Yes	X	None reported	
Federal Awards						
Internal control over	major programs:					
 Material weaknes 	s(es) identified?	X	_Yes		_ No	
 Significant deficiency(ies) identified that are not considered to be material weaknesses? 			_Yes		_ None reported	
Type of auditor's rep	ort issued on compliance for major programs:	Unmod	ified			
Any audit findings disclosed that are required to be reported in accordance with Section 2 CFR 200.516(a)?			_Yes		_ No	
Identification of major programs:						
Assistance Listing Number	Name of Federal Pro	gram or C	luster			
84.007, 84.033, 84.038, 84.063, and 84.268 Student Financial Assistance Cluster 10.561 State Administrative Matching Grants for the Supplemental Nutrition Assistance Program Smith-Lever Special Needs COVID-19 - Coronavirus State and Local Fiscal Recovery Funds COVID-19 - Activities to Support State, Tribal, Local and Territorial (STLT) Health Departments Response to Public Health or Healthcare Crises						
Dollar threshold used to distinguish between type A and type B programs: \$4,292,821						
Auditee qualified as low-risk auditee?			Yes	X	_ No	

The Pennsylvania State University

Schedule of Findings and Questioned Costs (Continued)

Year Ended June 30, 2023

Section II - Financial Statement Audit Findings

Reference Number	Finding
2023-001	Finding Type - Material weakness
	Criteria - Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 958-605 provides guidance with respect to net asset classification, donor-imposed restrictions, and board-designated amounts.
	Condition - Certain net asset funds within net assets without donor restrictions should have been classified as net assets with donor restrictions on the statements of financial position and activities.
	Context - The University moved \$442 million from net assets without donor restrictions to net assets with donor restrictions due to review of donor documentation and other support. This change effectively restates beginning net assets by classification. Total net assets remain unchanged.
	Cause - The University's process for reporting donor gifts at the time of receipt did not consider all donor restrictions.
	Effect - Due to not considering all donor restrictions, net assets without donor restrictions were overstated and net assets with donor restrictions were understated by a material amount.
	Recommendation - The University should modify its gift receipt process to properly report all restrictions on use and purpose at time of receipt and, subsequently, upon further donor support and/or changes in reporting policy.
	Views of Responsible Officials and Planned Corrective Actions - Management agrees with this finding and proposes the following corrective actions:
	 Funds with donor restrictions are in the process of being reclassified - via adjusting journal entries - in the University's endowment accounting application and accounting enterprise resource program (SAP) to restricted fund types.
	 University policy FN15 (Endowed or Named, Annually Funded, Accounts) is currently being revised to expand upon the topic of funds functioning as endowments (i.e., quasi endowments) and explicitly address how these funds are to be defined and established via gift receipting and fund setup processes; additionally, management is currently drafting supplemental guidance in the form of a procedures document to accompany policy FN15

personnel (and also make such training required, where appropriate).

Management will develop training related to the topic of funds functioning as endowments and restricted versus unrestricted funds and make such training available to university

related to funds functioning as endowments.

Schedule of Findings and Questioned Costs (Continued)

Year Ended June 30, 2023

Section III - Federal Program Audit Findings

Reference Number	Finding
2023-002	Assistance Listing Number, Federal Agency, and Program Name - Student Financial Assistance Cluster - Federal Pell Grants ALN 84.063 and Direct Student Loan Program ALN 84.268
	Federal Award Identification Number and Year - Various
	Pass-through Entity - None
	Finding Type - Significant deficiency
	Repeat Finding - No
	Criteria - Changes in a student's status are required to be reported timely and accurately to the National Student Loan Data System (NSLDS) within 30 days of the change or included in a student status confirmation report sent to NSLDS within 60 days of a status change (Pell, 34 CFR Section 690.83(b)(2); Direct Loan, 34 CFR Section 685.309(b)).
	Condition - The University did not report certain students' status changes timely to NSLDS.
	Questioned Costs - None
	Identification of How Questioned Costs Were Computed - N/A
	Context - Of the 40 students tested, the University did not report status changes timely to NSLDS for six students who withdrew, ceasing to be enrolled on at least a half-time basis. For all six students, accurate status changes were reported within 75 days of the effective date.
	Cause and Effect - The University did not have a control in place to ensure that the reporting of status changes to a third-party service provider, National Student Clearinghouse (NSC), was effectively designed to ensure that reporting from NSC to NSLDS complied with the 60-day requirement. As a result, certain student changes were not reported to NSLDS within the required time frame.
	Recommendation - The University should implement controls to ensure all student status changes are reported timely to NSLDS.
	Views of Responsible Officials and Corrective Action Plan - Management agrees with the finding. The University has implemented a change in the reporting timeline to ensure that there is adequate time between reporting to NSC and its reporting to NSLDS. In addition, the University will monitor reporting of status changes to NSLDS.
Reference	
Number	Finding
2023-003	Assistance Listing Number, Federal Agency, and Program Name - Student Financial Assistance Cluster - Federal Pell Grants ALN 84.063 and Direct Student Loan Program ALN 84.268
	Federal Award Identification Number and Year - Various
	Pass-through Entity - None
	Finding Type - Material weakness and material noncompliance with laws and regulations

Schedule of Findings and Questioned Costs (Continued)

Year Ended June 30, 2023

Section III - Federal Program Audit Findings (Continued)

Reference Number	Finding
2023-003 (Continued)	Repeat Finding - No
	Criteria - The University has 45 days from the date the college determines a student's withdrawal date to calculate a return of Title IV funds for the student and return the funds. Withdrawal dates are defined as the time when the student officially withdrawals or expresses notification to withdrawal or, if the student does not officially withdraw, the date the University determines the student is no longer in attendance (34 CFR Section 668.22(j)(1)).

Condition - The University did not return all Title IV funds in a timely manner due to a lack of communication and review.

Questioned Costs - \$485,231

Identification of How Questioned Costs Were Computed - The University identified all returns that should have been calculated during the fiscal year and performed the calculation for amounts not returned.

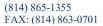
Context - Of the 60 students tested, for 6 students, the University did not calculate the required return in a timely manner and did not return funds to the Department of Education within the required time frame. All Title IV funds that were required to be returned were returned as of December 14, 2023.

Cause and Effect - The University did not have adequate controls to communicate, calculate, and review all returns in accordance with the regulations, which resulted in late returns.

Recommendation - We recommend implementing a control to ensure that all Title IV funds are returned within the required time frame.

Views of Responsible Officials and Planned Corrective Actions - Management has implemented the following corrective actions:

- Beginning with the spring 2024 semester, an internal peer review process was implemented
 to verify that Title IV funds are returned within the required time frame. This involves
 segregation of duties between the completion of each of the following: (1) official and
 unofficial withdrawal review, (2) verification of this review, and (3) return of the Title IV
 funding.
- Beginning in February 2024, the process team leader within the Office of Student Aid is
 monitoring system reports on a periodic basis (weekly for official withdrawals and within 45
 days of date of determination for unofficial withdrawals) to ensure procedures are being
 followed.
- Beginning in February 2024 for the fall 2024 semester, quality control reviews are being conducted by the Office of Student Aid's Compliance and Training Team in which withdrawn students are sampled to monitor compliance. These reviews will be conducted at the end of each semester going forward.
- Management will update its Return to Title IV (R2T4) procedures to reflect these additional
 controls. Additionally, job aids related to R2T4 have been reviewed and updated where
 appropriate, and ongoing training has been occurring with the R2T4 specialists.





The Pennsylvania State University 308 Old Main University Park, PA 16802-1505

The Pennsylvania State University Summary Schedule of Prior Audit Findings June 30, 2023

Prior Year Finding Number:

2022-001

Fiscal Year in Which the Finding Initially Occurred:

2022

Finding Type:

Financial statement finding

Original Finding Description:

The University does not have effectively designed and implemented internal controls over financial reporting relating to accounting and reporting for contributions with and without donor-imposed restricted, and Board designated amounts.

Status/Partial Corrective Action (as applicable):

In the process of completing the corrective action plan associated with this finding, additional reclassifications were identified, ultimately leading to the issuance of finding 2023-001. The correction action plan associated with finding 2023-001 has replaced the original corrective action plan for this finding, and will be completed by 6/30/24.

Planned Corrective Action:

See corrective action plan associated with finding 2023-001

Prior Year Finding Number:

2022-002

Fiscal Year in Which the Finding Initially Occurred:

2022

Federal Program, Assistance Listing Number and Name:

84.425F; Education Stabilization Fund

Original Finding Description:

The University received Higher Education Emergency Relief Fund (HEERF) III (a)(1) funding from the U.S. Department of Education. The University submitted Quarterly Budget and Expenditure Reporting for HEERF III(a)(1) Institutional Portion, (a)(2) and (a)(3) on a quarterly basis. However, it was noted that one (1) report for the Quarter ending June 30, 2021, due on July 10, 2021, was submitted on August 16, 2021.

Status/Partial Corrective Action (as applicable):

Fully corrected

Planned Corrective Action:

N/A

Prior Year Finding Number:

2022-003

Fiscal Year in Which the Finding Initially Occurred:

2022

Federal Program, Assistance Listing Number and Name:

93.155; Rural Health Research Centers

Original Finding Description:

The University provided subawards to various Hospitals during the fiscal year ended June 30, 2022. The Federal Funding Accountability and Transparency Act reporting submission by the University was not within the time frame as required by Health Resources and Services Administration.

Status/Partial Corrective Action (as applicable):

Fully corrected

Planned Corrective Action:

N/A



The Pennsylvania State University 308 Old Main University Park, PA 16802-1505

The Pennsylvania State University Corrective Action Plan June 30, 2023

Finding Number: 2023-001

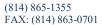
Condition: Certain net asset funds within net assets without donor restrictions should have been classified as net assets with donor restrictions on the statements of financial position and statement of activities.

Planned Corrective Action: Management proposes the following corrective actions:

- Funds with donor restrictions are in the process of being reclassified via adjusting journal entries - in the University's endowment accounting application and accounting enterprise resource program (SAP) to restricted fund types.
- University policy FN15 (Endowed or Named, Annually Funded, Accounts) is currently being
 revised to expand upon the topic of funds functioning as endowments (i.e., quasi endowments)
 and explicitly address how these funds are to be defined and established via gift receipting and
 fund setup processes; additionally, management is currently drafting supplemental guidance in
 the form of a procedures document to accompany policy FN15 related to funds functioning as
 endowments.
- Management will develop training related to the topic of funds functioning as endowments and restricted versus unrestricted funds and make such training available to university personnel (and also make such training required, where appropriate).

Contact person responsible for corrective action: Virginia A. Teachey, Associate Vice President for Budget and Finance

Anticipated Completion Date: 06/30/2024





The Pennsylvania State University 308 Old Main University Park, PA 16802-1505

The Pennsylvania State University Corrective Action Plan June 30, 2023

Finding Number: 2023-002

Condition: The University did not report certain students' status changes timely to the National Student

Loan Data System (NSLDS).

Planned Corrective Action: Management has implemented a change in the reporting timeline to ensure that there is adequate time between reporting to National Student Clearinghouse and their reporting to NSLDS. In addition, University management will monitor reporting of status changes to NSLDS.

Contact person responsible for corrective action: Robert Kubat, Assistant Vice President of Enrollment Management and University Registrar

Anticipated Completion Date: 06/30/2024



The Pennsylvania State University 308 Old Main University Park, PA 16802-1505

The Pennsylvania State University Corrective Action Plan June 30, 2023

Finding Number: 2023-003

Condition: The University did not return all Title IV funds in a timely manner due to a lack of

communication and review.

Planned Corrective Action: Management has implemented the following corrective actions:

- Beginning with the spring 2024 semester, an internal peer review process was implemented to
 verify that Title IV funds are returned within the required timeframe. This involves segregation of
 duties between the completion of each of the following: 1) official and unofficial withdrawal
 review, 2) verification of this review, and 3) return of the Title IV funding.
- Beginning in February 2024, the process team leader within the Office of Student Aid is
 monitoring system reports on a periodic basis (weekly for official withdrawals, within 45 days of
 date of determination for unofficial withdrawals) to ensure procedures are being followed.
- Beginning in February 2024 for the fall 2023 semester, quality control reviews are being conducted by the Office of Student Aid's Compliance and Training Team in which withdrawn students are sampled to monitor compliance. These reviews will be conducted at the end of each semester going forward.
- Management will update its Return to Title IV ("R2T4") procedures to reflect these additional
 controls. Additionally, job aids related to R2T4 have been reviewed and updated where
 appropriate and ongoing training has been occurring with the R2T4 specialists.

Contact person responsible for corrective action: Melissa J. Kunes, Assistant Vice President for Enrollment Management and Executive Director for Student Aid

Anticipated Completion Date: 03/31/2024