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

**The Pennsylvania State University
Fiscal Year Ended June 30, 2016**

University Park, Pennsylvania

THE PENNSYLVANIA STATE UNIVERSITY
REPORTS ON THE AUDIT OF
FEDERAL AWARDS
IN ACCORDANCE WITH OMB UNIFORM GUIDANCE
FISCAL YEAR ENDED JUNE 30, 2016

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

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

March 22, 2017

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

To Whom It May Concern:

The Pennsylvania State University's financial, internal control and compliance reports for the fiscal year ended June 30, 2016 are presented on the accompanying pages. The reports have been issued in accordance with the Office of Management and Budget (OMB) Title 2 U.S. Code of Federal Regulations (CFR) Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*. Also enclosed is The Pennsylvania State University's schedule of findings and questioned costs.

Sincerely,

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

JJD/kjm

Enclosures

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Audited Financial Statements

The Pennsylvania State University
Fiscal Year Ended June 30, 2016



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INDEPENDENT AUDITORS' REPORT

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

We have audited the accompanying consolidated financial statements of The Pennsylvania State University and its subsidiaries (the "University"), which comprise the consolidated statements of financial position as of June 30, 2016 and 2015, and the related consolidated statements of activities and cash flows for the years then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

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

Auditors' Responsibility

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

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

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

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the University as of June 30, 2016 and 2015, and the changes in its net assets and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Reporting Required by *Government Auditing Standards*

In accordance with Government Auditing Standards, we have also issued our report dated October 21, 2016 on our consideration of the University's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is 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 internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with the Government Auditing Standards in considering the University's internal control over financial reporting and compliance.

Deloitte & Touche LLP

October 21, 2016

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
ASSETS
JUNE 30, 2016 AND 2015
(in thousands)

	<u>June 30, 2016</u>	<u>June 30, 2015</u>
Current assets:		
Cash and cash equivalents	\$ 1,395,514	\$ 859,009
Short-term investments	371,363	383,756
Deposits held by bond trustees	109,739	61,262
Deposits held for others	10,240	9,622
Accounts receivable, net of allowances of \$83,942 and \$72,190	496,100	554,309
Contributions receivable, net	54,565	56,058
Loans to students, net of allowances of \$419 and \$481	9,304	6,105
Inventories	42,472	36,745
Prepaid expenses and other assets	<u>110,995</u>	<u>194,395</u>
Total current assets	<u>2,600,292</u>	<u>2,161,261</u>
Noncurrent assets:		
Deposits held by bond trustees	21,348	448
Contributions receivable, net	124,988	134,924
Loans to students, net of allowances of \$2,107 and \$2,675	51,602	55,038
Total investment in plant, net	4,590,311	4,188,312
Beneficial interest in perpetual trusts	14,558	15,471
Investments	5,279,950	5,684,125
Other assets	<u>97,932</u>	<u>74,807</u>
Total noncurrent assets	<u>10,180,689</u>	<u>10,153,125</u>
Total assets	<u><u>\$12,780,981</u></u>	<u><u>\$12,314,386</u></u>

See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
LIABILITIES AND NET ASSETS
JUNE 30, 2016 AND 2015
(in thousands)

	<u>June 30, 2016</u>	<u>June 30, 2015</u>
Current liabilities:		
Accounts payable and other accrued expenses	\$ 596,027	\$ 619,502
Deferred revenue	314,682	285,880
Long-term debt	40,729	37,071
Present value of annuities payable	6,361	5,594
Accrued postretirement benefits	<u>52,665</u>	<u>53,857</u>
Total current liabilities	<u>1,010,464</u>	<u>1,001,904</u>
Noncurrent liabilities:		
Deposits held in custody for others	35,710	32,422
Deferred revenue	1,477	1,939
Long-term debt	1,130,547	978,971
Present value of annuities payable	47,498	43,127
Accrued postretirement benefits	2,095,857	2,037,229
Refundable United States Government student loans	47,687	47,105
Other liabilities	<u>204,797</u>	<u>198,191</u>
Total noncurrent liabilities	<u>3,563,573</u>	<u>3,338,984</u>
Total liabilities	<u>4,574,037</u>	<u>4,340,888</u>
Net assets:		
Unrestricted -		
Undesignated	1,658	1,605
Designated for specific purposes	3,144,389	3,142,477
Net investment in plant	<u>2,987,299</u>	<u>2,733,135</u>
Total unrestricted - The Pennsylvania State University	<u>6,133,346</u>	<u>5,877,217</u>
Noncontrolling interest	<u>3,687</u>	<u>1,560</u>
Total unrestricted	6,137,033	5,878,777
Temporarily restricted	551,073	660,614
Permanently restricted	<u>1,518,838</u>	<u>1,434,107</u>
Total net assets	<u>8,206,944</u>	<u>7,973,498</u>
Total liabilities and net assets	<u>\$12,780,981</u>	<u>\$12,314,386</u>

See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENT OF ACTIVITIES
FOR THE YEAR ENDED JUNE 30, 2016
(in thousands)

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Operating revenues and other support:				
Tuition and fees, net of discounts of \$178,312	\$ 1,727,826	\$ -	\$ -	\$ 1,727,826
Commonwealth of Pennsylvania -				
Appropriations	294,949	-	-	294,949
Special contracts	74,239	-	-	74,239
Department of General Services projects	41,406	-	-	41,406
United States Government grants and contracts	480,463	-	-	480,463
Private grants and contracts	169,980	-	-	169,980
Gifts and pledges	66,824	11,507	-	78,331
Endowment spending	95,439	-	-	95,439
Other investment income	85,336	1,937	-	87,273
Sales and services of educational activities	76,051	-	-	76,051
Recovery of indirect costs	163,302	-	-	163,302
Auxiliary enterprises	445,562	-	-	445,562
Health System revenue	1,996,546	-	-	1,996,546
Other sources	33,442	-	-	33,442
Net assets released from restrictions	12,220	(12,220)	-	-
Total operating revenues and other support	5,763,585	1,224	-	5,764,809
Operating expenses:				
Educational and general -				
Instruction	1,326,628	-	-	1,326,628
Research	799,237	-	-	799,237
Public service	87,440	-	-	87,440
Academic support	405,207	-	-	405,207
Student services	193,891	-	-	193,891
Institutional support	371,203	-	-	371,203
Total educational and general	3,183,606	-	-	3,183,606
Auxiliary enterprises	416,600	-	-	416,600
Health System expense	1,843,196	-	-	1,843,196
Total operating expenses	5,443,402	-	-	5,443,402
Increase in net assets from operating activities	320,183	1,224	-	321,407
Nonoperating activities:				
Gifts and pledges	-	-	75,317	75,317
Current year investment returns	(25,789)	(114,512)	10,020	(130,281)
Endowment appreciation utilized	(69,619)	-	-	(69,619)
Changes in funds held by others in perpetuity	-	3	(931)	(928)
Acquisition of restricted net assets	-	4,730	10,862	15,592
Write-offs and disposals of assets	(10,287)	-	-	(10,287)
Nonperiodic change in postretirement benefit plan	41,641	-	-	41,641
Actuarial adjustment on annuities payable	-	(986)	(10,537)	(11,523)
Increase (decrease) in net assets from nonoperating activities	(64,054)	(110,765)	84,731	(90,088)
Increase (decrease) in net assets - The Pennsylvania State University	256,129	(109,541)	84,731	231,319
Noncontrolling interest:				
Excess of revenues over expenses	2,127	-	-	2,127
Increase in net assets - noncontrolling interest	2,127	-	-	2,127
Increase (decrease) in total net assets	258,256	(109,541)	84,731	233,446
Net assets at the beginning of the year	5,878,777	660,614	1,434,107	7,973,498
Net assets at the end of the year	\$ 6,137,033	\$ 551,073	\$ 1,518,838	\$ 8,206,944

See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENT OF ACTIVITIES
FOR THE YEAR ENDED JUNE 30, 2015
(in thousands)

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Operating revenues and other support:				
Tuition and fees, net of discounts of \$168,455	\$ 1,696,729	\$ -	\$ -	\$ 1,696,729
Commonwealth of Pennsylvania -				
Appropriations	277,931	-	-	277,931
Special contracts	64,221	-	-	64,221
Department of General Services projects	57,631	-	-	57,631
United States Government grants and contracts	462,089	-	-	462,089
Private grants and contracts	178,258	-	-	178,258
Gifts and pledges	86,017	158	-	86,175
Endowment spending	83,958	-	-	83,958
Other investment income	114,259	1,869	-	116,128
Sales and services of educational activities	70,970	-	-	70,970
Recovery of indirect costs	149,338	-	-	149,338
Auxiliary enterprises	427,782	-	-	427,782
Health System revenue	1,596,230	-	-	1,596,230
Other sources	25,960	-	-	25,960
Net assets released from restrictions	4,355	(4,355)	-	-
Total operating revenues and other support	5,295,728	(2,328)	-	5,293,400
Operating expenses:				
Educational and general -				
Instruction	1,272,778	-	-	1,272,778
Research	765,864	-	-	765,864
Public service	77,806	-	-	77,806
Academic support	357,962	-	-	357,962
Student services	182,957	-	-	182,957
Institutional support	369,967	-	-	369,967
Total educational and general	3,027,334	-	-	3,027,334
Auxiliary enterprises	380,711	-	-	380,711
Health System expense	1,494,296	-	-	1,494,296
Total operating expenses	4,902,341	-	-	4,902,341
Increase (decrease) in net assets from operating activities	393,387	(2,328)	-	391,059
Nonoperating activities:				
Gifts and pledges	-	-	92,396	92,396
Current year investment returns	(8,892)	(29,299)	11,680	(26,511)
Endowment appreciation utilized	(57,445)	-	-	(57,445)
Changes in funds held by others in perpetuity	-	207	(107)	100
Write-offs and disposals of assets	(5,645)	-	-	(5,645)
Nonperiodic change in postretirement benefit plan	(101,391)	-	-	(101,391)
Actuarial adjustment on annuities payable	-	(2,206)	(983)	(3,189)
Increase (decrease) in net assets from nonoperating activities	(173,373)	(31,298)	102,986	(101,685)
Increase (decrease) in net assets - The Pennsylvania State University	220,014	(33,626)	102,986	289,374
Noncontrolling interest:				
Excess of revenues over expenses	599	-	-	599
Increase in net assets - noncontrolling interest	599	-	-	599
Increase (decrease) in total net assets	220,613	(33,626)	102,986	289,973
Net assets at the beginning of the year	5,658,164	694,240	1,331,121	7,683,525
Net assets at the end of the year	\$ 5,878,777	\$ 660,614	\$ 1,434,107	\$ 7,973,498

See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED JUNE 30, 2016 AND 2015
(in thousands)

	<u>June 30, 2016</u>	<u>June 30, 2015</u>
Cash flows from operating activities:		
Increase in net assets	\$ 233,446	\$ 289,973
Adjustments to reconcile change in net assets to net cash provided by operating activities -		
Actuarial adjustment on annuities payable	11,523	3,282
Contributions restricted for long-term investment	(100,877)	(117,825)
Interest and dividends restricted for long-term investment	(75,605)	(25,819)
Net realized and unrealized losses (gains) on long-term investments	83,251	(22,856)
Depreciation expense	331,193	295,734
Amortization expense	(371)	(119)
Loss (gain) on early extinguishment of debt	6,405	(1,722)
Write-offs and disposals of assets	11,043	5,203
Contributions of land, buildings and equipment	(3,946)	(2,528)
Buildings and equipment provided by Pennsylvania Department of General Services	(95)	-
Contribution to government student loan funds	154	154
Provision for bad debts	68,655	53,341
(Increase) decrease in deposits held for others	(618)	47,392
Increase in receivables	(35,868)	(32,552)
Increase in inventories	(1,317)	(1,412)
Increase in prepaid expenses and other assets	(44,735)	(143,214)
Increase (decrease) in accounts payable and other accrued expenses	39,572	(10,894)
Increase in deferred revenue	25,390	15,511
Increase in accrued postretirement benefits	57,436	190,680
Net cash provided by operating activities	<u>604,636</u>	<u>542,329</u>
Cash flows from investing activities:		
Purchase of land, buildings and equipment	(597,267)	(520,425)
Increase in deposits held by bond trustees	(69,377)	(59,159)
Advances on student loans	(10,766)	(10,723)
Collections on student loans	10,618	9,562
Proceeds from sale of donated financial assets	522	504
Purchase of investments	(4,475,766)	(11,679,210)
Proceeds from sale of investments	4,789,221	11,373,167
Net cash used in investing activities	<u>(352,815)</u>	<u>(886,284)</u>
Cash flows from financing activities:		
Contributions restricted for long-term investment	100,877	117,825
Interest and dividends restricted for long-term investment	75,605	25,819
Payments of annuity obligations	(6,385)	(5,711)
Proceeds from long-term debt	437,193	230,883
Bond issuance costs	-	(201)
Principal payments on long-term debt	(323,335)	(194,617)
Proceeds related to government student loan funds, net of collection costs	729	437
Net cash provided by financing activities	<u>284,684</u>	<u>174,435</u>
Net increase (decrease) in cash and cash equivalents	536,505	(169,520)
Cash and cash equivalents at the beginning of the year	<u>859,009</u>	<u>1,028,529</u>
Cash and cash equivalents at the end of the year	<u>\$ 1,395,514</u>	<u>\$ 859,009</u>
Supplemental disclosures of cash flow information (Note 2)		

See notes to consolidated financial statements.

THE PENNSYLVANIA STATE UNIVERSITY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2016 AND 2015

1. THE UNIVERSITY AND RELATED ENTITIES

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

Basis of Presentation

The financial statements of the University include, on a consolidated basis, the consolidated and combined financial statements of Penn State Health (“the Health System”), a Pennsylvania non-profit corporation, and its wholly owned subsidiaries, including the Milton S. Hershey Medical Center (“TMSHMC” or “the Medical Center”), Saint Joseph’s Regional Health Network and Medical Group (“SJRHN/SJMG”), and Nittany Health, Inc. (“Nittany Health”) (formerly Penn State Hershey Health System, Inc.), and The Corporation for Penn State and its subsidiaries (“the Corporation”). See Note 11 for additional information about the Health System. 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 between 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 permanently restricted, temporarily restricted or unrestricted.

Permanently restricted net assets consist primarily of the historical amounts of endowed gifts. Additionally, contributions receivable and remainder interests, which are required by donors to be permanently retained, are included at their estimated net present values.

Temporarily restricted net assets consist of contributions receivable and remainder interests whose ultimate use is not permanently restricted. In addition, the excess of current market value over the historical cost of permanently restricted endowments is classified as temporarily restricted net assets.

Unrestricted net assets are all the remaining net assets of the University. Net unrealized losses on permanently restricted endowment funds for which historical cost exceeds market value are recorded as a reduction to unrestricted net assets.

Revenue from temporarily restricted sources is reclassified as unrestricted revenue when the circumstances of the restriction have been fulfilled. Donor-restricted revenues whose restrictions are met within the same fiscal year are reported as unrestricted income.

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 contingencies and commitments. Actual results could differ from those estimates.

Revenue Recognition

Tuition revenue is recognized in the fiscal year in which the substantial portion of the educational term occurs. Institutional financial aid provided by the University for tuition and fees is reflected as a reduction of tuition and fee revenue. Revenues for auxiliary enterprises are recognized as the related goods and services are delivered and rendered. Grant revenues are recognized as the eligible grant activities are conducted. Payments received in advance for tuition, goods and services are deferred.

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 with the revenue assigned to the appropriate category of restriction. The amounts are present valued based on timing of expected collections.

The Health System has agreements with third-party payors that provide for payments to its subsidiaries at amounts different from their established rates. Payment arrangements include prospectively determined rates per discharge, reimbursed costs, discounted charges and per diem payments. Net patient service revenue is reported at the estimated net realizable amounts from patients, third-party payors and others for services rendered, including estimated retroactive adjustments under reimbursement agreements with third-party payors. In addition, net patient service revenue is net of provision for bad debts of \$62.4 million and \$46.6 million for the years ended June 30, 2016 and 2015, respectively. Retroactive adjustments are accrued on an estimated basis in the period the related services are rendered and adjusted in future periods as final settlements are determined or such estimates change.

The subsidiaries of the Health System provide care to patients who meet certain criteria under its charity care policy without charge or at amounts less than established rates. The Health System does not pursue collection of amounts determined to qualify as charity care; they are not reported as net patient service revenue. The amounts of direct and indirect costs for services and supplies furnished under the Health System's charity care policy totaled approximately \$17.7 million and \$20.8 million for the years ended June 30, 2016 and 2015, respectively, and is based on a ratio of the Health System's operational costs to its gross charges. The amount of charges foregone for services and supplies furnished under the Health System's charity policy during 2016 and 2015 totaled approximately \$53.0 million and \$61.1 million, respectively.

Fair Value of Financial Instruments

The University has provided fair value estimates for certain financial instruments in the notes to the financial statements. Fair value information presented in the financial statements is based on information available at June 30, 2016 and 2015. 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, 2016 and 2015 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 3. The fair value of the University's bonds payable is disclosed in Note 7. See Note 5 for further discussion of fair value measurements.

Cash Flows

The following items are included as supplemental disclosure to the statements of cash flows for the years ended June 30:

<i>(in thousands of dollars)</i>	<u>2016</u>	<u>2015</u>
Interest paid	\$ 43,039	\$ 46,208
Non-cash acquisitions of land, buildings and equipment	131,778	7,437

Capitalized costs accrued related to construction are \$80.8 million and \$60.2 million as of June 30, 2016 and 2015, respectively. Taxes paid for 2016 and 2015 are considered immaterial. Cash and cash equivalents include certain investments in highly liquid instruments with initial maturities of 90 days or less, except for such assets held by the University's investment managers as part of their long-term investment strategies. Short-term investments include other current investments held for general operating purposes with maturities greater than 3 months but less than 12 months.

During the year ended June 30, 2016, the Health System finalized the \$113.5 million acquisition of SJRHN/SJMG, recorded in prepaid expenses and other assets at June 30, 2015. Of the \$113.5 million, \$104.4 million relates to property, plant and equipment and is included in 2016 non-cash acquisitions of land, buildings and equipment in the table above. See further discussion related to the acquisition in Note 11.

Accounts Receivable

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

<i>(in thousands of dollars)</i>	<u>2016</u>	<u>2015</u>
Grants and contracts, net of allowance of \$1,211 and \$1,211	\$ 173,067	\$ 167,170
Patient accounts receivable, net of allowance of \$68,743 and \$58,212	226,381	222,476
Student receivables, net of allowance of \$7,930 and \$7,287	27,183	33,694
Investment and interest receivable	12,665	81,814
Other, net of allowance of \$6,058 and \$5,480	56,804	49,155
Total accounts receivable, net	<u>\$ 496,100</u>	<u>\$ 554,309</u>

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

Related to patient accounts receivable associated with services provided to patients who have third-party coverage, management analyzes contractually due amounts and provides an allowance for doubtful accounts (for example, for expected uncollectible deductibles and copayments or for payors who are known to be having financial difficulties that make the realization of amounts due unlikely). For receivables from self-pay patients, the subsidiaries of the Health System record a provision for bad debts in the period of service on the basis of past experience, which indicates that many patients are unable or unwilling to pay the portion of their bill for which they are financially responsible. In estimating the allowance for doubtful accounts, account age is taken into consideration. The difference between the standard rates (or the discounted rates if negotiated) and the amounts actually collected after all reasonable collection efforts have been exhausted is charged off against the allowance for doubtful accounts.

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 have a grace period until repayment is required based upon the earlier of graduation or no longer achieving at least half-time enrollment status. The grace period varies depending on the type of loan. Loans accrue interest after the grace period and are repaid directly to the University. Loans to students are uncollateralized and carry default risk. At June 30, 2016 and 2015, student loans represent 0.5% of total assets.

The availability of funds for loans under federal government revolving loan programs is dependent on reimbursements to the pool from repayments of outstanding loans. Funds advanced by the federal government of \$47.7 million and \$47.1 million at June 30, 2016 and 2015, respectively, are ultimately refundable to the government and are classified as liabilities in the consolidated statements of financial position. Outstanding loans cancelled under the program result in a reduction of the funds available to loan and a decrease in the liability to the federal government.

Loans to students consisted of the following at June 30:

<i>(in thousands of dollars)</i>	<u>2016</u>	<u>2015</u>
Loans to students:		
Federal government loan programs:		
Perkins loan program	\$ 44,381	\$ 44,541
Health Professions Student Loans and Loans for Disadvantaged Students	<u>49</u>	<u>91</u>
Federal government loan programs	44,430	44,632
Institutional loan programs	<u>19,002</u>	<u>19,667</u>
	63,432	64,299
Less allowance for doubtful accounts:		
Balance, beginning of year	(3,156)	(2,703)
Provision for doubtful accounts	<u>630</u>	<u>(453)</u>
Balance, end of year	<u>(2,526)</u>	<u>(3,156)</u>
Loans to students, net	<u>\$ 60,906</u>	<u>\$ 61,143</u>

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

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

	<i>(in thousands of dollars)</i>				
	<u>45 days or less</u>	<u>46-75 days</u>	<u>76-105 days</u>	<u>Over 105 days</u>	<u>Total</u>
<u>2016</u>					
Loans to students:					
Federal government loan programs	\$ 37,547	\$ 28	\$ 20	\$ 6,835	\$ 44,430
Institutional loan programs	<u>16,194</u>	<u>27</u>	<u>15</u>	<u>2,766</u>	<u>19,002</u>
Total loans to students	<u>53,741</u>	<u>55</u>	<u>35</u>	<u>9,601</u>	<u>63,432</u>
Allowance for doubtful accounts:					
Federal government loan programs					(441)
Institutional loan programs					<u>(2,085)</u>
Total allowance for doubtful accounts					<u>(2,526)</u>
Total loans to students, net					<u>\$ 60,906</u>

	<i>(in thousands of dollars)</i>				
	<u>45 days or less</u>	<u>46-75 days</u>	<u>76-105 days</u>	<u>Over 105 days</u>	<u>Total</u>
<u>2015</u>					
Loans to students:					
Federal government loan programs	\$ 38,588	\$ 34	\$ 28	\$ 5,982	\$ 44,632
Institutional loan programs	<u>17,435</u>	<u>13</u>	<u>12</u>	<u>2,207</u>	<u>19,667</u>
Total loans to students	<u>56,023</u>	<u>47</u>	<u>40</u>	<u>8,189</u>	<u>64,299</u>
Allowance for doubtful accounts:					
Federal government loan programs					(872)
Institutional loan programs					<u>(2,284)</u>
Total allowance for doubtful accounts					<u>(3,156)</u>
Total loans to students, net					<u>\$ 61,143</u>

Inventories

Inventories are stated at the lower of cost or market, generally on the first-in, first-out basis.

Investments

The University's noncurrent investments represent the University's endowment and other investments held for general operating purposes. The University's investments are reported at fair value in the accompanying financial statements. Investments in equity securities with readily determinable fair values and all investments in debt securities are reported at fair values with gains and losses included in the consolidated statements of activities. In the management of investments, the University authorizes certain investment managers to purchase derivative securities to attain a desired market position; and the University may directly invest in derivative securities to attain a desired market position. The University does not trade or issue derivative financial instruments other than through the investment management practices noted above. The University

records derivative securities at fair value with gains and losses reflected in the consolidated statements of activities.

The estimated fair value amounts for marketable debt, equity and fixed income securities held by the University have been reviewed by the University and determined using available market information as supplied by the various financial institutions that act as trustees or custodians for the University. For non-liquid holdings, generally limited partnership investments in private real estate, venture capital, private equity, natural resources, and private debt, estimated fair value is determined based upon financial information provided by the general partner. This financial information includes assumptions and methods that were reviewed by University management. The University believes that the estimated fair value is a reasonable estimate of market value as of June 30, 2016 and 2015. Because the limited partnerships are not readily marketable, the estimated value is subject to uncertainty and, therefore, may differ from the value that would have been used had a ready market existed, and such differences could be material.

Income on operating investments and income used for the annual distribution under the annual spending policy for endowments are reported in operating revenues within the consolidated statement of activities.

Beneficial Interest in Perpetual Trusts

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

Investment in Plant

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

<i>(in thousands of dollars)</i>	<u>2016</u>	<u>2015</u>
Land	\$ 133,473	\$ 126,790
Buildings	6,272,904	5,731,089
Improvements other than buildings	650,696	632,938
Equipment	<u>1,382,532</u>	<u>1,261,088</u>
Total plant	8,439,605	7,751,905
Less accumulated depreciation	<u>(3,849,294)</u>	<u>(3,563,593)</u>
Total investment in plant, net	<u>\$ 4,590,311</u>	<u>\$ 4,188,312</u>

The value of land, buildings, and equipment is recorded at cost or, if received as gifts, at fair value at date of gift. 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 \$331.2 million and \$295.7 million for the fiscal years ended June 30, 2016 and 2015, respectively. The University has certain building and equipment lease agreements in effect which are considered capital leases that are included as long-term debt in the statements of financial position. These leases have been capitalized at the lower of fair market value or net present value of the minimum lease payments. Buildings and equipment held under capital leases are amortized on a straight-line basis over the shorter of the lease terms or the estimated useful lives of the assets. The capitalized cost and accumulated depreciation of the leases at June 30, 2016 and 2015 was \$169.2 million and \$72.5 million, and \$137.5 million and \$57.7 million, respectively.

Accounts Payable and Other Accrued Expenses

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

<i>(in thousands of dollars)</i>	<u>2016</u>	<u>2015</u>
Accounts payable (non-Health System)	\$ 248,897	\$ 301,075
Health System accounts payable and other accrued expenses	268,324	230,422
Accrued payroll and other related liabilities	64,690	60,505
Accrued payment under the Endowment Act (NCAA fine)	-	12,000
Accrued bond interest	9,027	10,736
Student deposits	5,089	4,764
Total accounts payable and other accrued expenses	<u>\$ 596,027</u>	<u>\$ 619,502</u>

In January 2015, the University entered into a Settlement Agreement (the "Agreement") in a lawsuit filed by certain current and former Commonwealth officials against the National Collegiate Athletic Association (NCAA), to which the University had been added as a party. Under the Agreement, the Consent Decree dated July 23, 2012 was repealed. The University simultaneously entered into Superseding Agreement with the NCAA which stated that the Consent Decree was dissolved. The two Agreements removed the original \$60 million fine and replaced it with the University's commitment of \$60 million for activities and programs related to child abuse. Under the Agreements, the University paid \$48 million to the Commonwealth, with \$36 million paid in 2015 and another \$12 million paid in 2016. Under the Superseding Agreement, the University created a \$12 million endowment for activities and programs related to child sexual abuse. This amount is included in permanently restricted net assets at June 30, 2016 and 2015, and in permanently restricted gifts and pledges in the consolidated statement of activities for the year ended June 30, 2015.

Impairment of Long-Lived Assets

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

Asset Retirement Obligations

The University has recognized liabilities for asset retirement obligations. The University has identified asbestos abatement and the decommissioning of the Breazeale Nuclear Reactor as conditional asset retirement obligations. These obligations are reported as part of other noncurrent liabilities within the consolidated statement of financial position. The following table details the change in liabilities for the years ended June 30:

	<i>(in thousands of dollars)</i>
Balance as of June 30, 2014	\$ 66,333
Accretion expense	7,242
Liabilities settled	<u>(1,990)</u>
Balance as of June 30, 2015	71,585
Accretion expense	5,539
Liabilities settled	<u>(3,022)</u>
Balance as of June 30, 2016	<u>\$ 74,102</u>

Annuities Payable

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

Net Assets

Net assets consist of the following at June 30:

<i>(in thousands of dollars)</i>	<u>2016</u>	<u>2015</u>
Unrestricted net assets	<u>\$ 6,137,033</u>	<u>\$ 5,878,777</u>
Temporarily restricted net assets:		
Future contributions	\$ 124,003	\$ 121,654
Annuity and life income funds	21,587	26,240
Contributions for property, plant and equipment	5,876	12,187
Term endowments and accumulated endowment gains	<u>399,607</u>	<u>500,533</u>
Total temporarily restricted net assets	<u>\$ 551,073</u>	<u>\$ 660,614</u>
Permanently restricted net assets:		
Future contributions	\$ 100,641	\$ 119,822
Annuity and life income funds	37,356	25,513
Student loan funds	16,560	16,037
Perpetual trusts and other funds	22,444	22,897
Endowment funds	<u>1,341,837</u>	<u>1,249,838</u>
Total permanently restricted net assets	<u>\$ 1,518,838</u>	<u>\$ 1,434,107</u>
Total net assets	<u>\$ 8,206,944</u>	<u>\$ 7,973,498</u>

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 740 Income Taxes Topic, the University continues to evaluate tax positions and has determined there is no material impact on the University financial statements.

Recent Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update ("ASU") 2014-09, "Revenue from Contracts with Customers." This guidance clarifies the principles for recognizing revenue that (1) removes inconsistencies and weaknesses in revenue requirements, (2) provides a more robust framework for addressing revenue issues, (3) improves comparability of revenue recognition practices across entities, industries, jurisdictions, and capital markets, (4) provides more useful information to users of financial statements through improved disclosure requirements, and (5) simplifies the preparation of financial statements by reducing the number of requirements to which an entity must refer. In August 2015, the FASB issued ASU 2015-14, "Revenue from Contracts with Customers; Deferral of the Effective Date." This guidance defers the effective date of the original ASU. This guidance is now effective for the University beginning July 1, 2018. The University has not yet evaluated the impact this guidance may have on its consolidated financial statements.

In February 2015, the FASB issued ASU 2015-02, "Consolidation; Amendments to the Consolidation Analysis." This update provides enhanced guidance for entities to apply in performing consolidation analyses. This guidance is effective for the University beginning July 1, 2016 with early adoption permitted. The University has not yet evaluated the impact this guidance may have on its consolidated financial statements.

In April 2015, the FASB issued ASU 2015-03, "Interest – Imputation of Interest; Simplifying the Presentation of Debt Issuance Costs." This guidance requires entities to present debt issuance costs related to a recognized debt liability in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. Although effective beginning July 1, 2016, the University has elected to early adopt this guidance during the year ended June 30, 2016. This guidance was applied retrospectively for the year ended June 30, 2015, causing \$0.4 million to be reported as a reduction in current long-term debt (previously reported in prepaid expenses and other assets) and \$5.1 million to be

reported as a reduction in noncurrent long-term debt (previously reported as deferred bond costs, net) on the statement of financial position. In addition, the disclosures in Note 7 have been modified to conform to this new guidance. The adoption of this guidance had no impact on the University's net assets or changes in net assets as of and for the year ended June 30, 2015.

In May 2015, the FASB issued ASU 2015-07, "*Fair Value Measurements; Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)*." This guidance removes the requirement to categorize within the fair value hierarchy all investments for which fair value is measured using the net asset value per share practical expedient. In addition, this guidance removes the requirement to make certain disclosures for all investments that are eligible to be measured at fair value using the net asset value per share practical expedient. Rather, those disclosures are limited to investments for which the entity has elected to measure the fair value using that practical expedient. Although effective beginning July 1, 2016, the University has elected to early adopt this guidance during the year ended June 30, 2016. The June 30, 2015 fair value disclosures in Note 5 have been modified to conform to this new guidance.

In July 2015, the FASB issued ASU 2015-11, "*Inventory; Simplifying the Measurement of Inventory*." This guidance requires entities to measure inventory within the scope of the update at the lower of cost and net realizable value. This guidance is effective for the University beginning July 1, 2017 with early adoption permitted. The University has not yet evaluated the impact this guidance may have on its consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01, "*Financial Instruments – Overall; Recognition and Measurement of Financial Assets and Financial Liabilities*." This guidance addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. This guidance is effective for the University beginning July 1, 2018. The University has not yet evaluated the impact this guidance may have on its consolidated financial statements.

In February 2016, the FASB issues ASU 2016-02, "*Leases*." This guidance requires substantial changes to lease accounting to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The main difference between previous GAAP and this guidance is the recognition of lease assets and lease liabilities by lessees for those leases classified as operating under previous GAAP. This guidance is effective for the University beginning July 1, 2019 with early adoption permitted. The University has not yet evaluated the impact this guidance may have on its consolidated financial statements.

In August 2016, the FASB issued ASU 2016-14, "*Not-for-Profit Entities; Presentation of Financial Statements of Not-for-Profit Entities*." This guidance amends the requirements for financial statements and notes in Topic 958, Not-for-Profit Entities. The most significant amendment requires a not-for-profit entity ("NFP") to present on the face of the statement of financial position amounts for two classes of net assets at the end of the period, rather than for the currently required three classes. That is, an NFP will report amounts for *net assets with donor restrictions* and *net assets without donor restrictions*, as well as the currently required amount for total net assets. This guidance is effective for the University beginning July 1, 2018 with early adoption permitted. The University has not yet evaluated the impact this guidance may have on its consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, "*Statement of Cash Flows; Classification of Certain Cash Receipts and Cash Payments*." This update provides guidance on eight specific cash flows issues with the objective of reducing the existing diversity in practice. This guidance is effective for the University beginning July 1, 2018 with early adoption permitted. The University has not yet evaluated the impact this guidance may have on its consolidated financial statements.

3. INVESTMENTS

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

<i>(in thousands of dollars)</i>	<u>2016</u>	<u>2015</u>
Money markets	\$ 93,741	\$ 361,971
Fixed income:		
U.S. government/agency	1,158,474	1,217,340
U.S. corporate	908,609	915,709
Foreign	199,586	250,122
Other	243,678	278,163
Equities	1,566,626	1,769,561
Private capital	<u>1,480,599</u>	<u>1,275,015</u>
Total	<u>\$ 5,651,313</u>	<u>\$ 6,067,881</u>

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

Futures contracts, which are fully cash collateralized, comprise the University's directly held derivative instruments at June 30, 2016 and 2015, are marked to market daily, and are included in the fair value of the University's investments. The fair value of derivative instruments is included in the fair value of the University's investments within the money market category. Futures contracts have minimal credit risk because the counterparties are the exchanges themselves. Fully cash collateralized derivative securities comprised \$4.4 million, 0.08% of total investments, and \$159.9 million, 2.6% of total investments at June 30, 2016 and 2015, respectively. The University's derivatives consist of S&P 500 futures at June 30, 2016 and 2015 and are employed as a low cost, passive investment vehicle with daily liquidity which allows the University to maintain desired market exposure in light of irregular cash flows.

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

<i>(in thousands of dollars)</i>				
<u>2016</u>	<u>Unrestricted</u>	<u>Temporarily Restricted</u>	<u>Permanently Restricted</u>	<u>Total</u>
Dividends and interest	\$ 111,156	\$ 1,937	\$ 10,020	\$ 123,113
Net realized gains (losses)	62,289	(17,965)	-	44,324
Net unrealized losses	<u>(88,078)</u>	<u>(96,547)</u>	-	<u>(184,625)</u>
Total returns	<u>\$ 85,367</u>	<u>\$ (112,575)</u>	<u>\$ 10,020</u>	<u>\$ (17,188)</u>

<i>(in thousands of dollars)</i>				
<u>2015</u>	<u>Unrestricted</u>	<u>Temporarily Restricted</u>	<u>Permanently Restricted</u>	<u>Total</u>
Dividends and interest	\$ 140,772	\$ 1,869	\$ 11,680	\$ 154,321
Net realized gains	69,673	31,399	-	101,072
Net unrealized losses	<u>(78,565)</u>	<u>(60,698)</u>	-	<u>(139,263)</u>
Total returns	<u>\$ 131,880</u>	<u>\$ (27,430)</u>	<u>\$ 11,680</u>	<u>\$ 116,130</u>

4. ENDOWMENT NET ASSETS

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

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

The University has interpreted PA Act 141 to permit the University to spend the earnings of its endowment based on a total return approach, without regard to the fair value of the original gift. As a result of this interpretation, the University classifies as permanently restricted net assets 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. Funds functioning as endowments are established at the direction of University management and are classified as unrestricted net assets due to the lack of external donor restrictions. Gains and losses attributable to permanent endowments are recorded as temporarily restricted net assets and gains and losses attributable to funds functioning as endowments are recorded as unrestricted net assets.

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. The aggregate amount of deficiencies at June 30, 2016 and 2015 was \$7.4 million and \$1.5 million, respectively, reported in unrestricted net assets on the consolidated statement of activities. Subsequent investment gains will be used to restore the balance up to the fair market value of the original gift. Subsequent gains above that amount will be recorded as temporarily restricted net assets.

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

<i>(in thousands of dollars)</i>		Temporarily	Permanently	
<u>2016</u>	<u>Unrestricted</u>	<u>Restricted</u>	<u>Restricted</u>	<u>Total</u>
Donor-restricted endowment funds	\$ (7,353)	\$ 398,384	\$ 1,330,966	\$ 1,721,997
Funds functioning as endowments	<u>594,587</u>	<u>-</u>	<u>-</u>	<u>594,587</u>
Total net assets	<u>\$ 587,234</u>	<u>\$ 398,384</u>	<u>\$ 1,330,966</u>	<u>\$ 2,316,584</u>
<i>(in thousands of dollars)</i>		Temporarily	Permanently	
<u>2015</u>	<u>Unrestricted</u>	<u>Restricted</u>	<u>Restricted</u>	<u>Total</u>
Donor-restricted endowment funds	\$ (1,454)	\$ 500,533	\$ 1,249,838	\$ 1,748,917
Funds functioning as endowments	<u>619,873</u>	<u>-</u>	<u>-</u>	<u>619,873</u>
Total net assets	<u>\$ 618,419</u>	<u>\$ 500,533</u>	<u>\$ 1,249,838</u>	<u>\$ 2,368,790</u>

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

<i>(in thousands of dollars)</i>				
<u>2016</u>	<u>Unrestricted</u>	<u>Temporarily Restricted</u>	<u>Permanently Restricted</u>	<u>Total</u>
Endowment net assets, beginning of the year	\$ 618,419	\$ 500,533	\$ 1,249,838	\$ 2,368,790
Endowment return:				
Endowment earnings	25,820	19	3,727	29,566
Net realized gains (losses)	63,939	(17,736)	-	46,203
Net unrealized losses	(30,090)	(91,831)	-	(121,921)
Reclassification of funds with deficiencies	<u>(5,899)</u>	<u>5,899</u>	<u>-</u>	<u>-</u>
Total endowment return	<u>53,770</u>	<u>(103,649)</u>	<u>3,727</u>	<u>(46,152)</u>
Contributions	-	1,500	77,401	78,901
Endowment spending	(95,439)	-	-	(95,439)
Transfers to create funds functioning as endowments	<u>10,484</u>	<u>-</u>	<u>-</u>	<u>10,484</u>
Endowment net assets, end of the year	<u>\$ 587,234</u>	<u>\$ 398,384</u>	<u>\$ 1,330,966</u>	<u>\$ 2,316,584</u>
 <i>(in thousands of dollars)</i>				
<u>2015</u>	<u>Unrestricted</u>	<u>Temporarily Restricted</u>	<u>Permanently Restricted</u>	<u>Total</u>
Endowment net assets, beginning of the year	\$ 595,779	\$ 521,680	\$ 1,146,955	\$ 2,264,414
Endowment return:				
Endowment earnings	26,513	20	4,191	30,724
Net realized gains	68,228	31,039	-	99,267
Net unrealized losses	(18,085)	(53,257)	-	(71,342)
Reclassification of funds with deficiencies	<u>(495)</u>	<u>495</u>	<u>-</u>	<u>-</u>
Total endowment return	<u>76,161</u>	<u>(21,703)</u>	<u>4,191</u>	<u>58,649</u>
Contributions	-	556	98,692	99,248
Endowment spending	(83,958)	-	-	(83,958)
Transfers to create funds functioning as endowments	<u>30,437</u>	<u>-</u>	<u>-</u>	<u>30,437</u>
Endowment net assets, end of the year	<u>\$ 618,419</u>	<u>\$ 500,533</u>	<u>\$ 1,249,838</u>	<u>\$ 2,368,790</u>

Not included above are the endowment net assets of subsidiaries of \$14.7 million and \$12.8 million as of June 30, 2016 and 2015, respectively.

The University has adopted investment and spending policies for endowment assets that attempt to provide a relatively predictable stream of funding to programs supported by its endowment while seeking to maintain, over time, the purchasing power of the endowment assets. The overall management objective for the University's pooled endowment funds is to preserve or grow the real (inflation-adjusted) purchasing power of the assets through a prudent long-term investment strategy. This objective would be achieved on a total return basis. Under these policies, as approved by the Board of Trustees and the Penn State Investment Council, the primary investment objective of the University's pooled endowment is to attain a real total return (net of investment management fees) that at least equals a total annual effective spending rate of 5.25% (program spending of 4.5% plus administrative costs of 0.75%) over the long term.

To satisfy its long-term rate-of-return objectives, the University relies on a total return strategy in which investment returns are achieved through both capital appreciation (realized and unrealized) and current yield (interest and dividends). The University targets diversified asset allocation that places a greater emphasis on equity-based investments to achieve its long-term return objectives within prudent risk constraints. The endowment assets of the University are invested in a broad range of equities and fixed income securities, thereby limiting the market risk exposure in any one institution or individual investment.

The University has a policy of appropriating for distribution each year a certain percentage (4.5% for 2016 and 2015) of its pooled endowment fund's average fair market value over the prior five years preceding the fiscal year in which the distribution is planned. Accordingly, over the long term, the University expects the current spending policy to allow its endowment to provide generous current spending while preserving "intergenerational equity". This is consistent with the University's objective to maintain the purchasing power of the endowment assets held in perpetuity as well as to provide additional real growth through new gifts and investment returns.

5. FAIR VALUE MEASUREMENTS

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

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

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

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

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

The following table presents information as of June 30, 2016 about the University's financial assets and liabilities that are measured at fair value on a recurring basis:

<i>(in thousands of dollars)</i>	Quoted Prices in Active Markets For Identical Assets <u>Level 1</u>	Significant Other Observable Inputs <u>Level 2</u>	Significant Unobservable Inputs <u>Level 3</u>	Total <u>Fair Value</u>
Assets:				
Long-term Investment Pool:				
Money markets	\$ 84,516	\$ -	\$ -	\$ 84,516
Fixed income				
U.S. government/agency	284,969	15,881	-	300,850
U.S. corporate	-	190,065	-	190,065
Foreign	-	115,349	-	115,349
Other	-	40,035	-	40,035
Equities	<u>823,912</u>	<u>102,341</u>	-	<u>926,253</u>
Total	<u>\$ 1,193,397</u>	<u>\$ 463,671</u>	<u>\$ -</u>	<u>\$ 1,657,068</u>
Operating investments:				
Money markets	\$ 9,215	\$ 10	\$ -	\$ 9,225
Fixed income				
U.S. government/agency	615,449	242,175	-	857,624
U.S. corporate	79,241	639,303	-	718,544
Foreign	11,272	72,965	-	84,237
Other	25,114	178,529	-	203,643
Equities	<u>127,318</u>	<u>59</u>	<u>4,214</u>	<u>131,591</u>
Total	<u>\$ 867,609</u>	<u>\$ 1,133,041</u>	<u>\$ 4,214</u>	<u>\$ 2,004,864</u>
Deposits held by bond trustees:				
Money markets	\$ 130,639	\$ -	\$ -	\$ 130,639
Fixed income				
U.S. government/agency	-	448	-	448
Total	<u>\$ 130,639</u>	<u>\$ 448</u>	<u>\$ -</u>	<u>\$ 131,087</u>
Beneficial interest in perpetual trusts	\$ -	\$ -	\$ 14,558	\$ 14,558
Liabilities:				
Present value of annuities payable	\$ -	\$ -	\$ 53,859	\$ 53,859

The following table presents information as of June 30, 2015 about the University's financial assets and liabilities that are measured at fair value on a recurring basis:

<i>(in thousands of dollars)</i>	Quoted Prices in Active Markets For Identical Assets <u>Level 1</u>	Significant Other Observable Inputs <u>Level 2</u>	Significant Unobservable Inputs <u>Level 3</u>	Total <u>Fair Value</u>
Assets:				
Long-term Investment Pool:				
Money markets	\$ 119,969	\$ 230,018	\$ -	\$ 349,987
Fixed income				
U.S. government/agency	59,206	27,727	-	86,933
U.S. corporate	-	101,055	-	101,055
Foreign	59,849	128,644	-	188,493
Other	-	10,206	-	10,206
Equities	<u>1,082,042</u>	-	-	<u>1,082,042</u>
Total	<u>\$ 1,321,066</u>	<u>\$ 497,650</u>	<u>\$ -</u>	<u>\$ 1,818,716</u>
Operating investments:				
Money markets	\$ 9,555	\$ 2,429	\$ -	\$ 11,984
Fixed income				
U.S. government/agency	678,931	451,476	-	1,130,407
U.S. corporate	82,979	731,675	-	814,654
Foreign	11,970	49,659	-	61,629
Other	19,903	244,409	3,645	267,957
Equities	<u>110,917</u>	-	<u>2,134</u>	<u>113,051</u>
Total	<u>\$ 914,255</u>	<u>\$ 1,479,648</u>	<u>\$ 5,779</u>	<u>\$ 2,399,682</u>
Deposits held by bond trustees:				
Money markets	\$ 61,262	\$ -	\$ -	\$ 61,262
Fixed income				
U.S. government/agency	-	448	-	448
Total	<u>\$ 61,262</u>	<u>\$ 448</u>	<u>\$ -</u>	<u>\$ 61,710</u>
Beneficial interest in perpetual trusts	\$ -	\$ -	\$ 15,471	\$ 15,471
Liabilities:				
Present value of annuities payable	\$ -	\$ -	\$ 48,721	\$ 48,721

The fair value tables above exclude investments of \$1,989.4 million and \$1,849.5 million as of June 30, 2016 and 2015, respectively, which are measured at NAV and are not classified in the fair value hierarchy.

The Long-term Investment Pool (LTIP) is a mutual fund-like vehicle used for investing the University's endowment funds, funds functioning as endowments, and other operating funds that are expected to be held long-term. A share method of accounting for the LTIP is utilized by the University. Each participating fund enters into and withdraws from the LTIP based on monthly share values. At June 30, 2016 and 2015, fair value of endowment funds and funds functioning as endowments within the LTIP totaled \$2,362.2 million and \$2,395.9 million, respectively. At June 30, 2016 and 2015, fair value of operating funds included in the LTIP totaled \$1,280.0 million and \$1,262.9 million, respectively.

The following tables present information related to changes in Level 3 for each category of assets and liabilities for year ended June 30, 2016:

<i>(in thousands of dollars)</i>	<u>Operating Investments</u>	<u>Beneficial Interest in Perpetual Trusts</u>
<u>Assets:</u>		
Beginning balance	\$ 5,779	\$ 15,471
Total realized and unrealized gains (losses)	502	(913)
Purchases	599	-
Sales	<u>(2,666)</u>	<u>-</u>
Ending balance	<u>\$ 4,214</u>	<u>\$ 14,558</u>
	<u>Present Value of Annuities Payable</u>	
<u>Liabilities:</u>		
Beginning balance	\$ 48,721	
Actuarial adjustment of liability	(1,556)	
Gifts	6,886	
Sales	<u>(192)</u>	
Ending balance	<u>\$ 53,859</u>	

The following tables present information related to changes in Level 3 for each category of assets and liabilities for year ended June 30, 2015:

<i>(in thousands of dollars)</i>	<u>Operating Investments</u>	<u>Beneficial Interest in Perpetual Trusts</u>
<u>Assets:</u>		
Beginning balance	\$ 5,638	\$ 15,498
Total realized and unrealized gains (losses)	118	(27)
Purchases	300	-
Sales	<u>(277)</u>	<u>-</u>
Ending balance	<u>\$ 5,779</u>	<u>\$ 15,471</u>
	<u>Present Value of Annuities Payable</u>	
<u>Liabilities:</u>		
Beginning balance	\$ 51,151	
Actuarial adjustment of liability	5,350	
Gifts	1,765	
Sales	<u>(9,545)</u>	
Ending balance	<u>\$ 48,721</u>	

There were no transfers of assets between Level 3 and Level 2 and between Level 1 and Level 2 in 2016 and 2015.

The following table presents the fair value and redemption frequency for those investments whose fair value is not readily determinable and is estimated using the net asset value per share or its equivalent as of June 30, 2016:

<i>(in thousands of dollars)</i>	<u>Fair Value</u>	<u>Unfunded Commitment</u>	<u>Redemption Frequency</u>	<u>Redemption Notice Period</u>
Commingled Funds:			Quarterly/ Daily/Monthly	5-90 days
Non-U.S. Equity	\$ 508,782			
Subtotal	<u>\$ 508,782</u>			
Marketable Investment Partnerships:				
Absolute Return	\$ 30,811		Quarterly	60 days
Distressed Debt	53,557		Quarterly/ Semi Annual	60-90 days
Commodities	94,795		Monthly	30-60 days
Opportunistic	186,635		Quarterly	30 days
Directional Long/Short	287,482		Monthly	30 days
Subtotal	<u>\$ 653,280</u>			
Non-Marketable Investment Partnerships:				
Private Real Estate	\$ 97,089	\$ 47,140		
Venture Capital	271,898	152,374		
Private Equity	248,969	280,331		
Natural Resources	116,307	38,988		
Private Debt	93,056	68,541		
Subtotal	<u>\$ 827,319</u>	<u>\$ 587,374</u>		
Total	<u>\$ 1,989,381</u>	<u>\$ 587,374</u>		

The following table presents the fair value and redemption frequency for those investments whose fair value is not readily determinable and is estimated using the net asset value per share or its equivalent as of June 30, 2015:

<i>(in thousands of dollars)</i>	<u>Fair Value</u>	<u>Unfunded Commitment</u>	<u>Redemption Frequency</u>	<u>Redemption Notice Period</u>
Commingled Funds:			Quarterly/ Daily/Monthly	5-90 days
Non-U.S. Equity	\$ 570,948			
Subtotal	<u>\$ 570,948</u>			
Marketable Investment Partnerships:				
Absolute Return	\$ 30,260		Quarterly	65 days
Distressed Debt	56,106		Quarterly/ Semi Annual	60-90 days
Commodities	99,039		Monthly	30-60 days
Opportunistic	175,102		Quarterly	30 days
Directional Long/Short	107,327		Monthly	30 days
Subtotal	<u>\$ 467,834</u>			
Non-Marketable Investment Partnerships:				
Private Real Estate	\$ 103,372	\$ 38,678		
Venture Capital	269,321	107,731		
Private Equity	240,539	219,965		
Natural Resources	118,463	86,371		
Private Debt	79,006	69,864		
Subtotal	<u>\$ 810,701</u>	<u>\$ 522,609</u>		
Total	<u>\$ 1,849,483</u>	<u>\$ 522,609</u>		

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

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

Nonmarketable Investment Partnerships include limited partnership interests in a variety of illiquid investments. The fair values of the investments for each fund in this category have been estimated using the net asset value of the LTIP's ownership interest in partner's capital and cannot be redeemed. Realizations from each fund are received as the underlying investments are liquidated or distributed, typically within 10 years after initial commitment. Unfunded commitments represent remaining commitments of the LTIP's drawdown funds as of June 30, 2016 and 2015. Five major investment strategies are included within this category. Private Real Estate includes properties primarily located in the U.S. Venture Capital includes non-public startups and enterprises in early stages of growth located globally. Private Equity includes buyouts of previously public companies as well as enterprises that are planning to go public in the near future, including funds focusing on opportunities outside the U.S. Natural Resources largely include companies primarily involved in oil and natural gas in addition to a variety of other natural resources. Private Debt includes global private credit securities rated below investment grade as well as non-rated debt.

6. CONTRIBUTIONS RECEIVABLE

Contributions receivable are summarized as follows as of June 30:

<i>(in thousands of dollars)</i>	<u>2016</u>	<u>2015</u>
In one year or less	\$ 59,567	\$ 63,293
Between one year and five years	63,646	67,504
More than five years	<u>113,277</u>	<u>126,815</u>
Contributions receivable, gross	236,490	257,612
Less allowance	(4,065)	(6,350)
Less discount	<u>(52,872)</u>	<u>(60,280)</u>
Contributions receivable, net	<u>\$ 179,553</u>	<u>\$ 190,982</u>

Contributions receivable are discounted at rates ranging from 0.45% to 1.69% and 0.28% to 2.59% at June 30, 2016 and 2015, respectively. The discount rates for prior periods ranged from 0.15% to 6.28%.

At June 30, 2016 and 2015, the University has received bequest intentions and certain other conditional promises to give of \$97.7 million and \$96.8 million, respectively. These intentions and conditional promises to give are not included in the consolidated financial statements.

The following table summarizes the change in contributions receivable, net during the year ended June 30, 2016:

	<i>(in thousands of dollars)</i>
Balance at the beginning of year	\$ 190,982
New pledges	35,510
Collections on pledges	(56,633)
Decrease in allowance	2,285
Decrease in unamortized discounts	<u>7,409</u>
Balance at the end of year	<u>\$ 179,553</u>

7. LONG-TERM DEBT

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

<i>(in thousands of dollars)</i>	<u>2016</u>	<u>2015</u>
<u>The Pennsylvania State University Bonds</u>		
Series 2016A	\$ 122,165	\$ -
Series 2016B	229,775	-
Series 2015A	65,210	65,210
Series 2015B	111,580	116,955
Series 2010	135,035	135,035
Series 2009A	-	101,295
Series 2009B	74,235	74,235
Series 2008A	-	77,670
Series 2008B	1,050	2,060
Series 2007A	-	87,045
Series 2007B	54,415	57,600
Refunding Series 2002	4,835	9,420
<u>Pennsylvania Higher Educational Facilities</u>		
<u>Authority University Revenue Bonds</u>		
<u>(issued for The Pennsylvania State</u>		
<u>University)</u>		
Series 2006	2,890	3,115
Series 2004	3,125	3,395
Series 2002	2,860	3,265
<u>Lycoming County Authority College</u>		
<u>Revenue Bonds (issued for Penn</u>		
<u>College)</u>		
Series 2015	7,660	8,840
Series 2012	24,685	24,685
Series 2011	37,880	38,550
Series 2008	<u>55,000</u>	<u>55,000</u>
Total bonds payable	932,400	863,375
Unamortized bond premiums	118,332	55,136
Unamortized deferred bond costs	(5,267)	(5,527)
<u>Notes payable and capital leases</u>		
Notes payable	29,000	20,000
Capital lease obligations	<u>96,811</u>	<u>83,058</u>
Total notes payable and capital leases	<u>125,811</u>	<u>103,058</u>
Total long-term debt	<u>\$ 1,171,276</u>	<u>\$ 1,016,042</u>

<u>Debt issuance</u>	<u>Interest rate mode</u>	<u>Interest rates</u>	<u>Payment ranges and maturity</u> <i>(in thousands of dollars)</i>
The Pennsylvania State University Bonds			
Series 2016A	Fixed	4.00% - 5.00%	\$2,585 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	2.00% - 5.00%	\$1,430 to \$3,445 through September 2035, with \$20,000 due September 2040
Series 2015B	Fixed	2.00% - 5.00%	\$3,580 to \$8,435 through September 2035
Series 2010	Fixed	3.375% - 5.00%	\$3,655 to \$6,595 through March 2030, with \$21,805 and \$44,245 due March 2035 and 2040
Series 2009B	Variable	0.66%	June 2031
Series 2008B	Fixed	3.75%	\$1,050 due August 2016
Series 2007B	Fixed	5.00% - 5.25%	\$3,350 to \$5,955 through August 2027
Refunding Series 2002	Fixed	5.25%	\$4,835 due August 2016

Pennsylvania Higher Educational Facilities Authority ("PHEFA") University Revenue Bonds

Series 2006	Fixed	4.20% - 5.125%*	\$235 to \$280 through September 2020, with \$1,610 due September 2025
Series 2004	Fixed	4.55% - 5.00%*	\$285 to \$325 through September 2019, with \$1,905 due September 2024
Series 2002	Fixed	4.60% - 5.00%*	\$425 due March 2017, with \$2,435 due March 2022

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

Lycoming County Authority College Revenue Bonds

Series 2015	Fixed	2.00% - 5.00%	\$465 to \$1,590 through January 2025
Series 2012	Fixed	2.00% - 5.00%	\$410 to \$2,635 through May 2032
Series 2011	Fixed	3.00% - 5.50%	\$70 to \$5,230 through July 2030
Series 2008	Fixed	3.50% - 5.50%	\$1,455 to \$4,140 through October 2037

The Series 2016A Bonds are general obligation bonds issued in June 2016 for the purpose of financing various construction and renovation projects. The Series 2016A Bonds are subject to early redemption provisions, at the option of the University, beginning September 2026. The bonds maturing in September 2041 are subject to mandatory sinking fund redemption.

The Series 2016B Bonds are general obligation bonds issued in June 2016 for the purpose of financing the current refunding and defeasance of all of the outstanding Series 2007A Bonds and the advance refunding and defeasance of all of the outstanding Series 2008A and Series 2009A Bonds. The Series 2016B Bonds are subject to early redemption provisions, at the option of the University, beginning September 2026. In conjunction with the issuance of the Series 2016B Bonds, the University legally defeased the Series 2007A Bonds, 2008A Bonds, and 2009A Bonds by irrevocably depositing the required funds in an escrow fund to be used to pay the interest accrued, maturing principal, and redemption price of the refunded bonds.

The Series 2009B Bonds are currently paying interest on a variable rate basis at a long term rate for the period June 1, 2016 through May 31, 2017. The University has the option to convert to another variable rate (daily, weekly, monthly or flexible) or to a fixed rate basis (such rates are generally determined on a market basis) at respective conversion dates. The bonds currently pay interest at 0.66% with adjustment on the respective date to the rate the remarketing agent believes will cause the bonds to have a market value equal to the principal. The 2009B bondholders have the right to tender bonds on the purchase dates while such bonds bear interest at

the daily, weekly or monthly rate. The 2009B Bonds were issued subject to the self-liquidity program established by the University on the date of issuance pursuant to which the University will provide liquidity for the 2009B Bonds from its general funds in the event of insufficient remarketing proceeds.

The University has complied with all financial debt covenants for the years ended June 30, 2016 and 2015.

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

<u>Year</u>	<u>Annual Installments</u> <i>(in thousands of dollars)</i>
2017	\$ 21,980
2018	28,195
2019	30,460
2020	32,580
2021	32,615
Thereafter	<u>786,570</u>
	<u>\$ 932,400</u>

The fair value of the University's bonds payable is estimated based on current rates offered for similar issues with similar security, terms and maturities using available market information as supplied by the various financial institutions who act as trustees or custodians for the University. At June 30, 2016, the carrying value and estimated fair value of the University's bonds payable, including issuance premiums and deferred bond costs, are \$1,045.5 million and \$1,102.6 million, respectively. At June 30, 2015, the carrying value and estimated fair value of the University's bonds payable, including issuance premiums and deferred bond costs, were \$913.0 million and \$952.0 million, respectively. Certain bond issues have associated issuance premiums; these issuance premiums total \$118.3 million and \$55.1 million at June 30, 2016 and 2015, respectively and are presented within the statement of financial position as long-term debt. These issuance premiums will be amortized over the term of the respective outstanding bonds. Certain bond issues have associated deferred bond costs; these deferred bond costs total \$5.3 million and \$5.5 million at June 30, 2016 and 2015, respectively and are presented within the statement of financial position as a reduction in long-term debt. These deferred bond costs will be amortized over the term of the respective outstanding bonds.

Notes payable and capital leases

The University has three notes payable included within the consolidated statements of financial position at June 30, 2016 with balances of \$9.0 million, \$10.0 million, and \$10.0 million. These notes have payments due annually through June 2024, June 2025, and March 2026 and bear interest at 2.60%, 2.85%, and 2.80%, respectively. The current portion of payments due under these notes totals \$2.0 million at June 30, 2016.

The University has certain building and equipment lease agreements in effect which are considered capital leases. Future minimum lease payments under capital leases together with the present value of the net minimum lease payments as of June 30, 2016 are as follows:

<u>Year</u>	<i>(in thousands of dollars)</i>
2017	\$ 18,773
2018	16,416
2019	13,623
2020	10,523
2021	8,442
Thereafter	<u>129,205</u>
Total minimum lease payments	196,982
Less imputed interest	<u>(100,171)</u>
Capital lease obligation	96,811
Current portion	<u>11,188</u>
Long-term portion	<u>\$ 85,623</u>

8. OPERATING LEASES

The University has certain lease agreements in effect which are considered operating leases. During the year ended June 30, 2016, the University recorded expenses of \$22.0 million for leased equipment and \$27.7 million for leased building space. During the year ended June 30, 2015, the University recorded expenses of \$19.2 million for leased equipment and \$25.2 million for leased building space.

Future minimum lease payments under operating leases as of June 30, 2016 are as follows:

<u>Year</u>	<i>(in thousands of dollars)</i>
2017	\$ 23,800
2018	16,715
2019	13,323
2020	10,407
2021	7,412
Thereafter	<u>39,503</u>
Total minimum lease payments	<u>\$ 111,160</u>

9. 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 or defined contribution plans administered by the Teachers Insurance and Annuity Association – College Retirement Equity Fund and Fidelity Investments. The University is billed for its share of the estimated actuarial cost of the defined benefit plans (\$85.9 million and \$67.8 million for the years ended June 30, 2016 and 2015, respectively). The University's total cost for retirement benefits, included in expenses, is \$219.4 million and \$190.8 million for the years ended June 30, 2016 and 2015, respectively.

The SERS is the administrator of a cost-sharing, multi-employer retirement system established by the Commonwealth of Pennsylvania to provide pension benefits for employees of state government and certain independent agencies. As provided by statute, the SERS Board of Trustees has exclusive control and management responsibility of the funds and full power to invest the funds. The SERS funding policy provides for periodic member contributions at statutory rates and employer contributions at actuarially determined rates (expressed as a percentage of annual gross pay) that are sufficient to accumulate assets to pay benefits when due. The University's contributions to this plan for the years ended June 30, 2016 and 2015 were \$84.1 million and \$66.4 million, respectively, and represent approximately 5.7% of total contributions to the plan based on projections for fiscal year 2016. The plan is funded at less than 65% with the funded ratio of the plan at 58.0% as of December 31, 2015.

10. POSTRETIREMENT BENEFITS

The University sponsors a retiree medical plan covering eligible retirees and eligible dependents. This program includes a Preferred Provider Organization ("PPO") plan for retirees and their dependents who are not eligible for Medicare, a Medicare Advantage PPO plan and a Medicare Supplement plan. In addition, the University provides certain retiree life insurance benefits to the retiree.

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

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

The retiree PPO medical plan and the life insurance coverage are self-funded programs, and all medical claims, death benefits and other expenses are paid from the unrestricted net assets of the University. The Medicare Advantage PPO plan is fully-insured; the Medicare Supplement plan is self-insured. The retirees pay varying amounts for coverage under the medical plan.

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

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

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

Included in unrestricted net assets at June 30, 2016 and 2015 are the following amounts that have not yet been recognized in net periodic postretirement cost: unrecognized prior service cost (benefit) of (\$21.0) million and (\$42.9) million and unrecognized actuarial loss of \$669.1 million and \$732.5 million, respectively.

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

Change in benefit obligation:
(in thousands of dollars)

	<u>2016</u>	<u>2015</u>
Benefit obligation at beginning of year	\$ 2,091,086	\$ 1,900,406
Service cost	44,524	46,800
Interest cost	88,671	78,812
Actuarial gain	(199,832)	(124,016)
Benefits paid	(45,490)	(45,123)
Plan assumptions	<u>169,563</u>	<u>234,207</u>
Benefit obligation at end of year	<u>\$ 2,148,522</u>	<u>\$ 2,091,086</u>

Change in plan assets:
(in thousands of dollars)

	<u>2016</u>	<u>2015</u>
Fair value of plan assets at beginning of year	\$ -	\$ -
Employer contributions	45,490	45,123
Benefits paid	(45,490)	(45,123)
Fair value of plan assets at end of year	<u>\$ -</u>	<u>\$ -</u>
Funded status	\$ (2,148,522)	\$ (2,091,086)
Unrecognized prior service cost (benefit)	-	-
Unrecognized net actuarial loss	-	-
Accrued postretirement benefit expense	<u>\$ (2,148,522)</u>	<u>\$ (2,091,086)</u>

Net periodic postretirement cost includes the following components for the years ended June 30:
(in thousands of dollars)

	<u>2016</u>	<u>2015</u>
Service cost	\$ 44,524	\$ 46,800
Interest cost	88,671	78,812
Amortization of prior service cost	(21,849)	(21,722)
Amortization of unrecognized net loss	<u>33,222</u>	<u>30,521</u>
Net periodic postretirement cost	<u>\$ 144,568</u>	<u>\$ 134,411</u>

The assumed healthcare cost trend rate used in measuring the accumulated postretirement benefit obligation was 7.00% and 7.25% for the years ended June 30, 2016 and 2015, respectively, reduced each year to an ultimate level of 5.00%. The weighted average postretirement benefit obligation discount rate was 4.21% and 4.75% for the years ended June 30, 2016 and 2015, respectively.

If the healthcare cost trend rate assumptions were increased by 1% in each year, the accumulated postretirement benefit obligation would be increased by \$461.2 million and \$437.5 million as of June 30, 2016 and 2015, respectively. The effect of this change on the sum of the service cost and interest cost components of the net periodic postretirement benefit cost would be an increase of \$32.4 million and \$29.0 million as of June 30, 2016 and 2015, respectively. If the healthcare cost trend rate assumptions were decreased by 1% in each year, the accumulated postretirement benefit obligation would be decreased by \$360.2 million and \$345.6 million as of June 30, 2016 and 2015, respectively. The effect of this change on the sum of the service cost and interest cost components of the net periodic postretirement benefit cost would be a decrease of \$24.4 million and \$22.1 million as of June 30, 2016 and 2015, respectively.

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

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

	<i>(in thousands of dollars)</i>
2017	\$ 52,665
2018	57,042
2019	61,722
2020	66,157
2021	71,001
2022-26	433,607

11. PENN STATE HEALTH

Penn State Health was organized exclusively for the charitable, educational, and scientific purposes as defined and limited by Section 501(c)(3) of the Internal Revenue Code of 1986. The Health System's purpose is to promote, support and further the charitable, educational, and scientific purposes of the University. The Health System is controlled by and affiliated with the University. During 2015, the Health System was organized, with the University as the sole owner, to provide oversight and governance of an expanded health enterprise. The Health System will own, in whole or in part, health care facilities which could include hospitals, surgery centers, home health providers and similar organizations.

Medical Center

In May 2016, the ownership of TMSHMC transferred from the University to the Health System. TMSHMC is a 527-bed, not-for-profit acute care academic medical center located in Hershey, Pennsylvania. The University retains ownership of the buildings and land occupied by TMSHMC, which is co-located with the University's College of Medicine. The clinical facilities of the Medical Center complex are leased to TMSHMC. TMSHMC makes certain payments to support the College of Medicine.

Nittany Health

In January 2016, the ownership of Nittany Health transferred from the University to the Health System. Nittany Health is a corporate investor in healthcare joint ventures, which are supportive of the missions of the Health System. Nittany Health's objectives are consistent with the strategic objective to extend the range of healthcare services offered by and through the Health System over a broader geographic region. Nittany Health was organized in 1995 for the purpose of organizing components of an integrated health care delivery system. Nittany Health recorded non-controlling interest related to the acquisition of additional ownership interest in a joint venture. This non-controlling interest is recorded in net assets within the consolidated statements of financial position with a value at June 30, 2016 and 2015 of \$3,687,000 and \$1,560,000, respectively.

Saint Joseph's Regional Health Network and Medical Group

On June 30, 2015, the Health System received \$113.5 million from the University to finance the purchase of SJRHN/SJMG, a Pennsylvania non-profit (nonstock) corporation and certain of its affiliates, with the Health System transferring funds on the same day. At June 30, 2015, the Health System recorded as prepaid expenses and other assets (current) the amount transferred on June 30, 2015 related to this transaction. The parties entered into closing agreements on June 30, 2015 and September 30, 2015, with an official acquisition date of July 1, 2015. On July 1, 2015, the Health System acquired SJRHN/SJMG. SJRHN/SJMG is a 144-bed, not-for-profit acute care hospital that provides inpatient, outpatient, and emergency care services to the Berks County Region.

Pursuant to the Health System's purchase accounting for acquisitions policy, the total purchase for SJRHN/SJMG was allocated to both tangible/intangible assets and liabilities based upon their estimated fair values. There was no goodwill associated with this transaction. The following represents the allocation of the purchase price for the acquisition, as described above (in thousands):

Net accounts receivable	\$ 26,042
Property, plant & equipment	104,446
Intangible assets	1,489
Other assets	21,975
Liabilities assumed	(24,812)
Temporarily restricted net assets	(4,730)
Permanently restricted net assets	<u>(10,862)</u>
Total net assets acquired	<u>\$113,548</u>
 Total purchase price	 <u>\$113,548</u>

On June 26, 2014, a letter of intent and term sheet (the "Agreement") was executed between the University, the Health System, and Pinnacle Health System. The purpose of the Agreement was to set forth certain non-binding understandings and certain binding agreements between the parties. The intent of the collaboration of the parties was to bring together a high-performing university medical center and a community health system that could provide increased access to a wider range of services and full spectrum of care to patients over a broad geographic base. Subsequent to June 30, 2016, as a result of various legal and regulatory challenges to the proposed transaction, the parties agreed to terminate the Agreement.

12. CONTINGENCIES AND COMMITMENTSContractual Obligations

The University has contractual obligations for the construction of new buildings and for additions to existing buildings in the amount of \$1,144.8 million of which \$964.9 million has been paid or accrued as of June 30, 2016. 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 \$23.9 million and \$20.6 million as of June 30, 2016 and 2015, 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. No liabilities related to guarantees have been recorded as of June 30, 2016.

Self-Insurance

The University has a coordinated program of commercial and self-insurance for medical malpractice claims at TMSHMC 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, 2016 and 2015, of the medical malpractice claims liability in the amount of \$107.4 million and \$109.1 million is recorded as of June 30, 2016 and 2015, respectively.

On July 1, 2003, TMSHMC became self-insured for all medical malpractice claims asserted on or after July 1, 2003, for all amounts that are below the coverage of the TMSHMC's excess insurance policies and not included in the insurance coverage of the MCARE Fund. Under the self-insurance program, TMSHMC 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 \$21.5 million and \$19.9 million at June 30, 2016 and 2015, respectively. TMSHMC 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. Certain claims under the program are contractually administered by a private agency. The University purchased insurance coverage for excess obligations over \$600,000 per incident. An estimate of the self-insured workers' compensation claims liability in the amount of \$8.1 million and \$8.6 million, discounted at 1.00% and 1.60%, respectively, is recorded as of June 30, 2016 and 2015, respectively. The University has established a trust fund, in the amount of \$13.3 million and \$13.0 million at June 30, 2016 and 2015, respectively, as required by PA-DLI, to provide for the payment of claims under this self-insurance program. TMSHMC is self-insured for workers' compensation claims and has purchased an excess policy through a commercial insurer which covers 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 policies which cover employee health benefit claims in excess of \$600,000 and \$575,000 per employee per year, respectively. The University and TMSHMC provide for reported claims and claims incurred but not reported.

Litigation and Contingencies

In November 2011, the University was made aware of certain allegations in a Commonwealth of Pennsylvania Grand Jury presentment. Various legal proceedings and investigations have arisen as a result of such allegations, including criminal proceedings against former officers and employees of the University. Certain claims and civil litigation have been filed against the University with anticipation that other complaints could be filed.

As of June 30, 2016, the University has paid or accrued \$93.0 million for 33 claims with \$0.2 million and \$33.2 million included in institutional support within the consolidated statements of activities for the years ended June 30, 2016 and 2015, respectively. Additional claims could be paid in the future but without having knowledge of the number and nature of such claims the University is unable to predict the outcome

of these matters or the ultimate legal and financial liability and at this time cannot reasonably estimate the possible loss or range of loss. Accordingly, no amounts have been accrued in the financial statements for these claims.

In addition to the settlement costs, the University has incurred costs for the fiscal years ended June 30, 2016 and 2015 totaling \$6.6 million and \$14.7 million, respectively, for internal investigation, legal, communications and other related costs. These costs are included in institutional support within the consolidated statement of activities.

The University has submitted claims to insurance carriers at June 30, 2016 related to the claims that have been settled. Insurance reimbursements and direct payments of settlements amounts, fees and costs totaled \$29.9 million as of the date on which the consolidated financial statements were issued. Additional insurance claims remain outstanding.

Based on its operation of the Health System (see Note 11), the University, like the rest of the healthcare industry, is subject to numerous laws and regulations of federal, state and local governments. Compliance with these laws and regulations can be subject to government review and interpretation, as well as regulatory actions. Recently, government reviews of healthcare providers for compliance with regulations have increased. Although the University believes it has done its best to comply with these numerous regulations, such government reviews could result in significant repayments of previously billed and collected revenues from patient services. Subsequent to June 30, 2015, the University received a notice from the Pennsylvania Department of Public Welfare alleging that the University had been overpaid \$11.5 million under the Medicaid program for a prior fiscal period. The University had a liability recorded at June 30, 2015 on the consolidated statements of financial position and a corresponding reduction in Health System revenue on the consolidated statement of activity. This matter has been resolved as of June 30, 2016 with no payment made to the Commonwealth related to this matter. As such, the liability has been reversed at June 30, 2016 and a corresponding increase in Health System revenue on the consolidated statement of activity has been recorded.

On July 12, 2013, the University received a preliminary report from the U.S. Department of Education based on the program review of the University's compliance with the Clery Act, a federal law related to campus safety. The Department of Education will make a final program review determination after the process is complete. The outcome and financial impacts of the program review are unknown as of the date the consolidated financial statements were issued.

Various other 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.

13. SUBSEQUENT EVENTS

The University has evaluated subsequent events through October 21, 2016, 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.

THE PENNSYLVANIA STATE UNIVERSITY
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2016

Programs:	CFDA No.	Subcontract Expenditures	Expenditures
Research and development cluster:			
Direct funding	Note 2	\$ 68,351,778	\$ 478,715,621
Direct funding - American Recovery and Reinvestment Act	Note 3	258,472	488,237
Pass-through funds - Commonwealth of Pennsylvania	Note 4	327,448	1,942,197
Pass-through funds - other institutions	Note 5	2,189,094	56,042,597
Pass-through funds - other institutions - American Recovery and Reinvestment Act	Note 6	-	8,023
Total research and development cluster		<u>71,126,792</u>	<u>537,196,675</u>
Student financial assistance cluster (direct):			
Department of Education:			
Federal Supplemental Educational Opportunity Grant	84.007	-	5,005,800
Federal Work Study Program	84.033	-	5,306,712
Federal Perkins Loan Program - Note 11	84.038	-	44,380,959
Federal Pell Grant Program	84.063	-	83,389,915
Federal Direct Loan Program - Note 12	84.268	-	547,279,796
Federal Endowment - Note 13	84.116	-	6,000,000
Department of Health and Human Services:			
Health Professions Student Loan Program - Note 11	93.342	-	49,671
Total student financial assistance cluster		<u>-</u>	<u>691,412,853</u>
Other programs:			
Other direct funding	Note 7	1,125,688	33,202,310
Other direct funding - American Recovery and Reinvestment Act	Note 8	-	59,813
Other pass-through funds - Commonwealth of Pennsylvania	Note 9	20,411,199	33,420,314
Other pass-through funds - other institutions	Note 10	32,158	2,657,556
Total other programs		<u>21,569,045</u>	<u>69,339,993</u>
Total programs		<u>\$ 92,695,837</u>	<u>\$ 1,297,949,521</u>

See notes to schedule of expenditures of federal awards.

THE PENNSYLVANIA STATE UNIVERSITY
NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED JUNE 30, 2016

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, 2016 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.

For purposes of the Schedule, federal awards have been classified into two types:

- Direct federal awards
- Pass-through funds received from non-federal organizations made under federally sponsored programs conducted by these organizations.

Expenditures for federal awards are determined using the cost accounting principles and procedures set forth in OMB Circular A-21, *Cost Principles for Educational Institutions*, and the uniform administration requirements as set forth in OMB Circular A-110, *Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations*, or the administrative and cost principles contained in Uniform Guidance, as applicable. Subcontract expenditures represent amounts paid to a third party for effort performed in support of the University's federal awards. The University has not elected to use the 10% de minimis indirect cost rate.

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.

2. RESEARCH AND DEVELOPMENT - DIRECT FUNDING

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
<u>Department of Agriculture:</u>				
Agricultural Marketing Service	10.RD		\$ -	\$ 35,058
Agricultural Research Service	10.RD		-	932,180
Animal and Plant Health Inspection Service	10.RD		136,590	814,113
Department of Agriculture	10.RD		-	354,255
Economic Research Service	10.RD		-	42,973
Foreign Agricultural Service	10.RD		-	95,506
Forest Service	10.RD		-	155,649
National Institute of Food and Agriculture	10.RD		2,969,354	22,607,640
Natural Resources Conservation Service	10.RD		191,794	242,668
The Office of the Chief Economist	10.RD		-	28,816
Total – Department of Agriculture			3,297,738	25,308,858

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
<u>Department of Commerce:</u>				
Department of Commerce	11.RD		-	59,250
Economic Development Administration	11.RD		422,957	554,261
National Institute of Standards and Technology	11.RD		273,237	1,951,225
National Oceanic and Atmospheric Administration	11.RD		245,458	1,815,883
Total – Department of Commerce			941,652	4,380,619
<u>Department of Defense:</u>				
Advanced Research Projects Agency	12.RD		15,687	1,085,862
Defense Intelligence Agency	12.RD		-	(147)
Defense Threat Reduction Agency	12.RD		1,320,113	3,571,452
Department of Defense	12.RD		-	6,330
Department of the Air Force, Materiel Command	12.RD		2,081,999	5,284,862
Department of the Navy, Office of the Chief of Naval Research	12.RD		9,428,913	174,453,868
Marine Corps System Command	12.RD		-	62,002
National Security Agency	12.RD		39,144	743,240
Office of the Secretary of Defense	12.RD		3,370,266	4,445,046
U.S. Army Materiel Command	12.RD		684,437	6,188,507
U.S. Army Medical Command	12.RD		-	68,894
Total – Department of Defense			16,940,559	195,909,916
<u>Department of the Interior:</u>				
Bureau of Land Management	15.RD		-	74,357
Bureau of Reclamation	15.RD		-	51,997
Department of the Interior	15.RD		-	101,554
Fish and Wildlife Service	15.RD		-	(15)
National Park Service	15.RD		-	318,676
U.S. Geological Survey	15.RD		23,648	525,411
Total – Department of the Interior			23,648	1,071,980
<u>Department of Justice:</u>				
Bureau of Justice Statistics	16.RD		-	17,880
National Institute of Justice	16.RD		188,254	790,717
Total – Department of Justice			188,254	808,597
<u>Department of Labor:</u>	17.RD		16,860	32,534
<u>Department of State:</u>				
Bureau of Oceans and International Environmental and Scientific Affairs	19.RD		35,074	44,193
Department of State	19.RD		19,960	414,104
Total - Department of State			55,034	458,297
<u>Department of Transportation:</u>				
Department of Transportation	20.RD		244,826	4,029,610
Federal Aviation Administration	20.RD		46,619	843,307
Federal Railroad Administration	20.RD		52,306	(21,667)
Office of the Secretary Administration Secretariate	20.RD		591,411	646,431
Total - Department of Transportation			935,162	5,497,681
<u>Department of the Treasury:</u>	21.RD		-	92,997

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
<u>General Services Administration:</u>	39.RD		-	813,185
<u>National Aeronautics and Space Administration:</u>	43.RD		2,312,715	10,848,812
<u>National Endowment for the Arts:</u>	45.RD		-	9,218
<u>National Endowment for the Humanities:</u>	45.RD		-	191,521
<u>Institute of Museum and Library Services:</u>	45.RD		-	13,209
<u>National Science Foundation:</u>	47.RD		3,583,765	63,872,898
<u>International Trade Commission:</u>	61.RD		22,829	56,498
<u>Environmental Protection Agency:</u>				
Environmental Protection Agency	66.RD		-	91,036
Office of Chemical Safety and Pollution Prevention	66.RD		-	70,825
Office of Research and Development	66.RD		75,991	976,477
Office of Water	66.RD		-	347,789
Total – Environmental Protection Agency			75,991	1,486,127
<u>Nuclear Regulatory Commission:</u>	77.RD		-	1,296,830
<u>Department of Energy:</u>	81.RD		9,283,505	26,309,554
<u>Department of Education:</u>				
Department of Education	84.RD		-	2,241,566
Institute of Education Sciences	84.RD		216,916	1,034,761
Office of Elementary and Secondary Education	84.RD		-	342,634
Office of Innovation and Improvement	84.RD		656,875	675,032
Office of Postsecondary Education	84.RD		-	88,160
Office of Special Education and Rehabilitative Services	84.RD		2,344	160,915
Total – Department of Education			876,135	4,543,068
<u>Department of Health and Human Services:</u>				
Administration for Community Living	93.RD		487,172	863,982
Agency for Healthcare Research and Quality	93.RD		212,967	519,603
Centers for Disease Control and Prevention	93.RD		-	50,681
Department of Health and Human Services	93.RD		-	165,330
Food and Drug Administration	93.RD		20,000	33,699
Health Resources and Services Administration	93.RD		134,119	1,114,082
National Institutes of Health	93.RD		22,060,382	112,084,988
Total – Department of Health and Human Services			22,914,640	114,832,365
<u>Department of Homeland Security:</u>	97.RD		-	226,275

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
<u>Agency for International Development:</u>	98.RD		612,695	957,384
<u>Miscellaneous:</u>	99.RD		6,270,596	19,697,198
Total Research and Development - Direct Funding			\$ 68,351,778	\$ 478,715,621

3. RESEARCH AND DEVELOPMENT - DIRECT FUNDING - AMERICAN RECOVERY AND REINVESTMENT ACT

<u>Department of Energy:</u>	81.RD		\$ (697)	\$ (697)
<u>Department of Health and Human Services:</u>				
National Institutes of Health	93.RD		259,169	488,934
Total – Department of Health and Human Services			259,169	488,934
Total Research and Development - Direct Funding - American Recovery and Reinvestment Act			\$ 258,472	\$ 488,237

4. RESEARCH AND DEVELOPMENT - PASS-THROUGH FUNDS - COMMONWEALTH OF PENNSYLVANIA

<u>Department of Agriculture:</u>				
Commonwealth of Pennsylvania	10.RD	4300487126	\$ -	\$ 20,389
Commonwealth of Pennsylvania	10.RD	ME 44112431	-	143,394
Commonwealth of Pennsylvania	10.RD	ME 44113182	-	(1)
Commonwealth of Pennsylvania	10.RD	ME 44134385	-	687
Commonwealth of Pennsylvania	10.RD	ME 44144950	-	11,323
Commonwealth of Pennsylvania	10.RD	ME 44144951	-	36,498
Commonwealth of Pennsylvania	10.RD	ME 44144952	-	39,311
Commonwealth of Pennsylvania	10.RD	ME 44144965	-	37,321
Commonwealth of Pennsylvania	10.RD	ME 44155555	-	5,232
Commonwealth of Pennsylvania	10.RD	ME 44155556	-	22,068
Commonwealth of Pennsylvania	10.RD	ME 44155557	-	14,990
Total – Department of Agriculture			-	331,212
<u>Department of Commerce:</u>				
Commonwealth of Pennsylvania	11.RD	4100068367	-	25,708
Commonwealth of Pennsylvania	11.RD	4300481646	-	60,000
Total - Department of Commerce			-	85,708
<u>Department of the Interior:</u>				
Commonwealth of Pennsylvania	15.RD	1434-03HQRU1548	-	126,515
Commonwealth of Pennsylvania	15.RD	4000018425	-	(22,951)
Commonwealth of Pennsylvania	15.RD	4100053520	-	25,024
Commonwealth of Pennsylvania	15.RD	4100061794	-	46,575
Commonwealth of Pennsylvania	15.RD	4100067192	-	166,044
Commonwealth of Pennsylvania	15.RD	4100068638	-	193,767
Commonwealth of Pennsylvania	15.RD	----	-	10,417
Total – Department of the Interior			-	545,391

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
<u>Department of Justice:</u>				
Commonwealth of Pennsylvania	16.RD	21186	-	45,595
Total – Department of Justice:			-	45,595
<u>Department of Transportation:</u>				
Commonwealth of Pennsylvania	20.RD	4300374902	-	40,546
Commonwealth of Pennsylvania	20.RD	4300453751	-	84,580
Total – Department of Transportation			-	125,126
<u>Environmental Protection Agency:</u>				
Commonwealth of Pennsylvania	66.RD	175569	-	26,972
Commonwealth of Pennsylvania	66.RD	4300397792	97,896	104,145
Commonwealth of Pennsylvania	66.RD	4300407852	-	19,317
Commonwealth of Pennsylvania	66.RD	4300418397	2,988	22,708
Commonwealth of Pennsylvania	66.RD	4300422968	-	29,986
Commonwealth of Pennsylvania	66.RD	4300452803	-	49,950
Commonwealth of Pennsylvania	66.RD	4300489658	-	37,242
Total - Environmental Protection Agency			100,884	290,320
<u>Department of Energy:</u>				
Commonwealth of Pennsylvania	81.RD	4300419387	-	1,763
Commonwealth of Pennsylvania	81.RD	4300462077	-	110,928
Total – Department of Energy			-	112,691
<u>Department of Education:</u>				
Commonwealth of Pennsylvania	84.RD	062-130042	-	41
Commonwealth of Pennsylvania	84.RD	062-140042	-	28
Commonwealth of Pennsylvania	84.RD	062-150042	-	79,003
Commonwealth of Pennsylvania	84.RD	062-160042	-	43,253
Commonwealth of Pennsylvania	84.RD	071-800025	226,564	252,989
Total – Department of Education			226,564	375,314
<u>Department of Health and Human Services:</u>				
Commonwealth of Pennsylvania	93.RD	4100070981	-	30,840
Total - Department of Health and Human Services			-	30,840
Total Research and Development - Pass-Through Funds - Commonwealth of Pennsylvania			\$ 327,448	\$ 1,942,197

5. RESEARCH AND DEVELOPMENT - PASS-THROUGH FUNDS - OTHER INSTITUTIONS

<u>Department of Agriculture:</u>				
The American Chestnut Foundation	10.RD	2016-67013-24581	\$ -	\$ 23,472
Brigham Young University	10.RD	2011-67009-20366	-	7,294
Cornell University	10.RD	2012-34383-19759	-	522
Cornell University	10.RD	2012-37620-19697	-	22,115
Cornell University	10.RD	2014-34383-22028	-	15,000
Cornell University	10.RD	2014-48757-22611	-	695
Cornell University	10.RD	2014-51106-22080	-	41,999
Cornell University	10.RD	2015-70006-24274	-	2,074
Cornell University	10.RD	----	-	14,811
Geisinger Health System	10.RD	59-1950-4-002	-	171,466
Giner Inc.	10.RD	2015-33610-23592	-	5,558

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
Kansas State University	10.RD	2013-68004-20378	-	9,503
Kansas State University	10.RD	2015-39575-24367	-	5,793
Kansas State University	10.RD	----	-	505,198
Michigan State University	10.RD	2012-51181-20105	-	90,683
Michigan State University	10.RD	2014-51181-22380	-	119,570
Michigan State University	10.RD	----	-	343,492
Montana State University	10.RD	2015-68006-22850	-	40,121
New York University	10.RD	2012-68006-30177	-	22,300
North Carolina State University	10.RD	2014-38502-22598	-	7,137
North Carolina State University	10.RD	----	-	16,334
Pennsylvania Co-Operative Potato Growers, Inc.	10.RD	ME 4413-4394	-	12,987
Pennsylvania Co-Operative Potato Growers, Inc.	10.RD	ME 4414-4956	-	44,514
Purdue University	10.RD	2012-51181-19878	-	202,160
Purdue University	10.RD	59-5000-5-0011	-	28,062
Rochester Institute of Technology	10.RD	2012-68001-19603	-	52,187
Rutgers University	10.RD	2015-34383-23812	-	3,999
South Dakota State University	10.RD	2014-38502-22598	-	33,267
Tennessee State University	10.RD	2011-38821-30966	-	16,089
University of Arkansas	10.RD	58-8250-4-002	-	34,021
University of California, Riverside	10.RD	2011-68004-30154	-	45,803
University of Georgia	10.RD	2014-51181-22383	-	2,439
The University of Maine	10.RD	2013-34141-21392	-	6,676
The University of Maine	10.RD	2014-34141-22266	-	24,532
The University of Maine	10.RD	2015-34141-23964	-	15,253
University of Maryland	10.RD	2011-67007-20017	-	38,943
University of Maryland	10.RD	2014-70006-22484	-	3,550
University of Maryland	10.RD	2015-70006-24277	-	1,822
University of Maryland	10.RD	LNE 14-338-29001	-	5,547
University of Minnesota	10.RD	2011-67003-30343	-	173,256
University of Minnesota	10.RD	2013-41520-21529	217,816	440,327
University of New Hampshire	10.RD	LNE 13-323	-	30,397
University of Southern California	10.RD	2012-68001-19592	-	15,622
The University of Vermont	10.RD	2012-38640-19543	-	30,516
The University of Vermont	10.RD	2013-38640-20895	-	126,650
The University of Vermont	10.RD	2014-38640-22161	-	110,820
The University of Vermont	10.RD	2014-68006-21873	-	8,897
The University of Vermont	10.RD	2015-38640-23777	-	6,125
The University of Vermont	10.RD	2015-68006-22929	-	1,842
The University of Vermont	10.RD	----	-	9,787
University of Wisconsin - Madison	10.RD	2012-68002-20525	-	179,259
University of Wisconsin - Madison	10.RD	2014-06507-05	-	10,677
The Xerces Society	10.RD	69-3A75-12-253	-	903
Virginia Polytechnic Institute and State University	10.RD	2010-51181-21599	-	8,407
Washington State University	10.RD	2011-68005-30416	-	138,277
West Virginia University	10.RD	2010-CR-11062759-030	-	24,702
World Cocoa Foundation	10.RD	58-3148-2-126	-	164
Total – Department of Agriculture			<u>217,816</u>	<u>3,353,616</u>
<u>Department of Commerce:</u>				
Colorado State University	11.RD	----	-	107,820
ERT, Inc.	11.RD	----	-	90,128
Global Science & Technology, Inc.	11.RD	----	-	13,842

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
University Corporation for Atmospheric Research	11.RD	NA11NWS4670004	-	4,244
University of Illinois	11.RD	NA11OAR4170052	-	9,217
University of Illinois	11.RD	----	-	25,581
University of Louisville	11.RD	70NANB13H192	-	22,318
University of Michigan	11.RD	NA12OAR4320071	-	(34)
University of Minnesota	11.RD	NA14OAR4170291	-	3,412
Total – Department of Commerce			-	276,528
<u>Department of Defense:</u>				
ACI Technologies, Inc.	12.RD	N00014-08-D-0758	-	(220)
Adaptive Methods	12.RD	N00024-16-C-4032	-	15,803
Advanced Powder Solutions, Inc.	12.RD	N00014-14-P-1136	-	(2,144)
Advanced Powder Solutions, Inc.	12.RD	N68335-15-C-0294	-	14,829
Advanced Technology International	12.RD	N00014-11-D-0504	-	160,304
Advanced Technology International	12.RD	N00014-11-D-0504 DO-004	-	325,075
Advanced Technology International	12.RD	N00014-14-D-0377 DO-002	-	32,813
Advanced Technology International	12.RD	W15QKN-09-9-1001	-	50,431
Advanced Technology International	12.RD	W15QKN-10-9-0003	63,272	245,107
Advanced Technology International	12.RD	----	361,878	1,543,224
Aerojet Rocketdyne	12.RD	FA8650-14-2-5214	-	12,005
Altex Technologies	12.RD	----	-	29,596
American GNC Corporation	12.RD	N132-144-0929	-	(198)
Anatom, Inc.	12.RD	N00014-16-P-2019	-	18,222
Analysis, Design & Diagnostics, Inc.	12.RD	N00014-15-P-1170	-	26,812
Antenna Research Associates, Inc.	12.RD	HDTRA1-13-C-0095	7,500	28,794
Applied Optimization, Inc.	12.RD	N68335-15-C-0212	-	21,115
Applied Physical Sciences Corporation	12.RD	N00014-14-C-0041	-	53,176
Applied Physical Sciences Corporation	12.RD	N66001-14-C-4031	-	2,787
Applied Research Associates, Inc.	12.RD	HDTRA1-14-D-0003/0008	-	37,027
Applied Technology, Inc.	12.RD	N00178-07-D-4963	-	225,772
ATI, Inc.	12.RD	N68335-15-C-0291	-	20,017
AVX Aircraft Company	12.RD	W911W6-16-C-0005	-	6,756
Booz Allen Hamilton Inc.	12.RD	W15P7T-06-D-E401 DO-016	-	(1,305)
Booz Allen Hamilton Inc.	12.RD	----	-	63,041
Boston University	12.RD	----	-	49,067
Brimrose Technology Corporation	12.RD	HQ0147-14-C-7904	-	(938)
Brimrose Technology Corporation	12.RD	HQ0147-15-C-7401	-	138,243
Carnegie Institution for Science	12.RD	W31P4Q-13-1-0005	-	256,591
Carnegie Mellon University	12.RD	N66001-13-2-4040	-	182,858
CFD Research Corporation	12.RD	W81XWH-14-C-0003	-	50,499
CFD Research Corporation	12.RD	W81XWH-14-C-0045	-	80,486
Charles River Analytics Inc.	12.RD	N00014-12-D-0583	-	62,241
Coherent Technical Services, Inc.	12.RD	N00014-15-P-1167	-	38,380
Columbia University	12.RD	HDTRA-11-0027	-	20,597
Combustion Science & Engineering, Inc.	12.RD	FA9300-15-M-1502	-	44,969
Concurrent Technologies Corporation	12.RD	N00014-10-D-0062/0008	-	8,252
Concurrent Technologies Corporation	12.RD	N00014-10-D-0062/0013	-	31,946
Cortana	12.RD	N68335-14-C-0180	-	68,647
Cortana	12.RD	N68335-15-C-0142	-	58,657
CRAFT Tech	12.RD	AF141-076	-	(146)
CRAFT Tech	12.RD	N68335-14-C-0342	-	181
CRAFT Tech	12.RD	----	-	25,039
Curtiss-Wright Corporation	12.RD	N00024-09-C-2014	-	91,562
Curtiss-Wright Corporation	12.RD	N00104-09-G-A756	-	(328)
Curtiss-Wright Corporation	12.RD	N00406-13-C-3012	-	185,205

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
Curtiss-Wright Corporation	12.RD	----	-	71,710
D&S Consultants, Inc. (DSCI)	12.RD	W15P7T-09-D-P012	-	(9,955)
DE Technologies, Inc.	12.RD	W911NF-13-C-0046	-	(1)
Defense Engineering Corporation	12.RD	----	-	132,971
Delaware State University	12.RD	----	-	86,291
Digital Solid State Propulsion Inc.	12.RD	----	-	14,411
Dynetics, Inc.	12.RD	W9113M-14-D-0002	-	222,187
Engility Corporation	12.RD	N00178-04-D-4143 DO-4Y02	-	84,343
EWI	12.RD	FA8650-12-2-7230	-	42,936
Excet, Inc.	12.RD	N00173-13-D-2012-0013	-	(30)
Exelis, Inc.	12.RD	N00173-12-D-2023	-	12,850
Fondation Merieux USA	12.RD	W911QY-15-P-0309	-	160,344
Fondation Merieux USA	12.RD	----	-	25,983
Gear Research Institute	12.RD	W56HZV-15-C-0197	-	40,025
Gear Research Institute	12.RD	W911QX-14-C-0071	-	60,806
Gear Research Institute	12.RD	W911W6-09-D-0014	-	5
Gear Research Institute	12.RD	W911W6-09-D-0014/0001	-	(193)
Gear Research Institute	12.RD	W911W6-14-C-0025	-	(156)
General Dynamics Corporation	12.RD	B11-2011076G005	-	18,218
General Dynamics Corporation	12.RD	FA8650-11-D-5702 TO-0009	-	345,040
General Dynamics Corporation	12.RD	N61331-11-C-0017	-	335,414
General Dynamics Corporation	12.RD	----	305	149
General Dynamics Electric Boat	12.RD	N00014-02-C-2101	-	6,404
General Dynamics Electric Boat	12.RD	N00024-03-C-2101	-	64,112
General Dynamics Electric Boat	12.RD	N00024-13-C-2128	-	44,985
General Dynamics Electric Boat	12.RD	----	-	48,183
General Electric	12.RD	FA8650-12-2-7230	-	44,460
General Electric	12.RD	W31P4Q-14-2-0001	-	30,251
General Electric	12.RD	----	-	143,193
General Lasertronics Corporation	12.RD	M00146-14-P-9015	-	2,775
George Mason University	12.RD	----	-	300,485
Green Dynamics Inc.	12.RD	W31P4Q-14-2-0001	-	105,659
H.C. Materials Corporation	12.RD	N00014-12-C-0368	-	239
Hadal, Inc.	12.RD	N00014-14-P-1128	-	19,490
Harris Corporation	12.RD	N00173-10-C-2021	-	73,583
Henry M. Jackson Foundation for the Advancement of Military Medicine	12.RD	HU0001-15-2-0003	-	6,889
Hepburn and Sons, LLC	12.RD	TIA 2015-446	-	22,726
Herman Advanced Engineering, Inc.	12.RD	FA8650-09-D-2945	-	1
Herman Advanced Engineering, Inc.	12.RD	N68335-10-C-0383	-	(380)
Honeywell International Inc.	12.RD	FA8650-12-2-7230	-	74,419
Howard University	12.RD	W911NF-14-1-0421	-	44,508
Huntington Ingalls Industries, Inc.	12.RD	N00024-00-C-2217	-	37,943
Huntington Ingalls Industries, Inc.	12.RD	----	-	(63)
Hydroid, Inc.	12.RD	N62306-08-D-9003	-	(18)
Hydroid, Inc.	12.RD	ONR-09-C-0137	-	4,220
IAP Research, Inc.	12.RD	W911QX-14-C-0043	-	(156)
IBM	12.RD	----	-	175,525
Image Acoustics, Inc.	12.RD	N00014-09-C-0491	-	(123)
Image Acoustics, Inc.	12.RD	N00014-14-P-1127	-	(514)
Innovative Scientific Solutions, Inc.	12.RD	N00014-11-C-0468	-	(562)
Intelligent Optical Systems, Inc.	12.RD	N68335-15-0230	-	10,969
Johns Hopkins University	12.RD	HR0011-12-D-0001	-	165,826
Johns Hopkins University	12.RD	N00024-13-D-6400	-	12,591
Johns Hopkins University	12.RD	W81XWH-09-2-0108	-	37,359
KCF Technologies, Inc.	12.RD	N00024-15-P-4525	-	26,375

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
KCF Technologies, Inc.	12.RD	W81XWH-13-C-0132	-	55,471
Kistler Instrument Corp.	12.RD	N00024-11-C-2103	-	(997)
Kyma Technologies	12.RD	----	-	72,933
Lehigh University	12.RD	FA86501227230	-	(11)
Leidos	12.RD	FA8650-12-D-1377/001	-	27,551
Leidos	12.RD	N00173-13-F-2007	-	25,421
Leidos	12.RD	----	-	63,826
LMI Research Institute	12.RD	SP4701-14-D-7015	-	77,689
Lockheed Martin Corporation	12.RD	N00024-13-C-2128	-	57,744
Luna Innovations Inc.	12.RD	HQ0147-15-C-7305	-	30,000
Lynntech Inc.	12.RD	N00014-15-C-0088	-	72,957
Massachusetts Institute of Technology	12.RD	W911NF-13-D-0001, T.O. 8	-	71,113
Massachusetts Institute of Technology	12.RD	----	-	164,890
Material Sciences Corporation	12.RD	N00024-11-C-4198	-	(55)
Matrix Research Inc.	12.RD	----	-	82,088
McKean Defense	12.RD	N00178-04-D-4078 EHP6	-	206
Medico Industries, Inc.	12.RD	----	-	43
MetroLaser, Inc.	12.RD	FA8650-15-C-2556	-	42,987
Momentive Performance Materials Inc.	12.RD	----	-	(507)
National Center for Defense Manufacturing and Machining	12.RD	FA8650-12-2-7230	401,283	1,595,335
National Center for Manufacturing Sciences	12.RD	----	-	(1,952)
Navmar Applied Sciences Corporation	12.RD	W911QXO-12-C-0021	-	(99)
Navmar Applied Sciences Corporation	12.RD	----	-	14,068
New York University	12.RD	N00014-12-1-0912	-	55,400
Nexagen Networks, Inc.	12.RD	W15P7T-06-D-E401 DO 0016	-	(2,755)
NextGen Aeronautics	12.RD	D14PC00142	-	(88)
NextGen Aeronautics	12.RD	W15QKN-14-C-0002	-	8,266
NextGen Aeronautics	12.RD	W15QKN-15-C-0029	-	73,888
Neya Systems LLC	12.RD	N00024-14-P-0041	-	397
Neya Systems LLC	12.RD	W31P4Q-08-C-0123	-	153,000
Noise Control Engineering, LLC	12.RD	N00014-14-P-1177	-	(591)
North Carolina State University	12.RD	H94003-11-2-1104	-	(2)
North Carolina State University	12.RD	----	-	215,263
Northeastern University	12.RD	W911NF-10-2-0098	-	78,065
Northern Illinois University	12.RD	W56HZV-09-C-0656	-	(31)
Northrop Grumman Corporation	12.RD	30062448	-	12,734
Northrop Grumman Corporation	12.RD	B14-2013308G001	-	(143)
Northrop Grumman Corporation	12.RD	N00178-04-D-4091/N410	-	130,033
Northrop Grumman Corporation	12.RD	----	-	11,019
OASIS, Inc.	12.RD	N00014-13-P-1166	-	1,667
OASIS, Inc.	12.RD	N00014-14-C-0315	-	141,311
Oceaneering International, Inc.	12.RD	N00024-13-C-6403	-	10,315
Oceaneering International, Inc.	12.RD	N00173-14-D-2017	-	185,611
Oceaneering International, Inc.	12.RD	N00173-14-D-2017/0004	-	44,570
Oceaneering International, Inc.	12.RD	SNY088-001	-	1,063,814
Oceaneering International, Inc.	12.RD	----	-	49,132
Optomec	12.RD	FA8650-12-2-7230	-	113,027
Ormond LLC	12.RD	W911W6-10-C-0065	-	(746)
Physical Sciences Inc.	12.RD	HQ0147-15-C-7310	-	27,550
Polarix	12.RD	W31P4Q-14-C-0007	-	(14,001)
PolyK Technologies	12.RD	N00014-14-C-0205	-	167,141
Princeton University	12.RD	N00014-12-1-0875	-	21,765
Princeton University	12.RD	N00014-12-1-0962	-	21,600
Princeton University	12.RD	N66001-11-1-4110	-	90,646

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
Princeton University	12.RD	W911NF-12-1-0461	-	67,012
Prometheus Innovations LLC	12.RD	N00024-12-C-4509	912	957
PROTEUS Technologies	12.RD	N00014-12-C-0554	-	(86)
Pueblo Economic Development Corp	12.RD	W911NF-11-2-0014	-	(13)
Raytheon BBN Technologies Corporation	12.RD	----	-	979,842
ReliaCoat Technologies, LLC	12.RD	W15QKN-13-C-0067	-	(78)
Rice University	12.RD	FA9550-12-1-0035	-	185,542
Rice University	12.RD	FA9550-14-1-0268	-	20,951
Rice University	12.RD	W911NF-11-1-0632	-	679,846
Rolls-Royce	12.RD	N00014-09-D-0680	-	231,434
Sabre Systems, Inc.	12.RD	N00178-05-D-4546 4Y02	-	(126)
ScienceTomorrow, LLC	12.RD	N00014-13-P-1130	-	(277)
Sikorsky Aircraft Corporation	12.RD	W15QKN-10-9-0003	-	21,999
Sikorsky Aircraft Corporation	12.RD	W911W6-11-2-0008	-	(2,504)
Southwest Research Institute	12.RD	----	-	32,755
Stanford University	12.RD	FA9550-14-10317	-	263,524
Stanford University	12.RD	HDTRA1-14-1-0036	-	80,374
Steel Founders' Society of America	12.RD	W911NF-12-2-0033	-	(5,045)
STEP Tools, Inc.	12.RD	W31P4Q-14-2-0001	-	228,897
Stevens Institute of Technology	12.RD	HQ0034-13-D-0004	-	(578)
Stevens Institute of Technology	12.RD	HQ0034-13-D-0004 TO-0037	-	24,374
STIMULUS Engineering Services, Inc.	12.RD	N00178-08-D-5603	-	14,012
Stony Brook University	12.RD	W911NF-09-1-0392	-	(395)
Stratonics, Inc.	12.RD	N00014-12-C-0221	-	15,692
Stratonics, Inc.	12.RD	SP4701-15-C-0108	-	18,144
Structured Materials Industries, Inc.	12.RD	W911NF-14-C-0163	-	135,620
SURVICE Engineering Company	12.RD	W91CRB-09-D-0027	-	266
Technical Data Analysis, Inc.	12.RD	N68335-13-C-0124	-	2,957
Technion - Israel Institute of Technology	12.RD	444/0483169	-	8,140
TechnoSoft, Inc.	12.RD	N00014-13-P-1199	-	68,257
TelAztec LLC	12.RD	FA9451-15-D-0019	-	28,850
Texas A&M Research Foundation	12.RD	FA9550-15-1-0149	-	62,121
Texas A&M University	12.RD	FA9550-12-1-0090	-	8,944
Texas Biochemicals Inc.	12.RD	FA9550-15-C-0011	-	50,922
Toyon Research Corporation	12.RD	FA8650-15-M-1944	-	57,597
Toyon Research Corporation	12.RD	N00014-13-C-0086	-	59,999
TRS Technologies, Inc.	12.RD	N00014-15-P-1076	-	21,847
Twinleaf LLC	12.RD	----	-	(2,964)
UES, Inc.	12.RD	FA8650-10-D-5226 DO 0001	-	(240)
UES, Inc.	12.RD	FA8650-10-D-5226 DO-0004	-	1,070
UES, Inc.	12.RD	FA8650-11-D-5400 TO-003	-	196,309
UES, Inc.	12.RD	FA8650-14-C-5193	-	137,998
UES, Inc.	12.RD	FA8650-9-D-5037 TASK 0020	-	7,683
UI LABS	12.RD	W31P4Q-14-2-0001	-	631,077
Ultra Communications, Inc.	12.RD	N00024-14-C-4060	-	4,240
Ultramet	12.RD	FA9300-12-C-2003	-	45,464
United Technologies Research Center	12.RD	FA8650-12-2-7230	-	384
Universal Technology Corporation	12.RD	FA8650-11-D-5800	-	14,974
Universal Technology Corporation	12.RD	FA8650-11-D-5800_TO 0005	-	31,202
The University of Arizona	12.RD	FA9550-14-1-0073	-	(1,987)
The University of Chicago	12.RD	FA9550-15-1-0162	-	86,853
University of Colorado	12.RD	W31P4Q-13-1-0015	-	86,889
University of Colorado	12.RD	W81ZWH-12-1-0090_NCE	-	12,935
University of Connecticut	12.RD	N00014-10-1-0944	-	176,752
University of Dayton Research Institute	12.RD	FA8650-10-2-2934	-	93,712

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
University of Illinois	12.RD	FA9550-12-1-0471	-	75,998
University of Maryland	12.RD	FA95501310126	-	112,639
University of Michigan	12.RD	N65540-10-C-0003	-	(198)
University of Minnesota	12.RD	2013-MA-2381	-	180,742
University of Minnesota	12.RD	FA9550-10-1-0563	-	28,653
University of Minnesota	12.RD	N00014-12-1-1030	-	54,747
The University of Mississippi	12.RD	HDTRA1-14-C-0130	-	244
The University of Mississippi	12.RD	W9113M-06-C-0029	-	(339)
The University of North Carolina at Charlotte	12.RD	W911NF-13-1-0332	-	34,836
University of Notre Dame	12.RD	2013-MA-2383	-	710,423
The University of Tennessee, Knoxville	12.RD	N00014-15-1-2269	-	64,006
The University of Tennessee, Knoxville	12.RD	W911W6-12-2-0003	-	32,318
The University of Texas at Austin	12.RD	FA95601410089	-	70,543
The University of Texas at Austin	12.RD	W81XWH-11-2-0222	-	24,035
The University of Texas Health Science Center at San Antonio	12.RD	W81XWH1320063	-	24,902
The University of Utah	12.RD	W911NF-12-2-0023	-	163,191
University of Washington	12.RD	HDTRA1-10-1-0075	-	831
Vertical Lift Consortium	12.RD	NRTC-FY15-R-01	-	60,746
Vertical Lift Consortium	12.RD	W911W6-12-2-0003	-	62,741
Voxtel, Inc.	12.RD	FA8650-12-C-7226	-	30,198
Voxtel, Inc.	12.RD	FA9451-15-M-0532	-	45,000
W.S. Darley & Co.	12.RD	GS-07F-0387Y	-	4,634
Wagner Associates	12.RD	N00014-10-C-0525	-	(3,595)
Wagner Associates	12.RD	N00014-13-C-0625	-	21,049
Wagner Associates	12.RD	N00024-11-C-4188	-	44
Wagner Associates	12.RD	N00024-13-P-4010	-	(1,015)
Weidlinger Associates, Inc.	12.RD	N00014-14-P-1209	-	13,905
Worcester Polytechnic Institute	12.RD	W911NF-15-2-0024	-	34,421
WR Systems, Ltd.	12.RD	N65236-10-D-2839	-	85,541
Wyle, Inc.	12.RD	HC1047-05-D-4005	-	15,653
Youngstown State University	12.RD	FA8650-16-2-5700	-	5,836
Total – Department of Defense			835,150	19,410,960
<u>Department of the Interior:</u>				
California University of Pennsylvania	15.RD	AV13-PA01	-	4,000
Florida Fish and Wildlife Conservation Commission	15.RD	----	-	37,949
University of Illinois	15.RD	G16AP00001	-	33,741
University of Maryland	15.RD	F12AP01037	-	6,867
University of Maryland Center for Environmental Science	15.RD	F12AP01037	3,365	6,081
Wildlife Management Institute	15.RD	----	-	9,539
Total – Department of the Interior			3,365	98,177
<u>Department of Justice:</u>				
H.F. Lenz Company	16.RD	J-FBI-12-137	-	(740)
Johns Hopkins University	16.RD	12-190	-	59,190
RTI International	16.RD	2011-RY-BX-0003	-	62,728
Tri County Community Action	16.RD	----	-	53,941
Total – Department of Justice			-	175,119
<u>Department of Labor:</u>				
Abt Associates	17.RD	GS-10F-0086K	-	30,197

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
County of Chester, Pennsylvania	17.RD	----	-	(46)
Total – Department of Labor			-	30,151
<u>Department of Transportation:</u>				
Applied Pavement Technology, Inc.	20.RD	DTFH61-10-D-00025	-	12,151
Mississippi State University	20.RD	DTRT12-G-UTC12	-	38,155
Mississippi State University	20.RD	----	-	30,811
Norfolk Southern Corporation	20.RD	----	-	93,376
San Jose State University Research Foundation	20.RD	DTRT12-G-UTC21	-	1,818
TechKnowServ	20.RD	DTRT5714C10018	-	103
TechKnowServ	20.RD	DTRT5715C10046	-	14,935
United Technologies Corporation - Pratt & Whitney Division	20.RD	DTFAWA-15-A-80010	-	294,534
VHB	20.RD	DTFH61-10-D-00022	-	7,183
VHB	20.RD	DTFH61-13-D-00001	-	8,769
Washington State Department of Transportation	20.RD	----	-	88,761
Total – Department of Transportation			-	590,596
<u>General Services Administration:</u>				
High Performance Technologies, Inc.	39.RD	GS04T09DBC0017	-	25,565
Total – General Services Administration			-	25,565
<u>National Aeronautics and Space Administration:</u>				
Applied Physical Sciences Corporation	43.RD	NNL15AA00C	-	77,685
Battelle Pacific Northwest National Laboratory	43.RD	NNH13CH25C	-	12,187
Brimrose Technology Corporation	43.RD	NNX12CB08C	-	(325)
Brimrose Technology Corporation	43.RD	NNX15CL50P	-	27,414
California Institute of Technology	43.RD	----	-	34,247
Hamilton Sundstrand Pacific Aerospace	43.RD	NNJ10TB01C	-	15,941
Hypertherm Inc.	43.RD	NNX11CG62P	-	(4,351)
I.M. Systems Group, Inc.	43.RD	NNX15AF38G	-	47,737
Jacobs ESSSA Group	43.RD	NNM12AA41C	-	29,852
Jet Propulsion Laboratory	43.RD	NNN12AA01C	-	324,685
Jet Propulsion Laboratory	43.RD	----	-	386,641
Michigan Technological University	43.RD	NNX14AN78G	-	18,256
QorTek	43.RD	----	-	31,097
Smithsonian	43.RD	NNX13AD46G	-	14,224
Smithsonian Astrophysical Observatory	43.RD	NAS8-03060	-	907,266
Smithsonian Astrophysical Observatory	43.RD	----	-	73,821
Solid State Ceramics Inc.	43.RD	NNX15CS14P	-	44,983
Space Telescope Science Institute	43.RD	NAS5-26555	-	557,326
Space Telescope Science Institute	43.RD	----	-	77,529
Terves Inc.	43.RD	NNX15CK16P	-	60,334
Ultramet	43.RD	----	-	27,146
The University of Chicago	43.RD	NNX16AB44G	-	5,015
University of Georgia	43.RD	NNX13AF42G	-	17
University of Hawaii	43.RD	NNX13AF20G	-	46,070
University of Montana	43.RD	NNX11A047G	-	2,028
University of Washington	43.RD	NNA13AA93A	-	5,678
Worcester Polytechnic Institute	43.RD	NNC14AA01A	-	(1,357)

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
Wyle, Inc.	43.RD	NND15AA05C	-	75,601
Total – National Aeronautics and Space Administration			-	2,896,747
<u>National Science Foundation:</u>				
Actuated Medical, Inc.	47.RD	IIP-1353176	-	3,000
Ascent Bio-Nano Technologies, Inc.	47.RD	IIP-1346440	-	729
Astronomical Society of the Pacific	47.RD	DRL-1217441	-	27,465
Boise State University	47.RD	----	-	14,289
California Institute of Technology	47.RD	PHY-0757058	-	323
California Institute of Technology	47.RD	----	-	169,326
California State University, Los Angeles	47.RD	DMR-1523588	-	5,062
Carleton College	47.RD	----	-	223,672
Columbia University	47.RD	OCE-1202632	-	116,649
Columbia University	47.RD	----	-	49,195
Consortium for Ocean Leadership	47.RD	CA OCE-0652315	-	(1)
Cornell University	47.RD	0335765	-	228,745
Cornell University	47.RD	----	-	52,606
CRDF Global	47.RD	----	-	(41)
Duke University	47.RD	DBI-0830093	-	6,855
Georgia State University	47.RD	CHE-1404633	-	4,013
Harvard University	47.RD	DRL-1503395	-	48,683
Harvard University	47.RD	----	-	29,629
Impulse Technology, LLC	47.RD	----	-	(97)
Iowa State University	47.RD	----	-	66,424
Lignolink, Inc.	47.RD	IIP-1353109	-	15,650
Louisiana State University	47.RD	DEB-1316334	-	88,838
Museum of Science, Boston	47.RD	----	-	15,925
Nascent Devices LLC	47.RD	IIP-1346363	-	(98)
New England Aquarium	47.RD	----	-	22,650
New York University	47.RD	----	-	18,799
North Carolina State University	47.RD	EEC-1160483	-	344,658
North Carolina State University	47.RD	NCSU 2013-1690	-	21,900
North Carolina State University	47.RD	----	-	317,831
Northwestern University	47.RD	----	-	13,950
The Ohio State University	47.RD	DMR-1420451	-	68,091
The Ohio State University	47.RD	----	-	135,516
Oregon State University	47.RD	OISE-0968391	-	9,437
Oregon State University	47.RD	----	-	32,869
Peak Diagnostics LLC	47.RD	1521179	-	66,765
PolyK Technologies	47.RD	IIP-1456204	-	11,733
Polymer Exploration Group, LLC	47.RD	----	-	10,815
Rensselaer Polytechnic Institute	47.RD	EFRI-1433311	-	131,605
Solid State Ceramics Inc.	47.RD	1448918	-	85,883
Stanford University	47.RD	1518681	-	49,850
Thermin Industries LLC	47.RD	IIP-1447975	-	38,872
Trinity University	47.RD	CBET-1160217	-	(3,466)
University of California, Irvine	47.RD	CHE-1414466	-	136,784
University of California, Santa Barbara	47.RD	CCF-1500848	-	99,271
University of Colorado	47.RD	AGS1135446	-	142,175
University of Colorado	47.RD	SES 11-32008	-	40,417
University of Florida	47.RD	DMR 12-07293	-	123,628
University of Illinois	47.RD	EAR-1331906	-	5,724
The University of Kansas	47.RD	ANT0424589	-	201,528
University of Maryland	47.RD	EFRI-1452045	-	15,389
University of Maryland	47.RD	IOS1025837	-	1,922

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
University of Maryland	47.RD	MCB-1244303	-	33,147
University of Massachusetts Amherst	47.RD	SES 14-24210	-	43,227
University of Minnesota	47.RD	DBI-1147079	-	13,510
University of Missouri	47.RD	IOS 11-14484	-	41,360
University of New Hampshire	47.RD	EAR-1331841	-	23,017
The University of North Carolina at Chapel Hill	47.RD	1127914	-	74,463
The University of Oklahoma	47.RD	AGS-1143948	-	105,560
The University of Oklahoma	47.RD	AGS-1230114	-	12,781
University of Pennsylvania	47.RD	1542707	-	72,800
University of Southern California	47.RD	OCE-0939564	-	45,392
The University of Texas at Austin	47.RD	BCS-0964596	-	4,526
The University of Texas at Austin	47.RD	OCE-1135427	3,800	9,703
University of Virginia	47.RD	DEB-1237733	-	12,569
University of Wisconsin - Madison	47.RD	ANT-0937462	-	74,816
University of Wisconsin - Madison	47.RD	DMR-1234096	-	63,773
University of Wisconsin - Milwaukee	47.RD	PHY-1104371	-	153,776
Utah State University	47.RD	DUE-1122654	-	4,134
Virginia Polytechnic Institute and State University	47.RD	479483-19079	-	10,104
Virginia Polytechnic Institute and State University	47.RD	IIP-1160977	-	70,344
Virginia Polytechnic Institute and State University	47.RD	IOS-1238057	-	264,244
Washington University in St. Louis	47.RD	MCB-1331194	-	90,356
Total – National Science Foundation			3,800	4,535,039
<u>Environmental Protection Agency:</u>				
Amec Foster Wheeler	66.RD	----	-	6,891
Delaware Valley Regional Planning Commission	66.RD	----	-	8,780
MACTEC Engineering and Consulting	66.RD	----	-	16,658
Maryland Department of the Environment	66.RD	----	-	2,156
National Fish and Wildlife Foundation	66.RD	FR.2413	-	37,361
Susquehanna River Basin Commission	66.RD	----	-	10,482
Tetra Tech, Inc.	66.RD	EP-C-12-060	-	1,644
Tetra Tech, Inc.	66.RD	----	-	15,113
University of Illinois	66.RD	EPA-R5-GL2012-1	-	7,290
University of Minnesota	66.RD	GL-00E00813	-	(51)
University of Minnesota	66.RD	----	-	3,745
The University of Texas at Austin	66.RD	83521601	-	23,030
Total – Environmental Protection Agency			-	133,099
<u>Department of Energy:</u>				
Advanced Cooling Technologies, Inc.	81.RD	----	-	15,924
Aerojet Rocketdyne	81.RD	----	-	95,406
Air Products and Chemicals, Inc.	81.RD	DE-FE0012065	-	48,757
Altex Technologies	81.RD	DE-FE0010427	-	4,109
Altex Technologies	81.RD	DE-SC0013823	-	35,652
Altex Technologies	81.RD	----	-	48,777
Argonne National Laboratory	81.RD	DE-AC02-06C11357	-	177,625
Bandgap Engineering, Inc.	81.RD	DE-EE0005323	-	(13,584)
Battelle Energy Alliance, LLC	81.RD	DE-AC07-051D14517	(28,420)	(9,241)
Battelle Energy Alliance, LLC	81.RD	----	-	24,492
Battelle Memorial Institute	81.RD	DE-AC05-00OR22725	-	116,270

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
Battelle Memorial Institute	81.RD	DE-AC05-76RL01830	-	40,395
Battelle Memorial Institute	81.RD	DE-AC07-05ID14517	-	(14,475)
Battelle Memorial Institute	81.RD	DE-AC52-07NA27344	-	49,569
Battelle Memorial Institute	81.RD	----	-	277,930
Battelle Pacific Northwest National Laboratory	81.RD	111923	-	26,383
Battelle Pacific Northwest National Laboratory	81.RD	6400012296	-	27,148
Battelle Pacific Northwest National Laboratory	81.RD	DE-AC05-76RL01830	-	18,242
Battelle Pacific Northwest National Laboratory	81.RD	----	-	4,226
Bechtel Bettis, Inc.	81.RD	----	-	167,043
Bettis Atomic Power Laboratory	81.RD	DE-NR0000031	-	58,853
Brookhaven National Laboratory	81.RD	----	-	38,535
Cardinal Engineering LLC	81.RD	----	-	10,185
Drexel University	81.RD	----	-	19,850
DRS Research	81.RD	----	-	189,667
EC Power	81.RD	----	-	54,777
Ford Motor Company	81.RD	DE-EE0005764	-	60,063
General Electric	81.RD	----	-	29,627
Georgia Institute of Technology	81.RD	DE-SC0012577	41,311	88,836
HICO Tech LLC	81.RD	DE-SC0013748	-	20,000
HiFunda LLC	81.RD	DE-SC0007544	-	6,931
Knolls Atomic Power Laboratory	81.RD	DE-NR0000031	-	148,349
Knolls Atomic Power Laboratory	81.RD	----	-	21
Lawrence Berkeley National Laboratory	81.RD	DE-AC02-05CH11231	-	72,871
Lawrence Berkeley National Laboratory	81.RD	----	-	27,530
Lawrence Livermore National Laboratory	81.RD	DE-AC52-07NA27344	-	57,900
Liquid Ion Solutions LLC	81.RD	DE-FE026464	-	69,212
Los Alamos National Laboratory	81.RD	DE-AC52-06NA25396	-	72,639
Massachusetts Institute of Technology	81.RD	DE-NE0008413	-	15,661
Massachusetts Institute of Technology	81.RD	DE-NE0008416	-	43,925
Massachusetts Institute of Technology	81.RD	----	-	48,469
Mikros Systems Corporation	81.RD	DE-SC0010175	-	55,029
National Renewable Energy Laboratory	81.RD	DE-AC36-08GO28308	-	156,319
Northwestern University	81.RD	----	-	148,057
Oak Ridge National Laboratory	81.RD	----	-	24,074
Ocean Renewable Power Company	81.RD	DE-AR0000658	-	48,281
Proton OnSite	81.RD	DE-EE0006958	-	71,198
Purdue University	81.RD	DE-NE0000696	-	94,609
Purdue University	81.RD	DE-NE0008259	-	96,700
Rensselaer Polytechnic Institute	81.RD	DE-NE0008440	-	37,007
Research Partnership to Secure Energy for America	81.RD	DE-AC26-07NT42677	187,390	486,798
RTI International	81.RD	DE-FE0007707	-	188,623
Sandia National Laboratories	81.RD	DE-AC04-94AL85000	-	(16,117)
Sandia National Laboratories	81.RD	----	-	179,125
Sapphire Energy, Inc.	81.RD	DE-EE0006315	-	69,293
Stanford University	81.RD	DE-SC0005171	412,023	761,398
Thomas Jefferson National Accelerator Facility	81.RD	----	-	81,290
UES, Inc.	81.RD	DE-SC0004356 0004	-	205,303
UES, Inc.	81.RD	DE-SC0011335	-	132,557
UES, Inc.	81.RD	DE-SC0013215	-	87,951

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
United Technologies Corporation - Pratt & Whitney Division	81.RD	DE-AR0000290	-	(990)
University Corporation for Atmospheric Research	81.RD	DE-EE0006016	-	22,123
University of California, Los Angeles	81.RD	DE-SC0006698	-	1,630
University of Illinois	81.RD	DE-SC0010778	-	63,798
University of Michigan	81.RD	DE-NA0002534	-	102,249
University of Michigan	81.RD	DE-NE0000639	-	230,341
The University of Oklahoma	81.RD	DE-SC0008811	-	38,610
University of South Florida	81.RD	DE-SC0012635	-	27,684
The University of Tennessee, Knoxville	81.RD	DE-AC07-05ID14517	-	199,957
University of Wisconsin - Madison	81.RD	DE-NE0008418	-	49,829
URS Corporation	81.RD	DE-FE0004000	-	(272)
URS Corporation	81.RD	----	-	18,003
Volvo Powertrain North America	81.RD	DE-EE0004232	274,243	438,551
Washington University in St. Louis	81.RD	DE-SC0001035	-	101,278
Washington University in St. Louis	81.RD	DE-SC0006870	-	3,646
Washington University in St. Louis	81.RD	DE-SC0012722	-	34,207
Total – Department of Energy			886,547	6,512,688
<u>Department of Education:</u>				
Project GRAD USA	84.RD	----	-	(30,591)
The State University of New York at Geneseo	84.RD	----	-	(7,043)
Texas A&M University	84.RD	R305A130704	-	(20,664)
Texas A&M University	84.RD	R305A130705-14	-	182,122
Texas A&M University	84.RD	R305A150057	-	163,329
University of Virginia	84.RD	R305A130701	-	6,624
University of Virginia	84.RD	----	-	215,186
Virginia Commonwealth University	84.RD	R305A110079	-	202,336
Virginia Commonwealth University	84.RD	R305A140434	-	105,638
Total – Department of Education			-	816,937
<u>Department of Health and Human Services:</u>				
Actuated Medical, Inc.	93.RD	2R44AG037214-03	-	59,175
Actuated Medical, Inc.	93.RD	2R44GM100535-02	-	23,794
Actuated Medical, Inc.	93.RD	----	-	4,822
AfaSci, Inc.	93.RD	5R42HL084990-03	-	65,194
Albert Einstein College of Medicine	93.RD	1R01-NS082432-01	-	26,524
Albert Einstein College of Medicine	93.RD	5P01AG003949-30	-	48,025
Albert Einstein College of Medicine	93.RD	P01AG003949	-	8,169
Albert Einstein College of Medicine	93.RD	R01ES010563	-	70,449
Albert Einstein College of Medicine	93.RD	R01NS082432	-	21,751
Albert Einstein College of Medicine	93.RD	----	-	7,184
American Thrombosis & Hemostasis Network	93.RD	5U01DD000761-03	-	(88)
American Thrombosis & Hemostasis Network	93.RD	----	-	770
Ascent Bio-Nano Technologies, Inc.	93.RD	1 R43 HL126441-01	-	7
Atoptix, LLC	93.RD	1R43GM113563-01	-	89,337
Augusta University	93.RD	----	-	39,106
Bassett Healthcare Network	93.RD	5U54OH007542-14	-	69,823
Bassett Healthcare Network	93.RD	5U54OH007542-15	-	190,865
Beth Israel Deaconess Medical Center	93.RD	R01AG030618	-	3,586
Boston Children's Hospital	93.RD	1 R01 HD085853-01	-	31,211

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
Boston Children's Hospital	93.RD	1R56AI084011-01	-	650
Boston Children's Hospital	93.RD	1U01HL107681-02	-	11,787
Boston Medical Center	93.RD	----	-	15,888
Brigham and Women's Hospital	93.RD	----	-	16,102
Brown University	93.RD	5 R01 ES020871-04	-	49,581
Carnegie Mellon University	93.RD	1R21AT008493-01A1	-	5,413
Carnegie Mellon University	93.RD	----	-	43,207
Case Western Reserve University	93.RD	----	-	11,665
Child Care Consultants, Inc.	93.RD	----	-	28,799
Children's Hospital of Philadelphia	93.RD	5U27DD00862-04	-	5,668
Children's Hospital of Philadelphia	93.RD	U10 CA98543-08	-	66,237
Children's Hospital of Philadelphia	93.RD	----	-	22,102
Children's Research Institute	93.RD	5P50AR060836-04	-	3,375
Cincinnati Children's Hospital Medical Center	93.RD	5R01 GM09973-03	-	797
Cincinnati Children's Hospital Medical Center	93.RD	R01HD069431	-	44,208
Cleveland Clinic Foundation	93.RD	4 R01 CA169117-04	-	42,458
Cleveland Clinic Foundation	93.RD	R01 CA169117	-	222,199
Cold Spring Harbor Laboratory	93.RD	----	-	29,656
Columbia University	93.RD	5R01 NS067443-05	-	3,958
Columbia University	93.RD	R21AL107G31	-	2,880
Cornell University	93.RD	R01AI092571	-	84,069
Cornell University	93.RD	----	-	31,492
Duke Clinical Research Institute	93.RD	----	-	15,369
Duke University	93.RD	2R01DA016903-11A1	-	36,719
Duke University	93.RD	HHSN275201000003I	-	96,973
Duke University	93.RD	----	-	9,179
The Emmes Corporation	93.RD	1U01NS026835-01A1	-	310
Essentia Institute of Rural Health	93.RD	----	-	63,604
Florida International University	93.RD	7R01MH083682-02	-	15,803
Geisinger Health System	93.RD	CD-1304-6987	-	18,821
Geisinger Health System	93.RD	----	-	50,092
GeneFluidics, Inc.	93.RD	1R01AI117059-01	-	206,759
GeneFluidics, Inc.	93.RD	1R44HD084033-01	-	42,933
GeneFluidics, Inc.	93.RD	5R01AI117059-02	-	34,204
The George Washington University	93.RD	R01CA169070	-	79,308
The George Washington University	93.RD	----	-	96,958
Georgetown University	93.RD	3U01AT003600-02S1	-	59,819
Gladstone Institutes	93.RD	5R01NS083390-03	-	47,914
Gladstone Institutes	93.RD	5U54NS091046-02	-	18,174
Harvard University	93.RD	5U19AI109764-02	-	85,388
Harvard University	93.RD	SU19A1109764-03	-	27,374
Icahn School of Medicine at Mount Sinai	93.RD	1 P01 HD078233-01A1	-	151,134
Icahn School of Medicine at Mount Sinai	93.RD	5 U01 DK062429-16	-	31,350
InvoTek, Inc.	93.RD	5R44HD059231-03	-	34,443
Iowa State University	93.RD	2R01DA013709	-	99,070
Iowa State University	93.RD	2R01DA013709-11	-	37,191
Iowa State University	93.RD	4R01DA0137909-15	-	19,768
John Wayne Cancer Institute at Providence Saint John's Health Center	93.RD	P01 CA029605	-	48,271
Johns Hopkins Bloomberg School of Public Health	93.RD	----	-	321
Johns Hopkins University	93.RD	1R01AI117032-01	-	68,674

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
Johns Hopkins University	93.RD	1U01NS062851-01A1	-	40,521
Johns Hopkins University	93.RD	2R01HD038384-16	-	36,661
Johns Hopkins University	93.RD	2U41HG006620-05	-	343,611
Johns Hopkins University	93.RD	W81XWH-10-2-0090	-	129,678
Johns Hopkins University	93.RD	----	-	59,542
Klein Buendel, Inc.	93.RD	1R41AG049570-01	-	74,800
Lehigh University	93.RD	7R01HD068594	-	67,251
Magee-Womens Research Institute	93.RD	1R01HD086325	-	41,918
Mars, Inc.	93.RD	----	-	15,797
Massachusetts General Hospital	93.RD	1R01MH101194-01A1	-	169,094
The Medical University of South Carolina	93.RD	5R01CA164335	-	11,685
Microbiotix, Inc.	93.RD	R43 A113993	-	62,616
Minnetronix, Inc.	93.RD	5 R44 HL108415-03	-	388,650
Mount Sinai Medical Center	93.RD	5 U01 DK062429-15	-	49,267
National Jewish Health	93.RD	5 U01 AI097073-02	-	5,527
National Jewish Health	93.RD	5 U01 AI097073-03	-	62,236
New York Institute of Technology	93.RD	1U18EB021789-01	-	77,242
New York University	93.RD	4U01HD076595-04	-	2,445
New York University	93.RD	5U01HD076595-03	-	21,643
New York University	93.RD	5U19AI089676-06	-	178,265
New York University	93.RD	F4330-03 A01	-	43,279
New York University	93.RD	R01HD081252	-	65,180
New York University	93.RD	----	-	74,601
Northwest Institute of Research	93.RD	4100029171	-	11,679
Northwest Institute of Research	93.RD	----	-	2,082
Northwestern University	93.RD	1R21CA182725-01A1	-	4,899
Northwestern University	93.RD	2R01CA154908-06A1	-	63,059
Northwestern University	93.RD	5R01CA154908-03	-	175,726
Northwestern University	93.RD	5U01NS080818-02	-	30,874
Northwestern University	93.RD	R01DK097364	-	64,852
Northwestern University	93.RD	R21CA182725	-	3,756
Northwestern University	93.RD	----	-	5,095
The Ohio State University	93.RD	1R21AR061085-01A1	-	(498)
The Ohio State University	93.RD	1U01CA188250-01	-	9,047
Old Dominion University	93.RD	1 R01 AA023197-01A1	-	36,989
Oregon Health & Science University	93.RD	5R34HL115032-03	-	28,162
Oregon State University	93.RD	5P42ES016465-07	-	67,724
Pennsylvania Association of Community Health Centers	93.RD	----	-	8,570
Princeton University	93.RD	1 R01 HD0765920-03	-	1,847
Purdue University	93.RD	1R01GM095923-01	-	108,531
RAND Corporation	93.RD	U19HS024067	-	217,174
Rensselaer Polytechnic Institute	93.RD	1R01OH010165-01A1	-	41,238
Rhode Island Hospital	93.RD	5R01HL110791-03	-	56,370
RTI International	93.RD	R21HD079524	-	40,330
Rutgers University	93.RD	1 R01 A1091985-01A1	-	73,814
Rutgers University	93.RD	5U52PS004090-04	-	5,259
Rutgers University	93.RD	5U52PS004090-05	-	5,937
Seattle Children's Hospital	93.RD	1U01HL114623-01A1	-	4,296
Space Telescope Science Institute	93.RD	NAS5-26555	-	2,268
St. Jude Medical, Inc.	93.RD	5U01CA176063-02	-	55,037
Stony Brook University	93.RD	1R01HD073352-01A1	-	121,916
Stony Brook University	93.RD	4R01HD073352-04	-	7,560
Temple University	93.RD	1R01GM117907-01	-	22,050
Texas State University	93.RD	90FM0067-01-00	-	52,011
Tobacco Centers of Regulatory Science	93.RD	P50 DA036107	-	(72,000)

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
University of California, Davis	93.RD	HHSN261201100038C	-	23,477
University of California, Davis	93.RD	HIS-1310-07894	-	57,918
University of California, Davis	93.RD	P01ES011269	-	33,947
University of California, Irvine	93.RD	1R01AG042431-01A1	-	7,637
University of California, Los Angeles	93.RD	1R21NS090027-01	-	49,530
University of California, Los Angeles	93.RD	5R01HD062547-05	-	10,348
University of California, San Diego	93.RD	1U01NS087964-01A1	-	115,216
University of California, San Francisco	93.RD	1R01DK098233-01A1	-	6,479
University of California, San Francisco	93.RD	5 K23 DK100468-03	-	13,235
University of California, San Francisco	93.RD	5R01DK098233-02	-	68,977
University of California, San Francisco	93.RD	R01HL114484	-	2,130
University of California, San Francisco	93.RD	----	-	29,280
University of Colorado	93.RD	1 R01 DA037904-01A1	-	68,368
University of Connecticut	93.RD	1R01DK103663-01A1	-	36,902
University of Connecticut	93.RD	----	-	2,630
University of Delaware	93.RD	5R21AR067390-02	-	6,944
University of Delaware	93.RD	7R01AR050052-06	-	19,901
University of Delaware	93.RD	----	-	12,154
University of Florida	93.RD	5 U01 HL119178-03	-	66,705
University of Florida	93.RD	ORHIR130004-02	-	11,902
University of Florida	93.RD	R01 GM059969	-	208,274
University of Georgia	93.RD	1 R01 DC013904-01A	-	65,995
University of Georgia	93.RD	1U01GM110744-01	-	10,313
University of Georgia	93.RD	5R01DC013904-02	-	23,485
University of Illinois	93.RD	1R01CA172726-01A1	-	29,593
University of Illinois	93.RD	1R21CA195543-01	-	36,367
University of Illinois	93.RD	1UG54GM093342	-	44,631
University of Kansas Medical Center	93.RD	CER-1306-02496	-	17,244
University of Kentucky	93.RD	1R21AI108260-01A1	-	258
University of Kentucky	93.RD	3 U54 CA153604-05S1	-	12,083
University of Kentucky	93.RD	5 R21 AI108260-02	-	67,724
University of Kentucky	93.RD	5 U54 CA153604-05	13,476	75,484
University of Louisville	93.RD	1 R01 CA185972-01	-	1,283
University of Louisville	93.RD	R01CA185972	-	62,774
University of Maryland	93.RD	7R01DA025047-06	-	202,793
University of Maryland	93.RD	R01ES019168	-	18,100
University of Miami	93.RD	1R01GM105004-01	-	168,215
University of Miami	93.RD	5R01NR014851-02	-	5,953
University of Michigan	93.RD	1P50GM103297	-	75
University of Michigan	93.RD	1R01AI110780-01A1	-	55,677
University of Michigan	93.RD	1R01DA037902-01A1	-	51,077
University of Michigan	93.RD	1R01DA039901-01	-	48,320
University of Michigan	93.RD	5 R01DA001411-41	-	40,460
University of Michigan	93.RD	5P50GM103297-04	-	186,080
University of Michigan	93.RD	5R01DA035183-03	-	47,550
University of Michigan	93.RD	5R01DA037902-02	-	35,337
University of Michigan	93.RD	5R01EY23722-02	-	54,771
University of Michigan	93.RD	5R01EY23725-03	-	17,638
University of Michigan	93.RD	HHSF223201310144C	-	62,544
University of Michigan	93.RD	P50GM103297	-	59,826
University of Michigan	93.RD	R21AA21426	-	3,111
University of Michigan	93.RD	U01 HL094345	-	4,457
University of Michigan	93.RD	----	-	7,470
University of Minnesota	93.RD	1R24MH106049-01	-	1,874
University of Minnesota	93.RD	1U01NS062091-01A2	-	10,641
University of Minnesota	93.RD	5R24MH106049-02	-	135,246

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
University of Minnesota	93.RD	----	-	95,651
University of Missouri	93.RD	7R01CA164335-05	-	16,135
The University of North Carolina at Chapel Hill	93.RD	1R01A121558-01	-	9,673
The University of North Carolina at Chapel Hill	93.RD	1R01HD080786	-	171,010
The University of North Carolina at Chapel Hill	93.RD	5 R01 ES020836-04	-	32,089
The University of North Carolina at Chapel Hill	93.RD	5U01 DK092239	-	3,523
The University of North Carolina at Chapel Hill	93.RD	U01DK092239	-	24,110
University of North Texas	93.RD	R01HL109340	-	57,165
University of Oregon	93.RD	1R01DA035062	-	29,836
University of Oregon	93.RD	R56HD042608	-	25,571
University of Pennsylvania	93.RD	1-U01-NS-094340-01	-	83,709
University of Pennsylvania	93.RD	5 R01 HD069321-04	-	6,262
University of Pennsylvania	93.RD	5 R01 HD069321-05	-	78,394
University of Pittsburgh	93.RD	1 U01 HL128954-01	-	11,142
University of Pittsburgh	93.RD	1R01GM101197-01A1-02	-	33,217
University of Pittsburgh	93.RD	1U01NS081041-01A1	-	44,128
University of Pittsburgh	93.RD	1U1QHP28736-01	-	105,000
University of Pittsburgh	93.RD	5 U01 HL123020-02	-	68,231
University of Pittsburgh	93.RD	UB4HP19199-05	-	635
University of Rochester	93.RD	1 R01 AI067391-01	-	96,452
University of Rochester	93.RD	R01MH097293	-	51,763
University of Rochester Medical Center	93.RD	5 U01 NS061799-02	-	12,463
University of Southern California	93.RD	5P41E8002182	-	102,608
University of Southern California	93.RD	5P41EB002182-16	-	33,005
University of Southern California	93.RD	5R01AG037985	-	10,791
The University of Tennessee Health Science Center	93.RD	1R01AA021951-01A1	-	34,455
The University of Texas at Arlington	93.RD	R01HL118498	-	229,472
The University of Texas at Austin	93.RD	R01AG027769	-	102,034
The University of Texas Southwestern Medical Center	93.RD	----	-	190,441
University of Virginia	93.RD	1R01CA178393-01A1	-	142,596
University of Virginia	93.RD	5 U01 NS069498-04	-	3,374
University of Virginia	93.RD	5R01CA018138-38	-	77,551
University of Virginia	93.RD	5R01CA098472-12	-	18,952
University of Virginia	93.RD	7P01CA171983-03	-	826,059
University of Virginia	93.RD	7R01CA018138-37	-	542
University of Virginia	93.RD	R01CA170334	-	1,978
University of Virginia	93.RD	----	-	95,906
University of Washington	93.RD	5 RO1 AR056221-05	-	5,244
University of Wisconsin - Madison	93.RD	1 P01 CA180945-01	-	22,374
University of Wisconsin - Madison	93.RD	1R01HD080201-02	-	141,897
University of Wisconsin - Madison	93.RD	5P01CA180945-02	-	55,808
University of Wisconsin - Madison	93.RD	7R01HD081361-02	-	121,085
University of Wisconsin - Madison	93.RD	P01AG020166	5,000	158,919
University of Wisconsin - Madison	93.RD	----	-	50,822
Vanderbilt University	93.RD	5K07CA172294-02	-	(1)
Vanderbilt University	93.RD	5U01 HG008385-04	-	2,562
Vanderbilt University	93.RD	5U19HL065962-13	-	319,004
Vanderbilt University	93.RD	K07 CA172294	-	15,366
Vanderbilt University	93.RD	R01AI077505	-	186,074

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
Virginia Commonwealth University	93.RD	5 P50 DA036105-02	-	101,553
Virginia Commonwealth University	93.RD	5 P50 DA036105-03	-	459,923
Virginia Commonwealth University	93.RD	5 R01 HD073555-03	-	7,101
Virginia Commonwealth University	93.RD	5 R01 HD073555-04	-	111,143
Washington State University	93.RD	5R01CA164366-04	-	50,944
Washington University in St. Louis	93.RD	1 U01 CA20060-01	-	70,781
Washington University in St. Louis	93.RD	5K12HB000849-27	-	34,211
Washington University in St. Louis	93.RD	5K12HD000849-28	-	107,922
Yale University	93.RD	1 R01 NR016191-01	-	7,276
Yale University	93.RD	2 U01 NS044876-06	-	8,088
Yale University	93.RD	5 U10 HD055925-07	-	8,564
Yale University	93.RD	5 U01 HD055925-08	-	94,233
Total – Department of Health and Human Services			18,476	13,858,200
<u>Department of Homeland Security:</u>				
Massachusetts Institute of Technology	97.RD	----	-	18,858
Purdue University	97.RD	2008-ST-061-CI0001	-	19,989
Purdue University	97.RD	2009-ST-061-CI0001	-	80,109
Purdue University	97.RD	DHS-12-DN-077-001-NC5	-	(2,185)
Total – Department of Homeland Security			-	116,771
<u>Agency for International Development:</u>				
College of William & Mary	98.RD	AID-OAA-A-12-00096	-	34,540
College of William & Mary	98.RD	----	-	2,808
International Crops Research Institute for the Semi-Arid Tropics	98.RD	----	-	12,883
International Rice Research Institute	98.RD	----	-	(43,000)
Kansas State University	98.RD	AID-OAA-L-14-00006	-	5,582
Michigan State University	98.RD	----	-	30,328
University of California, Davis	98.RD	016258	-	2,398
University of California, Davis	98.RD	EPP-A-00-09-00004	97,272	268,193
Virginia Polytechnic Institute and State University	98.RD	AID-OAA-L-12-00002	-	90,322
Virginia Polytechnic Institute and State University	98.RD	AID-OAA-L-15-00001	-	10,503
Virginia Polytechnic Institute and State University	98.RD	EPP-A-00-04-00016-00	-	(1,140)
Total – Agency for International Development			97,272	413,417
<u>Miscellaneous:</u>				
Advanced Technology International	99.RD	W1QKN-10-9-0003	-	49,045
Charles River Analytics Inc.	99.RD	FA8650-16-C-6680	-	27,792
Concurrent Technologies Corporation	99.RD	14-C-0144	-	832,316
Concurrent Technologies Corporation	99.RD	----	-	177,313
CRDF Global	99.RD	HDTRA1-13-C-0108	-	7,535
FunDo Science Corporation	99.RD	HQ0147-15-C-7303	-	29,229
General Atomics	99.RD	W15P7T-06-D-E402	-	23,282
General Dynamics Corporation	99.RD	----	-	178,282
ITT Inc.	99.RD	W5J9CQ-11-D-0009	-	(13,408)
ITT Inc.	99.RD	----	-	249,729
Johns Hopkins University	99.RD	11-G-2402	-	9,375
Johnson Controls	99.RD	N00024-13-C-2128	-	89,947
Kessler Foundation	99.RD	HC0185	-	42,076
L-3 Communications Holdings, Inc.	99.RD	NR0000-08-C-0249	-	(175)

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
L-3 Communications Holdings, Inc.	99.RD	----	-	381
Lockheed Martin Corporation	99.RD	----	-	219,183
Marine Mammal Commission	99.RD	----	-	1,031
Michigan State University	99.RD	EDH-A-00-07-00005	-	(30,025)
Miscellaneous	99.RD	----	-	56,608
MRIGlobal	99.RD	HR 15-59	-	9,652
Presbyterian Senior Living	99.RD	14SG4902	-	(124)
Raytheon Company	99.RD	----	126,668	805,246
Roberts & Folkers Associates LLC	99.RD	----	-	468
University of Pennsylvania	99.RD	G-2015-14011	-	31,664
Washington University in St. Louis	99.RD	4-FY15-415	-	2,565
Total – Miscellaneous			126,668	2,798,987

**Total Research and Development -
Pass-Through Funds - Other
Institutions**

\$ 2,189,094 \$ 56,042,597

**6. RESEARCH AND DEVELOPMENT - PASS-THROUGH FUNDS - OTHER INSTITUTIONS -
AMERICAN RECOVERY AND REINVESTMENT ACT**

National Science Foundation:

Lehigh University	47.RD	DMR-0844014	\$ -	\$ 4,317
Lehigh University	47.RD	----	-	3,706
Total – National Science Foundation			-	8,023

**Total Research and Development -
Pass-Through Funds - Other
Institutions - American Recovery
and Reinvestment Act**

\$ - \$ 8,023

Total Research and Development

\$ 71,126,792 \$ 537,196,675

7. OTHER DIRECT FUNDING

Department of Agriculture:

Plant and Animal Disease, Pest Control, and Animal Care	10.025		\$ -	\$ 57,696
Higher Education - Multicultural Scholars Grant Program	10.220		-	47,783
Agriculture and Food Research Initiative (AFRI)	10.310		-	1,092,322
Beginning Farmer and Rancher Development Program	10.311		-	126,884
Crop Protection and Pest Management Competitive Grants Program	10.329		-	243,375
Risk Management Education Partnerships	10.460		-	13,982
Cooperative Extension Service	10.500		148,340	14,411,262
Wood Utilization Assistance	10.674		20,480	60,629
Urban and Community Forestry Program	10.675		-	375,702
Forest Stewardship Program	10.678		-	176,380
Rural Business Enterprise Grants	10.769		-	1
Rural Energy for America Program	10.868		-	44,720
Environmental Quality Incentives Program	10.912		139,983	359,276
Scientific Cooperation and Research	10.961		10,300	18,286

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
Non-Specified	10.xxx		-	43,741
Total – Department of Agriculture			319,103	17,072,039
<u>Department of Commerce:</u>				
Non-Specified	11.xxx		-	136,786
Total – Department of Commerce			-	136,786
<u>Department of Defense:</u>				
Non-Specified	12.xxx		-	3,000,320
Total – Department of Defense			-	3,000,320
<u>Department of the Interior:</u>				
Assistance to State Water Resources Research Institutes	15.805		-	14,375
Total – Department of the Interior			-	14,375
<u>Department of Labor:</u>				
Brookwood-Sago Grant	17.603		33,416	73,480
Total – Department of Labor			33,416	73,480
<u>Department of Transportation:</u>				
Airport Improvement Program	20.106		-	2,363,669
Total – Department of Transportation			-	2,363,669
<u>General Services Administration:</u>				
Non-Specified	39.xxx		-	89,091
Total – General Services Administration			-	89,091
<u>National Aeronautics and Space Administration:</u>				
Science	43.001		-	1,341
Education	43.008		87,636	186,234
Total – National Aeronautics and Space Administration			87,636	187,575
<u>National Science Foundation:</u>				
Engineering Grants	47.041		-	14,143
Mathematical and Physical Sciences	47.049		-	331,603
Geosciences	47.050		-	747
Computer and Information Science and Engineering	47.070		-	12,410
Biological Sciences	47.074		-	29,367
Education and Human Resources	47.076		-	769,734
Total – National Science Foundation			-	1,158,004
<u>Environmental Protection Agency:</u>				
Pollution Prevention Grants Program	66.708		-	193,659
Source Reduction Assistance	66.717		-	37,441
Total – Environmental Protection Agency			-	231,100
<u>Department of Energy:</u>				
Office of Science Financial Assistance Program	81.049		-	1,608
Renewable Energy Research and Development	81.087		10,104	322,167
Total – Department of Energy			10,104	323,775

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
<u>Department of Education:</u>				
TRIO - Talent Search	84.044		-	701,736
TRIO - Upward Bound	84.047		-	1,057,508
TRIO - Educational Opportunity Centers	84.066		-	267,057
Rehabilitation Long-Term Training	84.129		-	196,012
TRIO - McNair Post-Baccalaureate Achievement	84.217		-	315,821
Education Research, Development and Dissemination	84.305		-	427,492
Special Education - Personnel Development to Improve Services and Results for Children with Disabilities	84.325		-	762,677
Non-Specified	84.xxx		17,416	382,143
Total – Department of Education			17,416	4,110,446
<u>Department of Health and Human Services:</u>				
Area Health Education Centers	93.107		629,894	817,075
Environmental Health	93.113		-	16,747
State Rural Hospital Flexibility Program	93.241		-	391,687
Mental Health Research Grants	93.242		-	10,479
Advanced Nursing Education Grant Program	93.247		-	425,773
Alcohol Research Programs	93.273		-	52,406
Drug Abuse and Addiction Research Programs	93.279		-	390,403
National Center for Advancing Translational Sciences	93.350		-	121,729
Research Infrastructure Programs	93.351		-	597,300
Cancer Research Manpower	93.398		-	322,226
Affordable Care Act (ACA) Advanced Nursing Education Expansion Initiative	93.513		-	2,021
Cardiovascular Diseases Research Diabetes, Digestive, and Kidney Diseases Extramural Research	93.837		-	24,031
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.847		467	182,164
Allergy and Infectious Diseases Research	93.853		-	5,090
Biomedical Research and Research Training	93.855		-	7,956
Child Health and Human Development Extramural Research	93.859		-	445,963
Grants to States for Operation of Offices of Rural Health	93.865		-	6,000
International Research and Research Training	93.913		-	183,090
Non-Specified	93.989		27,652	135,721
Non-Specified	93.xxx		-	46,618
Total – Department of Health and Human Services			658,013	4,184,479
<u>Department of Homeland Security:</u>				
Non-Specified	97.xxx		-	247,052
Total – Department of Homeland Security			-	247,052

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
<u>Miscellaneous:</u>				
Non-Specified	99.xxx		-	10,119
Total – Miscellaneous			-	10,119
Total Other Direct Funding			\$ 1,125,688	\$ 33,202,310

8. OTHER DIRECT FUNDING - AMERICAN RECOVERY AND REINVESTMENT ACT

Department of Health and Human

Services:

ARRA Grants for Training in Primary Care Medicine and Dentistry Training and Enhancement	93.403		\$ -	\$ 59,813
Total – Department of Health and Human Services			-	59,813
Total Other Direct Funding - American Recovery and Reinvestment Act			\$ -	\$ 59,813

9. OTHER PASS-THROUGH FUNDS - COMMONWEALTH OF PENNSYLVANIA

Department of Agriculture:

Specialty Crop Block Grant Program - Farm Bill	10.170	ME 44144959	\$ -	\$ 19,342
Specialty Crop Block Grant Program - Farm Bill	10.170	ME 44144963	-	29,183
Specialty Crop Block Grant Program - Farm Bill	10.170	ME 44145140	-	24,305
Specialty Crop Block Grant Program - Farm Bill	10.170	ME 44155554	-	48,205
Crop Insurance Education in Targeted States	10.458	ME 44144937	-	28,819
Crop Insurance Education in Targeted States	10.458	ME 44155556	-	5,393
Risk Management Education Partnerships	10.460	ME 44155490	-	42,896
Risk Management Education Partnerships	10.460	ME 44155491	-	3,596
Child and Adult Care Food Program	10.558	----	-	89,484
Summer Food Service Program for Children	10.559	----	-	27,244
State Administrative Expenses for Child Nutrition	10.560	4300463834	-	104,211
State Administrative Expenses for Child Nutrition	10.560	4300467243	-	124,799
State Administrative Matching Grants for the Supplemental Nutrition Assistance Program	10.561	4100069151	20,203,476	23,830,307
Team Nutrition Grants	10.574	4300396024	-	28,337
Team Nutrition Grants	10.574	4300396045	-	31,361
Team Nutrition Grants	10.574	4300487036	-	7,318
Non-Specified	10.xxx	4300324334	-	65,716
Non-Specified	10.xxx	4300426810	-	91,598
Total – Department of Agriculture			20,203,476	24,602,114

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
<u>Department of Justice:</u>				
Edward Byrne Memorial Justice Assistance Grant Program	16.738	4300483666	-	52,737
Edward Byrne Memorial Competitive Grant Program	16.751	4300448859	-	18,602
Total – Department of Justice			-	71,339
<u>Department of Labor:</u>				
Trade Adjustment Assistance	17.246	----	-	419,423
Incentive Grants - WIA Section 503	17.267	AET-16-0028	-	10,819
Mine Health and Safety Grants	17.600	4300410625	-	126,273
Mine Health and Safety Grants	17.600	4300470895	-	4,522
Mine Health and Safety Grants	17.600	4300474477	-	236,957
Total – Department of Labor			-	797,994
<u>General Services Administration:</u>				
Donation of Federal Surplus Personal Property	39.003	----	-	1,552
Total – General Services Administration			-	1,552
<u>Environmental Protection Agency:</u>				
Great Lakes Program	66.469	4300489436	-	20,766
Pollution Prevention Grants Program	66.708	4100066876	-	54,196
Total – Environmental Protection Agency			-	74,962
<u>Department of Energy:</u>				
State Energy Program	81.041	4300462053	-	102,644
State Energy Program	81.041	4300462056	-	112,003
State Energy Program	81.041	4300462068	-	84,323
Total – Department of Energy			-	298,970
<u>Department of Education:</u>				
Adult Education - Basic Grants to States	84.002	064-15-0039	-	6,750
Adult Education - Basic Grants to States	84.002	064-15-0040	-	328
Adult Education - Basic Grants to States	84.002	064-16-0039	-	222,481
Adult Education - Basic Grants to States	84.002	064-16-0040	-	165,846
Adult Education - Basic Grants to States	84.002	099-15-0001	10,000	11,008
Adult Education - Basic Grants to States	84.002	099-15-0002	-	2,304
Adult Education - Basic Grants to States	84.002	099-15-0003	-	3,554
Adult Education - Basic Grants to States	84.002	099-15-0004	-	228,360
Adult Education - Basic Grants to States	84.002	099-16-0001	60,000	216,180
Adult Education - Basic Grants to States	84.002	099-16-0002	-	217,463
Adult Education - Basic Grants to States	84.002	099-16-0003	-	256,864
Special Education - Grants to States	84.027	062-16-0042	-	352,982
Career and Technical Education - Basic Grants to States	84.048	119-16-0002	-	225,553
Supporting Effective Instruction State Grant	84.367	071-80-0045	137,723	290,746
Total – Department of Education			207,723	2,200,419
<u>Department of Health and Human Services:</u>				
Child Support Enforcement	93.563	4000018811	-	3,173,236
HIV Care Formula Grants	93.917	4300407203	-	(572)
HIV Care Formula Grants	93.917	4300458777	-	638,051

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
Assistance Programs for Chronic Disease Prevention and Control	93.945	4100065734	-	201,784
Preventive Health and Health Services Block Grant	93.991	4100065734	-	207,166
Maternal and Child Health Services Block Grant to the States	93.994	4100065723	-	286,409
Non-Specified	93.xxx	4100062657	-	20,482
Non-Specified	93.xxx	----	-	846,408
Total – Department of Health and Human Services			-	5,372,964
Total Other Pass-Through Funds - Commonwealth of Pennsylvania			\$ 20,411,199	\$ 33,420,314

10. OTHER PASS-THROUGH FUNDS - OTHER INSTITUTIONS

Department of Agriculture:

University of Arkansas - Agricultural Research - Basic and Applied Research	10.001	58-8250-4-002	\$ -	\$ 94,598
The University of Vermont - Aquaculture Grant Program	10.103	2015-38640-23777	-	9,666
Cornell University - Grants for Agricultural Research, Special Research Grants	10.200	2012-34383-19759	-	5,938
The University of Vermont - Sustainable Agriculture Research and Education	10.215	2014-38640-22161	-	44,996
Cornell University - Integrated Programs	10.303	2012-51120-20287	-	99
Cornell University - Integrated Programs	10.303	----	-	28,409
Cornell University - Specialty Crop Research Initiative	10.309	2015-51181-24393	-	7,274
Virginia Polytechnic Institute and State University - Specialty Crop Research Initiative	10.309	2010-51181-21140	-	24,249
The Ohio State University - Agriculture and Food Research Initiative (AFRI)	10.310	2015-68004-23131	-	35,070
The University of Vermont - Beginning Farmer and Rancher Development Program	10.311	2015-70017-23898	-	15,799
The University of Vermont - Crop Protection and Pest Management Competitive Grants Program	10.329	2014-70006-22516	-	17,171
University of Wisconsin - Madison - Alfalfa and Forage Research Program	10.330	2014-70005-22536	-	15,432
Kansas State University - Cooperative Extension Service	10.500	2010-48661-21868	-	5,421
Kansas State University - Cooperative Extension Service	10.500	2013-48696-21184	-	11,012
Kansas State University - Cooperative Extension Service	10.500	2014-48661-22370	-	27,779
Kansas State University - Cooperative Extension Service	10.500	2014-48713-22245	-	4,217
University of Nebraska - Lincoln - Cooperative Extension Service	10.500	2013-48712-21516	-	338,078
The University of Vermont - Cooperative Extension Service	10.500	2012-47001-19544	1,942	33,365

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
The University of Vermont - Cooperative Extension Service	10.500	2013-47001-20896	13,499	17,816
University of Delaware - Environmental Quality Incentives Program	10.912	69-3A75-12-244	-	215
Total – Department of Agriculture			15,441	736,604
<u>Department of Defense:</u>				
Academy of Applied Science - Non-Specified	12.xxx	----	-	15,446
National Defense University - Non-Specified	12.xxx	----	-	179,534
University of Michigan - Non-Specified	12.xxx	N65540-10-C-0003	-	52,323
Total – Department of Defense			-	247,303
<u>Department of Justice:</u>				
National 4-H Council - Juvenile Mentoring Program	16.726	2014-JU-FX-0025	-	21,474
National 4-H Council - Juvenile Mentoring Program	16.726	2015-JU-FX-0015	-	32,723
Total – Department of Justice			-	54,197
<u>Department of Labor:</u>				
Lehigh Valley Workforce Investment Board, Inc. - WIA/WIOA Youth Activities	17.259	----	-	100,653
Total – Department of Labor			-	100,653
<u>National Aeronautics and Space Administration:</u>				
Texas State University - Education	43.008	NNX14AQ30A	-	167,523
Space Telescope Science Institute - Non-Specified	43.xxx	NAS5-26555	-	927
Total – National Aeronautics and Space Administration			-	168,450
<u>National Endowment for the Arts:</u>				
Mid Atlantic Arts Foundation - Promotion of the Arts - Partnership Agreements	45.025	----	-	1,500
Total – National Endowment for the Arts			-	1,500
<u>Institute of Museum and Library Services:</u>				
Oregon State University - National Leadership Grants	45.312	LG-07-13-0328-13	-	5,743
Total – Institute of Museum and Library Services			-	5,743
<u>National Science Foundation:</u>				
Shippensburg University - Non-Specified	47.xxx	----	-	22,349
Total – National Science Foundation			-	22,349
<u>Department of Veterans Affairs:</u>				
Boston College - Non-Specified	64.xxx	----	-	7,500
Total – Department of Veterans Affairs			-	7,500

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
<u>Environmental Protection Agency:</u>				
National Fish and Wildlife Foundation - Chesapeake Bay Program	66.466	0602.15.049722	-	33,482
National Fish and Wildlife Foundation - Chesapeake Bay Program	66.466	----	6,282	113,194
Pennsylvania Association for Sustainable Agriculture - Environmental Justice Small Grant Program	66.604	96335501	-	2,664
Weston Solutions, Inc. - Non-Specified	66.xxx	EP-S3-10-05	-	4,950
Total – Environmental Protection Agency			6,282	154,290
<u>Department of Energy:</u>				
Washington University in St. Louis - Office of Science Financial Assistance Program	81.049	DESC0001035	-	1,179
Total – Department of Energy			-	1,179
<u>Department of Education:</u>				
National Writing Project - Supporting Effective Instruction State Grant	84.367	----	-	33,017
Total – Department of Education			-	33,017
<u>Department of Health and Human Services:</u>				
Boston College - Special Programs for the Aging - Title IV and Title II Discretionary Projects	93.048	----	-	2,912
Pennsylvania Association of Community Health Centers - Environmental Health Education Activities for Health Professionals and Communities	93.200	----	-	17,290
York/Adams Mental Health - Intellectual and Developmental Disabilities Program - Substance Abuse and Mental Health Services - Projects of Regional and National Significance	93.243	1-U79-SM061750-01	-	9,999
Marshfield Clinic Research Foundation - Occupational Safety and Health Program	93.262	2U54OH009568-06	-	21,521
Marshfield Clinic Research Foundation - Occupational Safety and Health Program	93.262	2U54OH009568-07	-	51,317
Vantage Human Resource Services, Inc. - President's Council on Fitness, Sports, and Nutrition	93.289	----	-	982
Community Services for Children - Child Care and Development Block Grant	93.575	----	-	5,832
Northwest Institute of Research - Child Care and Development Block Grant	93.575	----	-	127,082
Tuscarora Intermediate Unit 11 - Preventive Health and Health Services Block Grant	93.758	----	-	2

	CFDA No.	Pass-Through Entity Identifying No.	Subcontract Expenditures	Expenditures
Pennsylvania Mountains Healthcare Alliance - Rural Health Care Services Outreach, Rural Health Network Development and Small Health Care Provider Quality Improvement Program	93.912	R01RH26277	-	6,566
Skills of Central Pennsylvania, Inc. - Rural Health Care Services Outreach, Rural Health Network Development and Small Health Care Provider Quality Improvement Program	93.912	1 P10RH27754-01-00	-	2,498
Community Services for Children - Non-Specified	93.xxx	----	-	12,238
Intersociety Council for Pathology Information, Inc. - Non-Specified	93.xxx	147010	-	122
Joslin Diabetes Center - Non-Specified	93.xxx	----	-	164,205
Northwest Institute of Research - Non-Specified	93.xxx	----	-	37,000
Regeneron Pharmaceuticals, Inc. Non-Specified	93.xxx	PSHCI 15-053	-	6,300
Regeneron Pharmaceuticals, Inc. Non-Specified	93.xxx	R2810-ONC-1425	-	4,788
U.S. National Library of Medicine - Non-Specified	93.xxx	HHSN276201100003C	-	500
University of Pennsylvania - Non-Specified	93.xxx	----	-	619,466
Total – Department of Health and Human Services			-	1,090,620
<u>Agency for International Development:</u>				
Michigan State University - USAID Foreign Assistance for Programs Overseas	98.001	AID-OAA-A-13-00006	10,435	28,617
Virginia Polytechnic Institute and State University - USAID Foreign Assistance for Programs Overseas	98.001	AID-OAA-L-12-00002	-	5,534
Total – Agency for International Development			10,435	34,151
Total Other Pass-Through Funds - Other Institutions			\$ 32,158	\$ 2,657,556

11. FEDERAL LOAN PROGRAMS

The University administers the following Federal loan programs:

Title	CFDA No.	Federal Capital Contribution for the Year Ended June 30, 2016	Loan Expenditures and Disburs.	Outstanding Balance at June 30, 2016
Federal Perkins Loan Program	84.038	\$ -	\$ -	\$ 44,380,959
Health Professions Student Loan Program	93.342	-	-	49,671

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.

12. FEDERAL DIRECT LOAN PROGRAM

The University participates in the Federal Direct Student Loan Program (CFDA No. 84.268) including Federal Stafford Loans and Federal PLUS Loans. Loan disbursements under the program for the year ended June 30, 2016 totaled \$547,279,796.

13. FEDERAL ENDOWMENT

In fiscal year 2002, the University received \$6,000,000 from the U.S. Department of Education to establish the William F. Goodling Institute for Research in Family Literacy (the "Institute") and to establish an endowment for the Institute under the Fund for Improvement of Postsecondary Education Program. The Institute will focus on developing a sound conceptual, interdisciplinary research base for guiding practice and policy in family literacy. Based on research findings, the Institute will also build the capacity of the field to provide high-quality, research-based instruction and program development in family literacy. Under the terms of the endowment agreement, annual income from the endowment's investments must be used to support the planned activities of the Institute. In addition, the endowment is restricted for this use until 2021.

The University administers the following federal endowment:

		Balance at July 1, 2015		Endowment Expenditures		Endowment Income		Balance at June 30, 2016
Fund for the Improvement of Postsecondary Education	CFDA No. 84.116	\$ 6,000,000	\$	283,685	\$	283,685	\$	6,000,000



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

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

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the consolidated financial statements of The Pennsylvania State University and subsidiaries (the "University"), which comprise the consolidated statements of financial position as of June 30, 2016 and 2015, and the related consolidated statements of activities and cash flows for the years then ended, and the related notes to the consolidated financial statements, and have issued our report thereon dated October 21, 2016.

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) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the consolidated financial statements, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we do not express an opinion on the effectiveness of the University's internal control.

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

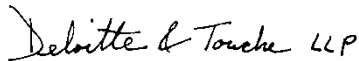
Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies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

Compliance and Other Matters

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

Purpose of this Report

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

Deloitte & Touche LLP

October 21, 2016

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

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

Report on Compliance for Each Major Federal Program

We have audited The Pennsylvania State University and subsidiaries (the "University") compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the University's major federal programs for the year ended June 30, 2016. 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.

Management's Responsibility

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

Auditors' Responsibility

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

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

Opinion on Each Major Federal Program

In our opinion, the University complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2016.

Report on Internal Control Over Compliance

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

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

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

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

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

We have audited the consolidated financial statements of the University as of and for the year ended June 30, 2016, and have issued our report thereon dated October 21, 2016, which contained an unmodified opinion on those consolidated financial statements. Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by the Uniform Guidance and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditure of federal awards is fairly stated in all material respects in relation to the consolidated financial statements as a whole.

Deloitte & Touche LLP

March 22, 2017

THE PENNSYLVANIA STATE UNIVERSITY

**SCHEDULE OF FINDINGS AND QUESTIONED COSTS
YEAR ENDED JUNE 30, 2016**

SECTION I - SUMMARY OF AUDITOR'S RESULTS

Financial Statements

Type of auditors' report issued		Unmodified
Internal control over financial reporting:		
Material weakness identified?	_____yes	_____X_____no
Significant deficiency identified?	_____yes	_____X_____none reported
Noncompliance material to financial statements noted?	_____yes	_____X_____no

Federal Awards

Internal control over major federal programs:		
Material weakness identified?	_____yes	_____X_____no
Significant deficiency identified?	_____yes	_____X_____none reported
Type of auditors' report issued on compliance for major federal programs		Unmodified
Any audit findings disclosed that are required to be reported in accordance with		
section 200.516 of Uniform Guidance?	_____yes	_____X_____no

Identification of major federal programs

CFDA Number	Name of Federal Program or Cluster
Cluster	Research and Development

Dollar threshold used to distinguish between Type A and Type B programs	\$	3,893,854
Auditee qualified as low-risk auditee?	_____X_____yes	_____no

SECTION II - FINANCIAL STATEMENT FINDINGS

The FY2016 and FY2015 audit disclosed no findings or questioned costs required to be reported in this section.

SECTION III - FEDERAL AWARD FINDINGS AND QUESTIONED COSTS

The audit disclosed no findings or questioned costs required to be reported in this section