Federal Awards
Supplemental Information
June 30, 2017

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

Independent Auditor's Report

To the Board of Trustees Michigan State University

We have audited the basic financial statements of Michigan State University (the "University") and its discretely presented component unit as of and for the year ended June 30, 2017 and the related notes to the financial statements, which collectively comprise the University's basic financial statements. We issued our report thereon dated October 26, 2017, which contained an unmodified opinion on the basic financial statements of the University and its component unit. Our audit was conducted for the purpose of forming opinions on the basic financial statements that collectively comprise the basic financial statements. We have not performed any procedures with respect to the audited financial statements subsequent to October 26, 2017. We did not audit the financial statements of Michigan State University Foundation (the "Foundation"), which represent all of the assets, net assets, and revenue of the discretely presented component unit. Those financial statements were audited by other auditors, whose report thereon has been furnished to us, and our opinion, insofar as it relates to the amounts included for the Foundation, is based on the report of the other auditors.

The accompanying schedule of expenditures of federal awards is presented for the purpose of additional analysis as required by the Uniform Guidance, and is not a required part of the basic 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 basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the basic financial statements as a whole.

Plante & Moran, PLLC

January 8, 2018



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Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

Independent Auditor's Report

To Management and the Board of Trustees Michigan State University

We have audited, in accordance with the 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 basic financial statements of Michigan State University (the "University") and its discretely presented component unit as of and for the year ended June 30, 2017, and the related notes to the financial statements, which collectively comprise the University's basic financial statements, and have issued our report thereon dated October 26, 2017. Our report includes a reference to other auditors who audited the financial statements of Michigan State University Foundation (the "Foundation"), as described in our report on the Michigan State University's financial statements. This report does not include the results of the other auditors' testing of internal control over financial reporting or compliance and other matters that are reported on separately by those auditors. The financial statements of the Foundation were not audited in accordance with *Government Auditing Standards*.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered Michigan State 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 opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we do not express an opinion on the effectiveness of the University's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the University's 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.



To Management and the Board of Trustees Michigan State University

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

Compliance and Other Matters

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

Plante & Moran, PLLC

October 26, 2017



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Report on Compliance for Each Major Federal Program; Report on Internal Control Over Compliance

Independent Auditor's Report

To the Board of Trustees Michigan State University

Report on Compliance for Each Major Federal Program

We have audited Michigan State University's (the "University") compliance with the types of compliance requirements described in the U.S. Office of Management and Budget (OMB) Compliance Supplement that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2017. Michigan State University's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Michigan State University's basic financial statements include the operations of Michigan State University Foundation (the "Foundation"). Our audit, described below, did not include the operations of the Foundation because the Foundation did not expend any federal awards during the year ended June 30, 2017.

Management's Responsibility

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

Auditor's Responsibility

Our responsibility is to express an opinion on compliance for each of Michigan State 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 (the "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 Michigan State University's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.



To the Board of Trustees Michigan State University

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 Michigan State University's compliance.

Opinion on Each Major Federal Program

In our opinion, Michigan State 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, 2017.

Report on Internal Control Over Compliance

Management of Michigan State 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 Michigan State 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 the 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 a 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.

To the Board of Trustees Michigan State University

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

Plante 1 Moran, PLLC

January 8, 2018

Research and Development Cluster: 10 2 2 2 2 2 2 2 2 2	16-JV-11242305-055 16-TMMSD-MI-0005 2017-JV-11261952-012 11-JV-1124306-058 12-C5-11091000-015 12-JV-11242306-167 14-C5-11091000-015 14-JV-11242306-067 14-C5-11052007-030 14-JV-1127139-016 14-PA-11091000-020 15-C5-11090400-21 15-TMXXX-MI-0002 58-1265-2-036 58-1910-4-012 58-3060-5-033 58-3060-5-033 58-3655-4-042 58-3655-2-635 58-3655-2-635 58-3655-2-635 58-3655-3-042 58-5050-5-011 58-5050-5-011 58-5050-5-011 58-5050-5-015 58-5050-5-015 58-5050-5-015 58-5050-5-016 58-5050-5-016 58-5050-5-016 58-5050-5-016 58-5050-6-002 58-5050-6-008	USDA - FOREST SERVICE USDA - AGRI MARKETING SERV US USDA - FOREST SERVICE USDA - AGRI MARKETING SERV US USDA - AGRI RESEARCH SERV US D USDA - AGRI RESEARCH SERV US D	\$ 76,889 42,171 19,723 5,043 25,066 (4,112) 110,802 76,458 28,780 31,933 1,633 56,783 41,574 2,085 28,523 13,153 12,603 4,886 70,820 14,299 6,987 (6,386)	\$
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Agriculture Direct 10.001 Agricul	58-5080-5-009 58-5090-5-066	USDA - AGRI RESEARCH SERV US D	13,982	-
Agriculture Direct 10.001 Agricul	58-5090-5-066 58-512-6-022	USDA - AGRI RESEARCH SERV US D USDA - AGRI RESEARCH SERV US D	12,991 5,490	-
Agriculture Direct 10.001 Agricul	58-5366-3-013	USDA - AGRI RESEARCH SERV US D	4,842	-
Agriculture Direct 10.001 Agricul	58-5442-4-016	USDA - AGRI RESEARCH SERV US D	62,729	-
Agriculture Direct 10.001 Agricul	58-6040-5-020	USDA - AGRI RESEARCH SERV US D	820	-
Agriculture Direct 10.001 Agricul	58-6040-6-015	USDA - AGRI RESEARCH SERV US D	6,375	-
Agriculture Direct 10.001 Agricul	58-6040-6-021 58-6040-6-029	USDA - AGRI RESEARCH SERV US D USDA - AGRI RESEARCH SERV US D	24,948 38,080	-
Agriculture Direct 10.001 Agricul	58-6040-7-006	USDA - AGRI RESEARCH SERV US D	7,952	_
Agriculture Direct 10.001	58-8010-5-020	USDA - AGRI RESEARCH SERV US D	52,795	-
Agriculture Direct 10.001	58-8030-6-004	USDA - AGRI RESEARCH SERV US D	29,299	-
Agriculture Direct 10.001	58-8060-6-009	USDA - AGRI RESEARCH SERV US D	1,088	-
Agriculture Direct 10.001	58-8062-5-036 59-0206-1-114	USDA - AGRI RESEARCH SERV US D USDA - AGRI RESEARCH SERV US D	120,381 (233)	-
Agriculture Direct 10.001	59-0206-4-001	USDA - AGRI RESEARCH SERV US D	109,664	_
Agriculture Direct 10.001	59-0206-4-008	USDA - AGRI RESEARCH SERV US D	66,917	-
Agriculture Direct 10.001 Agriculture Direct 10.002	59-0206-6-003	USDA - AGRI RESEARCH SERV US D	84,465	-
Agriculture Direct 10.001 Agriculture Direct 10.025	59-0206-6-004	USDA - AGRI RESEARCH SERV US D	30,348	-
Agriculture Direct 10.001 Agriculture Direct 10.025	59-0206-6-004 59-3040-5-001	USDA - AGRI RESEARCH SERV US D USDA - AGRI RESEARCH SERV US D	29,127 46,221	
Agriculture Direct 10.001 Agriculture Direct 10.025	59-5012-6-001	USDA - AGRI RESEARCH SERV US D	55,014	
Agriculture Direct 10.001 Agriculture Direct 10.001 Agriculture Direct 10.001 Agriculture Direct 10.025	59-5050-6-001	USDA - AGRI RESEARCH SERV US D	7,267	-
Agriculture Direct 10.001 Agriculture Direct 10.001 Agriculture Direct 10.025 Agriculture Direct 10.025	59-5090-5-004	USDA - AGRI RESEARCH SERV US D	52,960	-
Agriculture Direct 10.001 Agriculture Direct 10.025	59-6070-7-009	USDA - AGRI RESEARCH SERV US D USDA - AGRI RESEARCH SERV US D	31,708	-
Agriculture Direct 10.025	USDA ARS 58-5442-4-017 Chilvers USDAARS 59-0206-4-037 Nagelkirk	USDA - AGRI RESEARCH SERV US D	4,496 18,487	
	15-8130-0024-CA	USDA - ANIMAL AND PLT HTL INSP	31,472	
Agriculture Direct 10.025	15-8130-0254-CA	USDA - ANIMAL AND PLT HTL INSP	207,648	87,417
Agriculture Direct 10.025	15-8130-0254-CA	USDA - ANIMAL AND PLT HTL INSP	39,313	42,927
Agriculture Direct 10.025	15-8130-0324-CA	USDA - ANIMAL AND PLT HTL INSP	71,610	-
Agriculture Direct 10.025 Agriculture Direct 10.025	15-8130-0540-CA 15-8226-1001-CA	USDA - ANIMAL AND PLT HTL INSP USDA - ANIMAL AND PLT HTL INSP	12,558 4,971	-
Agriculture Direct 10.025	15-9419-0287-CA	USDA - ANIMAL AND PLT HTL INSP	1,430	-
Agriculture Direct 10.025	15-9419-0332	USDA - ANIMAL AND PLT HTL INSP	2,333	-
Agriculture Direct 10.025	16-8130-0024-CA	USDA - ANIMAL AND PLT HTL INSP	123,783	-
Agriculture Direct 10.025	16-8130-0666-CA	USDA - ANIMAL AND PLT HTL INSP	92,840	-
Agriculture Direct 10.025 Agriculture Direct 10.025	16-8226-1001-CA AP17PPQS&T00C002	USDA - ANIMAL AND PLT HTL INSP USDA - ANIMAL AND PLT HTL INSP	12,064 864	-
Agriculture Direct 10.025 Agriculture Direct 10.025	AP17PPQS&T00C002 AP17PPQS&T00C017	USDA - ANIMAL AND PLT HTL INSP	3,438	-
Agriculture Direct 10.028	14-7488-1077-CA	USDA - ANIMAL AND PLT HTL INSP	(1,949)	-
Agriculture Direct 10.028	USDA APHIS 15-7488-1077-CA Campa	USDA - ANIMAL AND PLT HTL INSP	42,777	-
Agriculture Direct 10.156	16FSMIPMI0007	USDA - FEDERAL STATE MARKETING IMPROVEMENT PROGRAM		-
Agriculture Direct 10.164 Agriculture Direct 10.164	15-TMXXX-MI-0001 16-TMMSD-MI-0012	USDA - AGRI MARKETING SERV US USDA - AGRI MARKETING SERV US	39,159 28,161	-
Agriculture Direct 10.200	2012-39571-20296	USDA - NATIONAL INSTITUTE OF F	315,693	271,986
Agriculture Direct 10.200	2012-39571-20296	USDA - NATIONAL INSTITUTE OF F	(406)	,500
Agriculture Direct 10.200	2013-34381-21204	USDA - NATIONAL INSTITUTE OF F	7,500	-
Agriculture Direct 10.200	2013-39573-21477	USDA - NATIONAL INSTITUTE OF F	19,303	-
Agriculture Direct 10.200 Agriculture Direct 10.200	2013-41530-21320 2014-34141-22487	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	1,847 261,736	- 221,285
Agriculture Direct 10.200 Agriculture Direct 10.200 10.200	2014-34141-22487 2014-34383-22030	USDA - NATIONAL INSTITUTE OF F	261,736 14,949	
Agriculture Direct 10.200	2014-34383-22030	USDA - NATIONAL INSTITUTE OF F	667	-
Agriculture Direct 10.200	2014-39586-22374	USDA - NATIONAL INSTITUTE OF F	1,365	-
Agriculture Direct 10.200	2015-34383-23852	USDA - NATIONAL INSTITUTE OF F	2,182,476	11,250
Agriculture Direct 10.200	2016-34141-25707	USDA - NATIONAL INSTITUTE OF F	145,706	45,730
Agriculture Direct 10.200 Agriculture Direct 10.202	2016-70007-25756 MCINTIRE-STENNIS FRINGE DIR	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	53,721 61,351	-
Agriculture Direct 10.202 Agriculture Direct 10.202	M-S 6011 Landscape Walters FOR	USDA - NATIONAL INSTITUTE OF F	57,757	-
Agriculture Direct 10.202	M-S 6021 Rothstein FOR	USDA - NATIONAL INSTITUTE OF F	31,093	-
Agriculture Direct 10.202	R02073 MCF MACFARLANE FOR	USDA - NATIONAL INSTITUTE OF F	22,525	-
Agriculture Direct 10.202	R06009 M-S Kamdem PKG	USDA - NATIONAL INSTITUTE OF F	41,836	-
Agriculture Direct 10.202	R06013 M-S Matuana PKG	USDA - NATIONAL INSTITUTE OF F	14,170	-
Agriculture Direct 10.202 Agriculture Direct 10.202	R06015 M-S Finley Retention FOR R06024 M-S Han HRT	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	36,987 41,738	-
Agriculture Direct 10.202 Agriculture Direct 10.202	RADFOR MCF UPTIC Project FOR	USDA - NATIONAL INSTITUTE OF F	38,131	-
Agriculture Direct 10.203		USDA - NATIONAL INSTITUTE OF F	38,453	-
Agriculture Direct 10.203	FED HATCH OPERATING-DIR		302,255	-
Agriculture Direct 10.203 Agriculture Direct 10.203	FED HATCH OPERATING-DIR FED HATCH SALARIES - AEC FED HATCH SALARIES - ANS	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	660,043	-

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Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
Agriculture	Direct	10.203	FED HATCH SALARIES-ADMIN	USDA - NATIONAL INSTITUTE OF F	\$ 120	\$ -
Agriculture	Direct	10.203	Fed Hatch Salaries-BAE	USDA - NATIONAL INSTITUTE OF F	394,489	-
griculture	Direct	10.203	FED HATCH SALARIES-DIR	USDA - NATIONAL INSTITUTE OF F	212,701	-
griculture	Direct	10.203	FED HATCH SALARIES-ENT	USDA - NATIONAL INSTITUTE OF F	189,451	-
Agriculture	Direct Direct	10.203 10.203	FED HATCH SALARIES-FSHN FED HATCH SALARIES-HRT	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	167,866 958,397	-
Agriculture Agriculture	Direct	10.203	FED HATCH SALARIES-LMO	USDA - NATIONAL INSTITUTE OF F	196,524	-
Agriculture	Direct	10.203	FED MULTISTATE RSCH SAL DIR	USDA - NATIONAL INSTITUTE OF F	53,987	
Agriculture	Direct	10.203	HATCH FRINGE DIR	USDA - NATIONAL INSTITUTE OF F	1,017,183	-
Agriculture	Direct	10.203	MULTISTATE FRINGE DIR	USDA - NATIONAL INSTITUTE OF F	148,270	-
Agriculture	Direct	10.203	ROOLMO HATCH CLARKSVILLE LMO	USDA - NATIONAL INSTITUTE OF F	13,569	-
Agriculture	Direct	10.203	ROOLMO HATCH UNIV FARMS LMO RO1305 MRF NC-140 G. LANG HRT	USDA - NATIONAL INSTITUTE OF F	26,365 483	-
Agriculture Agriculture	Direct Direct	10.203 10.203	R04003 MRF NC-1029 Siegford ANS	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	2,788	-
Agriculture	Direct	10.203	R04069 MRF NE-1044 UTSUMI KBS	USDA - NATIONAL INSTITUTE OF F	7,352	_
Agriculture	Direct	10.203	R04079 MRF NC-1194 Alocilja BAE	USDA - NATIONAL INSTITUTE OF F	(184)	-
Agriculture	Direct	10.203	R04082 MRF NC-1191 Sprague PSM	USDA - NATIONAL INSTITUTE OF F	3,913	-
Agriculture	Direct	10.203	R04087 MRF PhotosynQ TerAvest PRL	USDA - NATIONAL INSTITUTE OF F	19,334	-
Agriculture	Direct	10.203	R04088 MRF NE-1049 SKIDMORE AFRE	USDA - NATIONAL INSTITUTE OF F	5,083	-
Agriculture	Direct	10.203	R04089 MRF NE-1048 Sordillo LACS	USDA - NATIONAL INSTITUTE OF F	(182)	-
Agriculture Agriculture	Direct Direct	10.203 10.203	R04092 MRF W-3133 HOEHN AFRE R04093 MRF W-3122 Pestka FSHN	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	32,197 38,418	-
Agriculture	Direct	10.203	R04101 MRF NE-1336 Beaudry HRT	USDA - NATIONAL INSTITUTE OF F	65,223	
griculture	Direct	10.203	R04102 MRF Equipment Strasburg FSHN	USDA - NATIONAL INSTITUTE OF F	56,700	
Agriculture	Direct	10.203	R04105 MRF NC-2042 Beede ANS	USDA - NATIONAL INSTITUTE OF F	40,491	-
Agriculture	Direct	10.203	R04108 MRF NC-2040 Vandehaar ANS	USDA - NATIONAL INSTITUTE OF F	21,252	-
Agriculture	Direct	10.203	R04109 MRF W-3177 Ortega AFRE	USDA - NATIONAL INSTITUTE OF F	28,967	-
Agriculture	Direct	10.203	R04112 MRF W-3168 Olson PSM	USDA - NATIONAL INSTITUTE OF F	14,467	-
Agriculture	Direct	10.203	R04113 MRF S-1041 Lira CHEM ENGR	USDA - NATIONAL INSTITUTE OF F	16,954	-
Agriculture Agriculture	Direct Direct	10.203 10.203	R04114 MRF NRSP-8 Ernst ANS R04115 MRF S-1032 Powers-Schilling ANS	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	35,891 12,210	-
Agriculture	Direct	10.203	R04119 MRF NC-1177 Wolf AFRE	USDA - NATIONAL INSTITUTE OF F	34,918	-
Agriculture	Direct	10.203	R04121 MRF NC-1182 Cassida PSM	USDA - NATIONAL INSTITUTE OF F	9,814	-
Agriculture	Direct	10.203	R04126 MRF Donahue IWR	USDA - NATIONAL INSTITUTE OF F	68,269	3,734
Agriculture	Direct	10.203	R04126 MRF Ines PSM	USDA - NATIONAL INSTITUTE OF F	1,391	-
Agriculture	Direct	10.203	R04129 MRF NRSP-3 Kobe FOR	USDA - NATIONAL INSTITUTE OF F	90,251	-
Agriculture	Direct	10.203	R04129 MRF Nzokou FOR	USDA - NATIONAL INSTITUTE OF F	31,240	-
Agriculture	Direct	10.203	R04131 MRF NC-1179 Andresen GEO	USDA - NATIONAL INSTITUTE OF F	32,905	-
Agriculture Agriculture	Direct Direct	10.203 10.203	R04136 MRF NC-1184 Strasburg FSHN R04137 MRF NC-1100 Loveridge AFRE	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	16,278 29,319	-
Agriculture	Direct	10.203	R04137 MRF NC-1100 Loveridge Salary AFRE	USDA - NATIONAL INSTITUTE OF F	3,515	-
Agriculture	Direct	10.203	R04138 MRF NC-1186 Fernandez HRT	USDA - NATIONAL INSTITUTE OF F	13,112	-
Agriculture	Direct	10.203	R04139 MRF S-1065 Behe HRT	USDA - NATIONAL INSTITUTE OF F	14,744	-
Agriculture	Direct	10.203	R04142 MRF NE-1544 Utsumi KBS	USDA - NATIONAL INSTITUTE OF F	25,029	-
Agriculture	Direct	10.203	R04147 MRF NC-1203 Hoffman-Benning BMB	USDA - NATIONAL INSTITUTE OF F	7,323	-
Agriculture	Direct	10.203	R04148 MRF NC-1194 Alocilja BAE	USDA - NATIONAL INSTITUTE OF F	11,816	-
Agriculture Agriculture	Direct Direct	10.203 10.203	R04149 MRF NC-1029 Siegford ANS R04153 MRF NC-1196 Raven CSUS	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	14,537 12,677	-
Agriculture	Direct	10.203	RRF-NC100, 881 DIR	USDA - NATIONAL INSTITUTE OF F	151,664	-
Agriculture	Direct	10.207	ANIMAL HEALTH FRINGE DIR	USDA - NATIONAL INSTITUTE OF F	12,669	-
Agriculture	Direct	10.207	R06503 A-H Meek PDI	USDA - NATIONAL INSTITUTE OF F	15,078	-
Agriculture	Direct	10.207	R06506 A-H Erskine LACS	USDA - NATIONAL INSTITUTE OF F	15,985	-
Agriculture	Direct	10.207	R06507 A-H Sordillo LACS	USDA - NATIONAL INSTITUTE OF F	21,413	-
Agriculture	Direct	10.207	R06509 A-H Equipment Veiga-Lopez ANS	USDA - NATIONAL INSTITUTE OF F	(5,619)	-
Agriculture	Direct	10.207	R06509 A-H Veiga-Lopez ANS	USDA - NATIONAL INSTITUTE OF F	9,342	-
Agriculture Agriculture	Direct Direct	10.215 10.219	H004403705 2013-33522-21090	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	115,509 133,529	
Agriculture	Direct	10.219	2013-33522-21090	USDA - NATIONAL INSTITUTE OF F	125,359	
Agriculture	Direct	10.250	58-1000-4-0051	USDA - AGRI RESEARCH SERV US D	4,742	_
Agriculture	Direct	10.250	59-6000-6-0067	USDA - AGRI RESEARCH SERV US D	8,499	-
Agriculture	Direct	10.303	2011-51110-31027	USDA - NATIONAL INSTITUTE OF F	48,163	39,597
Agriculture	Direct	10.303	2011-51110-31027	USDA - NATIONAL INSTITUTE OF F	45,403	-
Agriculture	Direct	10.303	2011-51110-31027	USDA - NATIONAL INSTITUTE OF F	38,727	-
Agriculture	Direct	10.303	2011-51110-31027	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	23,961	-
Agriculture Agriculture	Direct Direct	10.303 10.303	2011-51110-31027 2011-51110-31104	USDA - NATIONAL INSTITUTE OF F	18,127 124,844	77,463
Agriculture	Direct	10.303	2013-5110-51104	USDA - NATIONAL INSTITUTE OF F	72,377	77,403
Agriculture	Direct	10.303	2013-51130-20344	USDA - NATIONAL INSTITUTE OF F	(92,476)	_
Agriculture	Direct	10.303	2013-51150-20935	USDA - NATIONAL INSTITUTE OF F	(1,208)	-
Agriculture	Direct	10.303	2014-51150-22095	USDA - NATIONAL INSTITUTE OF F	95,756	-
Agriculture	Direct	10.303	2015-51150-23876	USDA - NATIONAL INSTITUTE OF F	99,801	96,207
Agriculture	Direct	10.303	2016-51102-25875	USDA - NATIONAL INSTITUTE OF F	118,231	-
Agriculture	Direct Direct	10.303 10.304	2016-51150-25528 2012-37620-19617	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	27,143 243,627	11,575 201,759
Agriculture Agriculture	Direct	10.304	2016-37620-25765	USDA - NATIONAL INSTITUTE OF F		213,660
Agriculture Agriculture	Direct	10.304	2016-37620-25765 2016-51300-25732	USDA - NATIONAL INSTITUTE OF F	306,682 27,908	13,200
Agriculture	Direct	10.307	USDA NIFA-2016-51300-25732-Brainard	USDA - NATIONAL INSTITUTE OF F	45,799	-
Agriculture	Direct	10.309	2011-51181-30666	USDA - NATIONAL INSTITUTE OF F	(1,468)	7,604
Agriculture	Direct	10.309	2012-51181-20105	USDA - NATIONAL INSTITUTE OF F	2,189,249	1,673,808
Agriculture	Direct	10.309	2012-51181-20105	USDA - NATIONAL INSTITUTE OF F	6,389	-
Agriculture	Direct	10.309	2014-51181-22378	USDA - NATIONAL INSTITUTE OF F	1,245,299	652,675
griculture	Direct	10.309	2014-51181-22380	USDA - NATIONAL INSTITUTE OF F	546,690	275,250
Agriculture	Direct	10.309	2015-51181-24256	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	9,580	-
Agriculture Agriculture	Direct Direct	10.309 10.309	2015-51181-24256 2015-51181-24285	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	1,779 640,692	494,507
Agriculture	Direct	10.309	2015-51181-24285	USDA - NATIONAL INSTITUTE OF F	35,679	-54,307
Agriculture	Direct	10.309	2015-51181-24285	USDA - NATIONAL INSTITUTE OF F	13,157	-
Agriculture	Direct	10.309	2016-51181-25405	USDA - NATIONAL INSTITUTE OF F	28,534	-
Agriculture	Direct	10.309	2016-51181-25411	USDA - NATIONAL INSTITUTE OF F	164,790	3,904
Agriculture	Direct	10.310	2011-67005-30004	USDA - NATIONAL INSTITUTE OF F	551,474	-
Agriculture	Direct	10.310	2011-67009-30137	USDA - NATIONAL INSTITUTE OF F	76,477	-
Agriculture	Direct	10.310	2011-67015-30338	USDA - NATIONAL INSTITUTE OF F	110,852	26,076
Agriculture	Direct	10.310	2011-67023-30872	USDA - NATIONAL INSTITUTE OF F	43,977	-
Agriculture	Direct	10.310	2011-68004-30340	USDA - NATIONAL INSTITUTE OF F	889,610 1 351	572,889
Agriculture	Direct Direct	10.310 10.310	2012-67005-19666 2012-67005-19666	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	1,351 129	-
Agriculture Agriculture	Direct	10.310	2012-67015-19666 2012-67015-20498	USDA - NATIONAL INSTITUTE OF F	90,307	-
	Direct	10.310	2012-67015-20498 2012-67017-30181	USDA - NATIONAL INSTITUTE OF F	19,087	-
\griculture				0357. 101110101011011	100/	-
	Direct	10.310	2013-67005-21189	USDA - NATIONAL INSTITUTE OF F	54,632	24,841
Agriculture Agriculture Agriculture		10.310 10.310	2013-67005-21189 2013-67011-21281	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	54,632 3,255	24,841

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Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
griculture	Direct	10.310	2013-67015-20962	USDA - NATIONAL INSTITUTE OF F	\$ 41,739	\$ -
griculture	Direct	10.310	2013-67017-21227	USDA - NATIONAL INSTITUTE OF F	105,459	-
griculture	Direct	10.310	2013-67019-2137	USDA - NATIONAL INSTITUTE OF F	118,188	40,56
griculture	Direct Direct	10.310 10.310	2013-68004-20439 2014-67009-22310	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	537,195	211,02
griculture griculture	Direct	10.310	2014-67015-21619	USDA - NATIONAL INSTITUTE OF F	146,295 77,145	88,81
griculture	Direct	10.310	2014-67015-21632	USDA - NATIONAL INSTITUTE OF F	39,976	-
griculture	Direct	10.310	2014-67015-21708	USDA - NATIONAL INSTITUTE OF F	115,751	-
griculture	Direct	10.310 10.310	2014-67015-21832 2014-68004-21881	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	140,901 117,614	22,30
riculture riculture	Direct Direct	10.310	2014-68004-21861	USDA - NATIONAL INSTITUTE OF F	186,528	8,76
griculture	Direct	10.310	2014-68004-21972	USDA - NATIONAL INSTITUTE OF F	224,348	-
griculture	Direct	10.310	2014-68006-21828	USDA - NATIONAL INSTITUTE OF F	89,015	-
griculture	Direct	10.310	2014-68006-21863	USDA - NATIONAL INSTITUTE OF F	103,525	43,86
griculture griculture	Direct Direct	10.310 10.310	2014-68006-21869 2014-68006-21870	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	113,468 112,532	-
riculture	Direct	10.310	2014-68006-21870	USDA - NATIONAL INSTITUTE OF F	30,600	-
riculture	Direct	10.310	2014-68006-21870	USDA - NATIONAL INSTITUTE OF F	16,543	-
griculture	Direct	10.310	2014-68006-21870	USDA - NATIONAL INSTITUTE OF F	5,306	-
griculture	Direct	10.310	2014-68006-21870	USDA - NATIONAL INSTITUTE OF F	(1,070)	-
griculture	Direct	10.310	2015-67013-22932	USDA - NATIONAL INSTITUTE OF F	190,384	79,66
griculture griculture	Direct Direct	10.310 10.310	2015-67013-23068 2015-67015-23207	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	179,919 144,057	-
griculture	Direct	10.310	2015-67017-23113	USDA - NATIONAL INSTITUTE OF F	6,354	-
griculture	Direct	10.310	2015-67019-23007	USDA - NATIONAL INSTITUTE OF F	150,929	73,32
griculture	Direct	10.310	2015-67028-23510	USDA - NATIONAL INSTITUTE OF F	53,432	-
griculture	Direct	10.310	2015-67028-23652	USDA - NATIONAL INSTITUTE OF F	83,189	
riculture riculture	Direct Direct	10.310 10.310	2015-67030-25204 2015-68001-23239	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	86,048 743,831	4,55 315,32
riculture	Direct	10.310	2015-68001-23239 2015-68003-23415	USDA - NATIONAL INSTITUTE OF F	724,730	316,46
riculture	Direct	10.310	2015-68007-23133	USDA - NATIONAL INSTITUTE OF F	871,194	118,49
griculture	Direct	10.310	2016-67011-24713	USDA - NATIONAL INSTITUTE OF F	54,795	-
griculture	Direct	10.310	2016-67011-24726	USDA - NATIONAL INSTITUTE OF F	46,795	-
griculture	Direct	10.310	2016-67011-25205	USDA - NATIONAL INSTITUTE OF F	42,712	-
riculture riculture	Direct Direct	10.310 10.310	2016-67012-25254 2016-67015-24891	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	65,723 102,426	14,04
riculture	Direct	10.310	2016-67015-24898	USDA - NATIONAL INSTITUTE OF F	228,051	14,0-
riculture	Direct	10.310	2016-67017-24514	USDA - NATIONAL INSTITUTE OF F	171,236	-
riculture	Direct	10.310	2016-68004-24931	USDA - NATIONAL INSTITUTE OF F	615,230	395,19
riculture	Direct	10.310	2016-68004-24931	USDA - NATIONAL INSTITUTE OF F	653	
riculture	Direct Direct	10.310 10.310	2016-68006-24852 2017-67007-25947	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	117,506 19,356	20,8
riculture riculture	Direct	10.310	2017-67007-25947 2017-67011-26038	USDA - NATIONAL INSTITUTE OF F	14,976	-
riculture	Direct	10.310	2017-67011-26042	USDA - NATIONAL INSTITUTE OF F	20,035	-
riculture	Direct	10.310	2017-67011-26073	USDA - NATIONAL INSTITUTE OF F	18,403	-
griculture	Direct	10.310	2017-67011-26074	USDA - NATIONAL INSTITUTE OF F	2,368	-
griculture	Direct	10.310	2017-67013-26257	USDA - NATIONAL INSTITUTE OF F	14,906	-
griculture griculture	Direct Direct	10.310 10.310	2017-67015-26084 2017-67015-26673	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	152,849 19,275	-
griculture	Direct	10.310	2017-67015-26676	USDA - NATIONAL INSTITUTE OF F	9,164	_
griculture	Direct	10.310	2017-67017-26168	USDA - NATIONAL INSTITUTE OF F	1,419	-
griculture	Direct	10.310	2017-67017-26528	USDA - NATIONAL INSTITUTE OF F	8,957	-
riculture	Direct	10.310	2017-68004-26323	USDA - NATIONAL INSTITUTE OF F	81,086	-
griculture	Direct Direct	10.310 10.310	3014-67003-21812 USDA NIFA 2013-68004-20371 Coussens	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	137,274	95,48 401,45
griculture griculture	Direct	10.310	2015-70017-22856	USDA - NATIONAL INSTITUTE OF F	657,830 246,645	100,93
riculture	Direct	10.329	2014-70006-22522	USDA - NATIONAL INSTITUTE OF F	33,325	-
riculture	Direct	10.329	2015-70006-24280	USDA - NATIONAL INSTITUTE OF F	93,320	-
riculture	Direct	10.500	2013-41530-21320	USDA - NATIONAL INSTITUTE OF F	72	-
riculture	Direct	10.500	2013-48765-21544	USDA - NATIONAL INSTITUTE OF F	1,760,265	1,041,10
riculture	Direct	10.500 10.614	2015-41210-24205 FE-CR-16-005	USDA - NATIONAL INSTITUTE OF F US DEPT OF AGRICULTURE	11,601 159,563	-
riculture riculture	Direct Direct	10.652	11-JV-11242305-082	USDA - FOREST SERVICE	28,575	-
riculture	Direct	10.652	13-JV-11242303-078	USDA - FOREST SERVICE	96,099	-
riculture	Direct	10.652	16-JV-11242306-101	USDA - FOREST SERVICE	24	-
riculture	Direct	10.652	16-PA-11272139-073	USDA - FOREST SERVICE	12,495	-
riculture	Direct	10.652	USDA 13-JV-11242306-055 Zhong	USDA - FOREST SERVICE	44,053	-
riculture	Direct	10.674 10.678	15-CA-11420004-084 11-JV-11242306-065	USDA - FOREST SERVICE USDA - FOREST SERVICE	71,896	-
riculture riculture	Direct Direct	10.678	11-JV-11242306-065 15-CS-11083601-002	USDA - FOREST SERVICE USDA - FOREST SERVICE	3,404 106,206	-
riculture	Direct	10.678	15-CS-11083601-002 15-CS-11083601-002	USDA - FOREST SERVICE	17,201	
riculture	Direct	10.678	15-JV-11242303-067	USDA - FOREST SERVICE	27,160	
riculture	Direct	10.678	15-JV-11242315-036	USDA - FOREST SERVICE	17,870	
iculture	Direct	10.680	11-DG-11420004-060	USDA - FOREST SERVICE	(987)	
iculture	Direct	10.680	14-CA-11420004-054	USDA - FOREST SERVICE	21,732	
riculture riculture	Direct Direct	10.680 10.680	14-CA-11420004-061 14-CA-11420004-201	USDA - FOREST SERVICE USDA - FOREST SERVICE	1,938 85,814	
iculture	Direct	10.680	14-CA-11420004-201 14-DG-11420004-059	USDA - FOREST SERVICE	34,992	
riculture	Direct	10.680	14-JV-11242307-114	USDA - FOREST SERVICE	11,309	
riculture	Direct	10.680	14-JV-11242313-149	USDA - FOREST SERVICE	3,801	-
riculture	Direct	10.680	15-CA-11420004-102	USDA - FOREST SERVICE	5,884	
riculture	Direct	10.680	15-DG-11420004-222	USDA - FOREST SERVICE	53,039	
riculture riculture	Direct Direct	10.680 10.680	16-CA-11420004-072 16-DG-11420004-081	USDA - FOREST SERVICE USDA - FOREST SERVICE	23,348 220,121	
iculture	Direct	10.680	USDA FS 11-DG-11420004-257 COGNATO	USDA - FOREST SERVICE USDA - FOREST SERVICE	20,121	
riculture	Direct	10.912	69-3A75-12-175	USDA-NATURAL RESOURCES CONSERVATION SERVICE	8,188	
riculture	Direct	10.912	69-3A75-13-93	USDA-NATURAL RESOURCES CONSERVATION SERVICE	44,449	17,3
riculture	Direct	10.960	58-3148-1-113	FOREIGN AGRICULTURAL SERVICE	31,336	-
riculture	Direct	10.960	TA-CR-15-050-03	FOREIGN AGRICULTURAL SERVICE	106,879	
riculture	Direct Direct Total	10.960	TA-CR-16-017	FOREIGN AGRICULTURAL SERVICE	18,032 32,625,597	8,478,9
iculture	Pass-through	10	080500.330397.01	MISSISSIPPI STATE UNIV	7,792	0,478,
iculture	Pass-through	10.001	25-6235-0205-004	UNIVERSITY OF NEBRASKA LINCOLN	1,586	
iculture	Pass-through	10.001	59-3655-2-619	UNIVERSITY OF WISCONSIN MADISON	(3,605)	
iculture	Pass-through	10.001	59-3655-2-619	UNIVERSITY OF WISCONSIN MADISON	(7,225)	
riculture	Pass-through	10.001	59-8062-6-0003	CORNELL UNIV	22,964	-
riculture	Pass-through	10.001	RUTGERS 2012-MI001-AR5 WISE/CHEN	RUTGERS UNIV	29,300	
riculture riculture	Pass-through Pass-through	10.025 10.025	791N6600347 791N6600428	MICHIGAN DEPARTMENT OF NATURAL MI DEPT OF AG & RURAL DEVELOP	41,869 92,000	
griculture	Pass-through	10.025	791N6600429	MI DEPT OF AG & RURAL DEVELOP	39,001	-

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Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
Agriculture	Pass-through	10.025 10.025	791N7700355	MICHIGAN DEPT OF AGRICULTURE & RURAL DEVELOPMENT MICHIGAN DEPT OF AGRICULTURE & RURAL DEVELOPMENT		\$ -
Agriculture Agriculture	Pass-through Pass-through	10.025	791N7700356 791N7700375	MICHIGAN DEPT OF AGRICULTURE & RURAL DEVELOPMENT	39,804 4,309	-
Agriculture	Pass-through	10.025	791N7700376	MICHIGAN DEPT OF AGRICULTURE & RURAL DEVELOPMENT	8,609	-
Agriculture	Pass-through	10.025	G-06256-1	COLORADO STATE UNIV	2,217	-
Agriculture Agriculture	Pass-through Pass-through	10.170 10.170	544802-19057 791N7700139	VIRGINIA POLYTECHNIC INST MICHIGAN CARROT COUNCIL	31 20,324	-
Agriculture	Pass-through	10.170	791N7700187	MICHIGAN CARROT COUNCIL	28,423	-
Agriculture	Pass-through	10.170	791N7700192	MICHIGAN ONION COMMITTEE	17,099	-
Agriculture	Pass-through	10.170	791N7700194	MICHIGAN STATE HORTICULTURAL SOCIETY	29,571	-
Agriculture Agriculture	Pass-through Pass-through	10.170 10.170	MBG MRKTG - MDARD - Isaacs Mi Asparagus	MBG MARKETING MICHIGAN ASPARAGUS ADVISORY BOARD	29,481 22	-
Agriculture	Pass-through	10.170	Optimizing Cover Crops	MICHIGAN CARROT COUNCIL	76,022	-
Agriculture	Pass-through	10.170	Spotted Wing Drosophila	MICHIGAN CHERRY COMMITTEE	14,318	-
Agriculture	Pass-through	10.200	416-41-151	IOWA STATE UNIV	2,631	-
Agriculture Agriculture	Pass-through Pass-through	10.200 10.200	5701-BSST-HAUSBECK 5729-FB-Sundin	RUTGERS UNIV RUTGERS UNIV	(413) 2,928	-
Agriculture	Pass-through	10.200	5730-SWD-Isaacs	RUTGERS UNIV	15,858	-
Agriculture	Pass-through	10.200	5813-CB-Fulbright	RUTGERS UNIV	4,466	-
Agriculture Agriculture	Pass-through Pass-through	10.200 10.212	8000073491-AG E3TEC LLC Biobased Plasticizers-Miller	PURDUE UNIV E3TEC SERVICE LLC	45,922 33,000	-
Agriculture	Pass-through	10.212	SBIR Phase II	MIRTECH INC	22,764	-
Agriculture	Pass-through	10.215	410-40-33A	IOWA STATE UNIV	16,800	-
Agriculture	Pass-through	10.215	H003040104	NORTH CENTRAL REGION SARE AT THE UNIV OF MINNESOTA	19,597	-
Agriculture	Pass-through	10.215	H003679409	UNIVERSITY OF MINNESOTA	414	-
Agriculture Agriculture	Pass-through Pass-through	10.215 10.215	H004403726 H004403730	NORTH CENTRAL REGION SARE AT THE UNIV OF MINNESOTA NORTH CENTRAL REGION SARE AT THE UNIV OF MINNESOTA	57,728 9,240	-
Agriculture	Pass-through	10.215	H004403737	NORTH CENTRAL REGION SARE AT THE UNIV OF MINNESOTA	6,282	-
Agriculture	Pass-through	10.215	H004991223	NORTH CENTRAL REGION SARE AT THE UNIV OF MINNESOTA	4,348	-
Agriculture	Pass-through	10.215	H004991225	NORTH CENTRAL REGION SARE AT THE UNIV OF MINNESOTA	1,709	-
Agriculture Agriculture	Pass-through Pass-through	10.215 10.217	H005722934 8000064677-AG	NORTH CENTRAL REGION SARE AT THE UNIV OF MINNESOTA PURDUE UNIV	6,502 34,984	-
Agriculture	Pass-through	10.217	H006035703	UNIVERSITY OF MINNESOTA	3,493	-
Agriculture	Pass-through	10.307	4820	RUTGERS UNIV	5,446	-
Agriculture	Pass-through	10.307	73676-10347	CORNELL UNIV	65,908	-
Agriculture Agriculture	Pass-through Pass-through	10.307 10.307	73676-10347 73676-10347	CORNELL UNIV CORNELL UNIV	61,513 25,331	-
Agriculture	Pass-through	10.307	RC293-636-S000865	UNIVERSITY OF GEORGIA	134,734	
Agriculture	Pass-through	10.309	1762-207-2020386	CLEMSON UNIV	93,349	-
Agriculture	Pass-through	10.309	1762-207-2020386	CLEMSON UNIV	24,928	-
Agriculture Agriculture	Pass-through Pass-through	10.309 10.309	1762-207-2020386 2012-1785-04	CLEMSON UNIV NORTH CAROLINA STATE UNIV	12,747 11,520	-
Agriculture	Pass-through	10.309	2017-0398-06	NORTH CAROLINA STATE UNIV	29,249	-
Agriculture	Pass-through	10.309	215-0228-11	NORTH CAROLINA STATE UNIV	292,323	-
Agriculture	Pass-through	10.309	350K840	UNIVERSITY OF WISCONSIN MADISON	3,172	-
Agriculture Agriculture	Pass-through Pass-through	10.309 10.309	6066-PP2016-Smitley 64094-9753	RUTGERS UNIV CORNELL UNIV	52,414 25,413	-
Agriculture	Pass-through	10.309	64094-9753	CORNELL UNIV	16,683	-
Agriculture	Pass-through	10.309	64094-9753	CORNELL UNIV	12,446	-
Agriculture	Pass-through	10.309	73999-10421	CORNELL UNIV	105,645	-
Agriculture Agriculture	Pass-through Pass-through	10.309 10.309	8000076815-AG RR722-418/8644587	PURDUE UNIV UNIVERSITY OF GEORGIA	13,207 51,802	-
Agriculture	Pass-through	10.310	1210-1048-00-A	UNIVERSITY OF GEORGIA UNIVERSITY OF SOUTH FLORIDA	36,020	-
Agriculture	Pass-through	10.310	13-453 MSU	WEST VIRGINIA UNIV	8,767	-
Agriculture	Pass-through	10.310	13-AGR-373036-MSU	AUBURN UNIV	36,364	-
Agriculture Agriculture	Pass-through Pass-through	10.310 10.310	14-09-006 20152118-01	LOUISIANA STATE UNIV UNIVERSITY OF CALIFORNIA DAVIS	29,758 43,041	-
Agriculture	Pass-through	10.310	201603566-06	UNIVERSITY OF CALIFORNIA DAVIS	27,887	-
Agriculture	Pass-through	10.310	288K805	UNIVERSITY OF WISCONSIN MADISON	(3,107)	-
Agriculture	Pass-through	10.310	28987Sub51696	UNIVERSITY OF VERMONT UNIVERSITY OF MICHIGAN	6,824	-
Agriculture Agriculture	Pass-through Pass-through	10.310 10.310	3002559358 3TB462	SOUTH DAKOTA STATE UNIV	11,908 126,552	-
Agriculture	Pass-through	10.310	3TC453	SOUTH DAKOTA STATE UNIV	5,227	
Agriculture	Pass-through	10.310	400998-5801	COLORADO SCHOOL OF MINES	72,411	-
Agriculture	Pass-through	10.310	416-40-63B	IOWA STATE UNIV	47,964	-
Agriculture Agriculture	Pass-through Pass-through	10.310 10.310	416-41-07B 422262-19057	IOWA STATE UNIV VIRGINIA TECHNOLOGY	1,922 87.148	-
Agriculture	Pass-through	10.310	422517-19057	VIRGINIA POLYTECHNIC INST	23,043	-
Agriculture	Pass-through	10.310	517K296	UNIVERSITY OF WISCONSIN MADISON	4,409	-
Agriculture	Pass-through	10.310	60044923	OHIO STATE UNIV UNIVERSITY OF CALIFORNIA SAN DIEGO	24,865	-
Agriculture Agriculture	Pass-through Pass-through	10.310 10.310	71482287 S9001279 73706-10403	UNIVERSITY OF CALIFORNIA SAN DIEGO CORNELL UNIV	17,953 35,801	-
Agriculture	Pass-through	10.310	8000053332-AG	PURDUE UNIV	61,829	-
Agriculture	Pass-through	10.310	8000069354	PURDUE UNIV	25,407	-
Agriculture	Pass-through	10.310	BKK290-SB-005	UNIVERSITY OF IDAHO	80,915	-
Agriculture Agriculture	Pass-through Pass-through	10.310 10.310	C00034370-2 C00050735-1	UNIVERSITY OF MISSOURI UNIVERSITY OF MISSOURI	(85) 36,943	-
Agriculture	Pass-through	10.310	H001897203	UNIVERSITY OF MINNESOTA	32,567	-
Agriculture	Pass-through	10.310	U OF M-3002559358-Gasteyer	UNIVERSITY OF MICHIGAN	23,727	-
Agriculture	Pass-through	10.329	076332-15448	UNIVERSITY OF ILLINOIS	1,599	-
Agriculture Agriculture	Pass-through Pass-through	10.329 10.329	128995_G003680 Illinois USDA 2014-07306-19 Schutzki PSC	WASHINGTON STATE UNIV NORTH CENTRAL INTEGRATED PEST MANAGEMENT	7,158 8,303	-
Agriculture	Pass-through	10.500	200576-0001-290	UTAH STATE UNIV	6,970	-
Agriculture	Pass-through	10.500	H003703709	UNIVERSITY OF MINNESOTA	1,414	-
Agriculture	Pass-through	10.606	SA-13-006-USDA009N	TECHNOSERVE	96,149	11,856
Agriculture Agriculture	Pass-through Pass-through	10.664 10.664	P3-8b US EFC-APP151743 - Matuana	US ENDOWMENT FOR FORESTRY & COMMUNITIES INC US ENDOWMENT FOR FORESTRY & COMMUNITIES INC	18,191 30,602	-
Agriculture Agriculture	Pass-through	10.674	OS EFC-APP151743 - Matuana App 148050	RENEWABLE RESOURCE SOLUTIONS	10,778	-
Agriculture	Pass-through	10.902	68-52KY-16-1050	USDA - INDIANA NATURAL RESOURCES CONSERVATION SERVICE	11,558	-
Agriculture	Pass-through	10.932	060915-1	NATURE CONSERVANCY THE	154,946	
Agriculture Total	Pass-through Total				3,096,444 35,722,041	11,856 8,490,805
	Disease	11 202	00 00 00744 04	LIC ECONOMIC DEVELOPMENT ADMINISTRATION		0,450,005
Commerce Commerce	Direct Direct	11.303 11.303	06-66-05711-04 ED16CHI3030037	US ECONOMIC DEVELOPMENT ADMINISTRATION US ECONOMIC DEVELOPMENT ADMINISTRATION	56,938 107,627	-
Commerce	Direct	11.429	NA16NOS4290194	NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION	17,765	-
Commerce	Direct	11.431	NA12OAR4310081	NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION	18,593	-
Commerce	Direct	11.431	NA12OAR4310081	NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION	15,267	-
Commerce Commerce	Direct Direct	11.609 11.609	70NAB15H254 70NANB15H280	NATIONAL INST OF STANDARDS & TECHNOLOGY NATIONAL INST OF STANDARDS & TECHNOLOGY	73,007 167,887	-
Commerce	Direct	11.609	70NANB15H28U 70NANB16H244	NATIONAL INST OF STANDARDS & TECHNOLOGY NATIONAL INST OF STANDARDS & TECHNOLOGY	167,887 27,644	-
Commerce	Direct	11.609	70NANB17H027	NATIONAL INST OF STANDARDS & TECHNOLOGY	5,816 490,544	

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
Commerce	Pass-through	11	Coastal Dunes	MICHIGAN ENVIRONMENTAL COUNCIL	\$ 32	\$ -
Commerce	Pass-through	11.407	NA11NMF4070279	ILLINOIS DEPT OF NAT RESOURCES	10,602	-
Commerce	Pass-through	11.417	3003003042	UNIVERSITY OF MICHIGAN	33,168	-
Commerce	Pass-through	11.417	3003003182	UNIVERSITY OF MICHIGAN	44,434	-
Commerce Commerce	Pass-through	11.417 11.419	WSU14081 2015 CZM-MSU	WAYNE STATE UNIV NETWORKS NORTHWEST	20,672 37,674	-
Commerce	Pass-through Pass-through	11.431	3001671117	UNIVERSITY OF MICHIGAN	(31,929)	-
Commerce	Pass-through	11.431	3003959776	UNIVERSITY OF MICHIGAN	20,518	-
Commerce	Pass-through	11.431	505075-78052	NORTHEASTERN UNIV	29,424	-
Commerce	Pass-through	11.432	3003314015	UNIVERSITY OF MICHIGAN	67,535	-
Commerce	Pass-through	11.432	3004178132	UNIVERSITY OF MICHIGAN	58,187	-
Commerce	Pass-through Pass-through Total	11.438	15-FAA-367186-MSU	AUBURN UNIV	(158) 290,159	
Commerce Total					780,703	
Defense	Direct	12	2017-17020200004	INTELLIGENCE ADVANCED RESEARCH PROJECTS ACTIVITY	180,537	-
Defense Defense	Direct	12 12	W912HQ-17-C-0006 W912P6-16-C-0006	US ARMY CORPS OF ENGINEERS US ARMY CORPS OF ENGINEERS	18,773 223,008	-
Defense	Direct Direct	12.010	ARMY CORP W912DR-17-2-0001 Cui	US ARMY CORPS OF ENGINEERS	4,274	-
Defense	Direct	12.116	FA9453-14-C-0215	AIR FORCE RESEARCH LABORATORY	96,497	-
Defense	Direct	12.116	HDTRA1-11-1-0061	DEFENSE US DEPT OF	7,917	-
Defense	Direct	12.116	W912HQ-12-C-0020	US DEPT OF THE ARMY	101,179	-
Defense	Direct	12.116	W912HQ-13-C-0071	US ARMY CORPS OF ENGINEERS	317,591	39,810
Defense	Direct	12.300	FA8750-16-2-0284	US DEPT OF THE ARMY	157,215	-
Defense	Direct	12.300	FA8750-17-1-0139	AIR FORCE RESEARCH LABORATORY	22,565	-
Defense Defense	Direct Direct	12.300 12.300	N00014-14-1-0216 N00014-14-1-0631	NAVAL RESEARCH US OFFICE OF US NAVAL RESEARCH US OFFICE OF US	30,602 151,295	-
Defense Defense	Direct	12.300	N00014-14-1-0631 N00014-15-1-2005	NAVAL RESEARCH US OFFICE OF US NAVAL RESEARCH US OFFICE OF US	151,295 166,964	-
Defense	Direct	12.300	N00014-15-1-2003 N00014-15-1-2070	NAVAL RESEARCH US OFFICE OF US	10,417	-
Defense	Direct	12.300	N00014-16-1-2109	NAVAL RESEARCH US OFFICE OF US	127,042	-
Defense	Direct	12.300	N00014-16-1-2457	NAVAL RESEARCH US OFFICE OF US	155,717	-
Defense	Direct	12.300	N00014-16-1-2760	NAVAL RESEARCH US OFFICE OF US	240,820	-
Defense	Direct	12.300	N00014-16-1-2841	NAVAL RESEARCH US OFFICE OF US	110,604	-
Defense	Direct	12.300	N00014-17-1-2265	NAVAL RESEARCH US OFFICE OF US	10,959	-
Defense	Direct Direct	12.300 12.300	NAVY-N00014-17-1-2102-Yuan ONR - N00014-16-1-3051 Mukheriee	NAVAL RESEARCH US OFFICE OF US NAVAL RESEARCH US OFFICE OF US	29,133	-
Defense	Direct	12.300	W9126G-12-2-0020	US ARMY CORPS OF ENGINEERS	52,699	12,403
Defense Defense	Direct	12.300	W9126G-13-2-0020 W9126G-13-2-0022	US ARMY CORPS OF ENGINEERS	(116,401) 92,859	12,403
Defense	Direct	12.300	W912G-14-2-0044	US DEPT OF THE ARMY	17,209	
Defense	Direct	12.420	W81XWH-12-1-0418	US DEPT OF THE ARMY	24,569	8,404
Defense	Direct	12.420	W81XWH-14-1-0349	US DEPT OF THE ARMY	34,428	-
Defense	Direct	12.420	W81XWH-15-1-0018	US DEPT OF THE ARMY	215,416	-
Defense	Direct	12.420	W81XWH-15-1-0453	US DEPT OF THE ARMY	124,145	-
Defense	Direct	12.420	W81XWH-15-1-0454	US DEPT OF THE ARMY	25,064	-
Defense Defense	Direct Direct	12.420 12.420	W81XWH-15-1-0689 W81XWH-15-1-0689	US DEPT OF THE ARMY US DEPT OF THE ARMY	204,757 51,224	-
Defense	Direct	12.420	W81XWH-16-1-0631	US DEPT OF THE ARMY US DEPT OF DEFENSE	146,993	
Defense	Direct	12.420	W81XWH-16-1-0676	US DEPT OF THE ARMY	107,687	-
Defense	Direct	12.420	W81XWH-16-1-0732	US DEPT OF THE ARMY	55,252	-
Defense	Direct	12.420	W81XWH-16-1-0735	US DEPT OF THE ARMY	117,069	-
Defense	Direct	12.431	ARO W911NF-14-1-0063 Swain	ARMY RESEARCH OFFICE U S	75,612	-
Defense	Direct	12.431	W911NF-12-1-0235	ARMY RESEARCH OFFICE U S	(133)	-
Defense	Direct	12.431	W911NF-14-1-0063	ARMY RESEARCH OFFICE U.S	4,531	-
Defense Defense	Direct Direct	12.431 12.431	W911NF-14-1-0327 W911NF-15-1-0487	ARMY RESEARCH OFFICE U S ARMY RESEARCH OFFICE U S	7,704 283,208	
Defense	Direct	12.431	W911NF-17-1-0153	ARMY RESEARCH OFFICE U.S	12,670	
Defense	Direct	12.630	DOD HM04761510001 Liu	DEFENSE US DEPT OF	86,349	_
Defense	Direct	12.630	W911NF-14-1-0026	US DEPT OF THE ARMY	122,882	-
Defense	Direct	12.800	FA9550-11-1-010	AIR FORCE OFFICE OF SCIENTIFIC RESEARCH	187,945	-
Defense	Direct	12.800	FA9550-12-1-0343	AIR FORCE OFFICE OF SCIENTIFIC RESEARCH	182,686	-
Defense	Direct	12.800	FA9550-12-1-0455	AIR FORCE OFFICE OF SCIENTIFIC RESEARCH	(1)	-
Defense	Direct	12.800	FA9550-15-1-0224	AIR FORCE OFFICE OF SCIENTIFIC RESEARCH	250,313	-
Defense Defense	Direct Direct	12.800 12.800	FA9550-15-1-0282 FA9550-17-1-0150	AIR FORCE OFFICE OF SCIENTIFIC RESEARCH AIR FORCE OFFICE OF SCIENTIFIC RESEARCH	209,341 36,166	-
Defense	Direct	12.901	H98230-15-1-0260	NATL SECURITY AGENCY	21,761	-
Defense	Direct	12.901	H98230-16-1-0031	NATL SECURITY AGENCY	31,238	-
Defense	Direct	12.901	H98230-16-1-0031	NATL SECURITY AGENCY	2,823	-
Defense	Direct	12.910	ARMY W56HZV-07-2-0001 TACOM HAQ	US DEPT OF THE ARMY	854	(686)
Defense	Direct	12.910	ARMY W56HZV-07-2-0001 TACOM HAQ	US DEPT OF THE ARMY	88	-
Defense	Direct	12.910	ARMY W56HZV-07-2-0001 TACOM HOOLE	US DEPT OF THE ARMY	33,167	-
Defense	Direct	12.910	DARPA D16AP00117 Hirn	DEFENSE ADVANCED RESEARCH PROJECTS AGENCY	112,558	-
Defense Defense	Direct Direct	12.910 12.910	FA8650-15-1-7525 FA8650-16-1-7600	AIR FORCE US DEPT OF DEFENSE ADVANCED RESEARCH PROJECTS AGENCY	158,152 55,563	121,443
Defense	Direct	12.910	HR0011-15-2-0002	DEFENSE ADVANCED RESEARCH PROJECTS AGENCY DEFENSE ADVANCED RESEARCH PROJECTS AGENCY	457,456	419,434
Defense	Direct	12.910	HR0011-15-2-0034	DEFENSE ADVANCED RESEARCH PROJECTS AGENCY	398,832	-
Defense	Direct	12.910	N66001-14-1-4038	DEFENSE ADVANCED RESEARCH PROJECTS AGENCY	269,389	
	Direct Total				6,317,233	600,808
Defense	Pass-through	12	137253	JOHNS HOPKINS UNIV	50,985	-
Defense	Pass-through	12	2016-0443	MICHIGAN DEPT OF TRANSPORTATION IOWA STATE UNIV	14,007	-
Defense Defense	Pass-through	12 12	404-77-20 8217	IOWA STATE UNIV MATECH GSM	49,131 10,803	-
Defense	Pass-through Pass-through	12	8217 CRE-MSU-01	CREATV MICROTECH INC	2,999	-
Defense	Pass-through	12	FA8650-16-C-1764-MSU	TECH-X CORPORATION	174,380	-
Defense	Pass-through	12	VEM-MSU-3	VIRTUAL EM INC	37,522	-
Defense	Pass-through	12.116	12-S7114-02-C1	UNIVERSAL TECHNOLOGY CORP	18,046	-
Defense	Pass-through	12.116	13-S7128-01-C1	UNIVERSAL TECHNOLOGY CORP	240,962	-
Defense	Pass-through	12.116	16-S7412-06-C1	UNIVERSAL TECHNOLOGY CORP	38,565	-
Defense	Pass-through	12.116	4200876747	RAYTHEON COMPANY	457	-
Defense	Pass-through	12.116	45714.t.yonts: SCRTS-003	MATRIX RESEARCH INC	19,790	-
Defense Defense	Pass-through	12.116	7000295420	MASSACHUSETTS INST OF TECHNOLOGY	133,183	-
Defense Defense	Pass-through	12.116	8140000819 DBC MSULDIO RADIAEM 15 Task Order #001	NORTHROP GRUMMAN CORP	245,147	-
Defense Defense	Pass-through Pass-through	12.116 12.116	DRC.MSU.IDIQ.RADIAEM.15 Task Order #001 VEM-MSU-2	RIVERSIDE RESEARCH VIRTUAL EM. INC.	47,284 25.121	-
Defense Defense	Pass-through Pass-through	12.116	VEM-MSU-2 NCMS 201658-140851 Haq	NATIONAL CENTER FOR MANUFACTURING SCIENCE	25,121 14,520	-
Defense	Pass-through	12.300	Z8907001	UNIVERSITY OF MARYLAND	90,115	-
Defense	Pass-through	12.420	1(GG011705)	COLUMBIA UNIV	45,017	-
	Pass-through	12.420	3004148034	UNIVERSITY OF MICHIGAN	18,367	-
Defense				UNIVERSITY OF WASHINGTON	110	
Defense	Pass-through	12.420	731265			
Defense Defense	Pass-through	12.420	UWSC8721	UNIVERSITY OF WASHINGTON	60,697	-
Defense Defense Defense	Pass-through Pass-through	12.420 12.431	UWSC8721 00000834	UNIVERSITY OF WASHINGTON BROWN UNIV	60,697 169,821	-
Defense Defense	Pass-through	12.420	UWSC8721	UNIVERSITY OF WASHINGTON	60,697	-

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
Defense	Pass-through	12.800	3004148184	UNIVERSITY OF MICHIGAN	\$ 35,249	\$ -
Defense	Pass-through	12.800	NMC0155-01	NEW MEXICO CONSORTIUM	177,134	-
Defense	Pass-through	12.800	RFO1224336	OHIO STATE UNIV	54,770	
efense	Pass-through	12.910	079287-15764	UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN	17,582	-
efense	Pass-through	12.910	1015 S TA037	UNIVERSITY OF CALIFORNIA LOS ANGELES	116,598	-
efense	Pass-through	12.910	126.001	SIEMENS CORP	20,254	-
Pefense	Pass-through	12.910	14-503	ARIZONA STATE UNIV	13,838	-
Defense	Pass-through	12.910	SUB00000006	RUTGERS UNIV	40,732	-
Defense Total	Pass-through Total				2,417,203 8,734,436	600,808
Education	Direct	84.015	P015B140098	US DEPT OF EDUCATION	298,882	
Education	Direct	84.021	P021B120017 - 15	US DEPT OF EDUCATION	9,209	
ducation	Direct	84.021	P021B120017 - 15	US DEPT OF EDUCATION	7,402	_
ducation	Direct	84.200	P200A120149-14	US DEPT OF EDUCATION	89,107	-
ducation	Direct	84.305	R305A110293	US DEPT OF EDUCATION	27,246	21,052
ducation	Direct	84.305	R305A120416 - 15	US DEPT OF EDUCATION	64,574	-
ducation	Direct	84.305	R305A150210 - 17	US DEPT OF EDUCATION	325,925	86,179
ducation	Direct	84.305	R305A160049	US DEPT OF EDUCATION	160,501	-
ducation	Direct	84.324	R324A150063 - 15A	US DEPT OF EDUCATION	388,643	
	Direct Total				1,371,489	107,231
ducation	Pass-through	84	APP 142705	ILLINOIS ACTION FOR CHILDREN	60,020	-
ducation	Pass-through	84.004	S004D160011	INDIANA UNIVERSITY PURDUE UNIVERSITY INDIANAPOLIS	14,741	-
ducation	Pass-through	84.010	College Ambition APP147960	GOGERIC ONTONAGON INTERMEDIATE SCHOOL DISTRICT	13,666	-
ducation	Pass-through	84.010	Men of Promise	GOGEBIC ONTONAGON INTERMEDIATE SCHOOL DISTRICT	92,430	-
ducation	Pass-through	84.048	173430-17133	MICHIGAN DEPT OF EDUCATION	74,478	-
ducation	Pass-through	84.116	SP00012139-06	GEORGIA STATE UNIV	165,921	-
ucation	Pass-through	84.126	MRSM-14-99004	MI DEPT OF HUMAN SERVICES	72,434	-
ducation	Pass-through	84.133	282K741	UNIVERSITY OF WISCONSIN MADISON	3,339	-
ducation	Pass-through	84.263	84.263B P000160361	UNIVERSITY OF WISCONSIN STOUT	48,428	-
ducation	Pass-through	84.287	162122 - MSUEVAL	MICHIGAN DEPT OF EDUCATION	203,525	-
ducation	Pass-through	84.287	172122-MSUEVAL	MICHIGAN DEPT OF EDUCATION	212,894	-
ducation	Pass-through	84.305	0388700002	AMER INSTITUTES FOR RESEARCH	37,748	-
ducation	Pass-through	84.305	130596	UNIVERSITY OF CONNECTICUT	84,167	-
ducation	Pass-through	84.305	224640A	UNIVERSITY OF OREGON	64,247	-
ducation	Pass-through	84.305	511140-02	TEACHERS COLLEGE COLUMBIA UNIV	19,779	-
ducation	Pass-through	84.305	ED162A-A 201501255-02	OREGON STATE UNIV	22,958	-
ducation ducation	Pass-through	84.324 84.324		UNIVERSITY OF CALIFORNIA DAVIS CANISIUS COLLEGE	87,099 29,948	-
ducation	Pass-through Pass-through	84.412	Efficacy of Comprehensive Able Change Pilot	ILLINOIS ACTION FOR CHILDREN	45,702	-
addition.	Pass-through Total	UT.T12	Auto change i not	LEUROIS ACTION FOR CHIEDREN	1,353,524	
ducation Total	unough lotai				2,725,013	107,231
Energy	Direct	81.049	0016604	US DEPT OF ENERGY	80,007	
Energy	Direct	81.049	DE-FG02-01ER15228	US DEPT OF ENERGY	131,752	
Energy	Direct	81.049	DE-FG02-01ER15282	US DEPT OF ENERGY	151,758	
Energy	Direct	81.049	DE-FG02-03ER41259	US DEPT OF ENERGY	62,237	
Energy	Direct	81.049	DE-FG02-06ER15808	US DEPT OF ENERGY	88,610	
Energy	Direct	81.049	DE-FG02-06ER15808	US DEPT OF ENERGY	49,767	-
Energy	Direct	81.049	DE-FG02-06ER46309	US DEPT OF ENERGY	220,410	-
Energy	Direct	81.049	DE-FG02-06ER46341	US DEPT OF ENERGY	(11,814)	-
Energy	Direct	81.049	DE-FG02-08ER15929	US DEPT OF ENERGY	141,295	24,560
Energy	Direct	81.049	DE-FG02-08ER41546	US DEPT OF ENERGY	171,646	-
Energy	Direct	81.049	DE-FG02-08ER41556	US DEPT OF ENERGY	62,003	-
Energy	Direct	81.049	DE-FG02-08ER41556	US DEPT OF ENERGY	1,398	-
nergy	Direct	81.049	DE-FG02-91ER20021	US DEPT OF ENERGY	2,908,825	-
nergy	Direct	81.049	DE-FG02-91ER20021	US DEPT OF ENERGY	10,587	-
Energy	Direct	81.049	DE-FG02-98ER14907	US DEPT OF ENERGY	106,247	-
Energy	Direct	81.049	DE-FG02-98ER41070	US DEPT OF ENERGY	(51)	-
Energy	Direct	81.049	DE-FG02-99ER62848	US DEPT OF ENERGY	326,448	-
nergy	Direct	81.049	DE-SC0000661	US DEPT OF ENERGY	89,975,306	1,337,870
Energy	Direct	81.049	DE-SC0001525	US DEPT OF ENERGY	208,671	-
Energy	Direct	81.049	DE-SC0002325	US DEPT OF ENERGY	175,073	-
Energy	Direct	81.049	DE-SC0004835	US DEPT OF ENERGY	16,834	-
nergy	Direct	81.049	DE-SC0006400	US DEPT OF ENERGY	85,512	-
nergy	Direct	81.049	DE-SC0006956	US DEPT OF ENERGY	11,912	-
nergy	Direct	81.049	DE-SC0007101	US DEPT OF ENERGY	154,791	-
nergy	Direct	81.049	DE-SC0007101	US DEPT OF ENERGY	(6,783)	-
nergy	Direct	81.049	DE-SC0008338	US DEPT OF ENERGY	34,826	6,785
nergy	Direct	81.049	DE-SC0008509	US DEPT OF ENERGY	142,608	-
nergy	Direct	81.049	DE-SC0008511	US DEPT OF ENERGY	88,777	-
nergy	Direct	81.049	DE-SC0008511	US DEPT OF ENERGY	56,302	-
nergy	Direct	81.049	DE-SC0009962	US DEPT OF ENERGY	164,425	6,554
nergy	Direct	81.049	DE-SC0010472	US DEPT OF ENERGY	69,971	-
nergy	Direct	81.049	DE-SC0010847	US DEPT OF ENERGY	237,818	16,238
nergy	Direct	81.049	DE-SC0013365	US DEPT OF ENERGY	184,337	-
nergy	Direct	81.049	DE-SC0013617	US DEPT OF ENERGY	133,278	-
nergy	Direct	81.049	DE-SC0014108	US DEPT OF ENERGY	229,975	-
nergy	Direct	81.049	DE-SC0014108	US DEPT OF ENERGY	181,857	-
nergy	Direct	81.049	DE-SC0014108	US DEPT OF ENERGY	115,311	-
nergy	Direct	81.049	DE-SC0014108	US DEPT OF ENERGY	7,545	-
nergy	Direct	81.049	DE-SC0014384	US DEPT OF ENERGY	2,115,812	92,888
nergy	Direct	81.049	DE-SC0014530	US DEPT OF ENERGY	213,807	-
nergy	Direct	81.049	DE-SC0014537	US DEPT OF ENERGY	798,721	-
	Direct	81.049	DE-SC0015646	US DEPT OF ENERGY	(8,025)	-
	Direct	81.049	DE-SC0015903	US DEPT OF ENERGY	122,437	-
nergy		04.040	DE-SC0015904	US DEPT OF ENERGY	106,626	-
nergy nergy	Direct	81.049				
nergy nergy nergy	Direct	81.049	DE-SC0016052	US DEPT OF ENERGY	136,584	-
inergy inergy inergy inergy	Direct Direct	81.049 81.049	DE-SC0016052 DE-SC0017342	US DEPT OF ENERGY US DEPT OF ENERGY	136,584 32,023	-
nergy inergy nergy inergy nergy nergy	Direct Direct Direct	81.049 81.049 81.049	DE-SC0016052 DE-SC0017342 DOE DE-FG02-98ER20305 BENNING	US DEPT OF ENERGY US DEPT OF ENERGY US DEPT OF ENERGY	136,584 32,023 233,562	-
inergy inergy inergy inergy	Direct Direct	81.049 81.049	DE-SC0016052 DE-SC0017342	US DEPT OF ENERGY US DEPT OF ENERGY	136,584 32,023	- - - 102,948

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
Energy	Direct	81.049	FRIB DOE FUNDING	US DEPT OF ENERGY	\$ 13,836,318	\$ -
Energy	Direct	81.086	DE-EE0006424	US DEPT OF ENERGY	186,470	22,012
Energy Energy	Direct Direct	81.086 81.089	DE-EE0007803 DE-FE0023315	US DEPT OF ENERGY US DEPT OF ENERGY	84,997 184,520	-
inergy	Direct	81.112	DE-NA0002574	US DEPT OF ENERGY	286	-
Energy	Direct	81.112	DE-NA0002847	US DEPT OF ENERGY	306,741	-
Energy	Direct	81.112	DE-NA0002923	US DEPT OF ENERGY	208,350	-
inergy Energy	Direct Direct	81.112 81.112	DE-NA0002924 DE-NA0003221	US DEPT OF ENERGY US DEPT OF ENERGY	217,319 217,491	-
Energy	Direct	81.135	DE-AR0000455	US DEPT OF ENERGY	630,163	267,763
	Direct Total				116,991,270	1,877,618
Energy	Pass-through	81	16-P0616 270062	JEFFERSON SCIENCE ASSOCIATES L BROOKHAVEN NATI LABORATORY	8,245	-
Energy Energy	Pass-through Pass-through	81 81	276363	LOS ALAMOS NATL LABORATORY	(7,202) 74,280	-
Energy	Pass-through	81	300839	BROOKHAVEN NATL LABORATORY	6,640	-
Energy	Pass-through	81	308720	BROOKHAVEN NATL LABORATORY	170,993	-
Energy Energy	Pass-through Pass-through	81 81	312011 319838	BROOKHAVEN NATL LABORATORY LOS ALAMOS NATL LABORATORY	351,436 72,510	-
Energy	Pass-through	81	332574	LOS ALAMOS NATL LABORATORY	59,059	-
Energy	Pass-through	81	337256	PACIFIC NORTHWEST NATL LAB	34,857	-
Energy	Pass-through	81	3TP676	SOUTH DAKOTA STATE UNIV	1,210	-
Energy Energy	Pass-through Pass-through	81 81	3TP676 404227	SOUTH DAKOTA STATE UNIV LOS ALAMOS NATL LABORATORY	951 52,671	-
Energy	Pass-through	81	6F-31063	ARGONNE NATIONAL LABORATORY	96,428	-
Energy	Pass-through	81	Joint Appt Hao	BROOKHAVEN SCIENCE ASSOC LLC	90,459	-
Energy	Pass-through	81	Joint Appt Peter Ostroumov	ARGONNE NATIONAL LABORATORY	33,295	-
Energy	Pass-through Pass-through	81	N000199915 N000216846	HONEYWELL CORP	185,756	-
Energy Energy	Pass-through	81 81	TCS72964	HONEYWELL CORP GENERAL MOTORS CORP	63,642 52,519	-
Energy	Pass-through	81.049	130300-5085053	HARVARD UNIV	313,622	-
nergy	Pass-through	81.049	145841	KOPESS BIOMASS SOLUTIONS LLC	55,924	-
nergy	Pass-through	81.049	17630-Z7181004 2014-13	UNIVERSITY OF MARYLAND	131,507	-
energy Energy	Pass-through Pass-through	81.049 81.049	2014-13 3003805140	UNIVERSITY OF OKLAHOMA UNIVERSITY OF MICHIGAN	121,992 142,023	-
nergy	Pass-through	81.049	384H963	UNIVERSITY OF WISCONSIN MADISON	8,556,138	-
nergy	Pass-through	81.049	5103977	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	69,674	-
nergy	Pass-through	81.049	AGR2017 00021 - DE-SC0013233	ESTEC SERVICE LLC	163,614	-
Energy Energy	Pass-through Pass-through	81.049 81.049	APP 128563-K3840 NAMESFORLIFE STTR AMEND 1 GARRITY	SHEAR FORM INC NAMESFORLIFE LLC	1,669 71,397	-
Energy	Pass-through	81.049	RMD C15-25 Zegers	RADIATION MONITORING DEVICES INC	7,067	-
Energy	Pass-through	81.049	Translume/DOE Phase I SBIR Ringle	TRANSLUME, INC.	219,309	-
Energy	Pass-through	81.049	UHV-1501	UHV TECHNOLOGIES INC	67,998	-
Energy Energy	Pass-through Pass-through	81.086 81.086	CCS CORP-PA16-0349-5.3-01-Drzal CCSD A16-0349-S005 Drzal	COLLABORATIVE COMPOSITE SOLUTIONS CORP COLLABORATIVE COMPOSITE SOLUTIONS CORP	51,203 (77)	-
Energy	Pass-through	81.086	PA16-0349-3.1-01	COLLABORATIVE COMPOSITE SOLUTIONS CORP	5,126,706	-
Energy	Pass-through	81.086	PA16-0349-3.3-01	COLLABORATIVE COMPOSITE SOLUTIONS CORP	42,759	-
Energy	Pass-through	81.087	NCGA APP114981 MILLER	NATL CORN GROWERS ASSOCIATION	233,164	-
Energy Energy	Pass-through Pass-through	81.112 81.112	4-10469-28 \$1924106 5108	CARNEGIE INST RUTGERS UNIV	73,345 67,448	-
Energy	Pass-through	81.112	S1928815 5109	RUTGERS UNIV	182,686	-
Energy	Pass-through	81.113	00007638	UNIVERSITY OF CALIFORNIA BERKELEY	672,722	(219)
Energy	Pass-through	81.113	00009330	UNIVERSITY OF CALIFORNIA BERKELEY	149,105	-
Energy Total	Pass-through Total				17,868,744 134,860,014	(219) 1,877,399
Environmental Protection Agency	Direct	66.001	EPA 83589201 Schock	US ENVIRONMENTAL PROTECTION AGENCY	315,498	
Environmental Protection Agency	Direct	66.001	GL-00E00461-1	US ENVIRONMENTAL PROTECTION AGENCY	85,277	-
Environmental Protection Agency	Direct	66.469	GL-00E01294	US ENVIRONMENTAL PROTECTION AGENCY	45,983	-
Environmental Protection Agency Environmental Protection Agency	Direct Direct	66.469 66.509	GL-00E01294 83479701	US ENVIRONMENTAL PROTECTION AGENCY US ENVIRONMENTAL PROTECTION AGENCY	772 437,288	437,288
Environmental Protection Agency	Direct	66.509	83479701	US ENVIRONMENTAL PROTECTION AGENCY	131,714	437,200
Environmental Protection Agency	Direct	66.509	83479701	US ENVIRONMENTAL PROTECTION AGENCY	110,285	-
Environmental Protection Agency	Direct	66.509	83479701	US ENVIRONMENTAL PROTECTION AGENCY	75,596	63,833
Environmental Protection Agency	Direct	66.509	83479701	US ENVIRONMENTAL PROTECTION AGENCY	2,454	2,453
Environmental Protection Agency Environmental Protection Agency	Direct Direct	66.509 66.509	83579801 83616801	US ENVIRONMENTAL PROTECTION AGENCY US ENVIRONMENTAL PROTECTION AGENCY	179,422 11,643	85,894
Environmental Protection Agency	Direct	66.509	RD-83518301	US ENVIRONMENTAL PROTECTION AGENCY	15,410	1,306
Environmental Protection Agency	Direct	66.509	RD-83520301-1	US ENVIRONMENTAL PROTECTION AGENCY	193,688	-
Environmental Protection Agency	Direct	66.511	CR83422601	US ENVIRONMENTAL PROTECTION AGENCY	156,970	132,420
Environmental Protection Agency Environmental Protection Agency	Direct Direct	66.516 66.516	83594101 83676701	US ENVIRONMENTAL PROTECTION AGENCY US ENVIRONMENTAL PROTECTION AGENCY	13,454 12,448	-
Environmental Protection Agency	Direct	66.951	00E01570-0	US ENVIRONMENTAL PROTECTION AGENCY	34,102	-
Environmental Protection Agency	Direct	66.951	00E01570-0	US ENVIRONMENTAL PROTECTION AGENCY	11,381	-
Continuo anno antal Danto (1777)	Direct Total		10000 7 105247	CHAMALIIII	1,833,385	723,194
Environmental Protection Agency Environmental Protection Agency	Pass-through Pass-through	66 66,469	10006-7-105247 1509080Z2	CH2M HILL MICHIGAN TECHNICAL RESEARCH INST	355,128 17,051	-
Environmental Protection Agency	Pass-through	66.469	APP# 150589	TIP OF THE MITT WATERSHED COUN	9,373	-
Environmental Protection Agency	Pass-through	66.469	Stewardship Network/EPA 143652 Gasteyer	THE STEWARDSHIP NETWORK	8,806	-
Environmental Protection Agency	Pass-through	66.509	2013-04551-02	UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN	59,822	-
Environmental Protection Agency Environmental Protection Agency	Pass-through Pass-through	66.509 66.509	3002303905 429-40-10D	UNIVERSITY OF MICHIGAN IOWA STATE UNIV	3,416 1,951	-
Environmental Protection Agency	Pass-through	66.511	4109-79628	PURDUE UNIV	42,703	-
Environmental Protection Agency	Pass-through	66.608	OS83549201	MI ENVIRONMENTAL QUALITY	(3,594)	
Environmental Protection Agency Total	Pass-through Total				494,656 2,328,041	723,194
• ,	B*****	45.024	45 5500 7446	MATION A SUBOMMENT		
ederal Council on the Arts and Humanities ederal Council on the Arts and Humanities	Direct Direct	45.024 45.149	15-5500-7116 PW-51639-14	NATIONAL ENDOWMENT FOR THE ARTS NATL ENDOWMENT FOR THE HUMANIT	13,552 60,278	-
ederal Council on the Arts and Humanities	Direct	45.149	RZ-51461-12	NATE ENDOWMENT FOR THE HUMANIT	62,922	38,713
Federal Council on the Arts and Humanities	Direct	45.163	NEH EH-50443-14 GIFFORD	NATL ENDOWMENT FOR THE HUMANIT	(11,349)	
Federal Council on the Arts and Humanities	Direct	45.169	HK-50173-14	NATL ENDOWMENT FOR THE HUMANIT	89,975	-
Federal Council on the Arts and Humanities Total	Direct Total				215,378 215,378	38,713 38,713
Health and Human Services	Direct	93	200-2016-89831	CENTERS FOR DISEASE CONTROL AND PREVENTION	1,319,493	
Health and Human Services	Direct	93.103	FDA HHS-UFD004632B (P) Supp-Reams	FOOD & DRUG ADMINISTRATION	9,995	-
Health and Human Services	Direct	93.110	5 R40MC27704-03-00	HEALTH RESOURCES & SERVICES ADMINISTRATION	271,839	-
			1K22ES026208-01A1	NATIONAL INST OF ENVIRONMENTAL HEALTH SCIENCES	114,987	-
Health and Human Services	Direct	93.113				
Health and Human Services Health and Human Services	Direct	93.113	1R01ES024966-01A1 Revised	NATIONAL INST OF HEALTH	669,775	10,678
Health and Human Services Health and Human Services Health and Human Services Health and Human Services Health and Human Services						10,678 - -

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
Health and Human Services	Direct	93.113	4R00ES024806-03	NATIONAL INST OF HEALTH	\$ 133,950	\$ -
Health and Human Services	Direct	93.113	4R01ES002520-29	NATIONAL INST OF HEALTH	191,338	
Health and Human Services	Direct	93.113	5R01ES017537-07	NATIONAL INST OF HEALTH	287,277	56,285
Health and Human Services	Direct	93.113	5R01ES022302-03	NATIONAL INST OF HEALTH	479,789	210,291
Health and Human Services Health and Human Services	Direct	93.113	5R01ES024064-02	NATIONAL INST OF HEALTH	508,260	- 12.000
Health and Human Services Health and Human Services	Direct Direct	93.113 93.113	5R21ES024470-02 5R21ES026022 - 02	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	105,527 292,704	12,909 174,777
Health and Human Services	Direct	93.113	5R25ES0250602-02	NATIONAL INST OF HEALTH	69,469	-
Health and Human Services	Direct	93.113	5T3ES007255-28	NATIONAL INST OF HEALTH	175,015	-
Health and Human Services	Direct	93.113	5T3ES007255-28	NATIONAL INST OF HEALTH	124,016	-
Health and Human Services	Direct	93.113	5T3ES007255-28	NATIONAL INST OF HEALTH	566	-
Health and Human Services	Direct	93.113	5U01ES019434-05	NATIONAL INST OF HEALTH	(1)	-
Health and Human Services Health and Human Services	Direct Direct	93.113 93.113	5U01ES020885-04 5U01ES026119-03	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	139,145 826,994	54,106
Health and Human Services	Direct	93.113	NIH-5R01ES024064-02 (P) -Atchison	NATIONAL INST OF HEALTH	2,500	34,100
Health and Human Services	Direct	93.113	RES024064A	NATIONAL INST OF HEALTH	27,728	
Health and Human Services	Direct	93.121	1F32DE026346-01 revised	NATIONAL INST OF HEALTH	34,283	-
Health and Human Services	Direct	93.121	5R03DE023889-02	NATIONAL INST OF HEALTH	15,579	10,367
Health and Human Services	Direct	93.121	NIH FDE026346A (P) Hankenson	NATIONAL INST OF HEALTH	800	-
Health and Human Services	Direct	93.136	5R01CE002682-04	CENTERS FOR DISEASE CONTROL & PREVENTION	300,347	24,139
Health and Human Services	Direct	93.143	3P42RS004911-23S1	NATIONAL INST OF HEALTH	(707)	-
Health and Human Services Health and Human Services	Direct Direct	93.143 93.143	5PA2ES004911-26 Revised 5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	282,587 254,490	254,490
Health and Human Services	Direct	93.143	5PA2ES004911-26 Revised 5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH	237,901	254,490
Health and Human Services	Direct	93.143	5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH	214,692	-
Health and Human Services	Direct	93.143	5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH	208,357	-
Health and Human Services	Direct	93.143	5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH	207,831	-
Health and Human Services	Direct	93.143	5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH	201,858	188,483
Health and Human Services	Direct	93.143	5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH	170,942	-
Health and Human Services	Direct	93.143	5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH	158,727	-
Health and Human Services Health and Human Services	Direct Direct	93.143 93.143	5PA2ES004911-26 Revised 5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	158,525 138,460	-
						-
Health and Human Services Health and Human Services	Direct Direct	93.143 93.143	5PA2ES004911-26 Revised 5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	131,916 106,324	106,324
Health and Human Services	Direct	93.143	5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH	83,964	-
Health and Human Services	Direct	93.143	5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH	62,167	-
Health and Human Services	Direct	93.143	5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH	57,846	-
Health and Human Services	Direct	93.143	5PA2ES004911-26 Revised	NATIONAL INST OF HEALTH	49,019	49,019
Health and Human Services	Direct	93.172	5R00HG007065-04	NATIONAL INST OF HEALTH	207,890	-
Health and Human Services	Direct	93.172	5R01HG007060-03	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	284,837	-
Health and Human Services Health and Human Services	Direct Direct	93.173 93.173	1R21DC015550-01A1 5R01DC012315-04	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	7,697 528,212	156,672
Health and Human Services	Direct	93.173	5R03DC012434-03	NATIONAL INST OF HEALTH	17,006	130,072
Health and Human Services	Direct	93.173	7R21DC014238-03	NATIONAL INST OF HEALTH	103,494	88,400
Health and Human Services	Direct	93.213	1K99AT009156-01A1	NATIONAL INST OF HEALTH	81,980	-
Health and Human Services	Direct	93.213	3U19AT006057-01A1S1	NATIONAL INST OF HEALTH	1,041,078	-
Health and Human Services	Direct	93.213	5F32AT008761-02	NATIONAL INST OF HEALTH	44,974	-
Health and Human Services	Direct	93.213	5F32AT008761-02	NATIONAL INST OF HEALTH	7,734	
Health and Human Services	Direct	93.213	5R01AT007695-05	NATIONAL INST OF HEALTH	436,358	108,712
Health and Human Services Health and Human Services	Direct Direct	93.213 93.226	NIH-RAT007695B (P)-McCabe 5R18HS020208-05	NATIONAL INST OF HEALTH	164,604 367,842	74,066
Health and Human Services	Direct	93.226	5R21HS022335-02	AGENCY FOR HEALTHCARE RESEARCH & QUALITY AGENCY FOR HEALTHCARE RESEARCH & QUALITY	49,459	74,000
Health and Human Services	Direct	93.242	1R01MH111604-02	NATIONAL INST OF HEALTH	301,784	-
Health and Human Services	Direct	93.242	4R01MH093445-05	NATIONAL INST OF HEALTH	192,679	-
Health and Human Services	Direct	93.242	4R01MH096705-05	NATIONAL INST OF HEALTH	289,815	-
Health and Human Services	Direct	93.242	5R01MH085324-06	NATIONAL INST OF HEALTH	163,690	-
Health and Human Services	Direct	93.242	5R01MH092377-05	NATIONAL INST OF HEALTH	(1,524)	-
Health and Human Services	Direct	93.242	5R01MH104622-02	NATIONAL INST OF HEALTH	(1,692)	
Health and Human Services Health and Human Services	Direct	93.242	5R01MH108511-02 Revised	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	496,555	50,807
Health and Human Services Health and Human Services	Direct Direct	93.242 93.242	5R01MH111276-02 5R21MH100238-02	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	192,881 164,963	8,858
Health and Human Services	Direct	93.242	5R21MH104780-02	NATIONAL INST OF HEALTH	201,461	8,838
Health and Human Services	Direct	93.242	5R21MH105626-02	NATIONAL INST OF HEALTH	187,180	116,366
Health and Human Services	Direct	93.242	5U01MH106660-02	NATIONAL INST OF HEALTH	1,734,392	828,321
Health and Human Services	Direct	93.242	7R01MH102456-04	NATIONAL INST OF HEALTH	10	· -
Health and Human Services	Direct	93.242	NIH RMH111715A (P) Klump	NATIONAL INST OF HEALTH	110,226	-
Health and Human Services	Direct	93.262	1U60OH010892-01A1	CENTERS FOR DISEASE CONTROL & PREVENTION	62,823	-
Health and Human Services	Direct	93.262	5U60OH008466-12	CENTERS FOR DISEASE CONTROL & PREVENTION	660,340	88,673
Health and Human Services	Direct	93.262	5U60OH008466-12 NIH-RAA024288 (P)-Wang	CENTERS FOR DISEASE CONTROL & PREVENTION NATIONAL INST OF HEALTH	5,448	-
Health and Human Services Health and Human Services	Direct Direct	93.273 93.279	NIH-KAAU24288 (P)-Wang 1F31DA042502-01A1 REVISED	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	20,148 2,654	-
Health and Human Services	Direct	93.279	1R03DA033455-01A1	NATIONAL INST OF HEALTH	2,654 72	-
Health and Human Services	Direct	93.279	4K01DA033346-04	NATIONAL INST OF HEALTH	177,019	
Health and Human Services	Direct	93.279	4T32DA021129-10	NATIONAL INST OF HEALTH	140,035	-
Health and Human Services	Direct	93.279	4T32DA021129-10	NATIONAL INST OF HEALTH	106,064	-
Health and Human Services	Direct	93.279	5K01DA036747-03	NATIONAL INST OF HEALTH	110,735	-
Health and Human Services	Direct	93.279	5K05DA015799-11	NATIONAL INST OF HEALTH	26,900	-
Health and Human Services	Direct	93.279	5R00DA037271-04	NATIONAL INST OF HEALTH	141,687	-
Health and Human Services Health and Human Services	Direct Direct	93.279 93.279	5R01DA007908-20 5R01DA007908-20	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	2,847 170	-
						202 520
Health and Human Services Health and Human Services	Direct Direct	93.279 93.279	5R01DA039112-03 Revised 5R01DA039895-02	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	690,992 263,289	263,528
Health and Human Services	Direct	93.279	5R25DA030310-05	NATIONAL INST OF HEALTH	130,463	23,128
Health and Human Services	Direct	93.283	5U10DD000901-04	CENTERS FOR DISEASE CONTROL & PREVENTION	20,308	-
Health and Human Services	Direct	93.286	5R00EB016753-04 Revised	NATIONAL INST OF HEALTH	127,330	-
Health and Human Services	Direct	93.286	5R21EB016379-02	NATIONAL INST OF HEALTH	3,428	5,085
Health and Human Services	Direct	93.286	5R21EB017881-02	NATIONAL INST OF HEALTH	83,585	4,086
Health and Human Services	Direct	93.286	5U01EB018818-04	NATIONAL INST OF HEALTH	658,090	481,087
Health and Human Services	Direct	93.307	5U54MD011227-02 Revised	NATIONAL INST OF HEALTH	988,143	191,216
Health and Human Services	Direct	93.310	5DP7OD020320-04	NATIONAL INST OF HEALTH	328,274	245 265
Health and Human Services	Direct	93.310	5UG30D023285-02	NATIONAL INST OF HEALTH	640,212	215,385
Health and Human Services Health and Human Services	Direct Direct	93.351 93.351	4R13OD012091-10 4T35OD016477-14	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	32,000 45,351	-
Health and Human Services Health and Human Services	Direct	93.351	5R010D012206-04	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	45,351 361,971	11,777
Health and Human Services	Direct	93.351	5R21OD019915-02	NATIONAL INST OF HEALTH	100,624	-
Health and Human Services	Direct	93.351	5R24OD012915-02 5R24OD012221-15 Revised	NATIONAL INST OF HEALTH	597,150	143,032
Health and Human Services	Direct	93.351	5R25OD016534-03	NATIONAL INST OF HEALTH	166,616	68,641
	Direct	93.351	5T32OD011167-13	NATIONAL INST OF HEALTH	24,535	
Health and Human Services						
Health and Human Services Health and Human Services	Direct	93.351	NIH-5T35OD016477-15(P)-Yuzbasiyan-Gurkan	NATIONAL INST OF HEALTH	40,092	-
Health and Human Services Health and Human Services	Direct	93.351	NIH-ROD016534A (P)-Krajcik	NATIONAL INST OF HEALTH	85,260	-
Health and Human Services						- - - 85,906

Research and Development Cluster (Continued): Health and Human Services	Direct	93.361 93.393 93.393 93.393 93.395 93.395 93.395 93.395 93.395 93.396 93.396 93.396 93.398 93.398	NIH-1R21NR015589-01A1-Neighbors (P) 4R01CA160514-05 5R00CA177868-03 5R01CA151973-05 5R21CA185021-02 4R01CA162401-04 5R01CA149451-05 REVISED 5R01CA157459-05 5R01CA197050-02 Revised 5R21CA176854-02 5R01CA188305-02 5R21CA171251-02 1F99CA212221-01 5K2CA188149-03	NATIONAL INST OF HEALTH	\$ 34,419 248,947 210,583 115,211 22,679 268,253 88,576 70,433 492,204 (2,614)	\$ - - 42,835 - 17,188 129 700 172,188
Health and Human Services	Direct	93.393 93.393 93.393 93.395 93.395 93.395 93.395 93.395 93.396 93.396 93.398 93.398 93.398	ARDICA160514-05 SR00CA177868-03 SR01CA151973-05 SR21CA185021-02 4R01CA162401-04 SR01CA149451-05 REVISED SR01CA193706-02 Revised SR21CA176854-02 SR01CA188305-02 SR21CA171251-02 1F99CA212221-01	NATIONAL INST OF HEALTH	248,947 210,583 115,211 22,679 268,253 88,576 70,433 492,204	- 42,835 - 17,188 129 700
Health and Human Services	Direct	93.393 93.393 93.395 93.395 93.395 93.395 93.395 93.395 93.396 93.396 93.398 93.398	SR00CA177868-03 SR01CA151973-05 SR21CA185021-02 4R01CA162401-04 SR01CA149451-05 REVISED SR01CA193706-02 Revised SR21CA176854-02 SR01CA188305-02 SR21CA171251-02 1F99CA212221-01	NATIONAL INST OF HEALTH	210,583 115,211 22,679 268,253 88,576 70,433 492,204	- 17,188 129 700
Health and Human Services	Direct	93.393 93.395 93.395 93.395 93.395 93.395 93.396 93.396 93.396 93.398 93.398	SR01CA151973-05 SR21CA185021-02 4R01CA162401-04 SR01CA149451-05 REVISED SR01CA157459-05 SR01CA193706-02 Revised SR21CA176854-02 SR01CA188305-02 SR21CA171251-02 1F99CA212221-01	NATIONAL INST OF HEALTH	115,211 22,679 268,253 88,576 70,433 492,204	17,188 129 700
Health and Human Services	Direct	93.393 93.395 93.395 93.395 93.395 93.396 93.396 93.398 93.398 93.398 93.398	SR21CA185021-02 4R01CA162401-04 5R01CA149451-05 REVISED 5R01CA197459-05 5R01CA197405-02 Revised 5R21CA176854-02 5R01CA188305-02 5R21CA171251-02 1F99CA212221-01	NATIONAL INST OF HEALTH	22,679 268,253 88,576 70,433 492,204	- 17,188 129 700
Health and Human Services	Direct	93.395 93.395 93.395 93.395 93.396 93.396 93.398 93.398 93.398	ARDICA162401-04 SR01CA149451-05 REVISED SR01CA157459-05 SR01CA193706-02 Revised SR21CA176854-02 SR01CA188305-02 SR21CA171251-02 1F99CA212221-01	NATIONAL INST OF HEALTH	268,253 88,576 70,433 492,204	129 700
Health and Human Services	Direct	93.395 93.395 93.395 93.396 93.396 93.398 93.398 93.822	SR01CA157459-05 SR01CA193706-02 Revised 5R21CA176854-02 SR01CA188305-02 SR21CA171251-02 1F99CA212221-01	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	70,433 492,204	700
Health and Human Services	Direct	93.395 93.395 93.396 93.396 93.398 93.398 93.822	5R01CA193705-02 Revised 5R21CA176854-02 5R01CA188305-02 5R21CA171251-02 1F99CA212221-01	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	492,204	
Health and Human Services	Direct	93.395 93.396 93.396 93.398 93.398 93.822	5R21CA176854-02 5R01CA188305-02 5R21CA171251-02 1F99CA212221-01	NATIONAL INST OF HEALTH		1/2,100
Health and Human Services	Direct Direct Direct Direct Direct Direct Direct Direct Direct	93.396 93.398 93.398 93.822	5R01CA188305-02 5R21CA171251-02 1F99CA212221-01			-
Health and Human Services	Direct Direct Direct Direct Direct Direct Direct	93.398 93.398 93.822	1F99CA212221-01		385,027	-
Health and Human Services	Direct Direct Direct Direct Direct	93.398 93.822		NATIONAL INST OF HEALTH	19,781	-
Health and Human Services	Direct Direct Direct Direct	93.822		NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	22,849 186,062	-
Health and Human Services	Direct Direct Direct		4D18HP23030-03-02	HEALTH RESOURCES & SERVICES ADMINISTRATION	164,812	
Health and Human Services Health and Human Services Health and Human Services Health and Human Services	Direct	93.837	2R25HL103156-06 Revised	NATIONAL INST OF HEALTH	78,623	-
Health and Human Services Health and Human Services Health and Human Services		93.837	2R25HL108864-06A1	NATIONAL INST OF HEALTH	226,431	-
Health and Human Services Health and Human Services		93.837 93.837	4R00HL121160-03	NATIONAL INST OF HEALTH	193,123	-
Health and Human Services	Direct Direct	93.837	4RO0HL121073-03 5F31HL128035 - 02	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	340,299 14,784	-
Health and Human Services	Direct	93.837	5K01HL128843-02	NATIONAL INST OF HEALTH	109,596	-
	Direct	93.837	5P01HL070687-13	NATIONAL INST OF HEALTH	474,000	-
Health and Human Services	Direct	93.837	5P01HL070687-13	NATIONAL INST OF HEALTH	221,221	-
Health and Human Services Health and Human Services	Direct	93.837	5P01HL070687-13	NATIONAL INST OF HEALTH	206,054	-
Health and Human Services Health and Human Services	Direct Direct	93.837 93.837	5P01HL070687-13 5P01HL070687-13	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	135,410 131,883	-
Health and Human Services	Direct	93.837	5P01HL070687-13	NATIONAL INST OF HEALTH	86,529	-
Health and Human Services	Direct	93.837	5P01HL070687-13	NATIONAL INST OF HEALTH	53,865	-
Health and Human Services	Direct	93.837	5R01HL107495-04	NATIONAL INST OF HEALTH	244,498	-
Health and Human Services	Direct Direct	93.837	5R01HL109101-05	NATIONAL INST OF HEALTH	244,994	3,398
Health and Human Services Health and Human Services	Direct Direct	93.837 93.837	5R01HL115185-04 5R01HL117847-03	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	158,106 313,455	-
Health and Human Services	Direct	93.837	5R01HL117847-04	NATIONAL INST OF HEALTH	132,891	-
Health and Human Services	Direct	93.837	5R01HL130624 - 03	NATIONAL INST OF HEALTH	551,822	458,229
Health and Human Services	Direct	93.837	5R25HL108864-05	NATIONAL INST OF HEALTH	(297)	-
Health and Human Services Health and Human Services	Direct Direct	93.846 93.847	5R01AR066028-02 1R01DK108798-01A1	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	527,517 51,558	157,860
Health and Human Services	Direct	93.847	1R01DK1108798-01A1 1R01DK111475-01A1	NATIONAL INST OF HEALTH	72,751	-
Health and Human Services	Direct	93.847	1R01DK112695-01	NATIONAL INST OF HEALTH	113,410	-
Health and Human Services	Direct	93.847	3R01DK101050-02S1	NATIONAL INST OF HEALTH	38,290	-
Health and Human Services	Direct	93.847	3R01DK103723-02S1	NATIONAL INST OF HEALTH	359,277	44,820
Health and Human Services Health and Human Services	Direct Direct	93.847 93.847	4R01DK094932-05 5F30DK107163-03 Revised	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	197,134 31,846	-
Health and Human Services	Direct	93.847	5F31DK107103-03 Revised	NATIONAL INST OF HEALTH	30,430	-
Health and Human Services	Direct	93.847	5R01DK073566 - 09	NATIONAL INST OF HEALTH	279,509	-
Health and Human Services	Direct	93.847	5R01DK101050-03	NATIONAL INST OF HEALTH	196,010	-
Health and Human Services	Direct	93.847	5R01DK103723-03 Revised	NATIONAL INST OF HEALTH	51,151	-
Health and Human Services Health and Human Services	Direct Direct	93.847 93.847	5R01DK103759-03 Revised 5R01DK103808 - 04	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	321,578 358,267	64,427
Health and Human Services	Direct	93.847	5R01DK105099-03 Revised	NATIONAL INST OF HEALTH	306,476	27,840
Health and Human Services	Direct	93.847	5R01DK107697-03	NATIONAL INST OF HEALTH	684,844	46,720
Health and Human Services	Direct	93.847	5R01DK110665-02	NATIONAL INST OF HEALTH	391,595	-
Health and Human Services Health and Human Services	Direct Direct	93.847 93.853	NIH-FDK107232A (P) - Brown 1F31NS090866-01A1	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	30,694 1,948	-
Health and Human Services	Direct	93.853	1R01NS094460-01	NATIONAL INST OF HEALTH	775,540	580,720
Health and Human Services	Direct	93.853	1R13NS101877-01	NATIONAL INST OF HEALTH	10,000	-
Health and Human Services	Direct	93.853	5R01NS028421-22	NATIONAL INST OF HEALTH	33,025	-
Health and Human Services	Direct	93.853	5R01NS045195-15	NATIONAL INST OF HEALTH	318,701	-
Health and Human Services Health and Human Services	Direct Direct	93.853 93.853	5R01NS065338-05 5R03NS095202-02	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	(344) 67,233	-
Health and Human Services	Direct	93.853	5R21NS090107-02	NATIONAL INST OF HEALTH	223,869	-
Health and Human Services	Direct	93.853	5R21NS094900-02 Revised	NATIONAL INST OF HEALTH	217,276	-
Health and Human Services	Direct	93.853	5R21NS096637-02	NATIONAL INST OF HEALTH	54,877	-
Health and Human Services	Direct	93.853 93.853	5R21N5098079-02	NATIONAL INST OF HEALTH	144,831	36,047
Health and Human Services Health and Human Services	Direct Direct	93.853	5R25NS090989-02 5T32NS044928-13	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	222,196 139,578	-
Health and Human Services	Direct	93.853	5T32NS044928-13	NATIONAL INST OF HEALTH	17,207	-
Health and Human Services	Direct	93.853	NIH-R21NS098173-Yan (P)	NATIONAL INST OF HEALTH	20,048	-
Health and Human Services	Direct	93.853	NIH-RNS099632A (P)-Manfredsson	NATIONAL INST OF HEALTH	118,793	
Health and Human Services Health and Human Services	Direct Direct	93.853 93.855	RNS095656A (P) 1R01Al116605-01A1	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	202,470 475,336	31,718 11,870
Health and Human Services	Direct	93.855	1R01AI110005-01A1 1R01AI121178-01A1	NATIONAL INST OF HEALTH	119,428	
Health and Human Services	Direct	93.855	1R03AI130554-01 REVISED	NATIONAL INST OF HEALTH	38,775	-
Health and Human Services	Direct	93.855	1U01AI126610-01	NATIONAL INST OF HEALTH	314,644	115,018
Health and Human Services	Direct	93.855	2R56AI081817-06	NATIONAL INST OF HEALTH	48,565	-
Health and Human Services	Direct	93.855	4R01AI048758-17	NATIONAL INST OF HEALTH	213,740	-
Health and Human Services Health and Human Services	Direct Direct	93.855 93.855	5R01AI047153-15 5R01AI110894-02	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	103,351 3,756	2,447
Health and Human Services	Direct	93.855	5R01AI113257-02	NATIONAL INST OF HEALTH	572,132	58,269
Health and Human Services	Direct	93.855	5R01AI120189-03	NATIONAL INST OF HEALTH	125,953	-
Health and Human Services	Direct	93.855	5R03AI111054-02	NATIONAL INST OF HEALTH	124,486	-
Health and Human Services	Direct	93.855	5R21AI099404-02	NATIONAL INST OF HEALTH	861	-
Health and Human Services Health and Human Services	Direct Direct	93.855 93.855	5R21AI105867-02 5R21AI106477-02	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	1,186 148,567	-
Health and Human Services Health and Human Services	Direct	93.855	5R21AI1106477-02 5R21AI111192-03	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	105,330	1,647
Health and Human Services	Direct	93.855	5R21AI121748-02	NATIONAL INST OF HEALTH	151,751	-
Health and Human Services	Direct	93.855	5R21AI122808-02	NATIONAL INST OF HEALTH	197,522	-
Health and Human Services	Direct	93.855	5R21Al122863-02	NATIONAL INST OF HEALTH	134,322	-
Health and Human Services Health and Human Services	Direct Direct	93.855 93.855	5R21AI126359-02 5R21AI17018-02	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	66,799 10,776	-
Health and Human Services	Direct	93.855	5R37AI021884 - 32	NATIONAL INST OF HEALTH	415,086	-
Health and Human Services	Direct	93.855	5U19AI089683-04	NATIONAL INST OF HEALTH	1,570,098	1,127,406
Health and Human Services	Direct	93.855	5U19AI090872-05 REVISED	NATIONAL INST OF HEALTH	16,798	-
Health and Human Services	Direct	93.855	5U19AI090872-05 REVISED	NATIONAL INST OF HEALTH	1	(195)
Health and Human Services	Direct	93.855	5U19AI090872-05 REVISED	NATIONAL INST OF HEALTH	(9)	-
Health and Human Services Health and Human Services	Direct Direct	93.855 93.855	NIH 1R01AI121178-01A1 (P) Kaminski NIH 1R01AI121178-01A1 (P) Mulks	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	15,658 54,472	-
Health and Human Services	Direct	93.855	NIH-RAI117018A (P) -Tepe	NATIONAL INST OF HEALTH	102,287	-
Health and Human Services	Direct	93.859	1R01GM122085-01	NATIONAL INST OF HEALTH	336,140	185,679
Health and Human Services	Direct	93.859	1R25GM116761-01A1	NATIONAL INST OF HEALTH	72,877	-
Health and Human Services Health and Human Services	Direct Direct	93.859 93.859	2T32GM092715-06 3R01GM072667 - 11S1	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	129,614 103,895	-

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
Health and Human Services	Direct	93.859	3T34GM100872-03S1	NATIONAL INST OF HEALTH	\$ 44,619	\$ -
Health and Human Services	Direct	93.859	3T34GM100872-03S1	NATIONAL INST OF HEALTH	6,631	-
Health and Human Services	Direct	93.859	4R01GM100908-05	NATIONAL INST OF HEALTH	188,863	-
Health and Human Services	Direct	93.859	4R01GM101353 - 04	NATIONAL INST OF HEALTH	339,616	-
Health and Human Services Health and Human Services	Direct Direct	93.859 93.859	5R01GM026916-35 5R01GM043585-21	NATIONAL INST OF HEALTH	23,422 49,045	-
Health and Human Services	Direct	93.859	5R01GM057440-16	NATIONAL INST OF HEALTH	172,730	27,000
Health and Human Services	Direct	93.859	5R01GM063188-11	NATIONAL INST OF HEALTH	123,057	-
Health and Human Services	Direct	93.859	5R01GM063584-12	NATIONAL INST OF HEALTH	38,801	-
Health and Human Services	Direct	93.859	5R01GM072667-12 Revised	NATIONAL INST OF HEALTH	378,665	95,834
Health and Human Services	Direct	93.859	5R01GM084953-08	NATIONAL INST OF HEALTH	316,430	-
Health and Human Services Health and Human Services	Direct Direct	93.859 93.859	5R01GM090063-04 5R01GM094478-04	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	29,998 (914)	-
Health and Human Services	Direct	93.859	5R01GM094534-06	NATIONAL INST OF HEALTH	275,011	77,580
Health and Human Services	Direct	93.859	5R01GM101038-04	NATIONAL INST OF HEALTH	4,692	-
Health and Human Services	Direct	93.859	5R01GM101038-06 Revised	NATIONAL INST OF HEALTH	184,152	-
Health and Human Services	Direct	93.859	5R01GM101219-06	NATIONAL INST OF HEALTH	310,758	-
Health and Human Services	Direct	93.859	5R01GM101386-04	NATIONAL INST OF HEALTH	65,048	-
Health and Human Services	Direct	93.859	5R01GM102637-03	NATIONAL INST OF HEALTH	17,004	-
Health and Human Services Health and Human Services	Direct Direct	93.859 93.859	5R01GM104009-04 5R01GM109259-03	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	562,839 437,732	235,677
Health and Human Services	Direct	93.859	5R01GM109239-03 5R01GM109928-02	NATIONAL INST OF HEALTH	438,174	233,077
Health and Human Services	Direct	93.859	5R01GM110185-02	NATIONAL INST OF HEALTH	313,854	15,353
Health and Human Services	Direct	93.859	5R01GM110195-03	NATIONAL INST OF HEALTH	198,509	,
Health and Human Services	Direct	93.859	5R01GM110525-03	NATIONAL INST OF HEALTH	256,482	-
Health and Human Services	Direct	93.859	5R01GM115373-03	NATIONAL INST OF HEALTH	290,843	-
Health and Human Services	Direct	93.859	5R01GM115459-02	NATIONAL INST OF HEALTH	271,399	53,130
Health and Human Services	Direct	93.859	5R01GM115475-02	NATIONAL INST OF HEALTH	323,579	-
Health and Human Services Health and Human Services	Direct Direct	93.859 93.859	5R01GM118685-02 5R25GM108593-02	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	300,975 198,233	-
Health and Human Services Health and Human Services	Direct	93.859	5R25GM108593-02 5R25GM115335-03	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	198,233 56,770	24,975
Health and Human Services	Direct	93.859	5T32GM092715-05	NATIONAL INST OF HEALTH	16,516	24,3/3
Health and Human Services	Direct	93.859	5T32GM092715-05	NATIONAL INST OF HEALTH	(14)	
Health and Human Services	Direct	93.859	5T32GM110523-03	NATIONAL INST OF HEALTH	160,670	-
Health and Human Services	Direct	93.859	5T32GM110523-03	NATIONAL INST OF HEALTH	53,418	-
Health and Human Services	Direct	93.859	7R01GM099992-04	NATIONAL INST OF HEALTH	109,592	-
Health and Human Services	Direct	93.859	KGM115766A (P)	NATIONAL INST OF HEALTH	60,719	-
Health and Human Services	Direct	93.859	R01GM061893	NATIONAL INST OF HEALTH	232,045	-
Health and Human Services Health and Human Services	Direct Direct	93.865 93.865	1R21HD083058-01A1 1T32HD087166-01	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	24,434 149,591	-
Health and Human Services	Direct	93.865	2R01HD042280-10A1	NATIONAL INST OF HEALTH	184,909	26,304
Health and Human Services	Direct	93.865	3R01HD066040-04S1	NATIONAL INST OF HEALTH	(6)	-
Health and Human Services	Direct	93.865	4R01HD072972-05	NATIONAL INST OF HEALTH	260,795	-
Health and Human Services	Direct	93.865	5F32HD081856-02	NATIONAL INST OF HEALTH	48,567	-
Health and Human Services	Direct	93.865	5K12HD065879-05	NATIONAL INST OF HEALTH	587	-
Health and Human Services	Direct	93.865	5R00HD058698-05	NATIONAL INST OF HEALTH	93,016	-
Health and Human Services	Direct	93.865	5R01HD057962-05	NATIONAL INST OF HEALTH	(8,980)	
Health and Human Services Health and Human Services	Direct Direct	93.865 93.865	5R01HD064416-05 5R01HD066040-05	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	179,052 278	29,584
Health and Human Services	Direct	93.865	5R01HD070723-05	NATIONAL INST OF HEALTH	109,155	95,246
Health and Human Services	Direct	93.865	5R01HD070723-05	NATIONAL INST OF HEALTH	43,154	37,315
Health and Human Services	Direct	93.865	5R01HD072489-05	NATIONAL INST OF HEALTH	487,051	2,154
Health and Human Services	Direct	93.865	5R01HD072968-05 Revised	NATIONAL INST OF HEALTH	298,005	6,334
Health and Human Services	Direct	93.865	5R01HD075903-04 Revised	NATIONAL INST OF HEALTH	297,668	34,851
Health and Human Services	Direct	93.865	5R01HD083273-02 Revised	NATIONAL INST OF HEALTH	437,171	19,759
Health and Human Services	Direct	93.865	5R01HD084377-02	NATIONAL INST OF HEALTH	332,211	83,506
Health and Human Services	Direct	93.865	5R01HD084478-02 Revised	NATIONAL INST OF HEALTH	331,300	-
Health and Human Services Health and Human Services	Direct Direct	93.865 93.865	5R01HD084494 - 03 5R01HD085990-02	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	390,097 238,240	67,580
Health and Human Services	Direct	93.865	5R03HD073275-02	NATIONAL INST OF HEALTH	50,585	-
Health and Human Services	Direct	93.865	5R03HD077112-02	NATIONAL INST OF HEALTH	18,150	
Health and Human Services	Direct	93.865	5R03HD08184-02	NATIONAL INST OF HEALTH	50,709	-
Health and Human Services	Direct	93.865	5R21HD075974-02	NATIONAL INST OF HEALTH	57,431	4,433
Health and Human Services	Direct	93.865	5R21HD078471-02	NATIONAL INST OF HEALTH	16,475	-
Health and Human Services	Direct	93.865	5R21HD078566-02	NATIONAL INST OF HEALTH	87,578	12,556
Health and Human Services	Direct	93.865	5R21HD082453-02	NATIONAL INST OF HEALTH	34,954	-
Health and Human Services Health and Human Services	Direct	93.865 93.865	5R21HD085138-02 7R01HD045611-12	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	149,004 (12,244)	29,455
Health and Human Services	Direct Direct	93.865	NIH-1T32HD087166-01-Latham (P)	NATIONAL INST OF HEALTH	3,459	-
Health and Human Services	Direct	93.866	1RA56AG0523328-01A1	NATIONAL INST OF HEALTH	313,992	36,076
Health and Human Services	Direct	93.866	5K01AG043417-03	NATIONAL INST OF HEALTH	113,515	-
Health and Human Services	Direct	93.866	5R01AG034949-05	NATIONAL INST OF HEALTH	12,245	-
Health and Human Services	Direct	93.866	5R01AG034949-05	NATIONAL INST OF HEALTH	(368)	-
Health and Human Services	Direct	93.866	5R01AG040715-05	NATIONAL INST OF HEALTH	222,300	25,696
Health and Human Services	Direct	93.866	5R01AG044372-04 Revised	NATIONAL INST OF HEALTH	422,614	42,504
Health and Human Services	Direct	93.866	5R01AG048642-03	NATIONAL INST OF HEALTH	1,308,322	1,023,210
Health and Human Services	Direct	93.866	5R21AG044712-02	NATIONAL INST OF HEALTH	52,865	41.462
Health and Human Services Health and Human Services	Direct Direct	93.866 93.866	5R21AG051820-02 5R21AG053581-02	NATIONAL INST OF HEALTH NATIONAL INST OF HEALTH	109,878 110,237	41,462
Health and Human Services	Direct	93.866	7R01AG030425-06	NATIONAL INST OF HEALTH	83,310	-
Health and Human Services	Direct	93.867	4R01EY022727-05	NATIONAL INST OF HEALTH	198,099	
Health and Human Services	Direct	93.867	5R01EY016077-09 Revised	NATIONAL INST OF HEALTH	551,466	131,861
Health and Human Services	Direct	93.867	5R21EY024757-02	NATIONAL INST OF HEALTH	140,735	-
	Direct Total				56,930,895	9,632,009
Health and Human Services	Pass-through	93	15TJP0085	ICF INC LLC	13	-
Health and Human Services	Pass-through	93	3004138691	UNIVERSITY OF MICHIGAN	152,580	-
Health and Human Services Health and Human Services	Pass-through Pass-through	93 93	52000L APP 146044	RTI INTERNATIONAL BLOODCENTER OF WISCONSIN	27,421	-
Health and Human Services Health and Human Services	Pass-through	93	BCHS/MSU FY17	STATE OF MICHIGAN	229,844	-
Health and Human Services	Pass-through	93	CK #3058112	SOUTHWEST ONCOLOGY GROUP	18,231	-
Health and Human Services	Pass-through	93	EAY-131	NRG ONCOLOGY	903	
Health and Human Services	Pass-through	93	NRG Oncology B-43	NRG ONCOLOGY	726	-
Health and Human Services	Pass-through	93	PROTOCOL S1207	NRG ONCOLOGY	41	-
Health and Human Services	Pass-through	93	UA-NIH-000388010-016	UNIVERSITY OF ALABAMA AT BIRMINGHAM	81,422	-
Health and Human Services	Pass-through	93.070	E20172768-00-AO	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	548	-
Health and Human Services	Pass-through	93.077	114970-5101334	HARVARD UNIV	8,018	-
Health and Human Services	Pass-through	93.084	723K866	UNIVERSITY OF WISCONSIN SYSTEM	43,891	-
Health and Human Services	Pass-through	93.110	ATHN2014-NHPCC-1	MUNSON MEDICAL CENTER	110	-
Health and Human Services	Pass-through	93.113	1009036_MSU	OREGON HEALTH SCIENCES UNIV	75,139	-
Health and Human Services	Pass-through	93.113	2013-00165-01	UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN	6,694	-
Health and Human Services	Pass-through	93 113	3RRR7	LINIVERSITY OF NEW MEXICO		and the second second
Health and Human Services Health and Human Services	Pass-through Pass-through	93.113 93.113	3RBB7 713K053	UNIVERSITY OF NEW MEXICO UNIVERSITY OF WISCONSIN MADISON	88,090 13,469	-

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
Health and Human Services	Pass-through	93.113	UIUC-083348-16161-GardinerJoseph	UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN	\$ 34,578	\$ -
Health and Human Services	Pass-through	93.113	WSU16078	WAYNE STATE UNIV	18,154	-
Health and Human Services	Pass-through	93.136	2003124173	JOHNS HOPKINS UNIV	49,722	-
Health and Human Services	Pass-through	93.136	3001820588	UNIVERSITY OF MICHIGAN	237	-
Health and Human Services Health and Human Services	Pass-through Pass-through	93.142 93.172	007038-009 3002897437	CINCINNATI UNIV OF UNIVERSITY OF MICHIGAN	(1,700) 105,768	-
Health and Human Services	Pass-through	93.173	0044466 (125619-1)	UNIVERSITY OF MICHIGAN UNIVERSITY OF PITTSBURGH	44,332	-
Health and Human Services	Pass-through	93.173	13-0385	BRIGHAM YOUNG UNIV	1,496	-
Health and Human Services	Pass-through	93.173	3002722836	UNIVERSITY OF MICHIGAN	6,163	-
Health and Human Services	Pass-through	93.173	3004261216	UNIVERSITY OF MICHIGAN	14,239	-
Health and Human Services	Pass-through	93.173	60051342	OHIO STATE UNIV	129,051	-
Health and Human Services Health and Human Services	Pass-through	93.173 93.173	BL-4633518-MSU VANDERBILT VUMC56181 McAuley	INDIANA UNIV VANDERBILT UNIV	68,898 4.946	-
Health and Human Services	Pass-through Pass-through	93.226	FY17.688.002	UNIVERSITY OF COLORADO DENVER	63,038	-
Health and Human Services	Pass-through	93.226	Project 2-5-15980 FY16.688.001 AMD 1	UNIVERSITY OF COLORADO DENVER	58,379	-
Health and Human Services	Pass-through	93.226	UWSC8138	UNIVERSITY OF WASHINGTON	43,848	-
Health and Human Services	Pass-through	93.242	00000777	BROWN UNIV	29,740	-
Health and Human Services	Pass-through	93.242	00000778	BROWN UNIV	7,044	-
Health and Human Services Health and Human Services	Pass-through Pass-through	93.242 93.242	3003112208 3003210937	UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN	13,369 35,089	-
Health and Human Services	Pass-through	93.242	5-20953	SCRIPPS RESEARCH INST	38,835	_
Health and Human Services	Pass-through	93.242	5-20953	SCRIPPS RESEARCH INST	11,206	-
Health and Human Services	Pass-through	93.242	V2561-3	VAN ANDEL RESEARCH INST	42,901	-
Health and Human Services	Pass-through	93.242	WSU16128	WAYNE STATE UNIV	19,539	-
Health and Human Services	Pass-through	93.243	162734-AWARE16	MICHIGAN DEPT OF EDUCATION	39,016	-
Health and Human Services	Pass-through	93.243	172734-AWARE17	MICHIGAN DEPT OF EDUCATION	87,440	-
Health and Human Services	Pass-through	93.262	WSU16039	WAYNE STATE UNIV	6,529	-
Health and Human Services Health and Human Services	Pass-through Pass-through	93.273 93.273	3002128731 9053-8349	UNIVERSITY OF MICHIGAN BUTLER HOSPITAL	1,897 5,809	-
Health and Human Services Health and Human Services	Pass-through	93.273	9053-8349 BUTLER HOS 9053-8349 Johnson	BUTLER HOSPITAL BUTLER HOSPITAL	5,809 62,050	-
Health and Human Services	Pass-through	93.273	ORI-APP 144593-Roseth	OREGON RESEARCH INST	39,028	
Health and Human Services	Pass-through	93.273	R921	DARTMOUTH COLLEGE	32,438	-
Health and Human Services	Pass-through	93.279	1418(R195)	DARTMOUTH COLLEGE	42,373	5,840
Health and Human Services	Pass-through	93.279	2003097399	JOHNS HOPKINS UNIV	37,449	-
Health and Human Services	Pass-through	93.279	3002871750	UNIVERSITY OF MICHIGAN	20,635	-
Health and Human Services	Pass-through	93.279	3020746	DUKE UNIV	20,465	-
Health and Human Services	Pass-through	93.279	9522	WOMEN & INFANTS HOSPITAL	7,661	-
Health and Human Services Health and Human Services	Pass-through Pass-through	93.279 93.279	W&I HOSP-9522-JohnsonJennifer WIH/NIH 9522 YR 2 Johnson	WOMEN & INFANTS HOSPITAL WOMEN & INFANTS HOSPITAL	4,793 11,044	-
Health and Human Services	Pass-through	93.283	20160890-00	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	8,632	-
Health and Human Services	Pass-through	93.283	20160897-00 Attachment S	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	10,483	_
Health and Human Services	Pass-through	93.283	E20170245-00-M	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	15,986	-
Health and Human Services	Pass-through	93.283	E20170253-00-R	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	42,664	-
Health and Human Services	Pass-through	93.283	E20170657-00 -U	MICHIGAN DEPT OF COMMUNITY HEALTH	15,988	-
Health and Human Services	Pass-through	93.307	057063-87D5	UNIVERSITY OF NEW MEXICO	69,491	-
Health and Human Services	Pass-through	93.310	5106190	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	22,328	-
Health and Human Services Health and Human Services	Pass-through Pass-through	93.310 93.310	68-1096430 706K672	CALIFORNIA INSTITUTE OF TECHNO UNIVERSITY OF WISCONSIN MADISON	340,340 27,405	-
Health and Human Services	Pass-through	93.310	CK # 407	WINDROSE VISION	431	-
Health and Human Services	Pass-through	93.310	FP060906	UNIVERSITY OF CHICAGO	975	_
Health and Human Services	Pass-through	93.310	U CHICAGO FP060906 Yadav Year 2	UNIVERSITY OF CHICAGO	31,165	-
Health and Human Services	Pass-through	93.325	Reeve Foundation Grant	CHRISTOPHER & DANA REEVE FOUNDATION	11,192	-
Health and Human Services	Pass-through	93.351	215720B	UNIVERSITY OF OREGON	90,527	-
Health and Human Services	Pass-through	93.351	App 143125	FREEZEBACK LLC	90,267	-
Health and Human Services	Pass-through	93.393	153405503	UNIVERSITY OF WISCONSIN MILWAUKEE	9,144	-
Health and Human Services Health and Human Services	Pass-through	93.393 93.393	3002478030 5102580	UNIVERSITY OF MICHIGAN UNIVERSITY OF NORTH CAROLINA	11,065 72,325	34,552
Health and Human Services	Pass-through Pass-through	93.393	R789	TRUSTEES OF DARTMOUTH COLLEGE	46,449	34,332
Health and Human Services	Pass-through	93.395	9500080216-13c	CHILDRENS HOSPITAL OF PHILADELPHIA	22,057	
Health and Human Services	Pass-through	93.395	APP 145069 Martinez Hackert	ABREOS BIOSCIENCES INC	839	-
Health and Human Services	Pass-through	93.395	NIH/CHOP APP 140619 U10CA180886 GERA	CHILDRENS HOSPITAL OF PHILADELPHIA	834	-
Health and Human Services	Pass-through	93.395	NSABP B-49 TAMKUS	NATL SURGICAL ADJ BRST & BWL P	5,641	-
Health and Human Services	Pass-through	93.395	SIRNAX/NIH APP 130373 GARAVITO	SIRNAX INC.	(3,446)	-
Health and Human Services	Pass-through	93.395	TFED37-090, AMD#1	NATL SURGICAL ADJ BRST & BWL P	38,526	-
Health and Human Services Health and Human Services	Pass-through	93.398 93.506	App 152611	UNIVERSITY OF ILLINOIS CHICAGO MI DEPT OF LICENSING & REG AFF	35,911 71.430	-
Health and Human Services	Pass-through Pass-through	93.600	BHCS/MSU-CMS NBCP 2013-2016 WAYNE ST U-WSU17003 Vallotton	WAYNE STATE UNIV	122,114	-
Health and Human Services	Pass-through	93.600	WSU16012	WAYNE STATE UNIV	74,761	-
Health and Human Services	Pass-through	93.757	20160913-00-AI	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	2,718	-
Health and Human Services	Pass-through	93.757	20160914-00-AJ	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	12,197	-
Health and Human Services	Pass-through	93.757	E20170242-00-J	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	795	-
Health and Human Services	Pass-through	93.757	E20170243-00-K	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	10,077	-
Health and Human Services	Pass-through	93.778	20161931	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	5,803	-
Health and Human Services Health and Human Services	Pass-through	93.810 93.810	E20170245-00-M F20170657-00-H	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES MICHIGAN DEPT OF COMMUNITY HEALTH	5,329 5,330	-
Health and Human Services Health and Human Services	Pass-through Pass-through	93.810 93.837	E20170657-00 -U N003631001	MICHIGAN DEPT OF COMMUNITY HEALTH UNIVERSITY OF MINNESOTA TWIN CITIES	5,330 98,047	-
Health and Human Services	Pass-through	93.837	OOS100311-MSU	KAISER PERMANENTE	13,044	-
Health and Human Services	Pass-through	93.837	WSU15107-A1	WAYNE STATE UNIV	13,616	-
Health and Human Services	Pass-through	93.838	540544	UNIVERSITY OF MEMPHIS	40,574	-
Health and Human Services	Pass-through	93.838	MEMPHIS 540544 Ewart	UNIVERSITY OF MEMPHIS	71,136	-
Health and Human Services	Pass-through	93.846	3003073874	UNIVERSITY OF MICHIGAN	104,688	-
Health and Human Services	Pass-through	93.846	STTR R41AR068804	ABREOS BIOSCIENCES INC	27,424	-
Health and Human Services	Pass-through	93.847	15-A0-00-003649-01	NEW YORK UNIV SCHOOL OF MEDICINE	21,533	-
Health and Human Services	Pass-through	93.847	3003071149	UNIVERSITY OF MICHIGAN	189,092	-
Health and Human Services Health and Human Services	Pass-through Pass-through	93.847 93.847	3003853558 UND10495	UNIVERSITY OF MICHIGAN UNIVERSITY OF NORTH DAKOTA	31,156 36,107	-
Health and Human Services	Pass-through	93.853	3004086345	UNIVERSITY OF NORTH DAROTA UNIVERSITY OF MICHIGAN	26,571	-
Health and Human Services	Pass-through	93.853	416854	UNIVERSITY OF MICHIGAN UNIVERSITY OF ROCHESTER	4,614	-
Health and Human Services	Pass-through	93.853	488389 E27281	UNIVERSITY OF ILLINOIS CHICAGO	266,885	-
Health and Human Services	Pass-through	93.853	60036745 MSU	NORTHWESTERN UNIV	14,616	-
Health and Human Services	Pass-through	93.853	IN4689687MSU	INDIANA UNIV	15,830	-
Health and Human Services	Pass-through	93.853	PSG 186	MASSACHUSETTS GENERAL HOSPITAL	26,513	-
Health and Human Services	Pass-through	93.853	R21NS088554 - West/Tseng	ROSALIND FRANKLIN UNIV OF MEDICINE & SCIENCE	91,553	-
Health and Human Services	Pass-through	93.853	Univ of Rochester 416854 Shapiro	UNIVERSITY OF ROCHESTER	9,819	-
Health and Human Services	Pass-through	93.855	3002992954	UNIVERSITY OF MICHIGAN	10,252	-
Health and Human Services Health and Human Services	Pass-through	93.855	3200000654-17-016 LDR 01 MOD 3	UNIVERSITY OF KENTUCKY JOHNS HOPKINS UNIV	54,263 39.470	-
Health and Human Services Health and Human Services	Pass-through Pass-through	93.855 93.855	LDR 01 MOD 3 MOD02 2002283506	JOHNS HOPKINS UNIV JOHNS HOPKINS UNIV	39,470 40,583	-
Health and Human Services Health and Human Services	Pass-through	93.855	UNIV OF MEMPHIS/NIH 5-40150 EWART	UNIVERSITY OF MEMPHIS	40,583 12,719	-
Health and Human Services	Pass-through	93.859	0051314 (126984-2)	UNIVERSITY OF MEMFAIS UNIVERSITY OF PITTSBURGH	99,406	-
nealth and numan services						
Health and Human Services	Pass-through	93.859	0056117(129070-1)	UNIVERSITY OF PITTSBURGH	15,897	-

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
Health and Human Services	Pass-through	93.859	5104410	UNIVERSITY OF NORTH CAROLINA	\$ 85,590	\$ -
lealth and Human Services	Pass-through	93.859	5104410	UNIVERSITY OF NORTH CAROLINA	(10,766)	
lealth and Human Services	Pass-through	93.859	56810 PO H005230501	UNIVERSITY OF MINNESOTA	8,497	-
ealth and Human Services	Pass-through	93.859	Prime 4R44GM112406-02	QUANTUMBIO, INC.	116,868	-
ealth and Human Services	Pass-through	93.859	U OF M-3004222911-Feig (P)	UNIVERSITY OF MICHIGAN	17,205	-
ealth and Human Services ealth and Human Services	Pass-through Pass-through	93.859 93.865	UTA13-000938 000388010-016	UNIVERSITY OF TEXAS AT AUSTIN UNIVERSITY OF ALABAMA AT BIRMINGHAM	4,216 210,688	-
ealth and Human Services	Pass-through	93.865	2001660125	JOHNS HOPKINS UNIV	18,884	-
ealth and Human Services	Pass-through	93.865	60042504-MSU	OHIO STATE UNIV	9,255	_
ealth and Human Services	Pass-through	93.865	AGMSU-01	AGGAMIN LLC	182,229	-
ealth and Human Services	Pass-through	93.865	FY15.284.002	UNIVERSITY OF COLORADO	396	-
ealth and Human Services	Pass-through	93.865	JHU 2003075281 Boivin	JOHNS HOPKINS UNIV	87,764	-
ealth and Human Services	Pass-through	93.865	QN857961	UNIVERSITY OF KANSAS	5,482	-
ealth and Human Services ealth and Human Services	Pass-through Pass-through	93.865 93.865	R-16-0019 R866	UNIVERSITY OF HOUSTON DARTMOUTH COLLEGE	31,633 65,874	-
ealth and Human Services	Pass-through	93.865	RNG200543-02 (2680-2828)	KAISER PERMANENTE	8,753	
ealth and Human Services	Pass-through	93.865	WU-15-394	WASHINGTON UNIV IN ST LOUIS	27,508	-
ealth and Human Services	Pass-through	93.866	1032114-MSU	DIGNITY HEALTH	339,151	-
ealth and Human Services	Pass-through	93.866	160236	UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER	83,596	-
ealth and Human Services	Pass-through	93.866	3003090374	UNIVERSITY OF MICHIGAN	24,327	-
ealth and Human Services	Pass-through	93.866	3003883640	MI CNTR FOR URBAN AFRICAN AMER	2,732	-
ealth and Human Services	Pass-through	93.866	3004127215	UNIVERSITY OF MICHIGAN	44,342	-
ealth and Human Services	Pass-through	93.866	MCUAAAR / NIH 3004040429 Brittain	MI CNTR FOR URBAN AFRICAN AMER	6,780	-
ealth and Human Services	Pass-through	93.866 93.867	U OF M 3004217514 Hawkins 567945	UNIVERSITY OF MICHIGAN UNIVERSITY OF PENNSYLVANIA	26,069	-
ealth and Human Services ealth and Human Services	Pass-through Pass-through	93.867	1N4684832MSU	INDIANA UNIV	68,126 220	-
ealth and Human Services	Pass-through	93.867	IN4684833MSU	INDIANA UNIV	164,117	_
ealth and Human Services	Pass-through	93.958	Contract 20160908-00 Attachment AD	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	9,316	-
ealth and Human Services	Pass-through	93.958	Contract 20160909-00 Attachment AE	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	5,189	-
ealth and Human Services	Pass-through	93.958	Contract 20160910-00 Attachment AF	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	7,582	-
alth and Human Services	Pass-through	93.958	Contract 20160911-00 Attachment AG	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	37,495	-
ealth and Human Services	Pass-through	93.958	E20170238-00-F	MICHIGAN DEPT OF HUMAN SERVICES	38,792	-
ealth and Human Services ealth and Human Services	Pass-through	93.958 93.958	E20170241-00-I E20170248-00-Q	MICHIGAN DEPT OF HUMAN SERVICES MICHIGAN DEPT OF HUMAN SERVICES	15,341	-
ealth and Human Services	Pass-through Pass-through	93.958	E20170666-00-V	MICHIGAN DEPT OF HUMAN SERVICES MICHIGAN DEPT OF HUMAN SERVICES	30,440 19,126	-
ealth and Human Services	Pass-through	93.958	E20170666-00-V	MICHIGAN DEPT OF HUMAN SERVICES	17,207	
ealth and Human Services	Pass-through	93.958	E20170674-00	MICHIGAN DEPT OF HUMAN SERVICES	112,852	
ealth and Human Services	Pass-through	93.989	4D43TW009639-05	FOGARTY INTL CENTER	324,101	236,16
ealth and Human Services	Pass-through	93.989	5D43TW008267-05	FOGARTY INTL CENTER	2,660	2,629
ealth and Human Services	Pass-through	93.989	5K01TW009654-02	FOGARTY INTL CENTER	128,860	29,565
ealth and Human Services	Pass-through	93.989	TRN506258	CASE WESTERN RESERVE UNIV	109,279	-
ealth and Human Services	Pass-through Pass-through Total	93.989	VUMC 42900	VANDERBILT UNIV MEDICAL CENTER	7,225,592 -	3,083 311,834
lealth and Human Services Total					64,156,487	9,943,843
Homeland Security	Pass-through	97.061	Z901213	UNIVERSITY OF MARYLAND	10,232	-
•	Pass-through	97.061 97.062	Z901213 30345-Z9058104	UNIVERSITY OF MARYLAND UNIVERSITY OF MARYLAND	33,608	-
lomeland Security						-
tomeland Security tomeland Security tomeland Security Total nterior	Pass-through				33,608 43,840	
omeland Security omeland Security Total sterior	Pass-through Pass-through Total	97.062	30345-29058104	UNIVERSITY OF MARYLAND	33,608 43,840 43,840	
omeland Security	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637	30345-Z9058104 15-IV-11242313-115 USFWS F13AC00565 Infante F14AC00225	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM	33,608 43,840 43,840 142,974 188,461 36,286	
omeland Security omeland Security Total sterior sterior sterior sterior sterior	Pass-through Pass-through Total Direct Direct Direct Direct	97.062 15.232 15.608 15.637 15.647	30345-29058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00397	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US FISH & WILDLIFE SERVICE US FISH & WILDLIFE SERVICE	33,608 43,840 43,840 142,974 188,461 36,286 12,781	
omeland Security omeland Security Total Identified the secur	Pass-through Pass-through Total Direct Direct Direct Direct Direct Direct	97.062 15.232 15.608 15.637 15.647 15.662	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00397 F15AP00306	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504	
omeland Security omeland Security Total terior terior terior terior terior terior terior terior	Pass-through Pass-through Total Direct Direct Direct Direct Direct Direct Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00397 F15AP00306 F15AP00549	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21)	
omeland Security omeland Security Total terior terior terior terior terior terior terior terior	Pass-through Pass-through Total Direct Direct Direct Direct Direct Direct Direct Direct Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662	30345-Z9058104 15-IV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00397 F15AP00306 F15AP00549 F15AP00562	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830	
omeland Security comeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00365 Infante F14AC00225 F14AC00397 F15AP00306 F15AP00509 F15AP00562 F16AC00099	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610	
omeland Security Total terior	Pass-through Pass-through Total Direct Direct Direct Direct Direct Direct Direct Direct Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662	30345-Z9058104 15-IV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00397 F15AP00306 F15AP00549 F15AP00562	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830	
meland Security meland Security Total erior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.662 15.662 15.662 15.662 15.662	30345-29058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00397 F15AP00306 F15AP00509 F15AP00562 F16AC00099 F16AP00875	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768	
omeland Security comeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.662 15.662 15.662 15.662 15.662 15.678 15.805	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00297 F15AP00306 F15AP00369 F15AP00562 F16AC00099 F16AP00875 155500 G16AP00020 G16AP00020 G16AP000063	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616	
omeland Security comeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.662 15.662 15.662 15.662 15.662 15.662 15.805 15.805 15.805	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00549 F15AP00562 F16AC00099 F16AP00875 155500 G16AP00020 G16AP00003 G17AP00031	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY US GEOLOGICAL SURVEY US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317	
omeland Security comeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.662 15.662 15.662 15.662 15.662 15.678 15.805 15.805 15.805	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00297 F15AP00306 F15AP00369 F15AP00569 F15AP00562 F16AC00099 F16AP00675 155500 G16AP00020 G16AP00021 I6AC00211	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 56,286 12,781 25,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378	
omeland Security omeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.678 15.805 15.805 15.805 15.808	30345-Z9058104 15-IV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00297 F15AP00306 F15AP00306 F15AP00562 F16AC00099 F16AP00875 155500 G16AP00020 G16AP00003 G17AP00031 16AC00421 G12AC20994	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 13,768 405 50,799 86,616 7,317 97,378 4,298	
omeland Security pomeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.662 15.662 15.662 15.662 15.662 15.662 15.678 15.805 15.805 15.808 15.808	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00549 F15AP00562 F16AC00099 F16AP00875 1555500 G16AP00020 G16AP000031 I6AC00421 G12AC20394 G12AC20394 G12AC20457	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077	
omeland Security omeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.662 15.662 15.662 15.662 15.662 15.662 15.678 15.805 15.805 15.808 15.808	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00365 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00369 F15AP00569 F15AP00569 F16AP00075 155500 G16AP00020 G16AP00020 G16AP00011 I6AC00421 G12AC20394 G12AC20394 G12AC20457 G13AC00112	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 25,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486)	
omeland Security command Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.662 15.662 15.662 15.662 15.662 15.662 15.678 15.805 15.805 15.808 15.808	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00549 F15AP00562 F16AC00099 F16AP00875 1555500 G16AP00020 G16AP000031 I6AC00421 G12AC20394 G12AC20394 G12AC20457	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077	
omeland Security common Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.662 15.662 15.662 15.662 15.662 15.662 15.678 15.805 15.805 15.808 15.808 15.808 15.808 15.808	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00306 F15AP00549 F15AP00562 F16AC00099 F16AP00875 155500 G16AP000063 G17AP00031 16AC00421 G12AC2034 G12AC2034 G12AC2034 G13AC00112 G13AC00112	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097	
omeland Security command Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.662 15.662 15.662 15.662 15.662 15.678 15.805 15.805 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00549 F15AP00562 F16AC00099 F16AP00875 155500 G16AP00020 G16AP00003 G17AP00031 16AC00421 G12AC20394 G12AC20394 G12AC20344 G13AC00112 G13AC000144 G13AC000244 G13AC000244 G13AC000244 G13AC000244 G15AC00026 G15AC00064	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 19,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574	
omeland Security command Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.678 15.805 15.805 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00365 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00306 F15AP00569 F15AP00569 F16AP00067 5155500 G16AP000020 G16AP00003 G17AP00031 I6AC00421 G12AC20394 G12AC20457 G13AC00112 G13AC00244 G13AC00244 G13AC00284 G15AC00026 G15AC00166	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 25,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608	
omeland Security omeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.663 15.805 15.805 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808	30345-Z9058104 15-IV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00306 F15AP00562 F16AC00099 F16AP00875 155500 G16AP00020 G16AP00003 G17AP00031 16AC00421 G12AC20934 G12AC20957 G13AC00112 G13AC00124 G13AC00244 G13AC00266 G15AC00166 G16AC00166 G16AC00116 G16AC00116	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (26,103) 20,236 86,574 78,608 71,559	
omeland Security omeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.662 15.805 15.805 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00365 Infante F14AC00225 F14AC00397 F15AP00306 F15AP00309 F15AP00309 F15AP00509 F15AP00509 F16AP00075 155500 G16AP00003 G16AP00003 G16AP00003 G16AP00013 G17AP00031 I6AC00421 G12AC20394 G12AC20457 G13AC00112 G13AC00146 G16AC00164 G16AC00164 G16AC00164 G16AC00164 G16AC00148	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 50,286 12,781 25,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192	
omeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.662 15.805 15.805 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808	30345-29058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00297 F15AP00366 F15AP00569 F15AP00562 F16AC00099 F16AP000875 155500 G16AP00020 G16AP00020 G16AP00020 G16AP00011 G13AC00241 G12AC20394 G12AC20457 G13AC00112 G13AC00244 G13AC00264 G15AC00166 G16AC00166 G16AC00166 G16AC00116 G16AC00214 G17AC00148 G1AC00148 G1AC00368	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 93,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192 22,844	
omeland Security omeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.662 15.805 15.805 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808 15.808	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00365 Infante F14AC00225 F14AC00397 F15AP00306 F15AP00309 F15AP00309 F15AP00509 F15AP00509 F16AP00075 155500 G16AP00003 G16AP00003 G16AP00003 G16AP00013 G17AP00031 I6AC00421 G12AC20394 G12AC20457 G13AC00112 G13AC00146 G16AC00164 G16AC00164 G16AC00164 G16AC00164 G16AC00148	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 50,286 12,781 25,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192	
omeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.662 15.805 15.805 15.808	30345-29058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00397 F15AP00306 F15AP00309 F15AP00509 F16AC00099 F16AP00075 155500 G16AP00003 G16AP00003 G16AP00003 G16AP00003 G16AP00013 G17AP00031 16AC00421 G12AC20394 G12AC20394 G13AC00112 G13AC00116 G16AC00244 G13AC00164 G16AC00164 G16AC00164 G16AC00164 G16AC00164 G16AC00164 G16AC00144 G17AC00148 G1AC20388 USGS G13AC00140 Mantha	JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192 22,844 93,791	
omeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.678 15.805 15.805 15.808	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00306 F15AP00569 F15AP00569 F16AP00075 S155500 G16AP00007 G16AP00001 G16AP00001 G16AP00001 G16AP00011 G12AC20394 G12AC20394 G12AC20457 G13AC00112 G13AC00214 G13AC00244 G13AC0026 G15AC00166 G16AC00166 G16AC00166 G16AC00166 G16AC00166 G16AC00148 G1AC0048 G1AC0048 G1AC0048 G1AC0048 G1AC0048 G1AC0048 G1AC0048 G1AC0048 G1AC00186 G13AC00140 G1AC00186 G13AC00148 G1AC00321	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 25,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192 22,844 93,791 119,557	
omeland Security omeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.662 15.662 15.662 15.662 15.662 15.662 15.805 15.805 15.808	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00365 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00369 F15AP00369 F15AP00375 F155500 G16AP00020 G16AP00020 G16AP00020 G16AP00031 I6AC00421 G12AC20394 G12AC20457 G13AC00112 G13AC00244 G13AC00244 G15AC00166 G16AC00116 G16AC00116 G16AC00116 G16AC00116 G16AC00116 G16AC00116 G16AC00244 G17AC00148 G1AC00148 G1AC00388 USGS G13AC00140 Mantha G14AC00321 G15AC00126 G15AC00151 G15AC00126 G15AC00126 G15AC00151	JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192 22,844 93,791 119,557 2,350 95,838 21,558	
omeland Security Total terior	Pass-through Pass-through Total Direct	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.662 15.805 15.805 15.808	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00309 F15AP00509 F15AP00509 F15AP00507 S155500 G16AP00063 G17AP00031 I6AC00204 G12AC20394 G12AC20394 G12AC20394 G12AC20457 G13AC00112 G13AC00124 G13AC00024 G13AC00024 G15AC00026 G15AC00164 G16AC00164 G16AC00166 G15AC00166	JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192 22,844 93,791 119,557 2,350 95,838 21,558	
omeland Security omeland Security Total terior	Pass-through Pass-through Total Direct Dire	97.062 15.232 15.608 15.637 15.662 15.662 15.662 15.662 15.662 15.678 15.805 15.808	30345-Z9058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00297 F15AP00306 F15AP00306 F15AP00569 F15AP00569 F16AP00075 S155500 G16AP00007 G16AP00007 G16AP00007 G16AP00001 G16AP00011 G17AP00031 G16AP00011 G17AP00031 G17AP00031 G17AP00031 G17AP00031 G17AP00031 G17AP00031 G17AP00031 G17AC0044 G17AC00116 G17AC00164 G17AC00164 G17AC00166 G17AC00166 G17AC00166 G17AC00166 G17AC00166 G17AC00166 G17AC00176	JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 25,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192 22,844 93,791 119,557 2,350 95,838 21,558 96,131 1,556,829	
omeland Security comeland Security Total terior	Pass-through Pass-through Total Direct Dire	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.678 15.805 15.808	30345-29058104 15-IV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00562 F15AP00562 F16AC00099 F16AP000875 155500 G16AP00020 G16AP00003 G17AP00031 G16AC00421 G12AC20394 G12AC20457 G13AC00112 G13AC00112 G13AC00244 G13AC00264 G15AC00166 G16AC0016 G16AC0016 G16AC0016 G16AC0016 G16AC0016 G16AC0016 G16AC0016 G16AC0016 G16AC0017 G13AC00116 G16AC0016 G16AC0016 G16AC0016 G16AC0016 G16AC0017 G16AC00017 G16AC00017 G16AC00007 G16AC0007 G16AC0007 G16AC0007 G16AC0007 G16AC0007 G16AC0007 G16AC0007 G16AC0007 G16AC007 G16A	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192 22,844 93,791 119,557 2,350 95,838 21,558 98,131 1,546,829 17,057	
omeland Security Total terior	Pass-through Pass-through Total Direct Dire	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.662 15.662 15.805 15.805 15.808	30345-29058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00309 F15AP00309 F15AP00309 F15AP00059 F16AP00075 155500 G16AP00003 G16AP00003 G17AP00031 I6AC00421 G12AC20394 G12AC20394 G12AC20457 G13AC00112 G13AC00146 G16AC00026 G16AP00068 G15AC00164 G16AC00164 G16AC00164 G16AC00164 G16AC00164 G16AC00164 G16AC00164 G16AC00165 G15AC00168 G15AC00168 G15AC00169 G15AC00169 G15AC00169 G15AC00178 F15AC0178 F15AC0178 F16AC01326 S183-25-1932 S183-25-1932	JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 25,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (26,103) 20,236 86,574 78,608 71,559 5,192 22,844 93,791 119,557 2,350 95,838 21,558 98,131 1,546,829 17,057 6,147	
omeland Security Total terior	Pass-through Pass-through Total Direct Dire	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.662 15.678 15.805 15.808	30345-29058104 15-JV-11242313-115 USFWS F13AC00365 Infante F14AC00225 F14AC00237 F15AP00306 F15AP00369 F15AP00569 F15AP00569 F16AP00075 S155500 G16AP00020 G16AP00020 G16AP00021 G12AC20394 G12AC20394 G12AC20394 G12AC20457 G13AC00112 G13AC00244 G13AC00264 G15AC00166 G16AC00166 G16AC00166 G16AC00166 G16AC00167 G16AC00116 G16AC00216 G15AC00168 G15AC00168 G15AC00168 G15AC00168 G15AC00158 F15AC01178 F15AC01178 F15AC01178 F15AC01178 F15AC01178 F15AC01178 F15AC01178 F15AC01326 S183-25-1932 S183-25-1932 S183-25-1932	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY US GEOLOG	33,608 43,840 43,840 142,974 188,461 36,286 12,781 25,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192 22,844 93,791 119,557 2,350 95,838 21,558 98,131 1,568,629 17,057 6,147 4,668	
omeland Security omeland Security Total terior	Pass-through Pass-through Total Direct Dire	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.662 15.662 15.805 15.805 15.808	30345-29058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00397 F15AP00306 F15AP00309 F15AP00309 F15AP00509 F16AP00075 155500 G16AP00003 G16AP00003 G16AP00003 G16AP00003 G16AP00003 G16AP00003 G16AP00003 G16AP00004 G16AC00121 G12AC20394 G12AC20394 G12AC20457 G13AC00112 G13AC00116 G16AC00024 G15AC00024 G15AC000164 G16AC00116 G16AC00117 G16AC00116 G16AC00116 G16AC00116 G16AC00116 G16AC00116 G16AC00116 G16AC0016	JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY	33,608 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192 22,844 93,791 119,557 2,350 95,838 21,558 96,131 1,546,829 17,057 6,147 4,668 (59,005)	
omeland Security omeland Security Total sterior sterior sterior sterior sterior	Pass-through	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.662 15.678 15.805 15.808	30345-29058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00297 F15AP00306 F15AP00306 F15AP000549 F15AP00059 F16AP00075 S155500 G16AP00007 G16AP00007 G16AP00007 G16AP00001 G16AP0001 G16AP0001 G16AP00020 G16AP00020 G16AP00020 G16AP00020 G16AP00020 G16AP00020 G16AP00020 G16AP00020 G16AP00021 G16AC0021 G12AC20394 G12AC20394 G12AC20394 G13AC00116 G16AC00164 G16AC00116 G16AC00164 G16AC00116 G16AC00164 G16AC00116 G16AC00164 G16AC00164 G16AC00116 G16AC0017 G16AC0018 G16A	UNIVERSITY OF MARYLAND JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY US GEOLOG	33,608 43,840 43,840 142,974 188,461 36,286 12,781 25,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192 22,844 93,791 119,557 2,350 95,838 21,558 98,131 1,546,829 17,057 6,147 4,668 (59,005) (1)	
omeland Security omeland Security Total terior	Pass-through Pass-through Total Direct Dire	97.062 15.232 15.608 15.637 15.647 15.662 15.662 15.662 15.662 15.678 15.805 15.805 15.808	30345-29058104 15-JV-11242313-115 USFWS F13AC00565 Infante F14AC00225 F14AC00397 F15AP00306 F15AP00309 F15AP00309 F15AP00509 F16AP00075 155500 G16AP00003 G16AP00003 G16AP00003 G16AP00003 G16AP00003 G16AP00003 G16AP00003 G16AP00004 G16AC00121 G12AC20394 G12AC20394 G12AC20457 G13AC00112 G13AC00116 G16AC00024 G15AC00024 G15AC000164 G16AC00116 G16AC00117 G16AC00116 G16AC00116 G16AC00116 G16AC00116 G16AC00116 G16AC00116 G16AC0016	JOINT FIRE SCIENCE PROGRAM US FISH & WILDLIFE SERVICE US GEOLOGICAL SURVEY US GEO	33,608 43,840 43,840 43,840 142,974 188,461 36,286 12,781 26,504 (21) 29,830 101,610 13,768 405 50,799 86,616 7,317 97,378 4,298 25,077 (43,486) 78,097 (28,103) 20,236 86,574 78,608 71,559 5,192 22,844 93,791 119,557 2,350 95,838 21,558 96,131 1,546,829 17,057 6,147 4,668 (59,005)	

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
Interior	Pass-through	15.608	Phase 3	GREAT LAKES COMMISSION	\$ 40,775	\$ -
Interior	Pass-through	15.615	Arkansas Darter	KANSAS DEPT OF WILDLIFE, PARKS & TOURISM	30,931	-
Interior	Pass-through Pass-through	15.628	APP 144778 2013-0100	ASSOC OF FISH & WILDLIFE AGENCY MI FNVIRONMENTAL QUALITY	20,767	-
Interior Interior	Pass-through	15.662 15.662	74394	RESEARCH FOUNDATION OF SUNY	23,453 13,193	-
Interior	Pass-through	15.820	16-008848A00	UNIVERSITY OF MASSACHUSETTS AMHERST	4,140	-
Interior	Pass-through	15.820	404-42-07A	IOWA STATE UNIV	89,050	-
Interior Total	Pass-through Total				232,700 1,779,529	-
	B*****	46.550	2044 1411 CV 1/207	US DEPT OF JUSTICE		
Justice Justice	Direct Direct	16.550 16.550	2014-MU-CX-K037 2015-BI-CX-K022	US DEPT OF JUSTICE	9,950 148,618	-
Justice	Direct	16.550	2016-BJ-CX-K026	US DEPT OF JUSTICE	70,311	-
Justice	Direct	16.560	2013-DN-BX-K039	US DEPT OF JUSTICE	68	-
Justice	Direct	16.560	2013-IJ-CX-0019	US DEPT OF JUSTICE	187,120	-
Justice Justice	Direct Direct	16.560 16.560	2013-R2-CX-0015 2014-NE-BX-0006	US DEPT OF JUSTICE US DEPT OF JUSTICE	93,619 177,392	53,985
Justice	Direct	16.560	2014-NE-BA-0006 2014-ZA-BX-0004	US DEPT OF JUSTICE	214,343	80,770
Justice	Direct	16.560	2015-CK-BX-0003	US DEPT OF JUSTICE	231,512	66,305
Justice	Direct	16.560	2015-CK-BX-0017	US DEPT OF JUSTICE	236,857	73,893
Justice	Direct	16.560	2015-DN-BX-K012	US DEPT OF JUSTICE	174,736	-
Justice Justice	Direct Direct	16.560 16.560	2015-DN-BX-K013 2015-DN-BX-K031	US DEPT OF JUSTICE US DEPT OF JUSTICE	239,327 61,738	-
Justice	Direct	16.560	2015-DN-BX-R031 2015-DN-BX-K036	US DEPT OF JUSTICE	77,850	-
Justice	Direct	16.560	2015-IJ-CX-K008	US DEPT OF JUSTICE	103,190	-
Justice	Direct	16.560	2015-R2-CX-K041	US DEPT OF JUSTICE	169,945	63,155
Justice	Direct	16.560	2016-R2-CX-0052	US DEPT OF JUSTICE	21,060	-
Justice	Direct	16.562	2015-R2-CX-0005 2015-GP-RY-K003	US DEPT OF JUSTICE	41,451	-
Justice Justice	Direct Direct	16.609 16.738	2015-GP-BX-K003 2016-MU-BX-K001	BUREAU OF JUSTICE ASSISTANCE US DEPT OF JUSTICE	151,174 245,734	35,359
Justice	Direct	16.738	DOJ-PSC-2016-MU-BX-K001-McGarrell	US DEPT OF JUSTICE	47,059	-
Justice	Direct	16.751	2014-DB-BX-K010	BUREAU OF JUSTICE ASSISTANCE	105,852	-
Justice	Direct	16.751	2014-DB-BX-K010	BUREAU OF JUSTICE ASSISTANCE	95,615	
	Direct Total	46	00.0071111.14511	WEST VID SIANA LIANA	2,904,521	373,467
Justice Justice	Pass-through	16 16.560	09-097NN-MSU 031100.364880.01	WEST VIRGINIA UNIV MISSISSIPPI STATE UNIV	185,278 134,774	-
Justice	Pass-through Pass-through	16.560 16.560	031100.364880.01 40582-Z9246101	MISSISSIPPI STATE UNIV UNIVERSITY OF MARYLAND	134,774 111,318	-
Justice	Pass-through	16.560	CM0000097-00	JOHN JAY COLLEGE	1,999	-
Justice	Pass-through	16.560	M15P12131 (P00359)	YALE UNIV	66,895	-
Justice	Pass-through	16.609	153908	BLACK FAMILY DEVELOPMENT INC	7,690	-
Justice	Pass-through	16.662	791N5500195	MI DEPT AG & RURAL DEV.	48,140	5,243
Justice Justice	Pass-through Pass-through	16.662 16.751	MDEQ-Burley SAKI-15-04	MICHIGAN DEPT OF ENVIRONMENTAL QUALITY MICHIGAN DEPARTMENT OF STATE POLICE	23,790 55,855	-
Justice	Pass-through	16.817	Kettering/DOJ 5301095MSU	KETTERING UNIV	88,030	-
Justice	Pass-through	16.817	Kettering/DOJ 5301095MSU	KETTERING UNIV	(25,060)	-
	Pass-through Total				698,709	5,243
Justice Total					3,603,230	378,710
National Aeronautics & Space Administration	Direct	43.001	NASA NNX12AN71G KSC Brandizzi	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	35,272	-
National Aeronautics & Space Administration	Direct	43.001	NASA-GSFC- NNX16AQ44G Zarnetske	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	46,353	6,504
National Aeronautics & Space Administration	Direct	43.001	NASA-GSFC-NNX16AQ44G Zarnetske PSC	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	18,385	-
National Aeronautics & Space Administration	Direct	43.001 43.001	NNX12AC98G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION NATIONAL AERONAUTICS & SPACE ADMINISTRATION	(7,742)	-
National Aeronautics & Space Administration National Aeronautics & Space Administration	Direct Direct	43.001	NNX12AH49G NNX12AL14A	NATIONAL AERONAUTICS & SPACE ADMINISTRATION NATIONAL AERONAUTICS & SPACE ADMINISTRATION	(2,906) 5,338	-
National Aeronautics & Space Administration	Direct	43.001	NNX13AI41G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	5,785	-
National Aeronautics & Space Administration	Direct	43.001	NNX13AI44G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	87,846	33,110
National Aeronautics & Space Administration	Direct	43.001	NNX13AI44G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	71,686	-
National Aeronautics & Space Administration	Direct	43.001	NNX13AK41G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	(100)	-
National Aeronautics & Space Administration National Aeronautics & Space Administration	Direct Direct	43.001 43.001	NNX13AQ51G NNX14AD93G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION NATIONAL AERONAUTICS & SPACE ADMINISTRATION	15,640 42,534	
National Aeronautics & Space Administration	Direct	43.001	NNX14AQ36G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	21.662	_
National Aeronautics & Space Administration	Direct	43.001	NNX15AD10G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	272,722	110,894
National Aeronautics & Space Administration	Direct	43.001	NNX15AD51G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	227,461	-
National Aeronautics & Space Administration	Direct	43.001	NNX15AI71G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	79,762	-
National Aeronautics & Space Administration	Direct	43.001	NNX15AP39G	NATIONAL AFRONAUTICS & SPACE ADMINISTRATION	159,826	48,250
National Aeronautics & Space Administration National Aeronautics & Space Administration	Direct Direct	43.001 43.001	NNX15AU83G NNX16AE52G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION NATIONAL AERONAUTICS & SPACE ADMINISTRATION	55,924 27,861	-
National Aeronautics & Space Administration	Direct	43.001	NNX16AL53G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	72,127	-
National Aeronautics & Space Administration	Direct	43.001	NNX16AN73G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	17,461	-
National Aeronautics & Space Administration	Direct	43.001	NNX17AE16G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	19,059	-
National Aeronautics & Space Administration	Direct Direct	43.002	NNX15AR80G NNX13AM77G	NATIONAL AFRONAUTICS & SPACE ADMINISTRATION	120,488	-
National Aeronautics & Space Administration National Aeronautics & Space Administration	Direct	43.003 43.007	NNX13AM7/G NASA-NNX16AT85G GoSFC Ayres	NATIONAL AERONAUTICS & SPACE ADMINISTRATION NATIONAL AERONAUTICS & SPACE ADMINISTRATION	299,128 30,591	-
National Aeronautics & Space Administration	Direct	43.007	NNX16AC24A	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	58,566	-
National Aeronautics & Space Administration	Direct	43.007	NNX16AD52A	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	131,605	-
National Aeronautics & Space Administration	Direct	43.008	NNX16AR52G	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	3,633	
National Assessment Community	Direct Total	43	150005	IET DDODUUGION ASSOS TOOM	1,915,967	198,758
National Aeronautics & Space Administration National Aeronautics & Space Administration	Pass-through Pass-through	43 43	1566995 HST-GO-14086.001-A	JET PROPULSION LABORATORY SPACE TELESCOPE SCIENCE INST	6,456 42,046	-
National Aeronautics & Space Administration National Aeronautics & Space Administration	Pass-through	43	HST-GO-14704.003-A	SPACE TELESCOPE SCIENCE INST	42,046	-
National Aeronautics & Space Administration	Pass-through	43.001	1536353	JET PROPULSION LABORATORY	43,811	18,000
National Aeronautics & Space Administration	Pass-through	43.001	1552613	UNIVERSITY OF COLORADO	113,871	
National Aeronautics & Space Administration	Pass-through	43.001	AR3-14013X	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	639	-
National Aeronautics & Space Administration	Pass-through	43.001	AR7-18008X	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	5,187	-
National Aeronautics & Space Administration National Aeronautics & Space Administration	Pass-through Pass-through	43.001 43.001	DD5-16078X G06-17040X	SMITHSONIAN ASTROPHYSICAL OBSERVATORY SMITHSONIAN ASTROPHYSICAL OBSERVATORY	3,683 8,072	-
National Aeronautics & Space Administration	Pass-through	43.001	G06-17040X G06-17047X	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	32,771	-
National Aeronautics & Space Administration	Pass-through	43.001	GO3-14029X	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	7,695	-
National Aeronautics & Space Administration	Pass-through	43.001	GO4-15035A	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	30,753	-
National Aeronautics & Space Administration	Pass-through	43.001	GO4-15089A	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	7,852	-
National Aeronautics & Space Administration	Pass-through	43.001	GO4-15124X	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	1,998	-
National Aeronautics & Space Administration	Pass-through Pass-through	43.001 43.001	GO5-16036X GO5-16084A	SMITHSONIAN ASTROPHYSICAL OBSERVATORY SMITHSONIAN ASTROPHYSICAL OBSERVATORY	9,976 18,428	-
National Aeronautics & Space Administration	Pass-through	43.001	GO5-16084A GO5-16132X	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	40,565	-
			GO6-17035X	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	5,293	-
National Aeronautics & Space Administration National Aeronautics & Space Administration National Aeronautics & Space Administration	Pass-through	43.001				
National Aeronautics & Space Administration National Aeronautics & Space Administration		43.001	GO6-17045X	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	6,175	-
National Aeronautics & Space Administration National Aeronautics & Space Administration National Aeronautics & Space Administration National Aeronautics & Space Administration	Pass-through Pass-through Pass-through	43.001 43.001	GO6-17045X HST-AR-13261.01-A	SPACE TELESCOPE SCIENCE INST	(2,093)	-
National Aeronautics & Space Administration	Pass-through Pass-through Pass-through Pass-through	43.001 43.001 43.001	GO6-17045X HST-AR-13261.01-A HST-AR-13923.001-A	SPACE TELESCOPE SCIENCE INST SPACE TELESCOPE SCIENCE INST	(2,093) 7,854	-
National Aeronautics & Space Administration	Pass-through Pass-through Pass-through Pass-through Pass-through	43.001 43.001 43.001 43.001	GO6-17045X HST-AR-13261.01-A HST-AR-13923.001-A HST-AR-14315.001-A	SPACE TELESCOPE SCIENCE INST SPACE TELESCOPE SCIENCE INST SPACE TELESCOPE SCIENCE INST	(2,093) 7,854 32,847	- - -
National Aeronautics & Space Administration	Pass-through Pass-through Pass-through Pass-through	43.001 43.001 43.001	GO6-17045X HST-AR-13261.01-A HST-AR-13923.001-A	SPACE TELESCOPE SCIENCE INST SPACE TELESCOPE SCIENCE INST	(2,093) 7,854	-

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
National Aeronautics & Space Administration	Pass-through	43.001	HST-GO-13367.001-A	SPACE TELESCOPE SCIENCE INST	\$ 7,437	\$ -
National Aeronautics & Space Administration	Pass-through	43.001	HST-GO-13720.001-A	SPACE TELESCOPE SCIENCE INST	4,615	-
National Aeronautics & Space Administration National Aeronautics & Space Administration	Pass-through Pass-through	43.001 43.001	HST-GO-14203.002-A MA03401	SPACE TELESCOPE SCIENCE INST NATL SPACE BIOMEDICAL RESEARCH	6,352 3,752	-
National Aeronautics & Space Administration	Pass-through	43.001	TM7-18005X	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	5,187	-
National Aeronautics & Space Administration	Pass-through	43.001	Z683602	UNIVERSITY OF MARYLAND	7,375	-
National Aeronautics & Space Administration	Pass-through Pass-through Total	43.008	3003977407	UNIVERSITY OF MICHIGAN	12,858 480,133	18,000
National Aeronautics & Space Administration Total	rass-tillough rotal				2,396,100	216,758
National Science Foundation	Direct	47	DUE-1523739	NATIONAL SCIENCE FOUNDATION	58,874	-
National Science Foundation National Science Foundation	Direct Direct	47 47.041	SES-1612484-002 1100260	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	168,263 16,284	-
National Science Foundation	Direct	47.041	1150376	NATIONAL SCIENCE FOUNDATION	5,128	-
National Science Foundation	Direct	47.041	1231869	NATIONAL SCIENCE FOUNDATION	41,819	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	1336622 1444991	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	(2,807) 37,340	-
National Science Foundation	Direct	47.041	1444991	NATIONAL SCIENCE FOUNDATION	2,290	-
National Science Foundation	Direct	47.041	1463164	NATIONAL SCIENCE FOUNDATION	40,954	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	1510895 1510895	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	89,421 1,461	-
National Science Foundation	Direct	47.041	1511098	NATIONAL SCIENCE FOUNDATION	112,455	-
National Science Foundation	Direct	47.041	1547518	NATIONAL SCIENCE FOUNDATION	103,940	-
National Science Foundation National Science Foundation	Direct	47.041 47.041	1549517	NATIONAL SCIENCE FOUNDATION	122,118	-
National Science Foundation	Direct Direct	47.041	1549517 1561964	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	1,092 77,629	-
National Science Foundation	Direct	47.041	1565232	NATIONAL SCIENCE FOUNDATION	8,511	-
National Science Foundation	Direct	47.041	1600417	NATIONAL SCIENCE FOUNDATION	169,315	135,884
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	1603347 1603646	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	63,648 48,139	-
National Science Foundation	Direct	47.041	1603705	NATIONAL SCIENCE FOUNDATION	75,112	-
National Science Foundation	Direct	47.041	1603720	NATIONAL SCIENCE FOUNDATION	42,676	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	1603892 1603892	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	36,503 6,047	-
National Science Foundation National Science Foundation	Direct	47.041 47.041	1628958	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	32,166	-
National Science Foundation	Direct	47.041	1632051	NATIONAL SCIENCE FOUNDATION	119,056	3,489
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	1639115 1658802	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	87,022	-
National Science Foundation	Direct	47.041	1700785	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	47,216 67,235	
National Science Foundation	Direct	47.041	1700787	NATIONAL SCIENCE FOUNDATION	41,754	-
National Science Foundation	Direct	47.041	CBET - 1134215	NATIONAL SCIENCE FOUNDATION	63,847	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	CBET-1233154 CBET-1236120	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	2,220 3,995	-
National Science Foundation	Direct	47.041	CBET-1254238	NATIONAL SCIENCE FOUNDATION	49,674	-
National Science Foundation	Direct	47.041	CBET-1254453	NATIONAL SCIENCE FOUNDATION	84,043	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	CBET-1254662 CBET-1254662	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	14,568 12,704	-
National Science Foundation	Direct	47.041	CBET-1258581	NATIONAL SCIENCE FOUNDATION	31,978	-
National Science Foundation	Direct	47.041	CBET-1264772	NATIONAL SCIENCE FOUNDATION	46,494	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	CBET-1336622 CBET-1437657	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	32,721 92,496	-
National Science Foundation	Direct	47.041	CBET-1437657	NATIONAL SCIENCE FOUNDATION	1,130	-
National Science Foundation	Direct	47.041	CBET-1438105	NATIONAL SCIENCE FOUNDATION	92,903	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	CBET-1507789 CBET-1510203	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	146,076 158,383	-
National Science Foundation	Direct	47.041	CMMI-1030821	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	2,889	-
National Science Foundation	Direct	47.041	CMMI-1150376	NATIONAL SCIENCE FOUNDATION	67,943	-
National Science Foundation	Direct	47.041	CMMI-1150376	NATIONAL SCIENCE FOUNDATION	6,378	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	CMMI-1150376 CMMI-1150376	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	365 36	-
National Science Foundation	Direct	47.041	CMMI-1234067	NATIONAL SCIENCE FOUNDATION	950	-
National Science Foundation	Direct	47.041	CMMI-1250261	NATIONAL SCIENCE FOUNDATION	133,761	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	CMMI-1301243 CMMI-1335177	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	89,162 43,826	-
National Science Foundation	Direct	47.041	CMMI-1347533	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	8,457	-
National Science Foundation	Direct	47.041	CMMI-1347533	NATIONAL SCIENCE FOUNDATION	1,374	-
National Science Foundation	Direct	47.041	CMMI-1435126	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	50,809	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	CMMI-1462118 CMMI-1463006	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	52,818 87,441	-
National Science Foundation	Direct	47.041	ECCS-1128467	NATIONAL SCIENCE FOUNDATION	76,045	-
National Science Foundation	Direct	47.041	ECCS-1139773	NATIONAL SCIENCE FOUNDATION	9,601	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	ECCS-1232109 ECCS-1306311	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	106,385 101,521	-
National Science Foundation	Direct	47.041	ECCS-1307939	NATIONAL SCIENCE FOUNDATION	25,679	-
National Science Foundation	Direct	47.041	ECCS-1310257	NATIONAL SCIENCE FOUNDATION	102,883	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	ECCS-1350560 ECCS-1350560	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	75,696 3,195	-
National Science Foundation	Direct	47.041	ECCS-1407880	NATIONAL SCIENCE FOUNDATION	139,809	75,196
National Science Foundation	Direct	47.041	ECCS-1408115	NATIONAL SCIENCE FOUNDATION	50,746	-
National Science Foundation	Direct	47.041	ECCS-1408506	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	75,747	-
National Science Foundation National Science Foundation	Direct Direct	47.041 47.041	ECCS-1446793 NSF 1544068 Yadav	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	218,675 37,081	-
National Science Foundation	Direct	47.041	NSF CBET-1254238 PSC Whitehead	NATIONAL SCIENCE FOUNDATION	7,863	-
National Science Foundation	Direct	47.041	PHY-1531199	NATIONAL SCIENCE FOUNDATION	229,519	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	10/6/6170 10/6/6170	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	60,498 21,522	-
National Science Foundation	Direct	47.049	1056840	NATIONAL SCIENCE FOUNDATION	99,353	-
National Science Foundation	Direct	47.049	1149408	NATIONAL SCIENCE FOUNDATION	56,561	-
National Science Foundation	Direct	47.049 47.049	1149408	NATIONAL SCIENCE FOUNDATION	2,647	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	1150872 1150872	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	82,601 5,844	-
National Science Foundation	Direct	47.049	1300096	NATIONAL SCIENCE FOUNDATION	4,848	-
National Science Foundation	Direct	47.049	1403906	NATIONAL SCIENCE FOUNDATION	122,795	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	1410417 1417352	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	18,042 22,000	-
National Science Foundation National Science Foundation	Direct	47.049 47.049	141/352 1453661	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	22,000 122,749	-
National Science Foundation	Direct	47.049	1462156	NATIONAL SCIENCE FOUNDATION	48,669	-
National Science Foundation	Direct	47.049	1464807	NATIONAL SCIENCE FOUNDATION	123,061	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	1465043 1502135	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	181,775 3,472	-
National Science Foundation	Direct	47.049	1502135	NATIONAL SCIENCE FOUNDATION	2,398	-
National Science Foundation	Direct	47.049	1505364	NATIONAL SCIENCE FOUNDATION	101,891	

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
National Science Foundation	Direct	47.049	1507226	NATIONAL SCIENCE FOUNDATION	\$ 46,273	\$ -
National Science Foundation	Direct	47.049	150991	NATIONAL SCIENCE FOUNDATION	81,673	
National Science Foundation	Direct	47.049	1514591	NATIONAL SCIENCE FOUNDATION	141,097	66,303
National Science Foundation	Direct	47.049	1514700	NATIONAL SCIENCE FOUNDATION	3,561	-
National Science Foundation	Direct	47.049	1514763	NATIONAL SCIENCE FOUNDATION	44,574	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	1516969 1519045	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	106,239 188,024	
National Science Foundation	Direct	47.049	1520929	NATIONAL SCIENCE FOUNDATION	61,926	_
National Science Foundation	Direct	47.049	1522249	NATIONAL SCIENCE FOUNDATION	138,512	-
National Science Foundation	Direct	47.049	1554315	NATIONAL SCIENCE FOUNDATION	71,771	-
National Science Foundation	Direct	47.049	1562140	NATIONAL SCIENCE FOUNDATION	213,802	-
National Science Foundation	Direct	47.049	1600065	NATIONAL SCIENCE FOUNDATION	80,936	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	1607089 1607942	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	29,057 49,641	-
National Science Foundation	Direct	47.049	1608752	NATIONAL SCIENCE FOUNDATION	56,192	_
National Science Foundation	Direct	47.049	1612624	NATIONAL SCIENCE FOUNDATION	5,000	-
National Science Foundation	Direct	47.049	1612867	NATIONAL SCIENCE FOUNDATION	28,795	-
National Science Foundation	Direct	47.049	1612964	NATIONAL SCIENCE FOUNDATION	8,465	-
National Science Foundation	Direct	47.049	1613899	NATIONAL SCIENCE FOUNDATION	2,055	-
National Science Foundation	Direct	47.049	1614566	NATIONAL SCIENCE FOUNDATION	50,568	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	1619960 1620047	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	29,638 18.321	-
National Science Foundation National Science Foundation	Direct	47.049	1620216	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	18,321 8,960	
National Science Foundation	Direct	47.049	1621798	NATIONAL SCIENCE FOUNDATION	378	-
National Science Foundation	Direct	47.049	1625181	NATIONAL SCIENCE FOUNDATION	39,850	
National Science Foundation	Direct	47.049	1632761	NATIONAL SCIENCE FOUNDATION	53,878	-
National Science Foundation	Direct	47.049	1636555	NATIONAL SCIENCE FOUNDATION	43,580	-
National Science Foundation	Direct	47.049	1636557	NATIONAL SCIENCE FOUNDATION	117,734	-
National Science Foundation	Direct	47.049	1642322	NATIONAL SCIENCE FOUNDATION	35,919	-
National Science Foundation National Science Foundation	Direct	47.049 47.049	1642322 1663778	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	13,328	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	1663//8 1665285	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	30,210 16,989	-
National Science Foundation	Direct	47.049	1700026	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	14,799	-
National Science Foundation	Direct	47.049	1708331	NATIONAL SCIENCE FOUNDATION	10,038	-
National Science Foundation	Direct	47.049	1714144	NATIONAL SCIENCE FOUNDATION	13,115	-
National Science Foundation	Direct	47.049	1734183	NATIONAL SCIENCE FOUNDATION	3,569	-
National Science Foundation	Direct	47.049	7/8/6170	NATIONAL SCIENCE FOUNDATION	47,042	-
National Science Foundation	Direct	47.049	7/8/6170	NATIONAL SCIENCE FOUNDATION	10,673	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	AST-1308124 AST-1412549	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	102,012 73,844	-
National Science Foundation	Direct	47.049	AST-1412774	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	94,772	
National Science Foundation	Direct	47.049	AST-1412980	NATIONAL SCIENCE FOUNDATION	56,951	
National Science Foundation	Direct	47.049	CHE-1150378	NATIONAL SCIENCE FOUNDATION	32,903	-
National Science Foundation	Direct	47.049	CHE-1151590	NATIONAL SCIENCE FOUNDATION	84,140	-
National Science Foundation	Direct	47.049	CHE-1213299	NATIONAL SCIENCE FOUNDATION	(6,666)	-
National Science Foundation	Direct	47.049	CHE-1213759	NATIONAL SCIENCE FOUNDATION	(15)	-
National Science Foundation	Direct	47.049	CHE-1265738	NATIONAL SCIENCE FOUNDATION	(182)	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	CHE-1300063 CHE-1358842	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	43,957 54.117	-
National Science Foundation	Direct	47.049	CHE-1358842	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	25,840	
National Science Foundation	Direct	47.049	CHE-1362812	NATIONAL SCIENCE FOUNDATION	45,993	
National Science Foundation	Direct	47.049	CHE-1412776	NATIONAL SCIENCE FOUNDATION	94,288	-
National Science Foundation	Direct	47.049	CHE-1506315	NATIONAL SCIENCE FOUNDATION	66,756	-
National Science Foundation	Direct	47.049	CHE-1507588	NATIONAL SCIENCE FOUNDATION	57,807	-
National Science Foundation	Direct	47.049	CHE-1516126	NATIONAL SCIENCE FOUNDATION	107,754	-
National Science Foundation	Direct	47.049 47.049	CHE-1516126	NATIONAL SCIENCE FOUNDATION	91,109	-
National Science Foundation National Science Foundation	Direct Direct	47.049	CHE-1565634 DMR-1126343	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	82,540 7,698	-
National Science Foundation	Direct	47.049	DMR-1206356	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	52,305	
National Science Foundation	Direct	47.049	DMR-1206718	NATIONAL SCIENCE FOUNDATION	(74)	
National Science Foundation	Direct	47.049	DMR-1410850	NATIONAL SCIENCE FOUNDATION	66,951	-
National Science Foundation	Direct	47.049	DMR-1411102	NATIONAL SCIENCE FOUNDATION	169,862	
National Science Foundation	Direct	47.049	DMR-1507489	NATIONAL SCIENCE FOUNDATION	170,048	-
National Science Foundation	Direct	47.049	DMS-1005366	NATIONAL SCIENCE FOUNDATION	1,420	-
National Science Foundation	Direct	47.049	DMS-1056965	NATIONAL SCIENCE FOUNDATION	26,239	-
National Science Foundation National Science Foundation	Direct	47.049 47.049	DMS-1207655 DMS-1208238	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	18,190	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	DMS-1208238 DMS-1211292	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	(183) 512	-
National Science Foundation	Direct	47.049	DMS-1216547	NATIONAL SCIENCE FOUNDATION	44,995	-
National Science Foundation	Direct	47.049	DMS-1300924	NATIONAL SCIENCE FOUNDATION	56,447	-
National Science Foundation	Direct	47.049	DMS-1305377	NATIONAL SCIENCE FOUNDATION	48,333	-
National Science Foundation	Direct	47.049	DMS-1309156	NATIONAL SCIENCE FOUNDATION	16,432	-
National Science Foundation	Direct	47.049	DMS-1309856	NATIONAL SCIENCE FOUNDATION	263	-
National Science Foundation	Direct	47.049	DMS-1318186	NATIONAL SCIENCE FOUNDATION	(227)	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	DMS-1346876 DMS-1352407	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	(14) 114,449	-
National Science Foundation	Direct	47.049	DMS-1360733	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	72,871	-
National Science Foundation	Direct	47.049	DMS-1362352	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	99,614	-
National Science Foundation	Direct	47.049	DMS-1404754	NATIONAL SCIENCE FOUNDATION	70,578	-
National Science Foundation	Direct	47.049	DMS-1409940	NATIONAL SCIENCE FOUNDATION	78,866	-
National Science Foundation	Direct	47.049	DMS-1409940	NATIONAL SCIENCE FOUNDATION	5,618	-
National Science Foundation	Direct	47.049	DMS-1411411	NATIONAL SCIENCE FOUNDATION	26,324	-
National Science Foundation	Direct	47.049	DMS-1413060	NATIONAL SCIENCE FOUNDATION	58,837	-
National Science Foundation	Direct	47.049	DMS-1416752	NATIONAL SCIENCE FOUNDATION	104,849	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	DMS-1418804 DMS-1418959	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	49,328 162,157	-
National Science Foundation	Direct	47.049	DMS-1500386	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	46,159	-
National Science Foundation	Direct	47.049	DMS-15100380	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	12,416	-
National Science Foundation	Direct	47.049	DMS-1622301	NATIONAL SCIENCE FOUNDATION	9,965	-
National Science Foundation	Direct	47.049	DMS-1715902	NATIONAL SCIENCE FOUNDATION	5,576	-
National Science Foundation	Direct	47.049	NSF- 1624942 - Schatz	NATIONAL SCIENCE FOUNDATION	487,373	-
National Science Foundation	Direct	47.049	NSF-DMS-1715902-Hedden	NATIONAL SCIENCE FOUNDATION	39,420	-
National Science Foundation	Direct	47.049	NSF-PSC-1404442-Brown	NATIONAL SCIENCE FOUNDATION	3,374	-
National Science Foundation	Direct	47.049	PHY-1062410	NATIONAL SCIENCE FOUNDATION	37,935	-
National Science Foundation	Direct	47.049	PHY-1062410 PHY-1068318	NATIONAL SCIENCE FOUNDATION	13,865	- CE FOO
National Science Foundation	Direct Direct	47.049 47.049	PHY-1068318 PHY-1102511	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	65,598 7,200,759	65,599
	DITCUL	-7.0 4 5				-
National Science Foundation National Science Foundation	Direct	47.049	PHY-1126282			
National Science Foundation National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	PHY-1126282 PHY-1350234	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	(49,479) 109,017	-
National Science Foundation			PHY-1126282 PHY-1350234 PHY-1350234		109,017 10,202	-
National Science Foundation National Science Foundation	Direct	47.049	PHY-1350234	NATIONAL SCIENCE FOUNDATION	109,017	- - - - 65,381

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
National Science Foundation	Direct	47.049	PHY-1410972	NATIONAL SCIENCE FOUNDATION	\$ 1,350,080	\$ -
National Science Foundation	Direct	47.049	PHY-1415462	NATIONAL SCIENCE FOUNDATION	115,810	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.049	PHY-1417326	NATIONAL SCIENCE FOUNDATION	325,197	-
National Science Foundation	Direct	47.049	PHY-1428914 PHY-1430152	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	240,925 2,181,470	1,342,967
National Science Foundation	Direct	47.049	PHY-1430152	NATIONAL SCIENCE FOUNDATION	108,477	-,,
National Science Foundation	Direct	47.049	PHY-1520971	NATIONAL SCIENCE FOUNDATION	89,112	-
National Science Foundation National Science Foundation	Direct Direct	47.049 47.050	PHY-1565546 1039180	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	15,107,047 176,269	-
National Science Foundation	Direct	47.050	1443165	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	61,961	-
National Science Foundation	Direct	47.050	1446328	NATIONAL SCIENCE FOUNDATION	67,919	-
National Science Foundation	Direct	47.050	1456430	NATIONAL SCIENCE FOUNDATION	95,185	- 02 574
National Science Foundation National Science Foundation	Direct Direct	47.050 47.050	1523628 1531086	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	314,000 100,022	93,571
National Science Foundation	Direct	47.050	1540576	NATIONAL SCIENCE FOUNDATION	16,353	9,285
National Science Foundation	Direct	47.050	1549764	NATIONAL SCIENCE FOUNDATION	24,913	-
National Science Foundation National Science Foundation	Direct Direct	47.050 47.050	1551872 1620509	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	5,841 14,039	-
National Science Foundation	Direct	47.050	1630399	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	84,965	-
National Science Foundation	Direct	47.050	1638958	NATIONAL SCIENCE FOUNDATION	49,395	-
National Science Foundation	Direct	47.050	1644453	NATIONAL SCIENCE FOUNDATION	4,817	-
National Science Foundation	Direct	47.050	1649117	NATIONAL SCIENCE FOUNDATION	2,690	-
National Science Foundation National Science Foundation	Direct Direct	47.050 47.050	1664332 BCS-1263477	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	38,218 166	-
National Science Foundation	Direct	47.050	EAR-1348935	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	14,530	-
National Science Foundation	Direct	47.050	EAR-1462057	NATIONAL SCIENCE FOUNDATION	40,816	-
National Science Foundation	Direct	47.070	1054585	NATIONAL SCIENCE FOUNDATION	39,825	-
National Science Foundation	Direct	47.070	1054585	NATIONAL SCIENCE FOUNDATION	2,623	-
National Science Foundation National Science Foundation	Direct Direct	47.070 47.070	1115926 1115926	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	7,642 3,114	-
National Science Foundation National Science Foundation	Direct	47.070	1350253	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	3,114 13,362	-
National Science Foundation	Direct	47.070	1524698	NATIONAL SCIENCE FOUNDATION	48,634	-
National Science Foundation	Direct	47.070	1533802	NATIONAL SCIENCE FOUNDATION	10,556	-
National Science Foundation	Direct Direct	47.070 47.070	1560168	NATIONAL SCIENCE FOUNDATION	38,065	-
National Science Foundation National Science Foundation	Direct	47.070	1560168 1565596	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	12,552 73,537	-
National Science Foundation	Direct	47.070	1565604	NATIONAL SCIENCE FOUNDATION	33,218	-
National Science Foundation	Direct	47.070	1615489	NATIONAL SCIENCE FOUNDATION	28,560	-
National Science Foundation	Direct	47.070	1615597	NATIONAL SCIENCE FOUNDATION	4,734	-
National Science Foundation	Direct Direct	47.070 47.070	1617412	NATIONAL SCIENCE FOUNDATION	11,081	-
National Science Foundation National Science Foundation	Direct	47.070	1617627 1617682	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	14,305 180,994	-
National Science Foundation	Direct	47.070	1622659	NATIONAL SCIENCE FOUNDATION	74,228	-
National Science Foundation	Direct	47.070	1645783	NATIONAL SCIENCE FOUNDATION	13,104	-
National Science Foundation	Direct	47.070	1655422	NATIONAL SCIENCE FOUNDATION	32,893	-
National Science Foundation National Science Foundation	Direct Direct	47.070 47.070	1656905 ACI-1514580	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	5,420 26,737	-
National Science Foundation	Direct	47.070	ACI-1566049	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	38,889	-
National Science Foundation	Direct	47.070	CCF-1101266	NATIONAL SCIENCE FOUNDATION	3,863	-
National Science Foundation	Direct	47.070	CCF-1117900	NATIONAL SCIENCE FOUNDATION	23,419	-
National Science Foundation	Direct	47.070	CCF-1218377	NATIONAL SCIENCE FOUNDATION	4,458	-
National Science Foundation National Science Foundation	Direct Direct	47.070 47.070	CCF-1331852 CCF-1422262	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	15,650 42,185	-
National Science Foundation	Direct	47.070	CCF-1565719	NATIONAL SCIENCE FOUNDATION	38,815	-
National Science Foundation	Direct	47.070	CNS 1017598	NATIONAL SCIENCE FOUNDATION	4,256	-
National Science Foundation	Direct	47.070	CNS 1305358	NATIONAL SCIENCE FOUNDATION	29,542	-
National Science Foundation National Science Foundation	Direct Direct	47.070 47.070	CNS 1502462 CNS-0954039	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	228,777 104	176,934
National Science Foundation	Direct	47.070	CNS-1116544	NATIONAL SCIENCE FOUNDATION	10,896	-
National Science Foundation	Direct	47.070	CNS-1117831	NATIONAL SCIENCE FOUNDATION	789	-
National Science Foundation	Direct	47.070	CNS-1217206	NATIONAL SCIENCE FOUNDATION	111,639	-
National Science Foundation	Direct	47.070	CNS-1318563	NATIONAL SCIENCE FOUNDATION	37,053	-
National Science Foundation National Science Foundation	Direct Direct	47.070 47.070	CNS-1318678 CNS-1320561	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	114,942 129.605	31,844
National Science Foundation	Direct	47.070	CNS-1329807	NATIONAL SCIENCE FOUNDATION	123,598	-
National Science Foundation	Direct	47.070	CNS-1405273	NATIONAL SCIENCE FOUNDATION	154,089	87,899
National Science Foundation	Direct	47.070	CNS-1421407	NATIONAL SCIENCE FOUNDATION	133,793	-
National Science Foundation	Direct Direct	47.070 47.070	CNS-1423221	NATIONAL SCIENCE FOUNDATION	169,534	-
National Science Foundation National Science Foundation	Direct	47.070	CNS-1502462 CNS-1524296	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	6,884 34,318	-
National Science Foundation	Direct	47.070	CNS-1524520	NATIONAL SCIENCE FOUNDATION	73,981	-
National Science Foundation	Direct	47.070	CNS-1547015	NATIONAL SCIENCE FOUNDATION	149,884	-
National Science Foundation	Direct	47.070	CNS-1609339	NATIONAL SCIENCE FOUNDATION	94,814	-
National Science Foundation National Science Foundation	Direct Direct	47.070 47.070	CNS-1609339 CNS1618518	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	69,272 21,128	-
National Science Foundation	Direct	47.070	IIS-0953096	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	5,096	-
National Science Foundation	Direct	47.070	IIS-1208390	NATIONAL SCIENCE FOUNDATION	25,274	-
National Science Foundation	Direct	47.070	IIS-1208390	NATIONAL SCIENCE FOUNDATION	14,740	-
National Science Foundation National Science Foundation	Direct Direct	47.070 47.070	IIS-1217212 IIS-1217212	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	110,570 86	-
National Science Foundation National Science Foundation	Direct	47.070 47.070	IIS-121/212 IIS-1302285	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	86 376,373	-
National Science Foundation	Direct	47.070	IIS-1302285	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	2,379	-
National Science Foundation	Direct	47.070	IIS-1319602	NATIONAL SCIENCE FOUNDATION	76,220	-
National Science Foundation	Direct	47.070	IIS-1319909	NATIONAL SCIENCE FOUNDATION	50,841	-
National Science Foundation National Science Foundation	Direct Direct	47.070 47.070	IIS-1350253 IIS-1403004	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	78,356 40,190	-
National Science Foundation National Science Foundation	Direct	47.070	IIS-1403004 IIS-1422316	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	40,190 122,641	-
National Science Foundation	Direct	47.070	IIS-1422316	NATIONAL SCIENCE FOUNDATION	3,344	-
National Science Foundation	Direct	47.070	IIS-1452479	NATIONAL SCIENCE FOUNDATION	115,544	-
National Science Foundation	Direct	47.070	IIS-1615612	NATIONAL SCIENCE FOUNDATION	47,521	-
National Science Foundation National Science Foundation	Direct Direct	47.070 47.070	IIS-1615612 NSF-1617466-Ross	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	11,829	-
National Science Foundation National Science Foundation	Direct Direct	47.070 47.074	NSF-1617466-Ross 0939454	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	17,248 5,205,008	2,005,365
National Science Foundation	Direct	47.074	0939454	NATIONAL SCIENCE FOUNDATION	106,155	
National Science Foundation	Direct	47.074	0939454	NATIONAL SCIENCE FOUNDATION	(277)	-
National Science Foundation	Direct	47.074	0939454	NATIONAL SCIENCE FOUNDATION	(6,783)	-
National Science Foundation	Direct	47.074	0952659	NATIONAL SCIENCE FOUNDATION	65,160	-
National Science Foundation National Science Foundation	Direct Direct	47.074 47.074	1027253 1027253	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	221,327 139,414	-
National Science Foundation	Direct	47.074	1027253	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	108,721	-
National Science Foundation	Direct	47.074	1253225	NATIONAL SCIENCE FOUNDATION	13,786	

Research and Development Cluster (Continued): National Science Foundation National Science Foundation	Direct	47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074	1257756 1354089 1356380 1455405 1455405 1456615 1514706 1518366 1547961 1550765 1550262 1550262 1550262	NATIONAL SCIENCE FOUNDATION	\$ 8,316 134,850 72,662 95,793 7,387 88,423 249,495 220,753 3,630	- 1,568 - - - - 39,301
National Science Foundation	Direct	47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074	1354089 1356380 1455405 1455405 1456615 1514706 1518366 1547961 1550765 1556262	NATIONAL SCIENCE FOUNDATION	134,850 72,662 95,793 7,387 88,423 249,495 220,753	1,568 - - - 39,301
National Science Foundation	Direct	47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074	1354089 1356380 1455405 1455405 1456615 1514706 1518366 1547961 1550765 1556262	NATIONAL SCIENCE FOUNDATION	134,850 72,662 95,793 7,387 88,423 249,495 220,753	1,568 - - - 39,301
National Science Foundation	Direct	47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074	1356380 1455405 1455405 1456615 1514706 1518366 1547961 1550765 1556262	NATIONAL SCIENCE FOUNDATION	72,662 95,793 7,387 88,423 249,495 220,753 3,630	1,568 - - - - 39,301
National Science Foundation	Direct	47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074	1455405 1456615 1514706 1518366 1547961 1550765 1556262	NATIONAL SCIENCE FOUNDATION	7,387 88,423 249,495 220,753 3,630	- - - 39,301
National Science Foundation	Direct	47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074	1456615 1514706 1518366 1547961 1550765 1556262	NATIONAL SCIENCE FOUNDATION	88,423 249,495 220,753 3,630	39,301 -
National Science Foundation	Direct	47.074 47.074 47.074 47.074 47.074 47.074 47.074 47.074	1514706 1518366 1547961 1550765 1556262 1556262	NATIONAL SCIENCE FOUNDATION	249,495 220,753 3,630	39,301 -
National Science Foundation	Direct	47.074 47.074 47.074 47.074 47.074 47.074 47.074	1518366 1547961 1550765 1556262 1556262	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	220,753 3,630	39,301
National Science Foundation	Direct	47.074 47.074 47.074 47.074 47.074 47.074	1547961 1550765 1556262 1556262	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	3,630	-
National Science Foundation	Direct	47.074 47.074 47.074 47.074 47.074	1550765 1556262 1556262	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION		
National Science Foundation	Direct Direct Direct Direct Direct Direct Direct Direct	47.074 47.074 47.074 47.074	1556262 1556262	NATIONAL SCIENCE FOUNDATION	13,270	
National Science Foundation	Direct Direct Direct Direct Direct	47.074 47.074 47.074	1556262			
National Science Foundation	Direct Direct Direct Direct Direct	47.074 47.074			128,432	
National Science Foundation	Direct Direct Direct Direct	47.074	1550202	NATIONAL SCIENCE FOUNDATION	70,615	
National Science Foundation	Direct Direct Direct		1557324	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	4,568 145,745	
National Science Foundation National Science Foundation National Science Foundation National Science Foundation	Direct Direct		1557324	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	7,749	
National Science Foundation National Science Foundation National Science Foundation	Direct	47.074	1557437	NATIONAL SCIENCE FOUNDATION	373,646	
National Science Foundation National Science Foundation		47.074	1557657	NATIONAL SCIENCE FOUNDATION	23.469	
		47.074	1600556	NATIONAL SCIENCE FOUNDATION	53.618	
	Direct	47.074	1620018	NATIONAL SCIENCE FOUNDATION	11,249	
	Direct	47.074	1637653	NATIONAL SCIENCE FOUNDATION	293,448	
National Science Foundation	Direct	47.074	1637653	NATIONAL SCIENCE FOUNDATION	376	
National Science Foundation	Direct	47.074	1638679	NATIONAL SCIENCE FOUNDATION	150,692	
National Science Foundation	Direct	47.074	1638778	NATIONAL SCIENCE FOUNDATION	21,810	
National Science Foundation	Direct	47.074	1655386	NATIONAL SCIENCE FOUNDATION	1.064	
National Science Foundation	Direct	47.074	1655392	NATIONAL SCIENCE FOUNDATION	5,169	
National Science Foundation	Direct	47.074	1701602	NATIONAL SCIENCE FOUNDATION	510	
National Science Foundation	Direct	47.074	1719376	NATIONAL SCIENCE FOUNDATION	7,370	
National Science Foundation	Direct	47.074	1735934	NATIONAL SCIENCE FOUNDATION	76,030	
National Science Foundation	Direct	47.074	1753543	NATIONAL SCIENCE FOUNDATION	447,114	
National Science Foundation	Direct	47.074	BCS-1349125	NATIONAL SCIENCE FOUNDATION	2,540	
National Science Foundation	Direct	47.074	DBI-0939454	NATIONAL SCIENCE FOUNDATION	13,054	13,054
National Science Foundation	Direct	47.074	DBI-0953738	NATIONAL SCIENCE FOUNDATION	65,778	
National Science Foundation	Direct	47.074	DBI-1358474	NATIONAL SCIENCE FOUNDATION	111,347	
National Science Foundation	Direct	47.074	DBI-1358474	NATIONAL SCIENCE FOUNDATION	16,788	
National Science Foundation	Direct	47.074	DBI-1359302	NATIONAL SCIENCE FOUNDATION	60,836	-
National Science Foundation	Direct	47.074	DBI-1359302	NATIONAL SCIENCE FOUNDATION	2,656	-
National Science Foundation	Direct	47.074	DBI-1458556	NATIONAL SCIENCE FOUNDATION	(1) -
National Science Foundation	Direct	47.074	DBI-1460569	NATIONAL SCIENCE FOUNDATION	141,899	-
National Science Foundation	Direct	47.074	DBI-1460569	NATIONAL SCIENCE FOUNDATION	(6,341)	
National Science Foundation	Direct	47.074	DEB - 1401582	NATIONAL SCIENCE FOUNDATION	5,322	
National Science Foundation	Direct	47.074	DEB 1354878	NATIONAL SCIENCE FOUNDATION	60,112	
National Science Foundation	Direct	47.074	DEB-0845932	NATIONAL SCIENCE FOUNDATION	(5)	
National Science Foundation	Direct	47.074	DEB-0919452	NATIONAL SCIENCE FOUNDATION	(21)	
National Science Foundation	Direct	47.074	DEB-1027253	NATIONAL SCIENCE FOUNDATION	151,527	
National Science Foundation	Direct	47.074	DEB-1027253	NATIONAL SCIENCE FOUNDATION	64,444	
National Science Foundation	Direct	47.074	DEB-1027253	NATIONAL SCIENCE FOUNDATION	49,410	
National Science Foundation	Direct	47.074	DEB-1027253	NATIONAL SCIENCE FOUNDATION	37,944	
National Science Foundation	Direct	47.074	DEB-1027253	NATIONAL SCIENCE FOUNDATION	35,911	
National Science Foundation	Direct	47.074	DEB-1027253	NATIONAL SCIENCE FOUNDATION	31,726	
National Science Foundation	Direct	47.074	DEB-1027253	NATIONAL SCIENCE FOUNDATION	22,202	
National Science Foundation	Direct	47.074	DEB-1027253	NATIONAL SCIENCE FOUNDATION	21,473	
National Science Foundation	Direct	47.074	DEB-1027253	NATIONAL SCIENCE FOUNDATION	7,778	
National Science Foundation	Direct	47.074 47.074	DEB-1027253	NATIONAL SCIENCE FOUNDATION	5,603	
National Science Foundation National Science Foundation	Direct Direct	47.074	DEB-1027253 DEB-1136710	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	3,216 72,785	
		47.074	DEB-1136710 DEB-1145808	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION		
National Science Foundation National Science Foundation	Direct Direct	47.074	DEB-1145808 DEB-1256663	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	111,798 1,175	
National Science Foundation	Direct	47.074	DEB-1257756	NATIONAL SCIENCE FOUNDATION	37,377	
National Science Foundation	Direct	47.074	DEB-1257730 DEB-1258005	NATIONAL SCIENCE FOUNDATION	54,136	
National Science Foundation	Direct	47.074	DEB-1238005 DEB-1313677	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	54,130	
National Science Foundation	Direct	47.074	DEB-1313077 DEB-1342793	NATIONAL SCIENCE FOUNDATION	24,021	
National Science Foundation	Direct	47.074	DEB-1342793 DEB-1342793	NATIONAL SCIENCE FOUNDATION		
National Science Foundation	Direct	47.074	DEB-1354085	NATIONAL SCIENCE FOUNDATION	17,650 5,049	
National Science Foundation	Direct	47.074	DEB-1354085	NATIONAL SCIENCE FOUNDATION	1,605	
National Science Foundation	Direct	47.074	DEB-1354414	NATIONAL SCIENCE FOUNDATION	98,631	81,886
National Science Foundation	Direct	47.074	DEB-1359138	NATIONAL SCIENCE FOUNDATION	25.226	01,000
National Science Foundation	Direct	47.074	DEB-1333138 DEB-1407149	NATIONAL SCIENCE FOUNDATION	23,220	-
National Science Foundation	Direct	47.074	DEB-1407149 DEB-1451740	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	74,781	-
National Science Foundation	Direct	47.074	DEB-1431740 DEB-1518518	NATIONAL SCIENCE FOUNDATION	681,994	
National Science Foundation	Direct	47.074	DEB-1516516 DEB-1547024	NATIONAL SCIENCE FOUNDATION	46,073	
National Science Foundation	Direct	47.074	DEB-1547549	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	3,705	
National Science Foundation	Direct	47.074	DEB-1547961	NATIONAL SCIENCE FOUNDATION	14,104	
National Science Foundation	Direct	47.074	DEB-1552197	NATIONAL SCIENCE FOUNDATION	106,121	
National Science Foundation	Direct	47.074	DEB-1552197	NATIONAL SCIENCE FOUNDATION	1,905	
National Science Foundation	Direct	47.074	EF-1065786	NATIONAL SCIENCE FOUNDATION	76,429	
National Science Foundation	Direct	47.074	EF-1065786	NATIONAL SCIENCE FOUNDATION	66,257	
National Science Foundation	Direct	47.074	EF-1114856	NATIONAL SCIENCE FOUNDATION	1,478	-
National Science Foundation	Direct	47.074	EF-1137309	NATIONAL SCIENCE FOUNDATION	142,671	
National Science Foundation	Direct	47.074	EF-1340604	NATIONAL SCIENCE FOUNDATION	2,302	
National Science Foundation	Direct	47.074	EF-1340812	NATIONAL SCIENCE FOUNDATION	659,993	
National Science Foundation	Direct	47.074	IOS-0922493	NATIONAL SCIENCE FOUNDATION	(245)	
National Science Foundation	Direct	47.074	IOS-1025636	NATIONAL SCIENCE FOUNDATION	124,733	
National Science Foundation	Direct	47.074	IOS-1051919	NATIONAL SCIENCE FOUNDATION	6,822	
National Science Foundation	Direct	47.074	IOS-1054243	NATIONAL SCIENCE FOUNDATION	(62)	
National Science Foundation	Direct	47.074	IOS-1121474	NATIONAL SCIENCE FOUNDATION	1	
National Science Foundation	Direct	47.074	IOS-1144391	NATIONAL SCIENCE FOUNDATION	8	-
National Science Foundation	Direct	47.074	IOS-1146128	NATIONAL SCIENCE FOUNDATION	1,761	
National Science Foundation	Direct	47.074	IOS-1146128	NATIONAL SCIENCE FOUNDATION	(3,929)	
National Science Foundation	Direct	47.074	IOS-1146614	NATIONAL SCIENCE FOUNDATION	71,841	
National Science Foundation	Direct	47.074	IOS-1237969	NATIONAL SCIENCE FOUNDATION	613,748	
National Science Foundation	Direct	47.074	IOS-1237969	NATIONAL SCIENCE FOUNDATION	116,254	
National Science Foundation	Direct	47.074	IOS-1237969	NATIONAL SCIENCE FOUNDATION	76,790	
National Science Foundation	Direct	47.074	IOS-1237969	NATIONAL SCIENCE FOUNDATION	6,244	
National Science Foundation	Direct	47.074	IOS-1331218	NATIONAL SCIENCE FOUNDATION	61,869	
National Science Foundation	Direct	47.074	IOS-1351216	NATIONAL SCIENCE FOUNDATION	175,931	
National Science Foundation	Direct	47.074	IOS-1350772	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	3,103	
National Science Foundation	Direct	47.074	IOS-1353110	NATIONAL SCIENCE FOUNDATION	125,015	
National Science Foundation	Direct	47.074	IOS-1353110	NATIONAL SCIENCE FOUNDATION	200,002	
National Science Foundation	Direct	47.074	IOS-1354721	NATIONAL SCIENCE FOUNDATION	172,911	
National Science Foundation	Direct	47.074	IOS-1354721	NATIONAL SCIENCE FOUNDATION	6,367	
National Science Foundation	Direct	47.074	IOS-1444499	NATIONAL SCIENCE FOUNDATION	675,929	429,287
National Science Foundation	Direct	47.074	IOS-1444499	NATIONAL SCIENCE FOUNDATION	10,191	

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
National Science Foundation	Direct	47.074	IOS-1444499	NATIONAL SCIENCE FOUNDATION	\$ 174	\$ -
National Science Foundation	Direct	47.074	IOS-1456482	NATIONAL SCIENCE FOUNDATION	196,072	
National Science Foundation	Direct	47.074	IOS-1456864	NATIONAL SCIENCE FOUNDATION	109,693	-
National Science Foundation	Direct	47.074	IOS-1456864	NATIONAL SCIENCE FOUNDATION	8,330	-
National Science Foundation	Direct	47.074	MCB-1119778	NATIONAL SCIENCE FOUNDATION	33,725	-
National Science Foundation	Direct	47.074	MCB-1121650	NATIONAL SCIENCE FOUNDATION	171,707	-
National Science Foundation	Direct	47.074	MCB-1121650	NATIONAL SCIENCE FOUNDATION	4,066	-
National Science Foundation	Direct	47.074	MCB-1121650	NATIONAL SCIENCE FOUNDATION	243	-
National Science Foundation	Direct	47.074	MCB-1121943	NATIONAL SCIENCE FOUNDATION	99,038	-
National Science Foundation	Direct	47.074	MCB-1243654	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	98,467	-
National Science Foundation	Direct	47.074	MCB-1243792		127,189	-
National Science Foundation National Science Foundation	Direct Direct	47.074 47.074	MCB-1243792 MCB-1243983	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	(1,658)	-
National Science Foundation	Direct	47.074	MCB-1243983	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	30,208 1,476	-
National Science Foundation	Direct	47.074	MCB-1243300	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	52,894	
National Science Foundation	Direct	47.074	MCB-1253684	NATIONAL SCIENCE FOUNDATION	121,634	
National Science Foundation	Direct	47.074	MCB-1330441	NATIONAL SCIENCE FOUNDATION	130,208	
National Science Foundation	Direct	47.074	MCB-1330441	NATIONAL SCIENCE FOUNDATION	(18,750)	
National Science Foundation	Direct	47.074	MCB-1330560	NATIONAL SCIENCE FOUNDATION	133,062	
National Science Foundation	Direct	47.074	MCB-135594	NATIONAL SCIENCE FOUNDATION	114,468	-
National Science Foundation	Direct	47.074	MCB-1359636	NATIONAL SCIENCE FOUNDATION	38,447	
National Science Foundation	Direct	47.074	MCB-1411272	NATIONAL SCIENCE FOUNDATION	226,032	88,388
National Science Foundation	Direct	47.074	MCB-1411272	NATIONAL SCIENCE FOUNDATION	13,770	-
National Science Foundation	Direct	47.074	MCB-1413356	NATIONAL SCIENCE FOUNDATION	191,968	-
National Science Foundation	Direct	47.074	MCB-1515002	NATIONAL SCIENCE FOUNDATION	58,391	
National Science Foundation	Direct	47.074	MCB-1515002	NATIONAL SCIENCE FOUNDATION	2,862	-
National Science Foundation	Direct	47.074	MCB-1515169	NATIONAL SCIENCE FOUNDATION	196,308	-
National Science Foundation	Direct	47.074	MCB-1515169	NATIONAL SCIENCE FOUNDATION	604	-
National Science Foundation	Direct	47.074	MCB-1517241	NATIONAL SCIENCE FOUNDATION	140,796	
National Science Foundation	Direct	47.074	MCB-1517241	NATIONAL SCIENCE FOUNDATION	5,075	-
National Science Foundation	Direct	47.074	NSF DEB 0919452 CONNER	NATIONAL SCIENCE FOUNDATION	11	-
National Science Foundation	Direct	47.074	NSF-0939454-Goodman- PSC	NATIONAL SCIENCE FOUNDATION	5,011	-
National Science Foundation	Direct	47.074	NSF-1546617-Barry	NATIONAL SCIENCE FOUNDATION	95,636	-
National Science Foundation	Direct	47.074	NSF-1546617-Jones	NATIONAL SCIENCE FOUNDATION	190,945	-
National Science Foundation	Direct	47.074	NSF-1546617-Last	NATIONAL SCIENCE FOUNDATION	165,105	103,831
National Science Foundation	Direct	47.074	NSF-1546617-Shiu	NATIONAL SCIENCE FOUNDATION	138,068	-
National Science Foundation	Direct	47.074	NSF-1546657 Buell	NATIONAL SCIENCE FOUNDATION	4,249	-
National Science Foundation	Direct	47.074	NSF-1637653 REU PSC-Hamilton	NATIONAL SCIENCE FOUNDATION	14,011	-
National Science Foundation	Direct	47.074	NSF-1637653-Landis	NATIONAL SCIENCE FOUNDATION	17,829	-
National Science Foundation	Direct	47.074	NSF-1637653-Lau	NATIONAL SCIENCE FOUNDATION	11,235	-
National Science Foundation	Direct	47.074	NSF-1637653-Swinton	NATIONAL SCIENCE FOUNDATION	5,278	-
National Science Foundation	Direct	47.074	NSF-1638778-Boughman	NATIONAL SCIENCE FOUNDATION	2,144	-
National Science Foundation	Direct	47.074	NSF-Buell	NATIONAL SCIENCE FOUNDATION	9,707	-
National Science Foundation	Direct	47.075	1457138	NATIONAL SCIENCE FOUNDATION	109	-
National Science Foundation	Direct	47.075	1533499	NATIONAL SCIENCE FOUNDATION	66,919	-
National Science Foundation	Direct	47.075	1540314	NATIONAL SCIENCE FOUNDATION	144,575	28,764
National Science Foundation	Direct	47.075	1556270	NATIONAL SCIENCE FOUNDATION	33,691	-
National Science Foundation	Direct	47.075	1559045	NATIONAL SCIENCE FOUNDATION	26,736	-
National Science Foundation	Direct	47.075	1559045	NATIONAL SCIENCE FOUNDATION	7,211	-
National Science Foundation	Direct	47.075 47.075	1559045	NATIONAL SCIENCE FOUNDATION	3,098	-
National Science Foundation	Direct		1560846	NATIONAL SCIENCE FOUNDATION	132,613	-
National Science Foundation	Direct	47.075 47.075	1560846 1637010	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	12,550	-
National Science Foundation National Science Foundation	Direct Direct	47.075	1638167	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	9,729 69,072	-
National Science Foundation	Direct	47.075	1650013	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	107,017	•
National Science Foundation	Direct	47.075	1744094	NATIONAL SCIENCE FOUNDATION	1,417	
National Science Foundation	Direct	47.075	BCS-1149078	NATIONAL SCIENCE FOUNDATION	93,070	
National Science Foundation	Direct	47.075	BCS-1431063	NATIONAL SCIENCE FOUNDATION	93,910	
National Science Foundation	Direct	47.075	BCS-1431063	NATIONAL SCIENCE FOUNDATION	5,392	
National Science Foundation	Direct	47.075	BCS-1449667	NATIONAL SCIENCE FOUNDATION	25	
National Science Foundation	Direct	47.075	BCS-1536133	NATIONAL SCIENCE FOUNDATION	9,040	
National Science Foundation	Direct	47.075	BCS-1656133	NATIONAL SCIENCE FOUNDATION	5,705	
National Science Foundation	Direct	47.075	NSF 1630982 Reimers	NATIONAL SCIENCE FOUNDATION	38,869	
National Science Foundation	Direct	47.075	NSF SES-1231206 PSC Miller	NATIONAL SCIENCE FOUNDATION	9,827	_
National Science Foundation	Direct	47.075	NSF SES-1338614 O'Rourke	NATIONAL SCIENCE FOUNDATION	9,992	_
National Science Foundation	Direct	47.075	NSF SMA 1064157 COOK	NATIONAL SCIENCE FOUNDATION	9.033	
National Science Foundation	Direct	47.075	NSF-1650013-JeitschkoThomas	NATIONAL SCIENCE FOUNDATION	159,036	-
National Science Foundation	Direct	47.075	SES-1231206	NATIONAL SCIENCE FOUNDATION	929	-
National Science Foundation	Direct	47.075	SES-1318885	NATIONAL SCIENCE FOUNDATION	37,990	-
National Science Foundation	Direct	47.075	SES-1330999	NATIONAL SCIENCE FOUNDATION	3,837	-
National Science Foundation	Direct	47.075	SES-1429948	NATIONAL SCIENCE FOUNDATION	65,816	-
National Science Foundation	Direct	47.075	SES-1430372	NATIONAL SCIENCE FOUNDATION	130,420	-
National Science Foundation	Direct	47.075	SES-1449466	NATIONAL SCIENCE FOUNDATION	149,007	74,549
National Science Foundation	Direct	47.075	SES-1559067	NATIONAL SCIENCE FOUNDATION	165,267	-
National Science Foundation	Direct	47.075	SMA-1328503	NATIONAL SCIENCE FOUNDATION	167	4,903
National Science Foundation	Direct	47.075	SMA-1416730	NATIONAL SCIENCE FOUNDATION	141,740	74,278
National Science Foundation	Direct	47.075	SMA-1416730	NATIONAL SCIENCE FOUNDATION	48,008	-
National Science Foundation	Direct	47.075	SMA-1416730	NATIONAL SCIENCE FOUNDATION	46,601	-
National Science Foundation	Direct	47.076	1253036	NATIONAL SCIENCE FOUNDATION	119,795	-
National Science Foundation	Direct	47.076	1253036	NATIONAL SCIENCE FOUNDATION	12,192	-
National Science Foundation	Direct	47.076	1316908	NATIONAL SCIENCE FOUNDATION	134,744	-
National Science Foundation	Direct	47.076	1440988	NATIONAL SCIENCE FOUNDATION	1,589,254	482,198
National Science Foundation	Direct	47.076	1440988	NATIONAL SCIENCE FOUNDATION	141,849	-
National Science Foundation	Direct	47.076	1503211	NATIONAL SCIENCE FOUNDATION	222,371	-
National Science Foundation	Direct	47.076	1503211	NATIONAL SCIENCE FOUNDATION	12,000	-
National Science Foundation	Direct	47.076	1503277	NATIONAL SCIENCE FOUNDATION	132,336	-
National Science Foundation	Direct	47.076	1503277	NATIONAL SCIENCE FOUNDATION	62,041	38,893
National Science Foundation	Direct	47.076	1504659	NATIONAL SCIENCE FOUNDATION	103,173	-
National Science Foundation	Direct	47.076	1504786	NATIONAL SCIENCE FOUNDATION	19,653	-
National Science Foundation	Direct	47.076	1524128	NATIONAL SCIENCE FOUNDATION	115,627	-
National Science Foundation	Direct	47.076	1561122	NATIONAL SCIENCE FOUNDATION	9,128	-
National Science Foundation	Direct	47.076	1561159	NATIONAL SCIENCE FOUNDATION	23,330	-
National Science Foundation	Direct	47.076	1564745	NATIONAL SCIENCE FOUNDATION	44,310	-
National Science Foundation	Direct	47.076	1564745	NATIONAL SCIENCE FOUNDATION	21,995	-
National Science Foundation	Direct	47.076	1620580	NATIONAL SCIENCE FOUNDATION	140,556	-
National Science Foundation	Direct	47.076	1620746	NATIONAL SCIENCE FOUNDATION	104,161	-
	Disease	47.076	1620934	NATIONAL SCIENCE FOUNDATION	132,415	-
National Science Foundation	Direct					
National Science Foundation National Science Foundation	Direct	47.076	1643723	NATIONAL SCIENCE FOUNDATION	6,715	-
National Science Foundation National Science Foundation National Science Foundation	Direct Direct	47.076 47.076	1643723 1646869	NATIONAL SCIENCE FOUNDATION	6,715 26,362	-
National Science Foundation National Science Foundation National Science Foundation National Science Foundation	Direct Direct Direct	47.076 47.076 47.076	1643723 1646869 1649981	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	6,715 26,362 84,031	-
National Science Foundation National Science Foundation National Science Foundation	Direct Direct	47.076 47.076	1643723 1646869	NATIONAL SCIENCE FOUNDATION	6,715 26,362	- - -

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
lational Science Foundation	Direct	47.076	DGE-1424871	NATIONAL SCIENCE FOUNDATION	\$ 1,486,666	\$ -
lational Science Foundation	Direct	47.076	DGE-1438739	NATIONAL SCIENCE FOUNDATION	53,783	-
ational Science Foundation ational Science Foundation	Direct	47.076	DGE-1445583	NATIONAL SCIENCE FOUNDATION	43,196	73 141
ational Science Foundation ational Science Foundation	Direct Direct	47.076 47.076	DGE-1535011 DRL-0514431	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	120,626 (8,090)	72,141
ational Science Foundation	Direct	47.076	DRL-0910001	NATIONAL SCIENCE FOUNDATION	(33)	-
ational Science Foundation	Direct	47.076	DRL-1020187	NATIONAL SCIENCE FOUNDATION	100	-
ational Science Foundation	Direct	47.076	DRL-1108833	NATIONAL SCIENCE FOUNDATION	11,066	-
ational Science Foundation	Direct	47.076	DRL-1109256	NATIONAL SCIENCE FOUNDATION	2,568	
ational Science Foundation	Direct Direct	47.076 47.076	DRL-1119055 DRL-1119055	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	128,362 (97)	37,813
ational Science Foundation	Direct	47.076	DRL-1119055 DRL-1119327	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	168,878	8.864
ational Science Foundation	Direct	47.076	DRL-1228034	NATIONAL SCIENCE FOUNDATION	168,147	127,178
ational Science Foundation	Direct	47.076	DRL-1228034	NATIONAL SCIENCE FOUNDATION	17,927	· -
tional Science Foundation	Direct	47.076	DRL-1232388	NATIONAL SCIENCE FOUNDATION	152,327	86,530
ational Science Foundation	Direct	47.076	DRL-1252439	NATIONAL SCIENCE FOUNDATION	70,456	-
ational Science Foundation ational Science Foundation	Direct Direct	47.076 47.076	DRL-1253822 DRL-1347187	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	131,144 32,344	-
ational Science Foundation	Direct	47.076	DRL-1347187	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	15,337	-
tional Science Foundation	Direct	47.076	DRL-1404467	NATIONAL SCIENCE FOUNDATION	420,540	
tional Science Foundation	Direct	47.076	DRL-1420492	NATIONAL SCIENCE FOUNDATION	233,246	-
tional Science Foundation	Direct	47.076	DRL-1421116	NATIONAL SCIENCE FOUNDATION	27,962	4,928
ational Science Foundation	Direct	47.076	DRL-1421214	NATIONAL SCIENCE FOUNDATION	54,685	-
itional Science Foundation	Direct	47.076	DRL-1450756	NATIONAL SCIENCE FOUNDATION	27,283	-
tional Science Foundation tional Science Foundation	Direct Direct	47.076 47.076	DRL-1461468 DRL-1461833	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	16,854 8,909	6,991
ational Science Foundation	Direct	47.076	DRL-1502755	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	252,010	69,499
ational Science Foundation	Direct	47.076	DRL-1647033	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	12,241	-
tional Science Foundation	Direct	47.076	DUE-0335785	NATIONAL SCIENCE FOUNDATION	(48)	-
tional Science Foundation	Direct	47.076	DUE-1153778	NATIONAL SCIENCE FOUNDATION	25,140	-
ional Science Foundation	Direct	47.076	DUE-1153778	NATIONAL SCIENCE FOUNDATION	10,704	-
ational Science Foundation	Direct	47.076	DUE-1245402	NATIONAL SCIENCE FOUNDATION	16,810	-
itional Science Foundation	Direct	47.076	DUE-1323162	NATIONAL SCIENCE FOUNDATION	318,412	-
tional Science Foundation tional Science Foundation	Direct Direct	47.076 47.076	DUE-1340048 DUE-1340048	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	175,452 66,224	-
tional Science Foundation	Direct	47.076	DUE-1341987	NATIONAL SCIENCE FOUNDATION	1,732	549
ational Science Foundation	Direct	47.076	DUE-1347605	NATIONAL SCIENCE FOUNDATION	174,519	156,208
ational Science Foundation	Direct	47.076	DUE-1347740	NATIONAL SCIENCE FOUNDATION	139,744	-
ational Science Foundation	Direct	47.076	DUE-1431725	NATIONAL SCIENCE FOUNDATION	337,785	153,419
ational Science Foundation	Direct	47.076	DUE-1431725	NATIONAL SCIENCE FOUNDATION	14,091	-
ational Science Foundation	Direct	47.076	DUE-1431776	NATIONAL SCIENCE FOUNDATION	9,157	-
ational Science Foundation	Direct	47.076	DUE-1432563	NATIONAL SCIENCE FOUNDATION	262,552	-
rtional Science Foundation rtional Science Foundation	Direct Direct	47.076 47.076	DUE-1432563 DUE-1502552	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	12,710 39,471	-
itional Science Foundation	Direct	47.076	FED GOV FELLOWSHIPS-FEES	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	(8,615)	-
ational Science Foundation	Direct	47.076	HRD-0930182	NATIONAL SCIENCE FOUNDATION	15	
ational Science Foundation	Direct	47.076	HRD-1305819	NATIONAL SCIENCE FOUNDATION	64,740	-
ational Science Foundation	Direct	47.076	NSF DRL-1316702 Schneider	NATIONAL SCIENCE FOUNDATION	351,318	-
ational Science Foundation	Direct	47.076	NSF DRL-1417672 Herbel-Eisenmann	NATIONAL SCIENCE FOUNDATION	559,025	230,677
ational Science Foundation	Direct	47.076	NSF DRL-1417672 PSC Herbel-Eisenmann	NATIONAL SCIENCE FOUNDATION	37,496	-
ational Science Foundation	Direct	47.076	NSF DRL-1417900 Krajcik	NATIONAL SCIENCE FOUNDATION	209,314	-
ational Science Foundation ational Science Foundation	Direct Direct	47.076 47.076	NSF DRL-1417900 PSC Krajcik NSF DRL-1420532 Frank	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	17,973 740,993	80,956
ational Science Foundation	Direct	47.076	NSF-1620934-PSC-Phillips	NATIONAL SCIENCE FOUNDATION	5,690	-
ational Science Foundation	Direct	47.076	NSF-1623824 Ebert-MayDiane	NATIONAL SCIENCE FOUNDATION	111,022	
ational Science Foundation	Direct	47.079	1443920	NATIONAL SCIENCE FOUNDATION	9,238	-
ational Science Foundation	Direct	47.079	1556407	NATIONAL SCIENCE FOUNDATION	32,611	-
ational Science Foundation	Direct	47.079	1556407	NATIONAL SCIENCE FOUNDATION	2,898	-
itional Science Foundation	Direct	47.079	1614130	NATIONAL SCIENCE FOUNDATION	42,788	-
ational Science Foundation	Direct Direct	47.079 47.079	IIA-1358110 IIA-1358110	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	35,343 12,488	-
ational Science Foundation	Direct	47.079	OISE - 1064641	NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION	4,452	-
ational Science Foundation	Direct	47.079	OISE - 1064641	NATIONAL SCIENCE FOUNDATION	1,910	
ational Science Foundation	Direct	47.079	OISE-1545684	NATIONAL SCIENCE FOUNDATION	773,032	-
ational Science Foundation	Direct	47.079	OISE-1545684	NATIONAL SCIENCE FOUNDATION	33,542	-
tional Science Foundation	Direct	47.080	IIA-1260768	NATIONAL SCIENCE FOUNDATION	4,413	-
	Direct Total				73,406,560	7,129,351
tional Science Foundation	Pass-through	47	11-160H-MSU	WEST VIRGINIA UNIV	11,447	-
itional Science Foundation	Pass-through	47	3004423504	UNIVERSITY OF MICHIGAN	50,684	-
tional Science Foundation tional Science Foundation	Pass-through Pass-through	47 47.041	52-000117 11-160-MSU-2	SRI INTERNATL WEST VIRGINIA UNIV	34,876 44,959	-
tional Science Foundation	Pass-through	47.041	1431010	UBIQUITOUS ENERGY, INC.	(568)	-
tional Science Foundation	Pass-through	47.041	150282	KOPESS AG TECH, LLC	46,352	-
tional Science Foundation	Pass-through	47.041	3003795364	UNIVERSITY OF MICHIGAN	9,309	-
tional Science Foundation	Pass-through	47.041	4101-71104	PURDUE UNIV	64,329	-
cional Science Foundation	Pass-through	47.041	5218-MSU-NSF-5092	PENNSYLVANIA STATE UNIV	36,271	-
ional Science Foundation	Pass-through	47.041	G-01151-1	COLORADO STATE OF	41,916	-
ional Science Foundation	Pass-through	47.041	R01803	FLORIDA STATE UNIV	754	-
tional Science Foundation	Pass-through	47.049	10030626	UNIVERSITY OF UTAH	53,058	-
tional Science Foundation tional Science Foundation	Pass-through Pass-through	47.049 47.049	201387 201387	UNIVERSITY OF NOTRE DAME UNIVERSITY OF NOTRE DAME	16 (135)	-
tional Science Foundation	Pass-through	47.049	203086MSU	UNIVERSITY OF NOTRE DAME	649	
tional Science Foundation	Pass-through	47.049	68790	THE RESEARCH FOUNDATION FOR THE STATE UNIV OF NEW YO	635,390	-
ional Science Foundation	Pass-through	47.049	F-2015-76	UNIVERSITY OF TOLEDO	69,036	-
tional Science Foundation	Pass-through	47.049	GG006141	COLUMBIA UNIV	153,536	-
ional Science Foundation	Pass-through	47.049	GG006141	COLUMBIA UNIV	84,174	-
ional Science Foundation	Pass-through	47.049	HARDSHIP	STONY BROOK RESEARCH	84,768	-
tional Science Foundation	Pass-through	47.049	JHU-2003349346-Donahue	JOHNS HOPKINS UNIV	5,187	-
tional Science Foundation	Pass-through	47.049	SDSMT-Michigan St U 17-13	SOUTH DAKOTA SCHOOL OF MINES & TECHNOLOGY	43,986	-
tional Science Foundation tional Science Foundation	Pass-through Pass-through	47.049 47.050	U of M 3002333711 Brock 15-2904	UNIVERSITY OF MICHIGAN UNIVERSITY OF SOUTH CAROLINA	470,285 407	-
itional Science Foundation	Pass-through	47.050	24(GG009393-01)	COLUMBIA UNIV	11,841	-
ational Science Foundation	Pass-through	47.050	479483-19057	VIRGINIA POLYTECHNIC INST	51,048	-
ational Science Foundation	Pass-through	47.050	675K964	UNIVERSITY OF WISCONSIN MADISON	34,053	-
tional Science Foundation	Pass-through	47.050	SP0024578-PROJ0006670	NORTHWESTERN UNIV	61,206	-
	Pass-through	47.070	3003646555	UNIVERSITY OF MICHIGAN	247,937	-
	Dana Abraccale	47.074	10022513-01	UNIVERSITY OF UTAH	83,175	-
ational Science Foundation ational Science Foundation	Pass-through					
tional Science Foundation tional Science Foundation	Pass-through	47.074	10022513-01	UNIVERSITY OF UTAH	72,318	-
ational Science Foundation ational Science Foundation ational Science Foundation	Pass-through Pass-through	47.074 47.074	10022513-01	UNIVERSITY OF UTAH	67,583	-
ational Science Foundation ational Science Foundation	Pass-through	47.074				-

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaware Payments
esearch and Development Cluster (Continued):						
ational Science Foundation	Pass-through	47.074	1002973-01	NORTHERN ARIZONA UNIV	\$ 8,749	Ś
ational Science Foundation	Pass-through	47.074	1457323MSU	ALMA COLLEGE	45,907	
tional Science Foundation	Pass-through	47.074	15-571	ARIZONA STATE UNIV	67,318	
tional Science Foundation	Pass-through	47.074	1716340	UNIVERSITY OF KENTUCKY	15,910	
tional Science Foundation	Pass-through	47.074	2015-984-001	SAMUEL ROBERTS NOBLE FOUNDATION	228,018	
tional Science Foundation	Pass-through	47.074	202236	UNIVERSITY OF NOTRE DAME	86,261	
tional Science Foundation	Pass-through	47.074	4101-68711	PURDUE UNIV	7,302	
itional Science Foundation	Pass-through	47.074	420-66-08B	IOWA STATE UNIV	100,570	
tional Science Foundation	Pass-through	47.074	502294-78050	NORTHEASTERN UNIV	11,415	
tional Science Foundation	Pass-through	47.074	7793-MSU	WESTERN MICHIGAN UNIV	176,092	
tional Science Foundation tional Science Foundation	Pass-through	47.074	7793-MSU	WESTERN MICHIGAN UNIV	10,412	
tional Science Foundation tional Science Foundation	Pass-through	47.074 47.074	N. Arizona/NSF 1002973-01 ROBERTSON RSC14014	NORTHERN ARIZONA UNIV	23,183	
	Pass-through		UAF 13-0043	UNIVERSITY OF DAYTON	52,228	
tional Science Foundation tional Science Foundation	Pass-through Pass-through	47.074 47.074	UFDSP0001070	UNIVERSITY OF ALASKA UNIVERSITY OF FLORIDA	1,650 139,644	
tional Science Foundation	Pass-through	47.074		UNIVERSITY OF PEORIDA UNIVERSITY OF NEVADA RENO		
tional Science Foundation	Pass-through	47.075	UNR 17-21 129152	UNIVERSITY OF NEVADA RENO UNIVERSITY OF ARIZONA	3,777 79,303	
tional Science Foundation	Pass-through	47.075	17-009496 A	UNIVERSITY OF MASSACHUSETTS	79,303 2,870	
tional Science Foundation	Pass-through	47.075	GTK137-SB-002	UNIVERSITY OF IDAHO	258	
tional Science Foundation	Pass-through	47.076	11052-007	MISSOURI STATE UNIV	1,296	
tional Science Foundation	Pass-through	47.076	11052-007	MISSOURI STATE UNIV	(26,457)	
		47.076				
tional Science Foundation tional Science Foundation	Pass-through Pass-through	47.076	16043-003 16043-003	MISSOURI STATE UNIV MISSOURI STATE UNIV	127,448	
tional Science Foundation		47.076 47.076	16043-003 22512-S1	VANDERBILT UNIV	11,841 11,407	
tional Science Foundation	Pass-through	47.076	3001714504	UNIVERSITY OF MICHIGAN		
	Pass-through				65,035	
ional Science Foundation	Pass-through	47.076	3003620154 4101-65235	UNIVERSITY OF MICHIGAN	1,654	
ional Science Foundation ional Science Foundation	Pass-through	47.076 47.076	4101-65235 415612-G	PURDUE UNIV UNIVERSITY OF ROCHESTER	21,047	
ional Science Foundation ional Science Foundation	Pass-through Pass-through	47.076	415908-G	UNIVERSITY OF ROCHESTER UNIVERSITY OF ROCHESTER	(678) 38,714	
ional Science Foundation ional Science Foundation	Pass-through	47.076 47.076	415908-G 418K670	UNIVERSITY OF ROCHESTER UNIVERSITY OF WISCONSIN MADISON	51,972	
ional Science Foundation ional Science Foundation		47.076 47.076	418K670 479493-19057	VIRGINIA TECH		
ional Science Foundation ional Science Foundation	Pass-through	47.076 47.076	4/9493-1905/ 488K806	VIRGINIA LECH UNIVERSITY OF WISCONSIN MADISON	3,794 76,456	
	Pass-through				76,456 36,697	
ional Science Foundation ional Science Foundation	Pass-through Pass-through	47.076 47.076	490K840 GA11161 150025	UNIVERSITY OF WISCONSIN MADISON UNIVERSITY OF VIRGINIA	36,697 176,153	
tional Science Foundation tional Science Foundation	Pass-through Pass-through	47.076 47.076	GA11161 150025 NIU 64155-1 Schmidt	NORTHERN ILLINOIS UNIV	176,153 76,141	
ional Science Foundation	Pass-through	47.076 47.076	NIU 64155-1 Schmidt SP0009801-PROJ0002727	NORTHERN ILLINOIS UNIV NORTHWESTERN UNIV	76,141	
tional Science Foundation		47.076	U OF M-3004280408-Caldwell	UNIVERSITY OF MICHIGAN	26,422	
tional Science Foundation	Pass-through Pass-through	47.076	Z4625001	UNIVERSITY OF MICHIGAN UNIVERSITY OF MARYLAND		
					75,782	
tional Science Foundation tional Science Foundation	Pass-through Pass-through	47.079 47.079	OISE-1243433 OISE-16-62750-0	DUKE UNIV CRDF GLOBAL	302,379 21,298	
donar Science i oundation	Pass-through Total	47.075	0132-10-02730-0	CRDI GEOBAE	5,147,675	
tional Science Foundation Total	i ass timough rotal				78,554,235	7,12
te	Direct	19	SAQMMA15M2452	US DEPT OF STATE	53,312	
te	Direct Direct Total	19	SAQMMA16M2200	US DEPT OF STATE	17,263 70,575	
ate Total					70,575	
ansportation	Direct	20	DTFH61-13-C-00023	FEDERAL HIGHWAY ADMINISTRATION	18,791	1
ansportation	Direct	20.200	DTFH61-13-C-00015	FEDERAL HIGHWAY ADMINISTRATION	49,634	-
ansportation	Direct	20.200	DTFH61-3-H-00009	FEDERAL HIGHWAY ADMINISTRATION	265,522	189
insportation	Direct	20.215	DTFH6416G00054	US DEPT OF TRANSPORTATION	5,000	10.
Insportation	Direct	20.701	DTRT13-G-UTC44	US DEPT OF TRANSPORTATION	1,016,004	80
ansportation	Direct	20.701	DTRT13-G-UTC44	US DEPT OF TRANSPORTATION		00.
		20 701	DTRT13-G-LITCAA	LIS DEDT OF TRANSPORTATION	54,283	
nsportation	Direct	20.701	DTRT13-G-UTC44	US DEPT OF TRANSPORTATION	30,354	
nsportation nsportation	Direct Direct	20.701	USDOT-DTRT13-G-UTC44-Chatti	US DEPT OF TRANSPORTATION	30,354 7,550	
nsportation nsportation nsportation	Direct Direct Direct	20.701 20.701	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany	US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION	30,354 7,550 17,725	
nsportation nsportation nsportation nsportation	Direct Direct Direct Direct	20.701 20.701 20.701	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Haider	US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION	30,354 7,550 17,725 4,296	
nsportation nsportation nsportation nsportation	Direct Direct Direct Direct Direct	20.701 20.701	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany	US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION	30,354 7,550 17,725 4,296 9,368	1.00
nsportation nsportation nsportation nsportation nsportation	Direct Direct Direct Direct Direct Direct Total	20.701 20.701 20.701 20.701	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Haider USDOT-DTRT13-G-UTC44-Zaabar	US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION	30,354 7,550 17,725 4,296 9,368 1,478,527	1,00
rsportation rsportation rsportation rsportation rsportation rsportation rsportation	Direct Direct Direct Direct Direct Direct Direct Total Pass-through	20.701 20.701 20.701 20.701 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTR13-G-UTC44-Haider USDOT-DTRT13-G-UTC44-Zaabar 2013-0066 5	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663	
nsportation nsportation nsportation nsportation nsportation nsportation nsportation nsportation	Direct Direct Direct Direct Direct Direct Direct Total Pass-through Pass-through	20.701 20.701 20.701 20.701 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Haider USDOT-DTRT13-G-UTC44-Zaabar 2013-0066 5 2013-0066 26	US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171	
nsportation	Direct Direct Direct Direct Direct Direct Total Pass-through Pass-through	20.701 20.701 20.701 20.701 20.701 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Baider USDOT-DTRT13-G-UTC44-Zaabar 2013-0066 5 2013-0066 27	US DEPT OF TRANSPORTATION MICHICAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598	1,00
rsportation	Direct Direct Direct Direct Direct Total Pass-through Pass-through Pass-through Pass-through	20.701 20.701 20.701 20.701 20.701 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Haider USDOT-DTRT13-G-UTC44-Zaabar 2013-0066 5 2013-0066 26 2013-0066 27 2013-0066 28	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143	
rsportation	Direct Direct Direct Direct Direct Direct Direct Direct Total Pass-through Pass-through Pass-through Pass-through	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Haider USDOT-DTR113-G-UTC44-Zaabar 2013-0066 5 2013-0066 26 2013-0066 7 2013-0066 28 201401725-03	US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261	3
ssportation	Direct Direct Direct Direct Direct Total Pass-through Pass-through Pass-through Pass-through Pass-through Pass-through Pass-through Pass-through	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Baider USDOT-DTR113-G-UTC44-Zaabar 2013-0066 5 2013-0066 27 2013-0066 27 2013-0066 28 201401725-03 HR 10-822A	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293	3
Insportation Inspo	Direct Direct Direct Direct Direct Direct Direct Total Pass-through Pass-through Pass-through Pass-through Pass-through Pass-through Pass-through Pass-through Pass-through	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Haider USDOT-DTR113-G-UTC44-Zaabar 2013-0066 5 2013-0066 26 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02	US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919	
rsportation	Direct Direct Direct Direct Direct Direct Toinect Direct D	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Zaabar 2013-0066 5 2013-0066 27 2013-0066 27 2013-006 27 AUST-0066 27	US DEPT OF TRANSPORTATION MICHICAN DEPT OF TRANSPORTATION MICHICAN DEPT OF TRANSPORTATION MICHICAN DEPT OF TRANSPORTATION MICHICAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHICAN STATE POLICE IOWA STATE UNIV	30,354 7,750 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188	3
resportation	Direct Direct Direct Direct Direct Total Pass-through	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Taidier USDOT-DTR113-G-UTC44-Zaabar 2013-0066 5 2013-0066 27 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 29	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454	3
isportation	Direct Direct Direct Direct Direct Direct Total Pass-through	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20,205 20,505 20,724	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Haider USDOT-DTR113-G-UTC44-Zaabar 2013-0066 5 2013-0066 26 2013-0066 27 2013-0066 78 201401725-03 HR 10-82A MSP-Mc-17-02 436-17-358 2013-0066 29 17-158	US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527	3
isportation	Direct Direct Direct Direct Direct Total Pass-through	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Talaider USDOT-DTR113-G-UTC44-Zaabar 2013-0066 5 2013-0066 27 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 29	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074	3
sportation	Direct Direct Direct Direct Direct Direct Total Pass-through	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20,205 20,505 20,724	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Haider USDOT-DTR113-G-UTC44-Zaabar 2013-0066 5 2013-0066 26 2013-0066 27 2013-0066 78 201401725-03 HR 10-82A MSP-Mc-17-02 436-17-358 2013-0066 29 17-158	US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527	:
asportation sportation	Direct Direct Direct Direct Direct Total Pass-through	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20,205 20,505 20,724	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Haider USDOT-DTR113-G-UTC44-Zaabar 2013-0066 5 2013-0066 26 2013-0066 27 2013-0066 78 201401725-03 HR 10-82A MSP-Mc-17-02 436-17-358 2013-0066 29 17-158	US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291	:
Insportation Inspo	Direct Direct Direct Direct Direct Direct Total Pass-through	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Haider USDOT-DTR113-G-UTC44-Haider USDOT-DTR113-G-UTC44-Haider USDOT-DTR113-G-UTC44-Zaabar 2013-0066 5 2013-0066 77 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-33B 2013-0066 29 17-158 FY16.675.001	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818	1
nsportation nsportation	Direct	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20,215 20,505 20,724 20,724	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Haider USDOT-DTR113-G-UTC44-Zaabar 2013-0066 5 2013-0066 67 2013-0066 72 2013-0066 78 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 79 17-158 FY16.675.001	US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818	3
Insportation Inspo	Direct Direct Direct Direct Direct Direct Total Pass-through	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20,215 20.505 20.724 20.724	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dairgazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider 2013-0066 5 2013-0066 27 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 29 17-158 FY16.675.001	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT US AGENCY FOR INTL DEVELOPMENT US AGENCY FOR INTL DEVELOPMENT	30,354 7,750 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329	1 1 1,06
Insportation Inspo	Direct	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20,215 20,505 20,724 20,724	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Laider USDOT-DTR113-G-UTC44-Zaabar 2013-0066 5 2013-0066 7 2013-0066 7 2013-0066 7 2013-0066 7 2013-0066 7 2013-0066 7 2013-0066 7 2013-0066 7 2013-0066 7 2013-0066 7 2013-0066 7 2013-0066 7 2013-0066 7 2013-0066 1 201	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696	: : : : : : : : : : : : : : : : : : :
Isportation ID	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20,215 20,505 20,724 20,724 20,724 98.001 98.001 98.001 98.001	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider 2013-0066 5 2013-0066 27 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 79 17-158 FY16.675.001	US DEPT OF TRANSPORTATION MICHICAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES MATL ACADEMY OF SCIENCES MICHICAN STATE UNIV MICHICAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,750 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497	: : : : : : : : : : : : : : : : : : :
asportation sportation	Direct Direct Direct Direct Direct Direct Direct Direct Total Pass-through Direct	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20,215 20,505 20,724 20,724 98.001 98.001 98.001 98.001 98.001	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Taider USDOT-DTR113-G-UTC44-Taider USDOT-DTR113-G-UTC44-Taider USDOT-DTR113-G-UTC44-Taider 2013-0066 5 2013-0066 77 2013-0066 77 2013-0066 78 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 29 17-158 FY16.675.001 155588 611-4-00-11-00001-00 AID-482-L4-14-00003 AID-612-L4-15-00001 AID-620-L4-15-00001	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594	1 1,06
sportation	Direct	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20,215 20,505 20,724 20,724 98,001 98,001 98,001 98,001 98,001 98,001	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Laider USDOT-DTR113-G-UTC44-Zaabar 2013-0066 5 2013-0066 72 2013-0066 27 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 29 17-158 FY16.675.001 155588 611-A-00-11-00001-00 AlD-482-LA-14-00003 AlD-612-LA-15-00001 AlD-620-LA-15-00001 AlD-650-LA-12-00001	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239	1 5 1,06 71 54 1,60
sportation	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20,215 20,505 20,724 20.724 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dairgazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider 2013-0066 5 2013-0066 27 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 29 17-158 FY16.675.001 155588 611-A-00-11-00001-00 AID-482-LA-14-00003 AID-612-LA-15-00001 AID-620-LA-15-00001 AID-650-LA-15-00001 AID-650-LA-15-00001 AID-650-LA-15-00001 AID-650-LA-15-00001 AID-650-LA-15-00001 AID-650-LA-15-00001 AID-650-LA-15-00001 AID-650-LA-15-00001	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,750 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 38,239 863,720	; 1,00 7: 5: 1,60
sportation	Direct	20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Haider USDOT-DTR113-G-UTC44-Haider USDOT-DTR113-G-UTC44-Haider USDOT-DTR113-G-UTC44-Jabar 2013-0066 5 2013-0066 77 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 29 17-158 FY16.675.001 155588 611-A-00-11-00001-00 AID-482-LA-14-00003 AID-612-LA-15-00001 AID-650-LA-15-00001 AID-650-LA-15-00001 AID-658-LA-15-00001 AID-658-LA-15-00001 AID-688-LA-15-00001 AID-688-LA-15-00001 AID-688-LA-15-00001 AID-688-LA-15-00001 AID-688-LA-15-00001 AID-688-LA-15-00001	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239 833,239 833,239 833,239 833,239 833,239	: : : : : : : : : : : : : : : : : : :
sportation D D D D D D D D D D D D D D D D D D D	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-TSDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-	US DEPT OF TRANSPORTATION MICHICAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHICAN STATE UNIV MICHICAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032	: 1,06 7: 5- 5- 1,66 5: 1:
sportation	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20,215 20,505 20,724 20.724 20.724 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Baider USDOT-DTRT13-G-UTC44-Baider USDOT-DTRT13-G-UTC44-Baider 2013-0066 5 2013-0066 27 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 29 17-158 FY16.675.001 155588 611-A-00-11-00001-00 AID-482-LA-15-00001 AID-620-LA-15-00001 AID-620-LA-15-00001 AID-688-A-16-00001 AID-688-A-16-00001 AID-688-A-16-00001 AID-688-A-16-00001 AID-688-A-16-000001 AID-688-A-16-000001 AID-688-A-16-000001 AID-688-A-16-000001 AID-689-A-16-0000005 AID-EDH-A-00-07-000005	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032 943,849	
sportation	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20,215 20.505 20.724 20.724 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001 98.001	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-TS-USDOT-TAIDER USDOT-TS-USDOT-TAID	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 22,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032 943,849 246,833 1,350,685	1,000 7: 5-5 1,600 5:9 2-2 6:6
sportation	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTR113-G-UTC44-Chatti USDOT-DTR113-G-UTC44-Dargazany USDOT-DTR113-G-UTC44-Baider USDOT-DTR113-G-UTC44-Baider USDOT-DTR113-G-UTC44-Baider USDOT-DTR113-G-UTC44-Baider 2013-0066 5 2013-0066 77 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 29 17-158 FY16.675.001 155588 611-A-00-11-00001-00 AID-482-LA-14-00003 AID-612-LA-15-00001 AID-65G-LA-15-00001 AID-68S-A-15-00001 AID-688-A-16-00001 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-DA-A-13-00001	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032 943,849 246,833 1,350,685 2,405,396	; 1,06 7; 54 1,66 1: 9,2 2,66 (1,15)
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asportation before the control of the c	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dairgazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider 2013-0066 5 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-358 2013-0066 29 17-158 FY16.675.001 155588 611-A-00-11-00001-00 AID-482-LA-13-00001 AID-650-LA-15-00001 AID-650-LA-15-00001 AID-688-A-16-00001 AID-688-A-16-00001 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-DAA-1-13-00001 AID-OAA-1-13-00001	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 23,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032 943,849 246,833 1,350,685 2,405,396 416,498 53,573	1,000 77: 5-5 1,60 55: 11: 9-2-2-2-11:
issportation sportation sportatio	Direct	20,701 20,701 20,701 20,701 20,701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Tai	US DEPT OF TRANSPORTATION MICHIGAN STATE POLICE IOWAS TATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032 943,849 246,833 1,350,685 2,405,396 416,498 53,573 23,933	1,000 77: 54: 1,66 55: 17: 99: 22: 66: 1,15: 1
In the content of the	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Taider USDOT-TSDOT-TAIDER USDOT-TSDOT-TSDOT-TAIDER USDOT-TSD	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032 943,849 246,833 1,350,685 2,405,396 416,498 53,573 23,933 783,092	1,000 7:1,000 7:55 1,600 5:50 1:1,11,11,11,11,11,11,11,11,11,11,11,11,
Isportation Isport	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Haider USDOT-DTRT13-G-UTC44-Haider USDOT-DTRT13-G-UTC44-Haider USDOT-DTRT13-G-UTC44-Haider USDOT-DTRT13-G-UTC44-Zaabar 2013-0066 5 2013-0066 77 2013-0066 77 2013-0066 78 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 29 17-158 FY16.675.001 155588 611-A-00-11-00001-00 AID-482-LA-14-00003 AID-612-LA-15-00001 AID-65G-LA-15-00001 AID-65G-LA-15-00001 AID-65G-LA-15-00001 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-DAA-113-00001 AID-OAA-113-00001 AID-OAA-113-00001 AID-OAA-1-13-00001	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032 943,849 246,833 1,350,685 2,405,396 416,498 53,573 23,933 783,092 540,730	5.5 1,04 7.5 5.4 1,66 5.8 1.7 9.9 2.2 6.6 1,11 1.1
sportation	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Taider	US DEPT OF TRANSPORTATION MICHIGAN STORT OF TRANSPORTATION MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,29 863,720 872,252 1,837,032 943,849 246,833 1,350,685 2,405,396 416,498 53,573 23,933 783,092 540,730 660,495	1.00 7:1 5:5 1,60 5:5 1:1 9:9 2:2 6:6 1:1 1:1 4:4 2:2 6:6
asportation before the control of th	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dairgazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider 2013-0066 5 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-358 2013-0066 29 17-158 FY16.675.001 155588 611-A-00-11-00001-00 AID-482-LA-14-00003 AID-612-LA-15-00001 AID-659-LA-15-00001 AID-688-A-16-00001 AID-688-A-16-00001 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-DAA-1-13-00001 AID-OAA-1-13-00001 AID-OAA-1-10-00005 AID-OAA-10-00005 AID-OAA-10-00005 AID-OAA-10-00005 AID-OAA-10-00005 AID-OAA-10-00005 AID-OAA-10-00005 AID-OAA-10-00005	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,3293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032 943,849 246,833 1,350,685 2,405,396 416,498 53,573 23,933 783,092 540,730 650,495 663,220	1,00 7.7 5.6 1,60 5:1 9-2 2.2 6:1,1;1 1:1 1:1 4:4 2:1 6:6
issportation sportation sportatio	Direct	20,701 20,701 20,701 20,701 20,701 20,701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Tai	US DEPT OF TRANSPORTATION MICHIGAN STATE POLICE IOWAS TATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032 943,849 246,833 1,350,685 2,405,396 416,498 53,573 22,933 783,092 540,730 650,495 666,220 543,982	1,100 1,000 7:54 1,66 5:5 1:39 2:26 6:6 1,115 4:4 2:25 6:6 6:6 6:6 6:5 5:5
isportation sportation	Direct	20.701 20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider 2013-0066 5 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-35B 2013-0066 29 17-158 FY16.675.001 155588 611-A-00-11-00001-00 AID-482-LA-13-00001 AID-682-LA-15-00001 AID-685-A-16-00001 AID-688-A-15-00001 AID-688-A-15-00001 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-DAA-1-13-00001 AID-OAA-1-13-00001 AID-OAA-1-14-00005 AID-OAA-1-14-00005 AID-OAA-1-15-00006 EDH-A-00-07-00005-00 EDH-A-00-07-00005-00 EDH-A-00-07-00005-00 EDH-A-00-07-00005-00 EDH-A-00-07-00005-00 EDH-A-00-07-00005-00 EDH-A-00-07-00005-00	US DEPT OF TRANSPORTATION MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT US AGENCY FOR INTL DEV	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032 943,849 246,833 1,350,685 2,405,396 416,498 53,573 23,933 783,092 540,730 650,495 636,220 543,982 558,403	1,00 7.7 5.6 1,60 5: 1.1 9.9 2.2 6: 6: 1.1,1; 1.1 1.2 2: 6: 6: 6: 6: 6: 6: 6: 6: 6: 6: 6: 6: 6:
Issportation Isspo	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Zaabar 2013-0066 5 2013-0066 77 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-358 2013-0066 29 17-158 FY16.675.001 155588 611-A-00-11-00001-00 AID-482-LA-13-00001 AID-620-LA-15-00001 AID-620-LA-15-00001 AID-688-A-16-00001 AID-688-A-16-00001 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-DAA-1-13-00001 AID-0AA-1-13-00001 AID-0AA-1-15-00006 EDH-A-0-0-7-00005-00 EDH-A-0-07-00005-00 EDH-A-0-0-7-00005-00 EDH-A-0-07-00005-00 EDH-A-0-07-00005-00 EDH-A-0-07-00005-00 EDH-A-0-07-00005-00	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT US AGENCY FOR INTL DEVE	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032 943,849 246,833 1,350,685 2,405,396 416,498 53,573 23,933 783,092 540,730 650,495 636,220 543,982 544,983 53,573 23,933 783,092 540,730 650,495 6636,220 543,982	1.00 77: 55-61,60 55: 11: 12: 14: 14: 14: 14: 14: 14: 14: 14: 14: 14
issportation sportation sportatio	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Darigazany USDOT-DTRT13-G-UTC44-Darigazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-T	US DEPT OF TRANSPORTATION MICHICAN SET OF TRANSPORTATION MICHICAN STATE CULICE IOWA STATE UNIV MICHICAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT US AGENCY FOR INTL DEVE	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,299 863,720 872,252 1,837,032 943,849 246,833 1,350,685 2,405,396 416,498 53,573 23,933 783,092 540,730 650,495 636,220 543,982 538,403 397,958	1.00 7:1.00 5:5 1.60 5:5 1:1.15 4:1.15 4:1.15 6:6 6:6 6:5 5:5
isportation isport	Direct	20.701 20.701 20.701 20.701 20.701 20 20 20 20 20 20 20 20 20 20 20 20 20	USDOT-DTRT13-G-UTC44-Chatti USDOT-DTRT13-G-UTC44-Dargazany USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Taider USDOT-DTRT13-G-UTC44-Zaabar 2013-0066 5 2013-0066 27 2013-0066 27 2013-0066 28 201401725-03 HR 10-82A MSP-MC-17-02 436-17-358 2013-0066 29 17-158 FY16.675.001 155588 611-A-00-11-00001-00 AID-82-LA-15-00001 AID-620-LA-15-00001 AID-620-LA-15-00001 AID-688-A-16-00001 AID-688-A-16-00001 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-EDH-A-00-07-00005 AID-DAA-1-13-00001 AID-0AA-1-13-00001 AID-0AA-1-15-00006 EDH-A-0-0-7-00005-00 EDH-A-0-0-7-00005-00 EDH-A-0-0-7-00005-00 EDH-A-0-0-7-00005-00 EDH-A-0-0-7-00005-00 EDH-A-0-07-00005-00 EDH-A-0-0-7-00005-00 EDH-A-0-0-7-00005-00	US DEPT OF TRANSPORTATION MICHIGAN DEPT OF TRANSPORTATION UNIVERSITY OF CALIFORNIA LOS ANGELES NATL ACADEMY OF SCIENCES MICHIGAN STATE POLICE IOWA STATE UNIV MICHIGAN DEPT OF TRANSPORTATION ARIZONA STATE UNIV UNIVERSITY OF COLORADO DENVER US AGENCY FOR INTL DEVELOPMENT US AGENCY FOR INTL DEVE	30,354 7,550 17,725 4,296 9,368 1,478,527 184,663 86,171 34,598 66,143 111,261 93,293 10,919 11,188 45,454 25,527 28,074 697,291 2,175,818 3,095 32,329 1,306,696 1,200,497 2,006,594 338,239 863,720 872,252 1,837,032 943,849 246,833 1,350,685 2,405,396 416,498 53,573 23,933 783,092 540,730 650,495 636,220 543,982 544,983 53,573 23,933 783,092 540,730 650,495 6636,220 543,982	1 5 1,06 71 54 1,60

USAID	Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
March Marc	Research and Development Cluster (Continued):						
Part	ISAID	Direct	98.001	USAID FDH-A-00-07-00005 Kramer	US AGENCY FOR INTI-DEVELOPMENT	\$ 277.421	\$ 32,818
Company			98.001	USAID Zambia Buy-in Jayne	US AGENCY FOR INTL DEVELOPMENT		-
Second S	JSAID		98.001	USAID-AID EDH-A-00-07-00005 Pittendrigh	US AGENCY FOR INTL DEVELOPMENT		11,042,236
Section Sect	JSAID		98	016258-143	UNIVERSITY OF CALIFORNIA DAVIS		11,042,236
March Marc		Pass-through			CGD at CONSOLUTION		-
Section Profession Section S							-
SEGO Property Sego Seg							-
March Marc							-
							28,403
SECONO Proposition Propo							-
Minimary							-
SECONOMINA SEC							-
MACHINE MACH							-
Month							-
March Personal Section Per							-
SERIES OF MAY 19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							222,823
March Marc							-
March Marc							54,330
Management Man							
Website Execution Control Co	USAID TO A	Pass-through Total					305,556
Part	ISTOI UIACU					23,839,748	11,347,792
Wilson	Vietnam Education Foundation		85.600	CTFS ForestGEO 2015	SMITHSONIAN INSTITUTION		
State Stat	Sisteman Education Established	Direct Total					
Secretary Secr	vietnam Education Foundation Total					5,000	
Education Description Section	TOTAL RESEARCH AND DEVELOPMENT CLUSTER					361,990,188	41,914,754
Education	Student Financial Assistance Programs Cluster						
Secretary Profess Secretary Secret		Direct	84.007	USDE P007A102046 SEOG 16-17	US DEPT OF EDUCATION	1,173,088	-
March Marc							-
Secretion Direct Secretion Direct Secretion Direct Secretion S							-
Second Oracle Second O							-
March Marc							-
March Marc							-
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March Devel	Education						-
변성으로 10 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이							-
### ### ### ### ### ### ### ### ### ##							-
Education Direct B4.268 PIDELAND. PROCESSOM US DEPT OF EDUCATION 343.58.00,008							-
Selection Piete 84.379 SOSP \$797\$\$11,0333 TEACH 18-17 SOSP \$707\$\$11,0333 TEACH 18-17 SOSP \$707\$\$10,0333 TEACH 18-17 SO							-
Metable and Luman Services Section Total							-
Health and Human Services							-
Meth and Numan Services Direct 93.942 VARIOUS - MEATH PROFESSIONAS TUDENT LOANS HEATH AND HUMAN SERVICES 10.250,672 10.849,002 10.84	Education Total					451,662,838	
Meth and Numan Services Direct Di	Health and Human Services	Direct	93.264	VARIOUS - NURSING FACULTY PROG STUDENT LOANS	HEALTH AND HUMAN SERVICES	324,271	
Part Transportation							
Real hand Alemana Services Total	Health and Human Services		93.364	VARIOUS - NURSING PROFESSION STUDENT LOANS	HEALTH AND HUMAN SERVICES		
Commit Development Cluster:	Health and Human Services Total	Direct rotal					
Recommerce	TOTAL STUDENT FINANCIAL ASSISTANCE PROGRAMS	CLUSTER				462.511.870	
Commerce	Sconomic Development Cluster					. , , , , , , ,	
Commerce Direct Total 1.307 06.06.06.011 US ECONOMIC DEVELOPMENT ADMINISTRATION 27,646 213,696 213,	•	Direct	11.300	06-01-05931	US ECONOMIC DEVELOPMENT ADMINISTRATION	98,950	-
Commerce Total							-
Commerce Total	Commerce		11.307	06-06-06011	US ECONOMIC DEVELOPMENT ADMINISTRATION		
Highway Planning and Construction Cluster: Transportation Pass-through 20.205 16005 16005 37,088	Commerce Total	Direct rotal					
Highway Planning and Construction Cluster: Transportation Pass-through 20.205 116005 MICHIGAN FITNESS FOUNDATION 37,088 73,088	TOTAL FCONOMIC DEVELOPMENT CLUSTER					·	
Pass through Pass through 702.05 115005						223,030	
Pass-through Total 37,088 38,098 38,098 38,098 38,098 38,098 38,098 38,098 38,098 38,098 38,098 38,098 38,098 38,098 38,098 38,098 38,098 38,098 39,098		Pass-through	20.205	116005	MICHIGAN FITNESS FOUNDATION	37.088	_
Total Highway Planning and Construction Cluster 137,068 Highway Safety Cluster: 103,168 Pass-through 20,600 OP-16-03 MI OFFICE OF HIGHWAY SAFETY PL 103,188 Transportation Pass-through 20,616 OP-17-02 MICHIGAN OFFICE OF HIGHWAY SAFETY PLANNING 31,596 134,784 Transportation Total 134,784 Trans	•					37,088	
Highway Safety Cluster: Transportation						37,088	
Transportation Pass-through 20.600 OP-16-03 MI OFFICE OF HIGHWAY SAFETY PL 103,188 Transportation Pass-through 20.616 OP-17-02 MICHIGAN OFFICE OF HIGHWAY SAFETY PLANNING 31,596	TOTAL HIGHWAY PLANNING AND CONSTRUCTION CLU	JSTER				37,088	-
Pass-through Pass	Highway Safety Cluster:						
Transportation Total 134,784 1							38,118
Transportation Total	Fransportation		20.616	OP-17-02	MICHIGAN OFFICE OF HIGHWAY SAFETY PLANNING		38,118
Medicald Cluster:	Fransportation Total	rass-timougn rotal					38,118
Medicald Cluster: Health and Human Services Pass-through 93.778 20160884-00 Attachment G MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 40,189 Health and Human Services Pass-through 93.778 20160893-00 Attachment N MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 25,182 Health and Human Services Pass-through 93.778 20160894-00 Attachment O MICHIGAN DEPT OF COMMUNITY HEALTH 114,314 Health and Human Services Pass-through 93.778 20160903-00 Attachment P MICHIGAN DEPT OF COMMUNITY HEALTH 1,285 Health and Human Services Pass-through 93.778 20160905-00 Attachment AA MICHIGAN DEPT OF COMMUNITY HEALTH 33,953 Health and Human Services Pass-through 93.778 20160905-00 Attachment AA MICHIGAN DEPT OF COMMUNITY HEALTH 33,953 Health and Human Services Pass-through 93.778 20160905-00 Attachment AB MICHIGAN DEPT OF COMMUNITY HEALTH 96,737 Health and Human Services Pass-through 93.778 20160905-00 Attachment AB MICHIGAN DEPT OF PEALTH & HUMAN SERVICES 19,514 Health and Human Services Pass-through 93.778 20						-	38,118
Health and Human Services Pass-through 93.778 20160884-00 Attachment G MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 40,189 Health and Human Services Pass-through 93.778 20160893-00 Attachment N MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 37,119 Health and Human Services Pass-through 93.778 20160893-00 Attachment P MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 37,119 Health and Human Services Pass-through 93.778 20160895-00 Attachment P MICHIGAN DEPT OF COMMUNITY HEALTH 11,4314 Health and Human Services Pass-through 93.778 20160903-00 Attachment Y MICHIGAN DEPT OF COMMUNITY HEALTH 1,285 Health and Human Services Pass-through 93.778 20160905-00 Attachment AA MICHIGAN DEPT OF COMMUNITY HEALTH 33,953 Health and Human Services Pass-through 93.778 20160905-00 Attachment AB MICHIGAN DEPT OF COMMUNITY HEALTH 35,953 Health and Human Services Pass-through 93.778 20160905-00 Attachment AB MICHIGAN DEPT OF COMMUNITY HEALTH 96,737 Health and Human Services Pass-through 93.778 20170673-00-AE MICHIGAN DEPT OF COMMUNITY HEALTH 97,737 Health and Human Services Pass-through 93.778 20170673-00-AE MICHIGAN DEPT OF COMMUNITY HEALTH 37,546 Health and Human Services Pass-through 93.778 E20170235-00 MICHIGAN DEPT OF DEALTH & HUMAN SERVICES 29,241 Health and Human Services Pass-through 93.778 E20170235-00 MICHIGAN DEPT OF DEALTH & HUMAN SERVICES 75,598 Health and Human Services Pass-through 93.778 E20170255-00 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 578,218 Health and Human Services Pass-through 93.778 E20170255-00 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 578,218 Health and Human Services Pass-through 93.778 E20170659-00-2 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 578,218 Health and Human Services Pass-through 93.778 E20170659-00-2 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 578,218 Health and Human Services Pass-through 93.778 E20170659-00-2 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 578,218 Health and Human Services Pass-through 93.778 E20170659-00-2 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 578,218 Health and Human Services Pass-through 93.778 E20170						134,704	30,110
Health and Human Services		Pass-through	93.778	20160884-00 Attachment G	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	40.189	-
Health and Human Services Pass-through 93.778 20160895-00 Attachment P MICHIGAN DEPT OF COMMUNITY HEALTH 114,314 Health and Human Services Pass-through 93.778 20160905-00 Attachment Y MICHIGAN DEPT OF COMMUNITY HEALTH 3,953 Health and Human Services Pass-through 93.778 20160905-00 Attachment AB MICHIGAN DEPT OF COMMUNITY HEALTH 33,953 Health and Human Services Pass-through 93.778 20160905-00 Attachment AB MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 19,514 Health and Human Services Pass-through 93.778 20160905-00 Attachment AB MICHIGAN DEPT OF COMMUNITY HEALTH 96.737 Health and Human Services Pass-through 93.778 2016075-300-AE MICHIGAN DEPT OF COMMUNITY HEALTH 96.737 Health and Human Services Pass-through 93.778 E20170239-00-AE MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 29,241 Health and Human Services Pass-through 93.778 E20170234-00 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 75,598 Health and Human Services Pass-through 93.778 E20170255-00-T MICHIGAN DEPT OF HEALTH & HUMAN SERVI			93.778	20160893-00 Attachment N	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	25,182	-
Health and Human Services Pass-through 93.778 20160903-00 Attachment Y MICHIGAN DEPT OF COMMUNITY HEALTH 1,285 Health and Human Services Pass-through 93.778 20160905-00 Attachment AA MICHIGAN DEPT OF COMMUNITY HEALTH 33,953 Health and Human Services Pass-through 93.778 20160905-00 Attachment AB MICHIGAN DEPT OF COMMUNITY HEALTH 96,737 Health and Human Services Pass-through 93.778 2016175-1001 AK MICHIGAN DEPT OF COMMUNITY HEALTH 96,737 Health and Human Services Pass-through 93.778 20170239-00-H MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 29,241 Health and Human Services Pass-through 93.778 E20170239-00-H MICHIGAN DEPT OF COMMUNITY HEALTH 37,546 Health and Human Services Pass-through 93.778 E20170254-00 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 75,598 Health and Human Services Pass-through 93.778 E20170255-00-T MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 414,327 Health and Human Services Pass-through 93.778 E20170669-00-2 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 5							-
Health and Human Services Pass-through 93.778 2016090-00 Attachment AA MICHIGAN DEPT OF COMMUNITY HEALTH 33,953 Health and Human Services Pass-through 93.778 2016090-00 Attachment AB MICHIGAN DEPT OF COMMUNITY HEALTH 96,737 Health and Human Services Pass-through 93.778 20161751-001 AK MICHIGAN DEPT OF COMMUNITY HEALTH 96,737 Health and Human Services Pass-through 93.778 20170673-00-AE MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 29,241 Health and Human Services Pass-through 93.778 E20170239-00-H MICHIGAN DEPT OF COMMUNITY HEALTH 37,546 Health and Human Services Pass-through 93.778 E20170239-00-H MICHIGAN DEPT OF COMMUNITY HEALTH 37,546 Health and Human Services Pass-through 93.778 E20170254-00 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 75,598 Health and Human Services Pass-through 93.778 E20170255-00-T MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 578,218 Health and Human Services Pass-through 93.778 E20170669-00-z MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 12,333							-
Health and Human Services Pass-through 93.778 2016090-60 Attachment AB MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 19,514 Health and Human Services Pass-through 93.778 20161751-001 AK MICHIGAN DEPT OF COMMUNITY HEALTH 96,737 Health and Human Services Pass-through 93.778 201070239-00-H MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 29,241 Health and Human Services Pass-through 93.778 E20170239-00-H MICHIGAN DEPT OF OF COMMUNITY HEALTH 37,548 Health and Human Services Pass-through 93.778 E20170254-00 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 75,598 Health and Human Services Pass-through 93.778 E20170255-00-T MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 414,327 Health and Human Services Pass-through 93.778 E20170659-00-2 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 578,218 Health and Human Services Pass-through 93.778 E20170659-00-2 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 1,515,556 Health and Human Services Pass-through 93.778 E20170671-00-AC MICHIGAN DEPT OF HEALTH & HUMAN SERVICES							-
Health and Human Services Pass-through 93.778 20170673-00-AE MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 29,241 Health and Human Services Pass-through 93.778 E20170239-00-H MICHIGAN DEPT OF COMMUNITY HEALTH 37,546 Health and Human Services Pass-through 93.778 E20170254-00 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 75,598 Health and Human Services Pass-through 93.778 E20170255-00-T MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 414,327 Health and Human Services Pass-through 93.778 E20170669-00-z MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 578,218 Health and Human Services Pass-through 93.778 E20170669-00-z MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 12,33	Health and Human Services	Pass-through	93.778	20160906-00 Attachment AB	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	19,514	-
Health and Human Services Pass-through 93.778 E20170239-00-H MICHIGAN DEPT OF COMMUNITY HEALTH 37,546 Health and Human Services Pass-through 93.778 E20170254-00 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 75,598 Health and Human Services Pass-through 93.778 E20170255-00-T MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 414,327 Health and Human Services Pass-through 93.778 E20170669-00-z MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 578,218 Health and Human Services Pass-through 93.778 E20170671-00-AC MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 1,515,556 Health and Human Services Total 1,515,556 1,515,556 1,515,556							-
Health and Human Services Pass-through 93.778 E20170254-00 MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 75,598 Health and Human Services Pass-through 93.778 E20170255-00-T MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 41,4,327 Health and Human Services Pass-through 93.778 E20170669-00-z MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 578,218 Health and Human Services Pass-through 93.778 E20170671-00-AC MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 12,333 Pass-through Pass-through Pass-through Pass-through Pass-through 93.778 E20170671-00-AC MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 1,515,556 Pass-through							-
Health and Human Services Pass-through 93.778 E20170669-00-z MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 578,218 Health and Human Services Pass-through 93.778 E20170671-00-AC MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 12,333 Pass-through Total 1,515,556 Health and Human Services Total	Health and Human Services	Pass-through	93.778	E20170254-00	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	75,598	-
Health and Human Services Pass-through 93.778 E20170671-00-AC MICHIGAN DEPT OF HEALTH & HUMAN SERVICES 12,333 Pass-through Total 1,515,556 Health and Human Services Total							-
Pass-through Total 1,515,556 Health and Human Services Total							-
Health and Human Services Total 1,515,556	CONTROL HUMBIT SELVICES		55.770	220173071-00-NC	SECTIONS DELLOT HEALTH & HOIVIAN SERVICES		
TOTAL MEDICAID CLUSTER 1,515,556	Health and Human Services Total						
1,515,550	TOTAL MEDICAID CLUSTER					1 515 556	_
	OTTE MEDICALD CEOSTER					1,313,330	•

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Research and Development Cluster (Continued):						
SNAP Cluster:						
Agriculture Agriculture	Pass-through Pass-through	10.561 10.561	ADMIN-15-99010 ADMIN-16-99010	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	\$ 584,491 3,348,633	\$ -
Agriculture	Pass-through	10.561	CrimFit APP149222	CRIM FITNESS FOUNDATION	2,241	-
Agriculture	Pass-through	10.561	MDHS-Admin16-99010	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	4,086,872	
Agriculture Total	Pass-through Total				8,022,237 8,022,237	-
TOTAL SNAP CLUSTER					8,022,237	-
TRIO Cluster:						
Education	Direct	84.042	P042A150804	US DEPT OF EDUCATION	561,453	-
Education Education	Direct Direct	84.044 84.044	P044A110782 - 15 P044A160125	US DEPT OF EDUCATION US DEPT OF EDUCATION	33,562 214,996	-
Education	Direct	84.047	P047A120896 - 16	US DEPT OF EDUCATION	387,979	
Education Total	Direct Total				1,197,990 1,197,990	-
TOTAL TRIO CLUSTER					1,197,990	-
447 Cluster:						
Health and Human Services	Pass-through Pass-through Total	93.596	BCHS/MSU FY17	MICHIGAN DEPT OF LICENSING & REGULATORY AFFAIRS	21,407	9,556 9,556
Health and Human Services Total					21,407	9,556
TOTAL 447 CLUSTER					21,407	9,556
Other Federal Awards:						
Agriculture	Direct	10	14-PA-11090400-024	USDA - FOREST SERVICE	42,991	-
Agriculture Agriculture	Direct Direct	10 10	14-PA-11090400-024 16-CS-11090400-038	USDA - FOREST SERVICE USDA - FOREST SERVICE	(1,563) 3,888	-
Agriculture	Direct	10	17-CS-11090400-027	USDA - FOREST SERVICE	4,279	-
Agriculture	Direct	10.001	12-25A-5641	USDA - AGRI MARKETING SERV US USDA - RURAL BUS COOP SER	19,939	-
Agriculture Agriculture	Direct Direct	10.001 10.001	AG-31ME-C-15-0025 USDA 45-5484-8-0019 PHONE	USDA - RURAL BUS COOP SER USDA - FOREST SERVICE	6,424 3,993	-
Agriculture	Direct	10.001	USDA GENERAL FISCAL AGENT	USDA - FOREST SERVICE	2,541	-
Agriculture	Direct	10.025	16-9419-0332-CA	USDA - ANIMAL AND PLT HTL INSP	138,188	-
Agriculture Agriculture	Direct Direct	10.069 10.210	FA-MI-6-046 2012-38420-30199	USDA - FARM SER AGENCY USDA - NATIONAL INSTITUTE OF F	13,454 28,119	-
Agriculture	Direct	10.210	2014-38420-21803	USDA - NATIONAL INSTITUTE OF F	62,909	-
Agriculture	Direct	10.210	2015-38420-23697	USDA - NATIONAL INSTITUTE OF F	50,538	
Agriculture Agriculture	Direct Direct	10.217 10.226	2014-70003-22363 2016-38414-25820	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	78,960 32,073	42,371 10,142
Agriculture	Direct	10.310	2011-68001-23407	USDA - NATIONAL INSTITUTE OF F	999,855	667,071
Agriculture	Direct	10.310	2015-67011-23012	USDA - NATIONAL INSTITUTE OF F	(128)	-
Agriculture	Direct	10.310	2016-67011-24701	USDA - NATIONAL INSTITUTE OF F	(4,005)	-
Agriculture Agriculture	Direct Direct	10.329 10.500	2014-70006-22498 2013-41520-20939	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	283,356 117,338	-
Agriculture	Direct	10.500	2013-41580-20792	USDA - NATIONAL INSTITUTE OF F	72,775	-
Agriculture	Direct	10.500	2014-41590-22327	USDA - NATIONAL INSTITUTE OF F	178,823	89,168
Agriculture Agriculture	Direct Direct	10.500 10.500	2014-46100-22366 2015-41595-24254	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	26,368 771,313	702,159
Agriculture	Direct	10.500	2016-41520-25564	USDA - NATIONAL INSTITUTE OF F	56,402	702,133
Agriculture	Direct	10.500	EFNEP-EXT HN	USDA - NATIONAL INSTITUTE OF F	2,777,720	-
Agriculture Agriculture	Direct Direct	10.500 10.500	Life Insurance Contribution MSUE DIRECTOR - S-L SALARIES	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	374 1,058,304	-
Agriculture	Direct	10.500	RENEW RESOURCES PROJECT DIR	USDA - NATIONAL INSTITUTE OF F	65,495	
Agriculture	Direct	10.500	S-L CFS WORKGROUP OPER EXT GM	USDA - NATIONAL INSTITUTE OF F	6,887	-
Agriculture	Direct Direct	10.500 10.500	S-L EDUCATOR OPERATING EXT GM S-L GGP WORKGROUP OPER EXT GM	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	18,989 7,499	-
Agriculture Agriculture	Direct	10.500	S-L NAT RES WORKGROUP EXT GM	USDA - NATIONAL INSTITUTE OF F	4,828	-
Agriculture	Direct	10.500	S-L OPER EXT AG & AGRIBUSINESS	USDA - NATIONAL INSTITUTE OF F	16,286	-
Agriculture	Direct	10.500	S-L OPER EXT CARRS	USDA - NATIONAL INSTITUTE OF F	15,438	-
Agriculture Agriculture	Direct Direct	10.500 10.500	S-L OPER EXT CHILDREN & YOUTH S-L OPER EXT GREENING MICHIGAN	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	124,647 28,178	-
Agriculture	Direct	10.500	S-L OPER EXT GREENING MICHIGAN S-L OPER EXT HLTH & NUTRITION	USDA - NATIONAL INSTITUTE OF F	45,053	-
Agriculture	Direct	10.500	S-L PRJ LOVERIDGE NCRCRD DIR	USDA - NATIONAL INSTITUTE OF F	32,128	-
Agriculture	Direct	10.500	S-L PRI SKIDMORE NCRCRD DIR	USDA - NATIONAL INSTITUTE OF F	6,081	-
Agriculture Agriculture	Direct Direct	10.500 10.500	S-L SAL EXT AG & AGRIBUSINESS S-L SAL EXT CARRS	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	1,816,453 77,500	-
Agriculture	Direct	10.500	S-L SAL EXT CHILDREN & YOUTH	USDA - NATIONAL INSTITUTE OF F	1,347,788	-
Agriculture	Direct	10.500 10.500	S-L SAL EXT GREENING MICHIGAN S-L SAL EXT HEALTH & NUTRITION	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	1,650,034	-
Agriculture Agriculture	Direct Direct	10.500	S-L SAL EXT HEALTH & NUTRITION S-L SCP WORKGROUP OPER EXT GM	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	633,741 19,076	-
Agriculture	Direct	10.500	S-L Summer Intern Program EXT AA	USDA - NATIONAL INSTITUTE OF F	103,486	-
Agriculture	Direct	10.500	SMITH LEVER-FRINGES	USDA - NATIONAL INSTITUTE OF F	2,260,167	-
Agriculture Agriculture	Direct Direct	10.500 10.500	SMITH-LEVER OPERATING-DIR USDA NIFA 2014-48778-22647 Skidmore	USDA - NATIONAL INSTITUTE OF F USDA - NATIONAL INSTITUTE OF F	169,335 102,800	-
Agriculture	Direct	10.614	SE-CR-16-002	FOREIGN AGRICULTURAL SERVICE	42,121	-
Agriculture	Direct	10.614	SE-CR-16-006	FOREIGN AGRICULTURAL SERVICE	33,526	-
Agriculture	Direct	10.614	SE-CR-17-004	FOREIGN AGRICULTURAL SERVICE	7	-
Agriculture Agriculture	Direct Direct	10.771 10.771	26-033-030879893 386005984	US DEPT OF AGRICULTURE US DEPT OF AGRICULTURE	129,171 58,404	-
Agriculture	Direct	10.777	BF-CR-14-019	FOREIGN AGRICULTURAL SERVICE	4,362	-
Agriculture	Direct	10.777	BF-CR-14-020	FOREIGN AGRICULTURAL SERVICE	2,788	-
Agriculture	Direct Direct	10.777 10.777	BF-CR-16-014 BF-CR-16-020	FOREIGN AGRICULTURAL SERVICE FOREIGN AGRICULTURAL SERVICE	29,523 30,186	-
Agriculture Agriculture	Direct	10.777	BF-CR-16-020 BF-CR-16-024	FOREIGN AGRICULTURAL SERVICE FOREIGN AGRICULTURAL SERVICE	27,561	-
Agriculture	Direct	10.777	BF-CR-16-050	FOREIGN AGRICULTURAL SERVICE	33,885	-
Agriculture	Direct	10.868	26-033-030879893	USDA - RURAL BUS COOP SER	29,751	-
Agriculture Agriculture	Direct Direct	10.868 10.903	26-033-030879893 68-7482-15-540	USDA - RURAL BUS COOP SER USDA-NATURAL RESOURCES CONSERVATION SERVICE	15,200 2.816	-
Agriculture	Direct	10.903	68-7482-16-524	USDA-NATURAL RESOURCES CONSERVATION SERVICE	3,696	-
Agriculture	Direct	10.924	68-5D21-15-22	USDA-NATURAL RESOURCES CONSERVATION SERVICE	3,392	-
Agriculture	Direct	10.960	FAS 2015 - 2016	FOREIGN AGRICULTURAL SERVICE	97,297	-
Agriculture Agriculture	Direct Direct	10.960 10.960	TA-CR-15-039 TA-CR-16-043	FOREIGN AGRICULTURAL SERVICE FOREIGN AGRICULTURAL SERVICE	6,587 79,529	-
Agriculture	Direct	10.962	CO-CR-16-017	FOREIGN AGRICULTURAL SERVICE FOREIGN AGRICULTURAL SERVICE	24,860	-
Agriculture	Direct	10.962	CO-CR-16-027	FOREIGN AGRICULTURAL SERVICE	53,317	-
Agriculture Agriculture	Direct	10.962	CO-CR-16-030	FOREIGN AGRICULTURAL SERVICE	45,693	-
	Direct	10.962	CO-CR-16-034	FOREIGN AGRICULTURAL SERVICE	29,495	-

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Other Federal Awards (Continued):						
Agriculture	Direct	10.962	CO-CR-16-036	FOREIGN AGRICULTURAL SERVICE	\$ 20,895	\$ -
Agriculture	Direct	10.962	CO-CR-16-043	FOREIGN AGRICULTURAL SERVICE	58,466	-
Agriculture	Direct Direct Total	10.962	CO-CR-17-013	FOREIGN AGRICULTURAL SERVICE	61,674 16,301,319	1,510,911
Agriculture	Pass-through	10.001	018000.340753.13	MISSISSIPPI STATE UNIV	6,483	-
Agriculture Agriculture	Pass-through Pass-through	10.170 10.170	791N6600147 791N6600552	MI DEPT AG & RURAL DEV. MICHIGAN DEPT OF AGRICULTURE & RURAL DEVELOPMENT	53,506 18,483	16,200
Agriculture	Pass-through	10.170	MDARD-791N7700164-Weinfeld	MICHIGAN DEPT OF AGRICULTURE & RURAL DEVELOPMENT	45,786	28,058
Agriculture Agriculture	Pass-through Pass-through	10.200 10.200	416-41-15A 416-41-15R	IOWA STATE UNIV IOWA STATE UNIV	17,267 27,355	-
Agriculture	Pass-through	10.200	8000064756-AG	PURDUE UNIV	88,125	-
Agriculture	Pass-through	10.216	36 22091 396 76190	TUSKEGEE UNIV	11,764	-
Agriculture Agriculture	Pass-through Pass-through	10.216 10.310	36 22091 396 76190 3001825205	TUSKEGEE UNIV UNIVERSITY OF MICHIGAN	646 91,041	-
Agriculture	Pass-through	10.310	S11204	KANSAS STATE UNIV	125,978	-
Agriculture	Pass-through	10.329	2014-07306-13	UNIVERSITY OF ILLINOIS	25,392	-
Agriculture Agriculture	Pass-through Pass-through	10.329 10.329	2014-07306-16 Univ of Illinois 2014-07306-01 Jess	UNIVERSITY OF ILLINOIS UNIVERSITY OF ILLINOIS	12,892 158,373	-
Agriculture	Pass-through	10.350	018000.340753.26	MISSISSIPPI STATE UNIV	9,457	-
Agriculture	Pass-through Pass-through	10.500 10.500	5367-MSU-USDA-4341 S16047	PENNSYLVANIA STATE UNIV KANSAS STATE UNIV	1,198 6,153	-
Agriculture Agriculture	Pass-through	10.500	S16047	KANSAS STATE UNIV	5,562	-
Agriculture	Pass-through	10.557	20162261-001 AN	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	9,818	-
Agriculture Agriculture	Pass-through Pass-through	10.557 10.557	20164109-00 Contract 20160880-00 Attachment C	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	9,696 59,610	-
Agriculture	Pass-through	10.557	E20170237-00-E	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	23,872	-
Agriculture	Pass-through	10.572	20160902-00 Attachment X	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	15,918	-
Agriculture Agriculture	Pass-through Pass-through	10.572 10.574	E20170668-00-Y 313B7700003	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES MICHIGAN DEPT OF EDUCATION	5,317 10,137	-
Agriculture	Pass-through	10.574	313P5500018	STATE OF MICHIGAN	94,766	-
Agriculture	Pass-through	10.574	313P6600017	STATE OF MICHIGAN	68,727	-
Agriculture Agriculture	Pass-through Pass-through	10.680 10.777	Purdue 8000064146-AG McCullough 016258-141	PURDUE UNIV CIMMYT INC	11,532 15,151	-
ng.ica.cuic	Pass-through Total	20.777	010250-141	CHYMYTTING	1,030,005	44,258
Agriculture Total					17,331,324	1,555,169
Commerce	Direct	11.417	NA14OAR4170285	NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION	15,697	-
Commerce Commerce	Direct Direct	11.620 11.900	70NANB15H339 16111007-0000-000	NATIONAL INST OF STANDARDS & TECHNOLOGY COMMERCE US DEPT OF	43,210 41,016	-
commerce	Direct Total	11.500	10111007 0000 000	COMMERCE 03 DEL 1 OF	99,923	-
Commerce	Pass-through	11.407	102699	MINNESOTA DEPT OF NATURAL RESO	19,345	-
Commerce Commerce	Pass-through Pass-through	11.417 11.417	3002999560 3003003179	UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN	79,504 623,975	-
Commerce	Pass-through	11.417	3003003179	UNIVERSITY OF MICHIGAN	3,000	-
Commerce	Pass-through	11.417	3003003179	UNIVERSITY OF MICHIGAN	2,982	-
Commerce Commerce	Pass-through Pass-through	11.417 11.417	3003003181 3003675941	UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN	37,977 84,515	-
Commerce	Pass-through	11.417	3004235158	UNIVERSITY OF MICHIGAN	5,406	-
Commerce	Pass-through	11.417	D004419455	UNIVERSITY OF MINNESOTA	2,125	-
Commerce Commerce	Pass-through Pass-through	11.417 11.417	NA14OAR4170070 UW/NOAA 695K671 Triezenberg	UNIVERSITY OF MICHIGAN UNIVERSITY OF WISCONSIN MADISON	10,335 5,000	-
Commerce	Pass-through	11.463	GVSU-226260-01	GRAND VALLEY STATE UNIV	14,987	-
Commerce Total	Pass-through Total				889,151 989,074	-
Defense	Direct	12	152950	US ARMY CORPS OF ENGINEERS	35,848	
Defense	Direct	12	153048	US ARMY CORPS OF ENGINEERS	29,909	-
Defense	Direct	12.431	W911NF-16-1-0351	ARMY RESEARCH OFFICE U S	7,336	-
Defense	Direct Direct Total	12.431	W911NF-16-1-0394	ARMY RESEARCH OFFICE U S	26,785 99,878	
Defense	Pass-through	12	3287-DPA-2S	LUNA INNOVATIONS	34,550	-
Defense	Pass-through	12.116	Brainscope/Navy APP 148409 Covassin	BRAINSCOPE CO INC	262,847	-
Defense Defense	Pass-through Pass-through	12.550 12.550	0054-MSU-22-PI-280-PO2 0054-MSU-22-SSA-280-PO1	INST OF INTL EDUCATION INST OF INTL EDUCATION	334,898 22,341	-
Defense	Pass-through	12.550	2340-MSU-7-PI-093-PO1	INST OF INTL EDUCATION	9,140	
Defense Total	Pass-through Total				663,776 763,654	-
	Direct	84.015	P015A140097 - 16	US DEPT OF EDUCATION		
Education Education	Direct Direct	84.015	P015A140097 - 16 P015A140098 - 16	US DEPT OF EDUCATION	206,125 281,900	-
Education	Direct	84.015	P015B140097 - 17	US DEPT OF EDUCATION	281,674	-
Education	Direct	84.015	P015B140099 - 16	US DEPT OF EDUCATION	295,063	-
Education Education	Direct Direct	84.015 84.022	P015B140099 - 16 P022A140053	US DEPT OF EDUCATION US DEPT OF EDUCATION	2,250 500	-
Education	Direct	84.022	P022A150034	US DEPT OF EDUCATION	25,709	-
Education	Direct	84.022	P022A150034	US DEPT OF EDUCATION	15,261	-
Education Education	Direct Direct	84.022 84.022	P022A160061 USDE-P022A160061-Bresnahan/Bradshaw	US DEPT OF EDUCATION US DEPT OF EDUCATION	2,439 14,171	-
Education	Direct	84.022	USDE-P022A160061-Bresnahan/Glovsky	US DEPT OF EDUCATION	14,988	-
Education	Direct	84.022	USDE-P022A160061-Bresnahan/McDaniel	US DEPT OF EDUCATION	29,075	-
Education Education	Direct Direct	84.032 84.129	FFELP Loans Receivable H129B140012	US DEPT OF EDUCATION US DEPT OF EDUCATION	1,089,771 200,443	-
Education	Direct	84.141	S141A120010-15	US DEPT OF EDUCATION	505,238	-
Education Education	Direct Direct	84.149 84.200	S149A150003 - 16 P200A140215	US DEPT OF EDUCATION US DEPT OF EDUCATION	444,313 208,622	-
Education	Direct	84.220	P220A140001	US DEPT OF EDUCATION	313,409	
Education	Direct	84.229	P229A140006	US DEPT OF EDUCATION	190,384	-
Education	Direct	84.305	R305B090011-13	US DEPT OF EDUCATION	138,658	-
Education	Direct Direct Total	84.334	GEAR UP	US DEPT OF EDUCATION	86,024 4,346,017	-
Education	Pass-through	84.010	App 151026	GOGEBIC ONTONAGON INTERMEDIATE SCHOOL DISTRICT	211,095	-
Education	Pass-through	84.010	Coaching 101	GOGEBIC ONTONAGON INTERMEDIATE SCHOOL DISTRICT	196,751	-
Education Education	Pass-through Pass-through	84.011 84.011	16185-1516 171850-1617	MICHIGAN DEPT OF EDUCATION MICHIGAN DEPT OF EDUCATION	99,324 67,030	-
Education	Pass-through	84.048	163280-16183	MICHIGAN DEPT OF EDUCATION	3,202	-
Education	Pass-through	84.048	163430-16133	MICHIGAN DEPT OF EDUCATION	(5,941)	-
Education Education	Pass-through Pass-through	84.048 84.305	173280-17183 SP0021157-PROJ0006411	MICHIGAN DEPT OF EDUCATION NORTHWESTERN UNIV	64,880 28,522	-
Education	Pass-through	84.334	15-00-06	MICHIGAN ECONOMIC DEVELOPMENT	124,029	-
Education	Pass-through	84.334	16-00-06	MICHIGAN ECONOMIC DEVELOPMENT	153,071	
Education	Pass-through	84.367	150290-007	MICHIGAN DEPT OF EDUCATION	52,182	

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments	
Other Federal Awards (Continued):							
Education Education	Pass-through Pass-through	84.367 84.374	94-MI04-SEED2017-CRWPAI MAPSA Teacher Mentoring	NATIONAL WRITING PROJECT CORP MAPSA	\$ 3,225 (72)	\$ -	
Education Total	Pass-through Total				997,298	-	
Energy	Direct Direct Total	81.049	DE-SC0015419	US DEPT OF ENERGY	10,000 10,000		
Energy	Pass-through Pass-through Total	81.041	MEO-16-022	MI DEPT OF LICENSING & REG AFF	48,009 48,009	-	
Energy Total					58,009	-	
Environmental Protection Agency	Direct	66.514	91778301	US ENVIRONMENTAL PROTECTION AGENCY	7,824	-	
Environmental Protection Agency	Direct Direct Total	66.716	83559101	US ENVIRONMENTAL PROTECTION AGENCY	16,388 24,212		
Environmental Protection Agency	Pass-through Pass-through	66.469	APP#143229	THE STEWARDSHIP NETWORK MICHIGAN DEPT OF AGRICULTURE & RURAL DEVELOPMENT	17,773	-	
Environmental Protection Agency Environmental Protection Agency	Pass-through	66.605 66.605	791N6600447 791N7700173	MICHIGAN DEPT OF AGRICULTURE & RURAL DEVELOPMENT	7,999 10,525		
Environmental Protection Agency Total	Pass-through Total				36,297 60,509		
Federal Communications Commission	Direct	32.001	WKAR FCC Repack Account	FEDERAL COMMUNICATIONS COMMISSION	750		
	Direct Total				750	-	
Federal Communications Commission Total					750		
Federal Council on the Arts and Humanities Federal Council on the Arts and Humanities	Direct Direct	45.024 45.024	15-5500-7066 16-5500-7136	NATIONAL ENDOWMENT FOR THE ARTS NATIONAL ENDOWMENT FOR THE ARTS	5,535 32,503	-	
Federal Council on the Arts and Humanities	Direct	45.024	NEA-17-5500-7010-MacdowellMarsha	NATIONAL ENDOWMENT FOR THE ARTS	14,865	-	
Federal Council on the Arts and Humanities Federal Council on the Arts and Humanities	Direct Direct	45.149 45.149	PW-51583-14 PW-51583-14	NATL ENDOWMENT FOR THE HUMANIT NATL ENDOWMENT FOR THE HUMANIT	103,279 12,391	-	
Federal Council on the Arts and Humanities	Direct	45.169	HT-50088-14	NATL ENDOWMENT FOR THE HUMANIT	107,298	-	
Federal Council on the Arts and Humanities Federal Council on the Arts and Humanities	Direct Direct	45.301 45.301	193247145 MA-30-14-0073-14	INST OF MUSEUM & LIBRARY SERVICES INST OF MUSEUM & LIBRARY SERVICES	37,452 3,911	-	
Federal Council on the Arts and Humanities	Direct	45.301	MA-30-15-0325-15	INST OF MUSEUM & LIBRARY SERVICES	29,834	-	
Federal Council on the Arts and Humanities	Direct Total Pass-through	45.025	16NL3416MT	MICHIGAN COUNCIL FOR ARTS & CULTURAL AFFAIRS	347,068 1,565		
Federal Council on the Arts and Humanities	Pass-through	45.025	16OP3199PS	MICHIGAN COUNCIL FOR ARTS & CULTURAL AFFAIRS	(74)	-	
Federal Council on the Arts and Humanities Federal Council on the Arts and Humanities	Pass-through Pass-through	45.025 45.025	16OP3209PS 16OP3210PS	MICHIGAN COUNCIL FOR ARTS & CULTURAL AFFAIRS MICHIGAN COUNCIL FOR ARTS & CULTURAL AFFAIRS	8,763 (1,178)	-	
Federal Council on the Arts and Humanities	Pass-through	45.025	16SF3363SV	MICHIGAN COUNCIL FOR ARTS & CULTURAL AFFAIRS	28,955	-	
Federal Council on the Arts and Humanities Federal Council on the Arts and Humanities	Pass-through Pass-through	45.025 45.025	17NL4060MT_MSU 17PS3670AC	MICHIGAN COUNCIL FOR ARTS & CULTURAL AFFAIRS MICHIGAN COUNCIL FOR ARTS & CULTURAL AFFAIRS	997 21,002	-	
Federal Council on the Arts and Humanities	Pass-through	45.025	17PS3670AC 17PS3672ED	MICHIGAN COUNCIL FOR ARTS & CULTURAL AFFAIRS	18,000	-	
Federal Council on the Arts and Humanities Federal Council on the Arts and Humanities	Pass-through	45.025 45.025	17SF3476SV	MICHIGAN STRATEGIC FUND	24,553	-	
Federal Council on the Arts and Humanities	Pass-through Pass-through	45.129	MCACA 17PS4002AC Wilson Q023-16P	MICHIGAN COUNCIL FOR ARTS & CULTURAL AFFAIRS MICHIGAN HUMANITIES COUNCIL	9,753 985	-	
Federal Council on the Arts and Humanities Federal Council on the Arts and Humanities	Pass-through Pass-through	45.169 45.169	15-119-100485-010 NEH #HK-50155-14	OLD DOMINION UNIV THE NEW SCHOOL	19,579 9,577	-	
Federal Council on the Arts and Humanities	Pass-through	45.169	NEH #HK-50155-14	THE NEW SCHOOL	(966)		
Federal Council on the Arts and Humanities Total	Pass-through Total				141,511 488,579		
Health and Human Services	Direct	93.103	3U18FD004632-04S1	FOOD & DRUG ADMINISTRATION	4,703	-	
Health and Human Services Health and Human Services	Direct Direct	93.103 93.124	4U18FD004632-04 1A22HP29892-01-00	FOOD & DRUG ADMINISTRATION HEALTH RESOURCES & SERVICES ADMINISTRATION	16,428 19,827	-	
Health and Human Services	Direct	93.157	5D34HP24457-05-00	HEALTH RESOURCES & SERVICES ADMINISTRATION	679,914	-	
Health and Human Services Health and Human Services	Direct Direct	93.247 93.884	5 D09HP26953-03-00 5 D54HP23284-05-00	HEALTH RESOURCES & SERVICES ADMINISTRATION HEALTH RESOURCES & SERVICES ADMINISTRATION	224,375 61,686	-	
Health and Human Services	Direct	93.884	5D58HP23259-05-00	HEALTH RESOURCES & SERVICES ADMINISTRATION	101,980		
Health and Human Services	Direct Total Pass-through	93	391N6602397; 391N7700706	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	1,108,913 27,078	-	
Health and Human Services	Pass-through	93	AOEC Exposure Code	ASSOC OCCUPATIONAL & ENVIRONMENT	24,842	-	
Health and Human Services	Pass-through	93	Work@Health	ASLHLIN MANAGEMENT GROUP INC	(970)	-	
Health and Human Services Health and Human Services	Pass-through Pass-through	93.070 93.070	E20170233-00-B E20170233-00-B	MICHIGAN DEPT OF COMMUNITY HEALTH MICHIGAN DEPT OF COMMUNITY HEALTH	42,815 21,408	-	
Health and Human Services	Pass-through	93.074	20160883-00-0-F	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	95,767	-	
Health and Human Services Health and Human Services	Pass-through Pass-through	93.074 93.080	E20170235-00 D 15-16-442	MICHIGAN DEPT OF HUMAN SERVICES HEMOPHILIA FOUNDATION OF MICHIGAN	87,447 17,056	-	
Health and Human Services	Pass-through	93.080	CDC 16-17-442	HEMOPHILIA FOUNDATION OF MICHIGAN	40,214	-	
Health and Human Services Health and Human Services	Pass-through Pass-through	93.103 93.103	154180 15-AUFSI-360490-MSU	IOWA STATE UNIV AUBURN UNIV	5,251 11,098	-	
Health and Human Services	Pass-through	93.103	791N770000252	MICHIGAN DEPT OF AGRICULTURE & RURAL DEVELOPMENT	201,015	-	
Health and Human Services Health and Human Services	Pass-through Pass-through	93.103 93.110	VERMONT-FDA-Tocco ATHN2015-HRSA-2	UNIVERSITY OF VERMONT AMERICAN THROMBOSIS & HEMOSTAS	3,774 63,053		
Health and Human Services	Pass-through	93.110	E20172700-00-AL	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	2,736	-	
Health and Human Services Health and Human Services	Pass-through Pass-through	93.110 93.110	HFM / HRSA 150689 Kulkarni MCHB 442 17-18	HEMOPHILIA FOUNDATION OF MICHIGAN HEMOPHILIA FOUNDATION OF MICHIGAN	59,639 305	-	
Health and Human Services	Pass-through	93.110	MCHB Grant	HEMOPHILIA FOUNDATION OF MICHIGAN	(157)	-	
Health and Human Services Health and Human Services	Pass-through Pass-through	93.110 93.184	WSU16154 E20170233-00-B	WAYNE STATE UNIV MICHIGAN DEPT OF COMMUNITY HEALTH	41,589 3,568	-	
Health and Human Services	Pass-through	93.243	7F044-A	RESEARCH FOUNDATION OF CUNY	2,856	-	
Health and Human Services Health and Human Services	Pass-through Pass-through	93.243 93.262	E20170233-00-B E20170233-00-B	MICHIGAN DEPT OF COMMUNITY HEALTH MICHIGAN DEPT OF COMMUNITY HEALTH	8,028 10,704	-	
Health and Human Services	Pass-through	93.268	Contract 20160899-00 Attachment U	MI DEPT OF HUMAN SERVICES	63,817	-	
Health and Human Services Health and Human Services	Pass-through Pass-through	93.268 93.283	E20170667-00-X 20160881-001-D	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	134,410 8,571	-	
Health and Human Services	Pass-through	93.283	20160882-00-E	MI DEPT OF HUMAN SERVICES	223,373	-	
Health and Human Services	Pass-through	93.283	20160891-00 Attachment L	MICHIGAN DEPT OF COMMUNITY HEALTH	4,844	-	
Health and Human Services Health and Human Services	Pass-through Pass-through	93.283 93.283	E20170233-00-B E20170234-00-C	MICHIGAN DEPT OF COMMUNITY HEALTH MICHIGAN DEPT OF COMMUNITY HEALTH	226,258 18,567	-	
Health and Human Services	Pass-through	93.283	E20170234-00-C	MICHIGAN DEPT OF COMMUNITY HEALTH	2,513	-	
Health and Human Services Health and Human Services	Pass-through Pass-through	93.283 93.283	E20170247-00-P E20170672-00	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	118,203 42,761	-	
		93.283	E20172453-00-AA	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	200,763	-	
Health and Human Services	Pass-through						
Health and Human Services	Pass-through	93.283 93.305	E20172468-00-O E20170233-00-B	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES MICHIGAN DEPT OF COMMUNITY HEALTH	133 29.435	-	
Health and Human Services Health and Human Services Health and Human Services	Pass-through Pass-through Pass-through	93.305 93.469	E20170233-00-B E20170233-00-B	MICHIGAN DEPT OF COMMUNITY HEALTH MICHIGAN DEPT OF COMMUNITY HEALTH	29,435 7,136	-	
Health and Human Services Health and Human Services Health and Human Services Health and Human Services	Pass-through Pass-through Pass-through Pass-through	93.305 93.469 93.556	E20170233-00-B E20170233-00-B SFSC14-19001	MICHIGAN DEPT OF COMMUNITY HEALTH MICHIGAN DEPT OF COMMUNITY HEALTH MI DEPT OF HUMAN SERVICES	29,435 7,136 21,911	-	
Health and Human Services	Pass-through Pass-through Pass-through Pass-through Pass-through Pass-through	93.305 93.469 93.556 93.556 93.590	E20170233-00-B E20170233-00-B SFSC14-19001 SFSC14-19001 CTFDS-15-73001	MICHIGAN DEPT OF COMMUNITY HEALTH MICHIGAN DEPT OF COMMUNITY HEALTH MI DEPT OF HUMAN SERVICES MI DEPT OF HUMAN SERVICES MI DEPT OF HUMAN SERVICES	29,435 7,136 21,911 824 27,470	- - - - -	
Health and Human Services	Pass-through Pass-through Pass-through Pass-through Pass-through	93.305 93.469 93.556 93.556	E20170233-00-B E20170233-00-B SFSC14-19001 SFSC14-19001	MICHIGAN DEPT OF COMMUNITY HEALTH MICHIGAN DEPT OF COMMUNITY HEALTH MI DEPT OF HUMAN SERVICES MI DEPT OF HUMAN SERVICES	29,435 7,136 21,911 824	-	

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaware Payments
ther Federal Awards (Continued):						
lealth and Human Services	Pass-through	93.624	E20170233-00-B	MICHIGAN DEPT OF COMMUNITY HEALTH	\$ 115,311	\$
lealth and Human Services	Pass-through	93.624	E20170234-00-C	MICHIGAN DEPT OF COMMUNITY HEALTH	5,514	
ealth and Human Services	Pass-through	93.628	20160892-00 Attachment M	MI COMMUNITY HEALTH	30,251	
ealth and Human Services	Pass-through	93.644	E20172455-00 AH	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	23,529	
ealth and Human Services ealth and Human Services	Pass-through	93.647	FY16.150.002	UNIVERSITY OF COLORADO DENVER	28,758	
alth and Human Services alth and Human Services	Pass-through Pass-through	93.648 93.758	16-39 E20172531-00-AK	RESEARCH FOUNDATION OF SUNY MICHIGAN DEPT OF COMMUNITY HEALTH	125,055 10,744	
alth and Human Services	Pass-through	93.758	E20172532-00-AJ	MICHIGAN DEPT OF COMMUNITY HEALTH	9,493	
alth and Human Services	Pass-through	93.758	E20172760-00-AM	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	1,353	
alth and Human Services	Pass-through	93.778	E20170233-00-B	MICHIGAN DEPT OF COMMUNITY HEALTH	2,676	
alth and Human Services	Pass-through	93.778	U05M15ADM(17)	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	24,221	
alth and Human Services	Pass-through	93.808	E20170233-00-B	MICHIGAN DEPT OF COMMUNITY HEALTH	41,307	
alth and Human Services	Pass-through	93.872	FY17.494.004	UNIVERSITY OF COLORADO DENVER	13,333	
alth and Human Services	Pass-through	93.926	HR-SBP14-05	SPECTRUM HEALTH SYSTEM	69,795	
alth and Human Services	Pass-through	93.926	SPECTRUM HR-SBP14-05 Roman	SPECTRUM HEALTH SYSTEM	40,953	
alth and Human Services alth and Human Services	Pass-through Pass-through	93.945 93.945	E20170233-00-B E20170233-00-B	MICHIGAN DEPT OF COMMUNITY HEALTH MICHIGAN DEPT OF COMMUNITY HEALTH	32,825 7,136	
alth and Human Services	Pass-through	93.958	E20170233-00-B E20170233-00-B	MICHIGAN DEPT OF COMMUNITY HEALTH	8,920	
alth and Human Services	Pass-through	93.991	20160912 AH	MICHIGAN DEPT OF COMMONTY HEALTH MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	36,455	
alth and Human Services	Pass-through	93.994	20163467-00 AR	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	18,500	
	Pass-through Total				2,662,335	
alth and Human Services Total					3,771,248	
meland Security	Direct Direct Total	97.012	3316SUR160102	US COAST GUARD	81,805 81,805	
meland Security	Pass-through	97.061	06-S140695	TEXAS A&M UNIV	13,671	
	Pass-through Total				13,671	
meland Security Total					95,476	
using and Urban Development	Pass-through Pass-through Total	14.169	148914	MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY	33,589 33,589	
using and Urban Development Total	. ass-un ough total				33,589	
erior	Direct	15	G16PX00039	US GEOLOGICAL SURVEY	40,585	
erior	Direct Direct Total	15.805	G15PX01660	US GEOLOGICAL SURVEY	19,510 60,095	
rior	Pass-through	15.805	2015-06806-02	UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN	9,000	
erior erior	Pass-through	15.805	2015-06806-02	UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN	7,376	
erior	Pass-through	15.805	UIUC 078687-15712 Stewart	UNIVERSITY OF ILLINOIS ORBANA CHAMPAIGN	15,892	
rior	Pass-through	15.805	UIUC 078687-15712 Stewart	UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN	8,197	
rior	Pass-through	15.922	153436	CITY OF ST IGNACE	28,710	
	Pass-through Total				69,175	
rior Total					129,270	
ice	Direct	16.001	90-11-2-529Z	US DEPT OF JUSTICE	60,040	
	Direct Total	16 001	BAH/DOJ 20150521-140522-91 McGarrell	BOOZ ALLEN HAMILTON INC	60,040 20,566	
tice tice	Pass-through Pass-through	16.001 16.001	BOOZ-DOJ-20161005-142733-49-McGarrell	BOOZ ALLEN HAMILTON INC	26,609	
tice	Pass-through	16.575	20160907-00 Attachment AC	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	76,533	
tice	Pass-through	16.575	E20172267-00	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	195,525	
tice	Pass-through	16.575	E20172639-00	MICHIGAN DEPT OF HUMAN SERVICES	27,918	
tice	Pass-through	16.726	4-H National Mentoring Program Year 5	NATIONAL 4H COUNCIL	3,602	
tice	Pass-through	16.726	MI 4-H Tech Wizard	NATIONAL 4H COUNCIL	257,535	
tice	Pass-through	16.726	NMP7	NATIONAL 4H COUNCIL	96,578	
tice	Pass-through	16.751	Prime 2011-DB-BX-0033	MI STATE POLICE	(96)	
tice	Pass-through	16.833	3-321-0215016-52458L	RTI INTERNATIONAL	72,613	
tice Total	Pass-through Total				777,383 837,423	
or	Direct Direct Total	17.502	SH-26316-14-60-F-26	LABOR US DEPT OF	38,993 38,993	
or Total					38,993	
ional Aeronautics & Space Administration	Direct	43.001	NASA NNX14AO11H GoSFC Liu	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	29,903	
ional Aeronautics & Space Administration Total	Direct Total				29,903	
onal Aeronautics & Space Administration Total					25,503	
e of Personnel Management	Direct	27.011	US Veterans APP 151184 Reeves	U S DEPT OF VETERANS AFFAIRS	11,081	
	Direct Total				11,081	
ce of Personnel Management Total					11,081	
al Security Administration	Pass-through	96.644	20164110AT	MICHIGAN DEPT OF HEALTH & HUMAN SERVICES	12,810	
al Security Administration Total	Pass-through Total				12,810 12,810	
2	Pass-through	12.550	0136	INST OF INTL EDUCATION	623	
e	Pass-through	19.010	3223_MSU_7.1.16	INST OF INTL EDUCATION	197,140	
e	Pass-through	19.400	S-ECAGD-16-CA-1004	INST OF INTL EDUCATION	67,606	
te Total	Pass-through Total				265,369 265,369	
nsportation	Pass-through	20	MFF 116500 - DOT 2012-0730#23	MICHIGAN FITNESS FOUNDATION	52,369	
nsportation	Pass-through	20.215	2016-0131	MICHIGAN DEPT OF TRANSPORTATION	15,523	
nsportation	Pass-through Pass-through Total	20.215	MDOT-2016-0131-LuschDavid	MICHIGAN DEPT OF TRANSPORTATION	21,420 89,312	
nsportation Total					89,312	
asury	Pass-through	21.000	NFMC Program	MICH STATE HOUSING DEVELOPMENT	161	
asury	Pass-through	21.000	NFMC Round 9	MICH STATE HOUSING DEVELOPMENT	(26)	
asury Total	Pass-through Total				135 135	
	B*****	00.004	ND 044 4 42 00005	US A STANSAUGOD INT. DEL TOTOTO		
ND	Direct	98.001	AID-OAA-A-13-00006	US AGENCY FOR INTL DEVELOPMENT	2,783,478	88
AID	Direct	98.001	AID-OAA-A-13-00006	US AGENCY FOR INTL DEVELOPMENT	72,867	
AID AID	Direct	98.001 98.001	AID-OAA-A-13-00006	US AGENCY FOR INTL DEVELOPMENT	61,362 109.891	
IID	Direct Direct Total	98.001	USAID AID-OAA-A-13-00006 DERKSEN-GRAIN	US AGENCY FOR INTL DEVELOPMENT	109,891 3,027,598	8
ıID	Pass-through	98	1856-000	TETRA TECH INC	17,140	8
ID	Pass-through	98.001	016258-158	UNIVERSITY OF CALIFORNIA DAVIS	9,160	
	Pass-through	98.001	2015-07022-02	UNIVERSITY OF CALIFORNIA DAVIS UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN	82,287	
ID	rass-till ougil					
AID AID	Pass-through	98.001	2015-07022-02	UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN	32,477	

Federal Agency	Direct/Pass-through	CFDA (Note 5)	Award Number	Grantor Name	Total Expenditures	Subaward Payments
Other Federal Awards (Continued):						
USAID	Pass-through	98.001	2993-MSU-1	INST OF INTL EDUCATION	\$ 5,263	\$ -
USAID	Pass-through	98.001	60039687	OHIO STATE UNIV	190,002	
USAID	Pass-through	98.001	8000069602	PURDUE UNIV	19,194	-
USAID	Pass-through	98.001	A1101 BANGLADESH	CIMMYT INC	60,853	-
USAID	Pass-through	98.001	A1101 CAMBODIA	CIMMYT INC	127,869	-
USAID	Pass-through	98.001	A1101 GHANA	CIMMYT INC	129,333	-
USAID	Pass-through	98.001	A1101 UGANDA	CIMMYT INC	163,827	-
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	1,047,816	22,103
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	713,771	245,690
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	658,453	540,172
USAID USAID	Pass-through	98.001 98.001	BHEARD BHEARD	CIMMYT INC	658,121 562,743	133,652 41.737
USAID	Pass-through Pass-through	98.001	BHEARD	CIMMYT INC CIMMYT INC	458,114	41,737 447,931
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	455,613	250,343
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	414,243	230,343
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	406,079	355,648
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	399,639	83,173
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	253,590	147,253
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	216.576	101.052
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	156,951	77,242
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	149,122	2,970
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	106,381	55,029
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	35,342	35,342
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	34,724	8,091
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	20,487	-,
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	18,291	-
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	16,883	
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	3,442	-
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	105	-
USAID	Pass-through	98.001	BHEARD	CIMMYT INC	(482,434)	-
USAID	Pass-through	98.001	RC710-059/S000766	UNIVERSITY OF GEORGIA	(27,709)	(27,709)
USAID	Pass-through	98.001	REPLACE-IQC-TtARD-MSU-005	TETRA TECH INC.	35,856	-
USAID	Pass-through	98.001	UIUC-2015-07022-02-Suvedi	UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN	54,305	
	Pass-through Total				7,245,378	2,519,719
USAID Total					10,272,976	3,414,060
Vietnam Education Foundation	Direct	85.802	VIETNAM EDUCATION FOUNDATION	VIETNAM EDUCATION FOUNDATION	27,997	
Vietnam Education Foundation Total	Direct Total				27,997 27,997	
TOTAL OTHER FEDERAL AWARDS					40,650,796	4,969,229
TOTAL FEDERAL EXPENDITURES					\$ 876,295,612	\$ 46,931,657
SUMMARY OF EXPENDITURES BY FEDERAL AGENCY Energy					\$ 134,918,023	\$ 1,877,399
National Science Foundation					78.554.235	7,129,351
Health and Human Services					69,464,698	9,953,399
Agriculture					61,075,602	10,045,974
Education					49,806,596	107.231
USAID					34,112,724	14,761,852
Defense					9,498,090	600,808
Justice					4,440,653	378,710
Transportation					2,437,002	1,098,268
National Aeronautics & Space Administration					2,426,003	216,758
Environmental Protection Agency					2,388,550	723,194
Commerce					1,983,473	-
Interior					1,908,799	-
Federal Council on the Arts and Humanities					703,957	38,713
State					335,944	-
Homeland Security					139,316	-
Labor					38,993	-
Housing and Urban Development					33,589	-
Vietnam Education Foundation					32,997	-
Social Security Administration Office of Personnel Management					12,810 11,081	-
Federal Communications Commission					750	-
Treasury					135	-
casa.y					454,324,020	46,931,657
SUMMARY OF LOAN BALANCES BY FEDERAL AGENCY						
Education					411,122,560	-
Health and Human Services					10,849,032	
					421,971,592	
TOTAL FEDERAL EXPENDITURES					\$ 876,295,612	\$ 46,931,657

Notes to Schedule of Expenditures of Federal Awards Year Ended June 30, 2017

Note I - Basis of Presentation

The accompanying schedule of expenditures of federal awards (the "Schedule") includes the federal grant activity of Michigan State University (the "University") under programs of the federal government for the year ended June 30, 2017. The information in the Schedule is presented in accordance with the requirements of the Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (the "Uniform Guidance"). Because the Schedule presents only a selected portion of the operations of Michigan State University, it is not intended to, and does not, present the financial position, changes in net position, or cash flows of Michigan State University.

Note 2 - Summary of Significant Accounting Policies

Expenditures reported on the Schedule are reported on the accrual basis of accounting. Such expenditures are recognized following, as applicable, either the cost principles in OMB Circular A-21, Cost Principles for Educational Institutions, or the cost principles contained in Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, wherein certain types of expenditures are not allowable or are limited as to reimbursement. Negative amounts shown on the Schedule represent adjustments or credits made in the normal course of business to amounts reported as expenditures in prior years. Pass-through entity identifying numbers are presented where available.

Note 3 - Indirect Costs

The University has elected not to use the 10 percent *de minimus* indirect cost rate to recover indirect costs as allowed under the Uniform Guidance.

Included as federal expenditures are indirect costs of \$66,653,809, which are based on the approved university rate agreement negotiated with the cognizant agency. The negotiated rate is effective from July 1, 2016 through June 30, 2019.

Note 4 - Commingled Funds

Certain miscellaneous pass-through funds consist of commingled funds from federal and nonfederal sources. The commingled component cannot be separated to specify the individual funding sources; therefore, the total amount is included in the schedule of expenditures of federal awards.

Note 5 - Catalog of Federal Domestic Assistance (CFDA) Numbers

All programs with identifiable CFDA numbers have been listed separately. Award numbers have been provided for all programs for which CFDA numbers were not available. Programs without an identifiable CFDA number are identified by agency number only. If the agency number is not known, the program is listed using an agency number of 99.

Notes to Schedule of Expenditures of Federal Awards Year Ended June 30, 2017

Note 6 - Federal Student Loans Granted and Outstanding

As part of the Student Financial Assistance Cluster, the University participates in the Federal Perkins Loan Program through the U.S. Department of Education and the Health Professional Student Loan Program, Nursing Student Loan Program, and Nurse Faculty Loan Program, all through the U.S. Department of Health and Human Services. These loan programs are directly administered by the University and are considered revolving loan programs where collections received on past loans, including interest, and new funds received from federal agencies with University matching requirements are loaned out to current students. The loans disbursed during the year and year end outstanding balances for these loans are disclosed below.

Loan Program	Loan Program	<u>_</u>	oans Issued	Loan Balances		
84.038	Perkins	\$	2,557,661	\$ 34,642,965		
93.264	Nurse Faculty Loans		84,575	285,019		
93.342	Health Professional Student Loans		1,386,574	9,504,098		
93.364	Nursing Student Loans		-	4,089		
	Total	\$	4,028,810	\$ 44,436,171		

The University participates in the Federal Direct Student Loan Program (FDLs). A total of \$369,630,484 of the amount presented in the schedule of expenditures of federal awards represents the value of the new FDLs accepted by students during the year ended June 30, 2017.

The University had participated in the discontinued U.S. Department of Education Federal Family Education Loan Program and continues to hold and service loans totaling \$829,285 at June 30, 2017.

Note 7 - Federal Work Study Program Adjustments and Transfers

During the year ended June 30, 2017, certain Federal Work Study funds were transferred in accordance with federal guidelines. The transfers were as follows:

Transferred from		Amount	Transferred to
Federal Work Study 2016-2017	\$	538,571	Federal Supplemental Educational Opportunity Grant 2016-2017
Federal Work Study 2015-2016		220,590	Federal Work Study 2016-2017
Federal Work Study 2016-2017		206,809	Federal Work Study 2017-2018
Total	\$	965,970	

Schedule of Findings and Questioned Costs Year Ended June 30, 2017

Section I - Summary of Auditor's Results

Financial Statements							
Type of auditor's report issue	d: Unmodified						
Internal control over financial	reporting:						
Material weakness(es) ide	entified?		Yes	Χ	No		
 Significant deficiency(ies) not considered to be m 			Yes	X	None reported		
Noncompliance material to fi statements noted?	nancial		Yes _	X	_No		
Federal Awards							
Internal control over major p	rograms:						
 Material weakness(es) ide 		Yes	Χ	No			
 Significant deficiency(ies) not considered to be m 		Yes	X	None reported			
Type of auditor's report issue	d on compliance for m	najor prog	rams:	Unmo	dified		
Any audit findings disclosed the to be reported in accorda Section 2 CFR 200.516 (a	nce with		Yes	X	_No		
Identification of major progra	ms:						
CFDA Numbers	CFDA Numbers Name of Federal Program or Cluster						
Various 84.032 10.500 98.001	Research and Development Cluster Federal Family Education Loan Program - Lenders Cooperative Extension Service USAID Foreign Assistance for Programs Overseas						
Dollar threshold used to distinguish between type A and type B programs: \$3,000,000							
Auditee qualified as low-risk auditee? X Yes					No		

Schedule of Findings and Questioned Costs (Continued) Year Ended June 30, 2017

Section II - Financial Statement Audit Findings

None

Section III - Federal Program Audit Findings

None



Single Audit Report: Summary Schedule of Prior Audit Findings

Year Ended June 30, 2017

Finding 2016-001

Program Name –Student Financial Assistance Cluster –CFDA #84.007, 84.033, 84.038, 84.063, 84.268, 93.264, 93.342 and 93.364

Finding Type – Significant Deficiency

Corrective Action Plan – The University Registrar's Office and the National Student Clearinghouse (NSC), the University's agent for enrollment and degree reporting, have implemented additional controls and functionality to ensure data updates are completed within the reporting window established by NSLDS. The University considers this issue corrected and closed.

 $\begin{tabular}{ll} \textbf{Position of Responsible Official} - \textbf{University Registrar}, \textbf{Office of the Registrar} \end{tabular}$



Status of Finding – This finding is corrected.

OFFICE OF THE CONTROLLER

Financial Analysis & Reporting

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