

Michigan  
Technological  
University

**Michigan Tech**<sup>®</sup>  
Create the Future

Year Ended  
June 30, 2012

Single Audit Act  
Compliance

# MICHIGAN TECHNOLOGICAL UNIVERSITY

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INDEPENDENT AUDITORS' REPORT ON THE  
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

December 11, 2012

Board of Control  
Michigan Technological University  
Houghton, Michigan

We have audited the financial statements of business-type activities and the discretely presented component unit of *Michigan Technological University* (the "University"), as of and for the year ended June 30, 2012, and have issued our report thereon dated October 31, 2012. Our audit was performed for the purpose of forming an opinion on the basic financial statements taken as a whole. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by OMB Circular A-133, 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 financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain other procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated in all material respects in relation to the financial statements as a whole.



# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
<b>Student Financial Assistance Cluster:</b>				
U.S. Department of Education:				
Federal Work-Study Program	84.033	Direct	-n/a-	\$ 293,509
Federal Pell Grant Program	84.063	Direct	-n/a-	5,755,116
Federal Supplemental Educational Opportunity Grants	84.007	Direct	-n/a-	381,538
Federal Direct Student Loans	84.268	Direct	-n/a-	30,788,132
National Science and Mathematics Access to Retain Talent (SMART) Grants	84.376	Direct	-n/a-	(500)
Federal Perkins Loan Program	84.038	Direct	-n/a-	1,638,546
<b>Total Student Financial Assistance Cluster</b>				<b>38,856,341</b>
<b>Research and Development Cluster:</b>				
U.S. Department of Agriculture:				
No CFDA Number:				
USDA-ESC-Effect of Earthworms	10.unk	Direct	06-HV-11231300-101	(423)
USAGR-FFC-ESC Soil Survey Methods	10.unk	Direct	10-JV-11242305-119	33,619
USAGR-ESC-FFC Peatland Rsh Houghtn	10.unk	Direct	02-JV-11231300-084	17,208
USAGR-ESC-FFC-Native Plant Prod Res	10.unk	Direct	11-JV-11221632-130	27,625
USAGR-ESC-FFC-Impacts of Reburns	10.unk	Direct	11-CS-11221633-154	726
USAGR-ESC-FFC-Wood Stake Decomp.	10.unk	Direct	11-JV-11242301-081	2,952
USAGR-CWS1-Evl Riparian Tmbr Hrvst	10.unk	Direct	07-CR-11242300-048 MOD 1	16,746
USAGR-ESC-FFC-Distgd Ecologist Lect	10.unk	Direct	08-CS-11242306-106	890
USAGR-FFC-ESC-Fire Impct Wood Dcomp	10.unk	Direct	08-JV-11221633-222	34,553
USAGR-ESC-FFC-Custer NF Reg 1 Soil	10.unk	Direct	08-CS-11010800-026	6,910
USAGR-Inter Fungi Plant Nutr/Grw	10.unk	Direct	07-CR-11242300-056	53,604
USAGR-FFC-ESC-Soil Monitoring Metho	10.unk	Direct	07-CS-11221662-307	36,059
USAGR-ESC-FFC-Carbon H2O & Soils	10.unk	Direct	09-CR-11242306-048	47,078
USAGR-ESC-FFC-Asses Veg Isle Royale	10.unk	Direct	09-JV-11242305-058	288
USAGR-ESC-FFC-Red Pine Thinning	10.unk	Direct	09-JV-11242307-009 MOD 1	16,468
USAGR-ESC-FFC-Nat'l Soil Carbon Net	10.unk	Direct	09-CR-11242306-086	46,527
USAGR-ESC-FFC-Peatlands Env Chg	10.unk	Direct	09-JV-11242306-087	44,238
USAGR-ESC-FFC-North Eco Experiment	10.unk	Direct	10-JV-11242313-051	125,852
USAGR-ESC-FFC-Marcell Exp Forest	10.unk	Direct	10-JV-11242307-067	21,128
Cooperative Management of Archaeolo	10.unk	Direct	10-CS-11091000-022	2,351
USFOR-ESC-FFC-Lk States Forest Veg	10.unk	Direct	10-CS-11132425-258	23,934
USAGR-Curation Ottawa Nat Forest	10.unk	Direct	11-CS-11090700-026	312
USAGR-ESC-FFC-Black Ash Wetlands	10.unk	Direct	11-CS-11090100-006	190,972
USAGR-ESC-FFC-Fire Management Natur	10.unk	Direct	11-JV-11221633-078	14,268
USAGR-ESC-FFC-Poplar Energy Crops	10.unk	Direct	11-JV-11242313-088	13,679
USAGR-CWS-Sand Accumltn Lk Superior	10.unk	Direct	11-CR-11242307-107	5,690
NATUR-ESC-FFC-Sage Habitats	10.unk	Nature Conservancy	TNC/MITECH042011	26,339
OREGO-ESC-FFC-ADV ACCT-Encroachment	10.unk	Oregon State University	ADVANCE ACCOUNT	4,883
REGEN-ESC-FFC-Biomass Inventory	10.unk	The Regents of the University of Idaho	GNK230-SB-001	3,638
UNIVE-Consume Python Development	10.unk	University of Washington	SUBCONTRACT NO 701430	6,780
				<b>824,894</b>
<b>Plant and Animal Disease, Pest Control, and Animal Care:</b>				
USAGR-ESC-FFC-Emer Ash Borer Trap	10.025	Direct	10-8100-1133-CA	20,585
MIAGR-ESC-FFC-SLAM-Purple Traps '11	10.025	Michigan Dept of Agriculture	791N1300316	25,260
UNIVE-CISSIC-Gas Filled Foam	10.025	University of Georgia	RE683-053/4784056	7,228
				<b>53,073</b>
<b>Cooperative Forestry Research:</b>				
MS-ESC-FFC-FY11 ADMIN	10.202	Direct	2011-32100-06098	141,679
USAGR-MS-FFC-FY12 Admin	10.202	Direct	2012-32100-06098	182,929
				<b>324,608</b>
<b>Agriculture and Food Research Initiative:</b>				
USAGR-BRC-FFC Root Dev Populus	10.310	Direct	2009-65504-05767	229,441
USAGR-FFC-Overlapping Sense/Antisen	10.310	Direct	2012-67014-19445	3,736
				<b>233,177</b>
<b>Urban and Community Forestry Program:</b>				
USAGR-ESC-FFC-GLRI EAB Plan UP	10.675	Direct	11-DG-11420004-020	56,132

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# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
Research and Development Cluster (Continued):				
U.S. Department of Agriculture (Continued):				
Forest Health Protection:				
USAGR-ESC-FFC-Growth Emerald Ash	10.680	Direct	09-CA-11420004-140	\$ (5)
USAGR-ESC-FFC-Beech Bark Disease	10.680	Direct	09-CA-11420004-308	94,598
Sugar Maple Dieback in the Upper Gr	10.680	Direct	10-DG-11420004-143	69,419
USAGR-ESC-FFC-Gypsy Moth Houghton	10.680	Direct	11-CA-11420004-067	7,454
USAGR-ESC-FFC-Ash Trees Tolerance	10.680	Direct	11-DG-11420004-068	31,462
USAGR-ESC-FFC-Ash Mortality in UP	10.680	Direct	11-CA-11420004-331	131,355
USAGR-ESC-FFC-Ground Survey Techno.	10.680	Direct	11-DG-11420004-312	47,005
				<u>381,288</u>
ARRA-Capital Improvement and Maintenance:				
Trails Infra Data Cleanup, Verification	10.687	Direct	10-PA-11094419-074	238,758
USAGR-ARRA-Trails Infra Data II	10.687	Direct	10-PA-11094419-083	167,976
				<u>406,734</u>
ARRA-Wildland Fire Management:				
USAGR-ESC-FFC-ARRA-Ash Mortality UP	10.688	Direct	10-CA-11420004-621	110,993
MITRA-FFC-ESC-ARRA-Tree Inventory	10.688	Michigan Dept of Natural Resources	GRANT #ARRA 10-03	12,555
MIAGR-ESC-FFC-ARRA-SLAM Position	10.688	Michigan Dept of Agriculture	791N1300318	64,289
MIAGR-ESC-FFC-ARRA-Forest Health	10.688	Michigan Dept of Agriculture	791N1300317	30,553
				<u>218,390</u>
Total U.S. Department of Agriculture				<u>2,498,296</u>
U.S. Department of Commerce:				
Integrated Ocean Observing System:				
LIMNO-GLOS IOOS/DMAC-01	11.012	LimnoTech Inc	NA10NOS0120041 #IOOS/DMAC-01	<u>2,652</u>
Coastal Zone Management Administration Awards:				
MIDEQ-FFC-ESC-Bat Activity	11.419	Michigan Dept of Environmental Quality	PROJECT #11-309-07	36,677
MIDEQ-Mining Impacted Strm	11.419	Michigan Dept of Environmental Quality	PROJECT #12.D-13.02	17,849
MIDEQ-FFC-ESC-Portage Waterway	11.419	Michigan Dept of Environmental Quality	PROJECT #12E-13.01	3,584
				<u>58,110</u>
Climate and Atmospheric Research:				
UNIVE-Great Lakes Region Center	11.431	University of Michigan	3001768645	<u>146,087</u>
National Oceanic and Atmospheric Administration (NOAA):				
Cooperative Institutes:				
UNIVE-GLOS Open Lakes	11.432	University of Michigan	PO #3001278616	<u>18,116</u>
Coastal Services Center:				
GREAT - Remote Sensing	11.473	Great Lake Observing System	RC00S08-02	137,763
LIMNO-GLOS MPA/DMAC-01	11.473	LimnoTech Inc	NA08NOS4730293 #MPA/DMAC-01	2,061
				<u>139,824</u>
Total U.S. Department of Commerce				<u>364,789</u>
U.S. Department of Defense:				
No CFDA Number:				
DARPA-Powerline Sensor Matur Ph II	12.unk	Direct	W9132T-10-C-0026 MOD P00007	2,253,854
OFFIC-MuSTI-Study Struc Resp Mat	12.unk	Direct	W911NF-09-2-0026	2,451
USARM-Antarctica Snow Pavements	12.unk	Direct	W913E5-11-C-0001	55,801
OFFIC-ASSURED II-Micro JP8 Burn	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-018	79,763
OFFIC-Husky Driveline Rev 01	12.unk	Direct	W56HZV-06-C-0525 WD AMMS-017	92,933
OFFIC-ASSURED II-APU Noise Eval	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-021	5,815
OFFIC-SURGE II-Pointman	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-022	112,798
USNAV-SFI-Catalyst Design	12.unk	Direct	N00173-12-P-1464	10,046
OFFIC-ASSURED II-Field VCM Imprvmnt	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-019	566,566
Dismounted roller development	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-020	504,532
USAIR-MTRI-Radar Frequency Sensing	12.unk	Direct	FA8750-05-C-0237 P00007	1,262,386
USAIR-Multi-Domain Intelligence	12.unk	Direct	FA8750-12-C-0032	125,555
USAIR-CISSIC-Multi-Sensor Intell	12.unk	Direct	FA8750-12-2-0108	28,137
OFFIC-Super Resolution Reconstruct	12.unk	Direct	FA8750-12-C-0119	36,066
USAIR-Penetration Fuzing	12.unk	Direct	FA8651-12-C-0198	96,768
USARM-ARRA-PERC-Army Inst Microgrid	12.unk	Direct	W9132T-10-C-0037	53,840
USARM-IMP-Aluminum Alloy Processing	12.unk	Direct	PO #PIC11111DK	1,405
OFFIC-Riverine Imaging	12.unk	Direct	W911NF-10-2-0069	165,110
OFFIC-CISSIC-FNR-Hghly Ing'd Mil Av	12.unk	Direct	N00421-09-D-0003, DO # 0001	(2,427)
OFFIC-CISSIC-FNR-Hi Int Optical Int	12.unk	Direct	N00421-09-D-0003 DO#0002	109,608

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# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
Research and Development Cluster (Continued):				
U.S. Department of Defense (Continued):				
No CFDA Number (Continued):				
OFFIC-CISSIC-FNR-Military Av D00003	12.unk	Direct	N00421-09-D-003 DO 0003	\$ 646,016
USNAV-Electroreduction CO2/Fuels	12.unk	Direct	PO #N00173-11-P-1196	9,928
USNAV-ASISC-CO2/Hydrocarbon Fuels	12.unk	Direct	N00173-11-P-3174	14,990
TACOM-Assured II-VCM Roller Suspen	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-005	364,921
TACOM-Assured II-VCM Roller Solt	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-010	13,555
TACOM-Assured II-ATO SPARK HdwDev	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-009	170,125
TACOM-Assured II-SIM/SID Threat	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-007	116,113
TACOM-Assured II-VCM Roller Tech	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-006	319,650
TACOM-Assured II-Hvy VCM Roller	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-008	75,087
OFFIC-SURGE II-LW Metallic Track	12.unk	Direct	W56HZV-09-C-0477 WD TSS-003	(924)
TACOM-Assured II- SPARK Testing	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-011	(6,354)
OFFIC-SURGE II-LTWT Track	12.unk	Direct	W56HZV-09-C-0477 MTU-TSS-004	111,722
OFFIC-ASSURED II - AMMS Spark 2	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-009/6	366,787
OFFIC-ASSURED II-AMMS SIM Dev	12.unk	Direct	W56HZV-08-C-0525 WDAMMS-007/15	273,942
TACOM-ASSURED II-FY 11 WNS	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-014	272,767
TACOM-SURGE II-High Performanc Trck	12.unk	Direct	W56HZV-09-C-0477 MTU-TSS-007	552,059
TACOM-Assured MBII-Iron Scrape Dev	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-014	13,840
TACOM-Assured MBII-Noise & Vibes	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-015	7,663
OFFIC-Assured Mobility-Husky Engine	12.unk	Direct	W56HZV-08-C-0525 WD AMMS-017/9	184,374
DARPA-RADAR Electronic Countermeasu	12.unk	Information Systems Laboratories	FA8750-08-C-0216 ISL#2560-500	69,756
LANZA-SFI-GHG & Fossil Energy	12.unk	LanzaTech Inc.	W911NF-11-C-0090	18,944
SCIEN-MTRI-DO4	12.unk	Science Applications International Corporation	SUB #4400149824	71,186
2LSIN - VMMD Panel Test	12.unk	2LS Inc.	MTU CO & PO #1823-00	10,681
2LSIN-Husky Tire Vibration Testing	12.unk	2LS Inc.	PO #1922-00;SP4701-11-C-0006	16,115
ALION-Floors/Structures Report	12.unk	Alion Science and Technology Corporation	LETTER SUBCONTRACT DATED 5/10/12	57,992
SCIEN-FNR Info Fusion Test Bed Y2	12.unk	Science Applications International Corporation	SUBCONTRACT #P010025638	(6,248)
CONFIDENTIAL	12.unk	Science Applications International Corporation	P010038798	16,570
SCIEN-Hearts	12.unk	Science Applications International Corporation	SUBCONTRACT #P010092279	7,163
THERM-CISSIC-Scene Generation	12.unk	Thermoanalytics Inc.	PRIME HQ0147-12-C-7899	19,420
NATIO-MTRI-Linking NASA Satellite	12.unk	National Institute of Aerospace	X12-7059-MTU-JM	46,505
CRAFT-MuSTI-Shp Lnchd Aerial Del Sy	12.unk	Craft Engineering Associates Inc.	MTU SBIR AGRMT & PO #X0602	32,699
CRAFT-MuSTI-Transfer Offshore	12.unk	Craft Engineering Associates Inc.	PO#Z1101	75,790
QUANT-MuSTI-Cargo Vessel Discharge	12.unk	Quantum Engineering Design, Inc.	MTU AGREEMENT #1106051	18,225
APPLI-Delineating Cultural Models	12.unk	Applied Research Associates	RQ000746 SUB S-000363.01	18,502
HELIO-Waveforms & Related Signal Pr	12.unk	Helios Remote Sensing Systems	1105-S01-HRSSI	22,664
IAI-MTRI-FNR-RF Tomography Phase 2	12.unk	Integrity Applications, Inc.	FA8650-10-C-1718-01	114,752
IAI-MTRI-Long Range Target ID Ph2	12.unk	Integrity Applications, Inc.	FA8650-10-C-1704-01	176,289
MATRI-Synthetic Aperture RADAR	12.unk	Matrix Research Inc.	SUBCONTRACT #AF1336-11-001	29,746
SCIEN-Star Section 2.2 Test &Analys	12.unk	Science Applications International Corporation	P010095187 CLIN 1B	3,539
SCIEN-Star Sect 2.1 Studies & Asses	12.unk	Science Applications International Corporation	P010095187 CLIN1A	53,490
SCIEN-Acme	12.unk	Science Applications International Corporation	PRIME 12-C-8917 P010108055	49,455
SCIEN - Sydney	12.unk	Science Applications International Corporation	P010104371 PRIME 09-C-8579	15,174
SYSTE-Windfarm Mitigation	12.unk	Systems & Technology Research LLC	2012-1007 FA8650-12-M-1429	14,670
HELIO-Range/Doppler Straddle	12.unk	Helios Remote Sensing Systems	1120S01-HRSSI W15P7T-12-C-A016	5,862
MATSY-IEM-Enthalpy Release Struct	12.unk	MATSYS Inc.	MATSYS AGRMT #SA-09-11	15,626
MISSI-SimBRS WE0035 Photo & Radar	12.unk	Mississippi State University	SUBCONTRACT NO 060803-360409-01	1,075,934
ACADE-IMP-REAP 5.24.11 Apprentice	12.unk	Academy of Applied Science	CHECK #1486 5/24/11	1,888
ACADE-IMP-REAP-6.11.12 Apprentice	12.unk	Academy of Applied Science	CHECK #1663 6/11/12	888
GENER-Lightweight Steel Track	12.unk	General Dynamics	GD PO #40076930	31,588
GENER-Mitigating Track Pad Design	12.unk	General Dynamics	GDLS PO #40111323 REV. 1	13
LIMNO - Tiffin Watershed Phase II	12.unk	LimnoTech Inc.	MTU CO & PO #TIFFIN2012	18,516
CALUM-CISSIC-Wavelength Division	12.unk	Calumet Electronics Corporation	SUB #CPC00111012012	24,000
				<u>11,194,662</u>
Basic and Applied Scientific Research:				
OFFIC-Sensing-Tracking MIMO Radar	12.300	Direct	N00014-09-1-0438 MOD #P00003	36,472
IEM-ONR-Metallurgical Processing	12.300	Direct	N00014-10-1-0434	52,477
OFFICE-IMP-Hi St Low Alloy Aluminum	12.300	Direct	N00014-11-1-0876	108,894
USAIR-Photonic Crystal Fiber	12.300	Direct	FA8750-12-1-0136	26,349
MASSA-CISSIC-Eng Mat Init	12.300	Massachusetts Institute of Technology	SUBAWARDM #5710002044	60,102
				<u>284,294</u>
Military Medical Research and Development:				
USARM-BRC-Wireless Snsr Lower Limb	12.420	Direct	W81-XWH-09-1-0734	58,790
USDEF-BRC-Remote Active Surfaces	12.420	Direct	W81-XWH-10-1-0879	84,027
				<u>142,817</u>
Basic Scientific Research (B):				
OFFIC-MuSTI- Fund Und Probe-Target	12.431	Direct	W911NF-09-1-0221	63,520

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## MICHIGAN TECHNOLOGICAL UNIVERSITY

**Schedule of Expenditures of Federal Awards**  
For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
Research and Development Cluster (Continued):				
U.S. Department of Defense (Continued):				
Air Force Defense Research Sciences Program:				
OFFIC-MuSTI-Multiscale Modeling Ply	12.800	Direct	FA9550-09-1-0375	\$ 74,661
USAIR-Sr Design Wireless Data Link	12.800	Direct	FA8651-11-2-0002	24,733
OFFIC-CISSIC-Stackelberg Game Appr	12.800	Direct	FA9453-11-1-0290	29,019
USAIR-ILI-Oculus-ASR Nanosat Flight	12.800	Direct	FA9550-12-1-0008	23,806
USAIR-Capstone Design Challenge	12.800	Direct	FA9550-11-1-0207	19,875
HENRY-MuSTI-Nanoparticles w/Biologi	12.800	Henry M Jackson Foundation	SUBAWARD #718243	35,381
UNIVE-MACEEP-Electric Propulsion	12.800	University of Michigan	3001381267 P2	193,613
				<u>401,088</u>
Mathematical Sciences Grants Program:				
NATIO-Classic Quantum Error Correct	12.901	Direct	H98230-10-1-0177	3,688
OFFIC-FNR-Perfect nonlinearity code	12.901	Direct	H98230-10-1-0159	6,047
NATIO-FNR-Comb Desgns/Hamada's Conj	12.901	Direct	H98230-12-1-0213	32,409
NATIO-FNR-Precise Probabilistic	12.901	Direct	H98230-12-1-0237	10,936
				<u>53,080</u>
Total U.S. Department of Defense				<u>12,139,461</u>
U.S. Department of Housing and Urban Development				
Lead Technical Studies Grants				
SIROM-BRC-Vetiver Grass	14.902	SIROM Scientific Solutions LLC	MTU CO #1103057	<u>27,989</u>
U.S. Department of Interior:				
No CFDA Number:				
USPAR-RSI-Zooplankter Park	15.unk	Direct	H6000082000 TASK J6067080012	1,480
USPAR-ESC-FFC-Invas Plnts-Pict Rock	15.unk	Direct	H6000082000 TASK J6320080002	988
USPAR-ESC-FFC-Vernal Pools	15.unk	Direct	TASK AGRMT J6320106203	146
USFIS-Wetlands Assessment & Mapping	15.unk	Direct	TASK ORDER NO. F11AC00735	26,447
USGEO-ESC-Analysis/Marine Sediments	15.unk	Direct	1109053	491
USFIS-ESC-FFC-Earthworm Abundance	15.unk	Direct	ORDER# 30181AM415/F10PX77034	2,672
LITTL-CWS1-Develop Arctic Grayling	15.unk	Little River Band Ottawa Indians	AGREEMENT DATED 1/19/11	53,573
WISCO-FFC-ESC-Lakeshore Restoration	15.unk	Wisconsin Dept of Natural Resources	PO# NMB00000095	76,105
				<u>161,902</u>
Cultural Resource Management:				
USBUR-NSSI-Intergov Website Mtce/Op	15.224	Direct	AGMT NO LAA 08 0008/L08AC14728	<u>80,589</u>
Wildland Fire Research and Studies Program:				
FLORI-ESC-FFC-Black Carbon Formatio	15.232	Florida Atlantic University	MRJ06	<u>9,872</u>
Secure Rural Schools and Community Self-Determination:				
USBUR-North Slope Water Charac Prj	15.234	Direct	L07AC14987 & L08AC13082	<u>(1)</u>
ARRA- Environmental Quality and Protection				
Resource Management (B):				
USBUR-ARRA-Survey Abandoned Mines	15.236	Direct	L10AC20007	<u>150,258</u>
Keweenaw National Historical Park Enhancement Grants:				
2011 Public Archaeology at Cliff Mi	15.407	Keweenaw NHP Advisory Commission	C2011-00016	<u>11,200</u>
Fish and Wildlife Management Program:				
USFIS-Marine Water Selawik Natl Rfg	15.608	Direct	AGMNT #70181BJ030 / F11AC00676	21,196
Development and Support of the USFW	15.608	Direct	30181AJ195 / F10AC00214	135,900
				<u>157,096</u>
Migratory Bird Conservation:				
USFIS-FFC-ESC Disp Gold Wng Warbler	15.647	Direct	301819G086 / F09AC00107	<u>17,171</u>
National Fish and Wildlife Foundation:				
NATIO-ESC-Restore Brook Trout	15.663	Direct	PROJECT 0901.11.026938	<u>19,062</u>
U.S. Geological Survey Research and Data Collection:				
USGEO-Phragmites Great Lks	15.808	Direct	G10AC00335	100,841
USGEO-CWS1-Sturgeon Prod Detroit Riv	15.808	Direct	G11AC20032	30,577
				<u>131,418</u>
National Land Remote Sensing-Education				
Outreach and Research:				
AMERI-Michigan View Consort FY 13	15.815	AmericaView Inc	SUB-AWARD AGRMT AV08-MI01	<u>38,805</u>
National Resource Stewardship:				
USPAR-ESC-FFC-Wolf Moose 2011-16	15.944	Direct	TASK AGRMT J6310110025	<u>14,695</u>
Resources of the National Park System:				
USPAR-MTRI-Lake Bottoms	15.945	Direct	TASK AGMT NO P12AC10449	<u>1,584</u>
Total U.S. Department of Interior				<u>793,651</u>

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# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
Research and Development Cluster (Continued):				
U.S. Department of Justice				
National Institute of Justice Research and Development Grants				
USJUS-MTTI-Mount Eqt Patrol Vehicle	16.560	Direct	2010-DE-BX-K003	\$ 140,076
U.S. Department of Transportation:				
No CFDA Number:				
USTRA-MTTI-Bridge Cond Assessmnt RS	20.unk	Direct	DTOS59-10-H-00001	557,031
USTRA-Unpaved Road Conditions RS	20.unk	Direct	RITARS-11-H-MTU1	335,287
USTRA-Clarus Weather/State Crash Dt	20.unk	Direct	DTFH61-10-P-00121	43,377
USTRA-MTTI-High Speed Rail Work	20.unk	Direct	DTRF53-11-C-00030	89,714
NATIO-MTTI-Fly Ash Specs Hwy C	20.unk	National Academies	NAS CONTRACT #HR 18-13 MOD #2	101,941
JACKS-Imaging Crack Detection	20.unk	Jackson State University	SUB NO 634895, PO057514	11,294
LANZA-SFI-Waste Gas to Jet Fuel	20.unk	LanzaTech Inc	USDOT-FAA DTRT57-12C-10008	1,848
MITRA-MTTI-Warm Mix Asphalt Eval	20.unk	Michigan Dept of Transportation	2006-0414 AUTH Z1	20,644
APPLI-MTTI-Cost Effective MDOT	20.unk	Applied Pavement Technology Inc	ORE0910	17,503
NATIO-MTTI-Joint Deterioration Stud	20.unk	National Concrete Pavement Technology Center	ISU #474-17-40	6,535
MITRA-MTTI-Alternative Materials	20.unk	Michigan Dept of Transportation	2009-0750 AUTH Z1	130,531
WISCO-MTTI-CIP Piling Properties	20.unk	Wisconsin Dept of Transportation	PROJECT ID: 0092-09-04	502
WISCO-MTTI-Class C Fly Ash	20.unk	Wisconsin Dept of Transportation	PROJECT ID: 0092-12-04	10,488
				<u>1,326,695</u>
Highway Research and Development Program:				
IOWAS-MTTI-Joint Deterior. In Concrete	20.200	Iowa State University	436-17-25	<u>16,775</u>
Occupant Protection Incentive Grants:				
MIPOL-MTTI-Seatbelt Study	20.602	Michigan Dept of State Police	GRANT #OP-11-04	<u>49,098</u>
Child Safety and Child Booster Seats Incentive Grants:				
MIPOL-2012 Michigan Seat Belt	20.613	Michigan Dept of State Police	OP-12-03	<u>45,214</u>
University Transportation Centers Program:				
USTRA-MTTI-MiSTI 2006	20.701	Direct	DTRT06-G-0033 MOD 1	341,401
OHIOS - Nextran	20.701	Ohio State University	GRT00005994	17,668
UNIVE-MTTI-Improve Log Transport	20.701	University of Wisconsin-Superior	UNIVERSITY #144 051044 4	3,470
UNIVE-MTTI-Export Container Pooling	20.701	University of Wisconsin-Superior	346K006	3,722
UNIVE-MTTI-NURail Education Center	20.701	University of Illinois at Urbana-Champaign	2012-020611-05-00	13,017
				<u>379,278</u>
Total U.S. Department of Transportation				<u>1,817,060</u>
Federal Mediation and Conciliation Service				
Labor Management Cooperation:				
FEDER-Lean Training and Outreach	34.002	Direct	11-MI/PS-010	<u>17,967</u>
National Aeronautics and Space Administration:				
No CFDA Number:				
USNAS-Biomass Burn/Anthropogenic	43.unk	Direct	NNX07AR26G	53,157
USNAS-Multi Effects Grpht/Epxy Comp	43.unk	Direct	NNX07AU58A	460
USNAS-CSERI-Pic of the Day	43.unk	Direct	NNX09AD32G	32,959
USNAS-EPSSI-Vald OMI L2 Sulfur Diox	43.unk	Direct	NNX09AJ40G	69,309
USNAS-APSRC-Heat Trans Evap Films	43.unk	Direct	NNX09AM31G	11,301
USNAS-Vulnerability NA Boreal Peat	43.unk	Direct	NNX09AM15G	247,816
USNAS-Multi-Scale Water Quality Grt	43.unk	Direct	NNX09AU88G	168,996
USNAS-Impact Implication Fire Tund	43.unk	Direct	NNX10AF41G	250,434
USNAS-APS-Flight Exp & 2 Phase Sys	43.unk	Direct	NNX10AJ59G	2,843
USNAS-IMP-Elongated Pore Form	43.unk	Direct	NNX10AV37G	157,898
USNAS-Remote Sensing Models	43.unk	Direct	NNX11AC72G	390,744
NATIO-Linking NASA Sat Data	43.unk	National Institute of Aerospace	X09-7059-MTU	75,152
CFDRE-BRC-FNR-Diagnostics Pathogens	43.unk	CFD Research Corporation	2012001 PRIME NNX12CG02P	10,513
UNIVE-MSGC-Infred Spc Tr Volc Pl	43.unk	University of Michigan	U OF M CK #2000433	(113)
UNIVE-Exp & Use of ASTER URP	43.unk	University of Pittsburgh	AWARD #0008149	414
UNIVE-MSGC-FNR-Carbon Nano Circuits	43.unk	University of Michigan	CHECK #2214175	662
UNIVE-MSGC-FNR-Quartz-Enhanced	43.unk	University of Michigan	CHECK #2214175	481
UNIVE-MSGC-ESC-FNR-Patchy Ecosystem	43.unk	University of Michigan	CHECK #2214175	345
UNIVE-MSGC-FNR-Structural Fiber Sen	43.unk	University of Michigan	CHECK # 2214175	1,768
UNIVE-BRC-FNR-MSGC-Cognitive Stress	43.unk	University of Michigan	CHECK #2491144	2,357
UNIVE-FNR-MSGC-Water In Fuel Cells	43.unk	University of Michigan	CHECK #2491144	1,450
UNIVE-EPSSI-NPP Ozone Mapping	43.unk	University of Maryland, College Park	Z664401	8,810
UNIVE-FNR-MSGC-Graphene Biosensors	43.unk	University of Michigan	CHECK #2751150	1,285
				<u>1,489,041</u>

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# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
Research and Development Cluster (Continued):				
National Aeronautics and Space Administration (Continued):				
Science:				
USNAS-FNR-EPPSI- A-Train Volcano	43.001	Direct	NNX11AF42G	\$ 57,837
USNAS-Biomass Burning for Carbon	43.001	Direct	NNX11AL34G	44,837
USNAS-EPSSI-FFC-Fuel Consumption	43.001	Direct	NNX12AK31G	391
BOWDO-Carbon Export Maine Coast	43.001	Bowdoin College	AGREEMENT NO 2011 001	76,140
CARNE-CO2 Monitoring Network	43.001	Carnegie Institute of Washington	SUBCONTRACT NO 9-10330-01	10,514
UNIVE-EPSSI-Volanic Sulfate	43.001	University of Nebraska - Lincoln	25-0514-0108-002	7,546
UNIVE-MSI STEM Students Capstone	43.001	Universidad del Turabo	2010T-02	53,340
				<u>250,605</u>
Aeronautics:				
USNAS-MuSTI Noise Reduction Appl	43.002	Direct	NNX11AI72A	107,471
SOUTH-Crop Acreage Forecasts	43.002	South Dakota State University	SUBAWARD NO. 3TD197	28,653
				<u>136,124</u>
Cross Agency Support:				
USNAS-MuSTI-Mdl Polymer Nanocompost	43.009	Direct	NNX09AM50A	<u>44,542</u>
Total National Aeronautics and Space Administration				<u>1,920,312</u>
National Science Foundation:				
No CFDA Number:				
NSF-RSI-Air Snowpack Exch	47.unk	Direct	ARC-0713992	103,314
NATIO-NSF-CAREER-Model-Nxt-Gen-Sys	47.unk	Direct	CCF-0643664	2,123
NSF-DRU Collaborative Research	47.unk	Direct	SES-0624118	2,022
UNIVE-Microscopy Testing	47.unk	University of Washington - Friday Harbor Labs	UW PO #694077 MTU #100607	75
UNIVE-ESC-FFC-15N Leaf Analysis	47.unk	University of Idaho	CONFIRMING ORDER #1107008	955
				<u>108,489</u>
Engineering Grants:				
NSF-SFI - Renew Energy Forest Res	47.041	Direct	BES-0524872	14,742
NATIO-MuSTI-CAREER MOLFET	47.041	Direct	ECCS-0643420	41,889
NSF-MTTI-Micrstr Asphalt Mtls	47.041	Direct	CMMI-0701264	23,401
NSF-MuSTI-CAREER: Gas-Liq Interface	47.041	Direct	CBET-0748049	109,027
NSF-ASISC-Ctr Adv SustainIron-Steel	47.041	Direct	IIP-0832427	77,603
NSF-Hands On Ability	47.041	Direct	EEC-0835987	117,993
NSF-CWS1-Mdl-Analyz Water-Grt Lks	47.041	Direct	CMMI-0725636	157,324
NSF-MuSTI-Self Healing Microfibers	47.041	Direct	CMMI-0900582	59,901
NSF-IEM Promote Anions H Storage	47.041	Direct	CBET-0931587	34,183
NSF-MuSTI-Energy Harvstng Nanowires	47.041	Direct	CMMI-0926819	22,366
NSF-APSRC-Fluid Structure Wind Turb	47.041	Direct	CBET-0933058	56,569
NSF-CISSIC-Comp Coop Wideband Spec	47.041	Direct	ECCS-0925881	30,304
NSF-PERC-Comp Distributed Control	47.041	Direct	ECCS-0901094	148,937
NSF-CISSIC Impl Dielectric Metamat	47.041	Direct	ECCS-0968850	77,242
NSF-CWS1-Mod Eval Hydro Micro DNAP	47.041	Direct	CBET-1034700	95,950
NSF-APSRC-FlowPredictionFluctuation	47.041	Direct	CBET-1033591	82,849
NSF-APSRC-CAREER Fluid Structure	47.041	Direct	CBET-0952218	31,565
NSF-Meeting NAE Grand Challenge	47.041	Direct	EEC-1024628	80,394
NSF-Rsch-Eng Minority Students	47.041	Direct	EEC-1025191	17,972
NSF-EAGER-APSRC-Wireless Networks	47.041	Direct	CMMI-1049294	21,163
NSF-Collaborative ISES Study	47.041	Direct	EEC-1025220	53,681
NSF-FNR-BRIGE 1D PdFe Core-pt Shell	47.041	Direct	CBET-1032547	57,509
NSF-CWS1-Cat1:Ecosystem Analysis	47.041	Direct	CBET-1039062	50,466
NSF-CWS-IDR:SustianableWater	47.041	Direct	CBET-1014818	87,046
NSF-SFI-RET-W2W Transp Shonnard	47.041	Direct	EEC-1009617	88,687
NSF-APS-FNR- REU Site Fuel Technolo	47.041	Direct	EEC-1062886	76,865
NSF-SFI Mainschock/Aftershock Seq	47.041	Direct	CMMI-1100423	69,401
NSF-CAREER-ABO Blood DEMos	47.041	Direct	CBET-1041338	75,962
NSF-MuSTI-Fractal Nanoparticles	47.041	Direct	CMMI-1130651	62,201
NSF-BRC-FNR-BRIGE-Membrane Develop	47.041	Direct	CBET-1125585	81,110
NSF-SFI-Biofuels and Bioenergy	47.041	Direct	CBET-1140152	96,449
NSF-CISSIC-Near Ground Wireless	47.041	Direct	ECCS-1101843	46,924
NSF-SFI-Enzymatic Hydrolysis Biomass	47.041	Direct	CBET-1138734	29,567
NSF-Making Optics from Scratch	47.041	Direct	ECCS-1202443	23,225
Collaborative Research: Integrated	47.041	Direct	CMMI-1200061	7,850
NSF-IMP-Metal Matrix Composites	47.041	Direct	CMMI-1200038	5,813
NSF-PERC-Physical Power Systems	47.041	Direct	ECCS-1128512	12,003
UNIVE-MuSTI-Liquid Nanotube Compos	47.041	University of Oregon	209041A	22,078
				<u>2,248,211</u>

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## MICHIGAN TECHNOLOGICAL UNIVERSITY

**Schedule of Expenditures of Federal Awards**  
For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
<b>Research and Development Cluster (Continued):</b>				
<b>National Science Foundation (Continued):</b>				
Mathematical and Physical Sciences:				
NSF-CAREER:Frontier Carbon Material	47.049	Direct	DMR-0447555 AMD # 001	\$ 88,265
NSF-IME-Algorithms Protein Studies	47.049	Direct	CHE-0809002	61,342
NSF-Exact Inequal & Limit Theorems	47.049	Direct	DMS-0805946	1
NATIO-NSF-Bound/Continuum Prop L	47.049	Direct	PHY-0652844	(29)
NSF-BRC-Smpl Mthds Oligonucleotide	47.049	Direct	CHE-0647129	250
NSF-BRC-Photoinitiated Control Nit	47.049	Direct	DMR-0906709	123,919
NSF-IEM-Form Magnetic Domain Evolut	47.049	Direct	DMR-0965081	52,926
NSF-IEM-Comp Study Optimizing Micro	47.049	Direct	DMR-0968792	78,943
NSF-Bound & Continuum Properties	47.049	Direct	PHY-0968205	56,674
NSF-EPSSI-HAWC Gamma-Ray	47.049	Direct	PHY-1002445	129,368
NSF-BRC-Purification Synth Peptide	47.049	Direct	CHE-1111192	73,775
NSF-MuSTI-Cellulose Nanocrystals	47.049	Direct	DMR-1100806	17,523
				<u>682,957</u>
Geosciences:				
NSF-RSI/Physical Meteorology Proces	47.050	Direct	ATM-0554670	(2,270)
NATIO-RSI-Ozone Photochem	47.050	Direct	ATM-0720955	108,774
NSF-Virunge Volcanic SO2 Emissions	47.050	Direct	EAR-0910795	780
NSF-CWS1-Lk Sup Carbon Bal	47.050	Direct	OCE-0628545	(592)
NSF-EPSSI-Col Rsh Hygroscopic Aeros	47.050	Direct	ATM-0931505	30,800
NSF-EPSSI-Seismicity Infra High Res	47.050	Direct	EAR-0948526	51,386
NSF-EPSSI-IceNucleiInContactMode	47.050	Direct	AGS-1028998	108,638
NSF-EPSSI-Cloud Turbulence	47.050	Direct	AGS-1026123	202,986
NSF-EPSSI-MRI Dev Multiphase Turb	47.050	Direct	AGS-1039742	303,980
NATIO-EPSSI-Paleomagnetic Investig.	47.050	Direct	EAR-1045406	45,785
NSF-RSI-CAREER Volcano-Seismic	47.050	Direct	EAR-1053794	69,326
NSF-CAREER Flood Risk Projections	47.050	Direct	EAR-1053655	43,787
NSF-EPSSI-Geomag Mafic Dikes India	47.050	Direct	EAR-1112952	51,554
NSF-EPPSI-FREE Tropospheric Aerosol	47.050	Direct	AGS-1110059	57,884
NSF-EPSSI-Physical/Radar Meteor	47.050	Direct	AGS-1119164	63,147
NSF-EPSSI-CAREER-Magnet Fingerprint	47.050	Direct	EAR-1149434	16,394
NEVAD-EPSSI-MRI Photoacoustic	47.050	Nevada System of Higher Education	663.1085.01	14,006
				<u>1,166,365</u>
Computer and Information Science and Engineering:				
NATIO-CISSIC-Real Time Robust	47.070	Direct	CNS-0644056	67,621
NSF-SFI-Int Sust Undergrad Comp Ed	47.070	Direct	CNS-0829619	5,264
NSF-Resp Conduct Rsch Sci & Eng Ed	47.070	Direct	IIS-0832922	71,287
NSF- EAGER: Model Check PGAS Apps	47.070	Direct	CCF-0950678	5,745
NSF-CISSIC-Security 4 Radio Network	47.070	Direct	CNS-1017887	62,108
NSF-GV-Small-Large Data Analysis	47.070	Direct	IIS-1017935	75,375
NSF-Framework for Algorithmic	47.070	Direct	CCF-1116546	58,324
NSF-CCSR-Single Assignment Arch/Com	47.070	Direct	CFF-1116551	106,056
				<u>451,780</u>
Biological Sciences:				
NSF-ESC-FFC-Response to Nitrate Dep	47.074	Direct	DEB-0814864	26,413
NSF-ESC-FFC-Yellowstone Wolves	47.074	Direct	DEB-0613730	52,067
NSF-BRC-Evolution Land Plant Cell	47.074	Direct	IOS-0848071	12,241
NSF-ESC-FFC-Predation Eco System	47.074	Direct	DEB-1019928	137,216
NSF-ESC-FFC-PEATLAND ECOSYSTEMS	47.074	Direct	DEB-1146149	16,738
NSF-BRC-EAGER RNAi Gene Discovery	47.074	Direct	IOS-1219316	18,619
NSF-BRC-EAGER-DNA Synthesis	47.074	Direct	DBI-1225720	14,096
COLOR-Sate Image Grass Col LTER	47.074	Colorado State University	G-3080-2	1,993
PENNS-FFC-BRC-Stress in Wood	47.074	Pennsylvania State University	4374-MTU-NSF-5974	43,703
VIRGI-BRC-Diphospho Triphospho Inos	47.074	Virginia Polytechnic Institute & State University	478501-19959	14,912
				<u>337,998</u>
Social, Behavioral, and Economic Sciences:				
NSF-Doctoral Dissertation Research	47.075	Direct	SES-1123577	8,759
NSF-IMP-Rehydroxylation Ceramic Dat	47.075	Direct	BCS-1112327	23,426
				<u>32,185</u>

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# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
Research and Development Cluster (Continued):				
National Science Foundation (Continued):				
Education and Human Resources:				
NSF-IGERT:Sustainable Futures Model	47.076	Direct	DGE-0333401-AMD 009	\$ 5,677
NSF-ILI-Valid Assessment Procedures	47.076	Direct	DUE-0817445	39,489
NSF-BRC-Lab in Biomolecular Chem	47.076	Direct	DUE-0837220	5,906
NSF-First Year IDEAS Modules & Cntr	47.076	Direct	DUE-0836861	35,665
NSF-EPSSI-Cyber Volcano Hazards Mod	47.076	Direct	DRL-0940883	62,967
NSF-Digital Logic Design Collab.	47.076	Direct	DUE-1003389	115,179
NSF-Learning Through EFELTS	47.076	Direct	DUE-1023022	75,113
NSF- STEM Relevant Spatial Skills	47.076	Direct	HRD-1036706	50,173
NSF-CAREER Math Moments Instru	47.076	Direct	DRL-1052958	64,621
NSF-ILI-Ethical Reasoning & Climate	47.076	Direct	DUE-1122390	1,777
UNIVE-H2O Evglade Jny Evaluation	47.076	University of Central Florida	AWARD #64016152	371
UNIVE-Revisiting the Future	47.076	University of Central Florida	64016228 PO#191200	37,346
				<u>494,284</u>
Polar Programs:				
NSF-Measuring Nitrogen Oxide GEO	47.078	Direct	ARC-1107398	30,305
NSF - Clean Snowmobile Challenge	47.078	Direct	ARC-1062619	4,000
				<u>34,305</u>
International Science and Engineering (OISE):				
NSF-RSI-Remte Sen Pac Lat Amer	47.079	Direct	OISE-0530109	291,392
NSF-EPSSI-Volcanic Hazards	47.079	Direct	OISE-1036265	(5,259)
USCIV-Geohazard Landslides Model	47.079	US Civilian Research & Development Foundation	UKG1-9203-DP-11	9,877
				<u>296,010</u>
Office of Cyberinfrastructure:				
NSF-CWS-Environmental CyberCitezens	47.080	Direct	OCI-1135523	45,048
ARRA- Trans-NSF Recovery Act Research Support:				
NSF-SFI-ARRA-Public Health Tanzania	47.082	Direct	OISE-0854050	25,954
NSF-MTTI-ARRA-Frost Damage Concrete	47.082	Direct	CMMI-0900015	40,639
NSF-MuSTI-ARRA-Mag-Photonic Crystal	47.082	Direct	ECCS-0856650	50,664
NSF-ARRA-Weaving Threads of Sustain	47.082	Direct	EEC-0935088	38,875
NSF-FFC-ESC-ARRA LTREB Wolf-Moose	47.082	Direct	DEB-0918247	125,544
NSF-IMP-ARRA-Activation Spillover	47.082	Direct	CBET-0929207	150,271
NSF-ARRA-Synergistic Inte Sustain	47.082	Direct	EEC-0934567	2,310
NSF-MTTI-ARRA EAGER E-Waste Asphalt	47.082	Direct	CMMI-0936726	9,595
NSF-CNLM-ARRA Sustain Fuel Lactose	47.082	Direct	CBET-0933017	21,662
UNIVE-ARRA-Turbulent Flames	47.082	University of California at Davis	08-003989-01	4,899
				<u>470,413</u>
Total National Science Foundation				<u>6,368,045</u>
U.S. Environmental Protection Agency				
No CFDA Number:				
HOUGH-ESC-Hills Creek	66.unk	Houghton-Keweenaw Conservation District	AWARD #1107016	21,740
Regional Wetland Program Development Grants:				
MICHI-Approach for Vernal Pools	66.461	Michigan State University	MSU #RC069697	1,108
Great Lakes Program:				
USENV-FFC-ESC-Restore Peatlands	66.469	Direct	GL-00E00472-0	43,612
USENV-Wetland Map Protocol	66.469	Direct	GL-00E00559-0	217,898
USENV-Cladophora Monitoring	66.469	Direct	GL-00E00561-0	151,896
USENV-CWS1-Predicting Eco Changes	66.469	Direct	GL-00E00560-0	137,239
USENV-Algal Bloom Mapping Great Lks	66.469	Direct	GL-00E00855-0	94,466
GREAT-Tributary Monitoring & Lamp	66.469	Great Lake Observing System	EPA-636-01	98,751
				<u>743,862</u>
Science To Achieve Results (STAR) Research Program:				
USENV-RSI-Impacts Land Use Land Cov	66.509	Direct	RD-83428601-0	136,120
Total U.S. Environmental Protection Agency				<u>902,830</u>

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## MICHIGAN TECHNOLOGICAL UNIVERSITY

**Schedule of Expenditures of Federal Awards**  
For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
<b>Research and Development Cluster (Continued):</b>				
<b>U.S. Department of Energy:</b>				
No CFDA Number:				
ARGON-APSRC-Ethanol as Fuel	81.unk	Argonne National Laboratory	SUBCONTRACT NO 1F-30621	\$ 5,707
ARGON-TEM Battery Materials	81.unk	Argonne National Laboratory	SUBCONTRACT NO. 1F-30581	16,462
ARGON - Segmented PEFC	81.unk	Argonne National Laboratory	2F-30081	4,679
BATTE-AMF Deployment Support	81.unk	Battelle Memorial Institute	SUBCONTRACT NO 119585	(569)
BATTE-RSI-HOLODEC 2	81.unk	Battelle Memorial Institute	CONTRACT NO. 139191	175,580
ARGON - Experimental Engine Testing	81.unk	Argonne National Laboratory	1F-32523	53,587
LOSAL-RSI-FNR-Iso Trac Climate Rel	81.unk	Los Alamos National Laboratory	77219-001-009	27,501
Year 1: Foresty Biofuel Statewide	81.unk	Michigan Economic Development Corporation	DOC-2105 AND PO 1672	171,475
SANDI-PERC-FNR-Microgrid Model	81.unk	Sandia National Laboratories	PO #1103234	128,090
SANDI-PERC-Application toMicrogrids	81.unk	Sandia National Laboratories	PO 1186206	195,425
UOPU-SFI-ARRA-Life Cycle Corn	81.unk	UOP LLC	MTU AGMT #090655	30,971
NATIO-APS-E15 Fuel Snowmobile En	81.unk	National Renewable Energy Laboratory	AXH-0-40493-01	82,554
ARGON-Marine Engines Fuel	81.unk	Argonne National Laboratory	2F-31621	10,416
ARGON-EcoCAR NeXt Challenge	81.unk	Argonne National Laboratory	AM SOC FOR ENG ED INC.CK 45152	2,673
				<u>904,551</u>
<b>Office of Science Financial Assistance Program:</b>				
USENE-MuSTI/Hetero-Junctions Boron	81.049	Direct	DE-FG02-06ER46294 A001, A002	90,591
USENE-ESC-Forest Atmosphere Carbon	81.049	Direct	DE-FG02-95ER62125-AMD A019	765,641
USENE-RSI/Study High Energy	81.049	Direct	DE-FG02-99ER41107-AMD A008	224,079
USENE-ESC Midwest Center Climate	81.049	Direct	DE-FC02-06ER64158 A005	677,888
USENE-ESC-Climate Chge Rsrch	81.049	Direct	DE-FC02-06ER64158	880
USENE-ESC-FFC-Midwest Center NICCR	81.049	Direct	DE-FC02-06ER64158 AMEND #A005	137,409
USENE-IEM-Behavior Ferroelect Matls	81.049	Direct	DE-SC0002196	119,136
USENE-EPSSI-Contact Freezing	81.049	Direct	DE-SC0006949	21,934
USENE-EPSSI-Tropospheric Aerosols	81.049	Direct	DE-SC0006941	71,922
USENE-ESC-FFC-Wood Carbon Pools	81.049	Direct	DE-SC0006986	48,318
COLOR-EPSSI-North Hem P Auger Co	81.049	Colorado State University	G-0113-1 P2	24,947
MARSH-MuSTI-Nano Phase 1	81.049	Marshall University Research Corporation	2010-001/210079 PO#RC-P1101336	392,428
UNIVE-ESC-FFC-Carbon Water Cycling	81.049	University of Colorado-Boulder	1548803	2,788
				<u>2,577,961</u>
<b>Renewable Energy Research and Development:</b>				
USENE-APS-Hydrogen Ed Curriculum	81.087	Direct	DE-FG36-08GO18108	14,035
USENE-IMP/Perhydride-Hydrogen Stora	81.087	Direct	DE-FG36-05GO15003 A003	1
ADV ACCT-Low Cost Membrane Electrod	81.087	3M	ADVANCE ACCOUNT	6,960
BALLA-APSRC-Microstructural	81.087	Ballard Power Systems	BMP/MTU AGRMT DATED 5/7/10	121,153
Advanced Gasoline Turbocharged Dire	81.087	Ford Motor Corp - Ford Rsch & Adv Eng	FORD PO# A 10 PO11 159794	316,392
GASTE-ARRA-SFI-IH2 Biofuels	81.087	Gas Technology Institute	SUBCONTRACT #S162	15,288
				<u>473,829</u>
<b>Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training and Technical Analysis:</b>				
USENE-APS-Exp Studies DPF & SCR Mdl	81.117	Direct	DE-EE0000204	433,965
<b>Total U.S. Department of Energy</b>				<u>4,390,306</u>
<b>U.S. Department of Education</b>				
No CFDA Number:				
UNIVE-Learning Construction Manage	84.unk	University of Nebraska - Lincoln	24-1122-001-002	34,120
<b>Fund for the Improvement of Postsecondary Education:</b>				
USEDU-MTTI-Tuning Transatlantic	84.116J	Direct	P116J090018	26,327
USEDU-EPSSI-Yr 1-INVUGE Program	84.116J	Direct	P116J090031-ACTION NO. 01	94,680
NORTH-BRC-FFC-Transatl Grad Degree	84.116	North Carolina State University	2008-1905-01	76,375
				<u>197,382</u>
<b>Total U.S. Department of Education</b>				<u>231,502</u>
<b>National Archives and Records Administration:</b>				
National Historical Publications and Records Grants:				
NATIO-Extract Buried Treasure	89.003	Direct	NAR11-RP-50064-11	26,082
<b>U.S. Department of Health and Human Services:</b>				
No CFDA Number:				
CENTE-NIOSH: Mining Bit	93.unk	Direct	NIOSH-CDC #254-2011-M-38171	3,354
CENTE-NIOSH-Mining Bit Instrumentat	93.unk	Direct	CDC #254-2011-M-40783	15,157
				<u>18,511</u>
<b>Human Genome Research:</b>				
NIH-BRC-Family Based Association	93.172	Direct	1 R03 HG006155-01A1	24,347

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# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
Research and Development Cluster (Continued):				
U.S. Department of Health and Human Services (Continued):				
National Center on Sleep Disorders Research:				
UNIVE-Slp Disorder Breathing Chldrn	93.233	University of Michigan	SUBCONTRACT #F011919 AMD 5	\$ 3,851
Occupational Safety and Health Program:				
CENTE-BRC-Mercury Vapor Exp Trcking	93.262	Direct	1R03OH009312-01A1	7,922
Drug Abuse and Addiction Research Programs:				
NIH-Short-Lived Radicals In Tobacco	93.279	Direct	1 R01 DA017201-01A1-03	(995)
JOHNS-Behavioral Pharmacology	93.279	Johns Hopkins University	2001428326	22,887
				21,892
Discovery and Applied Research for Technological Innovations to Improve Human Health:				
NIH-BRC In-Situ Biliary Manometer	93.286	Direct	1 R15 EB008883-01A1	33,390
NIH-BRC-Vivo Map in Knee Orthroplas	93.286	Direct	1 R03 EB009806-01A1	44,605
				77,995
Cancer Biology Research:				
NIH-Targeting Integrin Tumor Cells	93.396	Direct	1 R15 CA152828-01	71,872
ARRA-Trans-NIH Recovery Act Research Support:				
NIH-ARRA-Impacts Wildfire Part Emis	93.701	Direct	1 RC1 ES018612-01	144,752
NIH-BRC-ARRA-Meniscal Horn Attach	93.701	Direct	2 R15 AR051906-02A2	84,933
UNIVE-ARRA-MTRI-VF Doppler	93.701	University of Michigan	3001408483 P1	60,366
				290,051
Cardiovascular Diseases Research:				
NIH-BRC-VEGF-C Intrstitial Flow	93.837	Direct	1 R15 HL093705-01	16,050
NIH-BRC-Sleep Deprivation Neuro Con	93.837	Direct	1R21HL098676-01	131,973
NIH-BRC-Reg Interstitial Flow Lymph	93.837	Direct	1R21HL093568-01A2	32,475
NIH-BRC-Lymphatic Collecting	93.837	Direct	1 R15 HL113954-01	74,636
				255,134
Arthritis, Musculoskeletal and Skin Diseases Research:				
Black Bear Bone Mechanics	93.846	Direct	1 R15 AR050420-03	27,004
Diabetes, Digestive, and Kidney Diseases Extramural Research:				
NIH-BRC-miR-30d Insulin Gene Expres	93.847	Direct	7 R03 DK084166-03	78,391
PROTE-Bear Parathyroid for Bone	93.847	Proteos Inc	GRANT #2R42DK078407-02	77,771
				156,162
Biomedical Research and Research Training:				
NIH-BRC Molecular Recognition PB1	93.859	Direct	1R15GM076055-01A2	14,633
NIH-IEM-Folding Small Proteins	93.859	Direct	5 R01 GM062838-06	21,537
NIH-BRC-Enhance Barcode Readability	93.859	Direct	1 R15 GM088795-01	65,402
NIH-BRC-Centrosome Assembly	93.859	Direct	1 R15 GM101633-01	15,644
				117,216
Child Health and Human Development Extramural Research:				
NIH-BRC-Treat-Screen Gamma-Hydrox	93.865	Direct	5 R01 HD058553-03	295,514
NIH-Net Migration Estimates	93.865	Direct	7R03HD069737-02	15,657
MAYOM-MuSTI-Intramuscular Pressure	93.865	Mayo Clinic Rochester	2R01HD031476-11A1	9,226
OREGO-BRC-Rare Disease Research	93.865	Oregon Health and Science University	9003418-003-MTU	19,743
REGEN-Cerebral Metabolism	93.865	Regents of the University of Michigan	3001838648	9,432
				349,572
Total U.S. Department of Health and Human Services				1,421,529
U.S. Agency for International Development				
No CFDA Number:				
HIGHE-CWS1-Chiapas Oaxaca	98.unk	Higher Education For Development	SUB COOP AGMT DTD 2/16/09	129,234
Total Research and Development Cluster				33,189,129

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# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
Other Programs:				
U.S. Department of Agriculture:				
No CFDA Number:				
USAGR-Silviculture Program	10.unk	Direct	AG-56A1-C-12-0001	\$ 19,277
USAGR-FFC-ESC-Silviculture Program	10.unk	Direct	LETTER DATED 2/10/2011	13,553
USFOR-ESC-FFC-Sustain Forest Mgmt	10.unk	Direct	FS #08-CR-11242306-089 MOD 1	78,633
USAGR-FFC-Below Grnd Ecosystem	10.unk	Direct	08-JV-11242306-064	98,122
USAGR-ESC-FFC-Distgd Ecologist Lect	10.unk	Direct	08-CS-11242306-106	2,500
USAGR-ESC-FFC-Train Adv Climate Chg	10.unk	Direct	09-CR-11242306-085	(484)
USAGR-ESC-FFC-Climate Chnge Science	10.unk	Direct	09-PA-11242306-142	196,453
USAGR-SFI-Env Education Detroit	10.unk	Direct	10-CS-11090100-029	1,985
USAGR-FFC-ESC-Silviculture Prg 2012	10.unk	Direct	LETTER DATED 3/06/2012	98,423
				<u>508,462</u>
Child and Adult Care Food Program	10.558	Michigan Dept of Education	-n/a-	<u>7,818</u>
Forestry Research:				
USAGR-ESC-FFC-Climate Change Silvi	10.652	Direct	11-CA-11330124-051	<u>50,354</u>
Cooperative Forestry Assistance:				
USAGR-SFI-Develop Forest Stewards	10.664	Direct	11-DG-11420004-234	<u>29,924</u>
Total U.S. Department of Agriculture				<u>596,558</u>
U.S. Department of Commerce:				
No CFDA Number:				
UPPCO Building Renovations	11.unk	Direct	Award 06-01-05321	<u>294,534</u>
U.S. Department of Defense:				
No CFDA Number:				
USARM-MTTI-FNR-RoadSoft Culvrt 2012	12.unk	Direct	W911XK-12-C-0001	<u>58,361</u>
U.S. Department of Interior:				
No CFDA Number:				
USPAR-ESC-FFC-Isle Roy Inst Support	15.unk	Direct	TASK AGRMT NO J6310090048	<u>52,371</u>
U.S. Department of Labor:				
Mine Health and Safety Grants:				
USLAB-YR 10 MI Mine Safety & Health	17.600	Direct	MS-21936-11-55-R-26	215,470
USLAB-FY12 Mine Safety	17.600	Direct	MS-23049-12-55-R-26	3,348
				<u>218,818</u>
ARRA- State Energy Sector Program Advanced Energy Storage	17.275	Macomb/St. Clair Workforce Development Board	10-205-01	<u>78,845</u>
Total U.S. Department of Labor				<u>297,663</u>
U.S. Department of Transportation:				
No CFDA Number:				
MITRA-MTTI-TDG-RoadSoft 2011	20.unk	Michigan Dept of Transportation	MASTER 2010-0468 Z3	342,482
MITRA-MTTI-TDG-Roadsoft 2012	20.unk	Michigan Dept of Transportation	2010-0468 AUTHORIZATION Z7	322,782
MITRA-Natl Summer Tran Inst 2011	20.unk	Michigan Dept of Transportation	2011-0393	57,102
MITRA-MTTI-Training Electd Official	20.unk	Michigan Dept of Transportation	2010 -0470 AUTH Z2 JOB 111377	10,004
MITRA-MTTI-Hwy Safety Manuals	20.unk	Michigan Dept of Transportation	2010-0470 AUTH Z4 JOB 111387	34,504
MITRA-MTTI-MERL 2011	20.unk	Michigan Dept of Transportation	2011-0063 AUTH 1 JOB #112265	63,676
MITRA-MTTI-MERL 2012	20.unk	Michigan Dept of Transportation	2011-0063 AUTH 2 JOB 115071	23,855
UNIVE-CWS1-Superior GL Maritime	20.unk	University of Wisconsin-Superior	DTMA1G10001	2,136
				<u>856,541</u>
Highway Research and Development Program:				
USTRA-MTTI-MI Tribal Technical Asst	20.200	Direct	DTFH61-09-H-00001	<u>271,245</u>
University Transportation Centers Program (B)				
UNIVE-CWS1-Madison GL Maritime	20.701	Universtiy of Wisconsin-Madison	28OKO11	<u>11,124</u>
Total U.S. Department of Transportation				<u>1,138,910</u>

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# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
Other Programs:				
National Aeronautics and Space Administration:				
No CFDA Number:				
USNAS-FNR-A Willemsen Fellowship	43.unk	Direct	NNX09AI91H	\$ 30,227
UNIVE-MI Space-Desert Varnish Kenya	43.unk	University of Michigan	CHECK #1988116	2,541
UNIVE-MSGC Earth Sys Sci Fld Trg	43.unk	University of Michigan	CHECK #2038558	5,000
UNIVE-MSGC-Prep of Novel Polyimide	43.unk	University of Michigan	CHECK #2214175	494
UNIVE-MSGC-UnderH2O Remote	43.unk	University of Michigan	CHECK #2213028	(498)
UNIVE-MSGC-Nanosphere Drug Deliver	43.unk	University of Michigan	CHECK #2214175	1,632
UNIVE-MSGC-Human Climate Charact	43.unk	University of Michigan	CHECK #2214175	163
UNIVE-MSGC-Formaldehyde Living Env.	43.unk	University of Michigan	CHECK #2491144	439
UNIVE-MSGC-Bear Hormones 4 Osteo	43.unk	University of Michigan	CHECK #2491144	2,500
UNIVE-MSGC-Simulated Low Gravity	43.unk	University of Michigan	CHECK #2491144	978
UNIVE-MSGC-Treat Fracture Healing	43.unk	University of Michigan	CHECK #2491144	2,500
UNIVE-MSGC-Postmenopausal Mice	43.unk	University of Michigan	CHECK #2491144	992
UNIVE-MSGC-Astaxanthin Astronauts	43.unk	University of Michigan	CHECK #2491144	4,983
UNIVE-MTTI-MSGC-E Waste Asphalt	43.unk	University of Michigan	CHECK #2491144	2,597
UNIVE-ILI-MSGC-ROVs to Enhance STEM	43.unk	University of Michigan	CHECK #2441144	10,000
UNIVE-MSGC-ASR Nanosatellite	43.unk	University of Michigan	CHECK #2491144	2,058
UNIVE-MSGC-Geology Field Trip	43.unk	University of Michigan	CHECK #2491144	375
UNIVE-MSGC-MTU Mind Trekkers	43.unk	University of Michigan	CHECK #2491144	4,899
UNIVE-MSGC-Administrative FY12	43.unk	University of Michigan	CHECK #2491144	3,614
UNIVE-MSGC-Explore Cloud Microphysi	43.unk	University of Michigan	CHECK #2751149	1,432
UNIVE-MSGC-Boron Nanotubes CVD	43.unk	University of Michigan	CHECK #2751149	1,084
UNIVE-MSGC-Earthquake Damage	43.unk	University of Michigan	CHECK #2751149	833
UNIVE-MSGC-Volcanic Hazard Monitor	43.unk	University of Michigan	CHECK #2751149	2,084
UNIVE-MSGC-Great Lakes Teacher Inst	43.unk	University of Michigan	CHECK #2751150	266
UNIVE-MSGC-Calibrate Satellite Algo	43.unk	University of Michigan	CHECK #2751149	113
UNIVE-Train Teachers Earth Science	43.unk	University of Michigan	CHECK #1847384	4,793
UNIVE-MSGC-Get WISE	43.unk	University of Michigan	CHECK #2213028	2,214
Total National Aeronautics and Space Administration				88,313
National Science Foundation:				
No CFDA Number:				
NSF-ADV ACCT-E. Petushek Fellowship	47.unk	Direct	DGE-1051031 AMEND NO 002	39,500
NSF - IPA Assignment	47.unk	Direct	ECCS-1212464	71,596
NSF-ADV ACCT-Propellant Backflow	47.unk	Direct	ADVANCE ACCOUNT	8,555
				119,651
Geosciences:				
NSF-Ethics Education 2.0	47.050	Direct	GEO-0933026	50,703
Education and Human Resources:				
NATIO-EnVISIONS	47.076	Direct	HRD-0714197	(5,974)
NSF-SFI-Family Engineering	47.076	Direct	DRL-0741709	314,731
NSF-CWS1-FNR-Grad Schlr Globl Outlk	47.076	Direct	DUE-0806569	435,591
NSF-SFI-ADVANCE PAID Awd: Chg Face	47.076	Direct	HRD-0820083	116,164
NSF-ILI-High School Enterprise	47.076	Direct	DRL-0833542	416,936
NSF-EPSSI MITEP: Improving Earth	47.076	Direct	DUE-0831948	719,865
NSF-S. Wojda Fellowship	47.076	Direct	DGE-1051031	12,705
NSF-FNR-MTU SSEED Support4EngDegree	47.076	Direct	DUE-0965996	128,053
NSF-PERC-K Bunker - Fellowship	47.076	Direct	DGE-1051031	42,000
NSF-C DeDene Fellowship	47.076	Direct	DGE-1051031	15,307
DAPCEP-Underrep Girls in Rsch	47.076	DAPCEP	2010 ITEST SUM-001	183,841
UNIVE-Enrich AGEP Alliance	47.076	University of Michigan	3001959810	10,257
				2,389,476
Polar Programs:				
NATIO-Zero Emissions Snowmo Comp	47.078	Direct	ARC-0808798	889
International Science and Engineering (OISE)				
NSF-MTTI US Mal Col Rsch Micro Stone	47.079	Direct	OISE-0929619	7,005
ARRA- Trans-NSF Recovery Act Research Support:				
NSF-ARRA-FNR-CWS1-GK12 Global Wtr	47.082	Direct	DGE-0841073	417,489
NSF-FNR-ARRA-R Noyce Teacher Scholr	47.082	Direct	DUE-0934763	136,218
				553,707
Total National Science Foundation				3,121,431

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## MICHIGAN TECHNOLOGICAL UNIVERSITY

**Schedule of Expenditures of Federal Awards**  
For the Year Ended June 30, 2012

Federal Agency / Cluster / Program Title	CFDA Number	Passed Through	Pass-through / Grantor Number	Federal Expenditures
Other Programs:				
Small Business Administration				
Small Business Development Centers:				
SIXCO-Small Business Tech Dev	59.037	Six County Employment Alliance-Region 1	CONTRACT AGREEMENT	\$ 16,216
U.S. Environmental Protection Agency				
Nonpoint Source Implementation Grants:				
MIDEO-FFC-Forest H2O Oltv.Mgmt Demo	66.460	Michigan Dept of Environmental Quality	PROJECT #2008-0008	89,968
U.S. Department of Energy				
ARRA- Conservation Research and Development:				
USENE-APS-ARRA-Ed-Outrch Trans Elec	81.086	Direct	DE-EE0002493	837,494
U.S. Department of Education				
No CFDA Number:				
MIEDU-EPDIS Phy Sciences Physc&Chem	84.unk	Michigan Department of Education	GRANT #090290-8694	(679)
The Mystical Arts of Tibet	84.unk	Arts Midwest	FY12-135749	5,000
				4,321
Fund for the Improvement of Postsecondary Education				
NORTH-Brazil Higher Educ Consortium	84.116	North Dakota State Universtiy	SUBCONTRACT #12913	17,784
Fund for the Improvement of Postsecondary Education				
USEDU-CWS1-Yr1-SusR Project	84.116N	Direct	P116N080002	22,993
Safe and Drug-Free Schools and Communities_National Programs:				
PREVE-Reduce Underage Alcohol	84.184	Prevention Network	CHECK #14627	7,141
Byrd Honors Scholarships	84.185	Direct	-n/a-	5,750
Graduate Assistance in Areas of National Need:				
USEDU-ASISC-FNR-GAANN: Chem Eng Flw	84.200	Direct	P200A090124	78,472
Gaining Early Awareness and Readiness				
for Undergraduate Programs:				
MILAB-Gear Up 2011	84.334	Michigan Dept of Labor & Economic Growth	GRANT #10-00-007	6,633
GEARUP 2012	84.334	Michigan Dept of Labor & Economic Growth	GRANT #11-00-07	14,382
				21,015
Statewide Data Systems	84.372A	Center for Educational Performance and Information	-n/a-	2,326
ARRA - Statewide Longitudinal Data Systems	84.384A	Center for Educational Performance and Information	-n/a-	17,115
EASTE-MI Tech Data Program	84.386	Eastern UP Intermediate School District	CHECK DATED SEPTEMBER 2011	5,894
Total U.S. Department of Education				182,811
National Archives and Records Administration				
National Historical Publications and Records Grants:				
NATIO-Revealing Hidden Collections	89.003	Direct	NAR09-RB-50059-09	14,733
Total Other Programs				6,789,363
Total Expenditures of Federal Awards				\$ 78,834,833
				concluded

See notes to schedule of expenditures of federal awards.



# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Notes to Schedule of Expenditures of Federal Awards

### 1. BASIS OF PRESENTATION

The accompanying schedule of expenditures of federal awards (the "Schedule") includes the federal grant activity of Michigan Technological University (the "University") under programs of the federal government for the year ended June 30, 2012. The information in this schedule is presented in accordance with the requirements of the Office of Management and Budget (OMB) Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*. Because the schedule presents only a selected portion of the operations of the University, it is not intended to and does not present the financial position, changes in net assets or cash flows of the University.

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Expenditures reported on the Schedule are reported on the accrual basis of accounting, which is described in Note 1 to the University's financial statements. Such expenditures are recognized following the cost principles contained in OMB Circular A-21, *Cost Principles for Educational Institutions*, 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.

### 3. SUBRECIPIENTS

The University administers certain federal awards programs through subrecipients. Those subrecipients are not considered part of the University's reporting entity. Of the federal expenditures presented in the Schedule, the University provided federal awards to subrecipients as follows:

Program Title	CFDA Number	Amount Provided to Subrecipients
Department of Defense	12.unk	\$ 2,586,517
Basic and Applied Scientific Research	12.300	1,923
Air Force Defense Research Sciences Program	12.800	9,346
ARRA- Environmental Quality and Protection Resource Management	15.236	4,689
Migratory Bird Conservation	15.647	7,452
National Institute of Justice Research and Development Grants	16.560	117,044
Department of Transportation	20.unk	242,577
National Aeronautics and Space Administration	43.unk	389,448
Engineering Grants	47.041	91,338
Biological Sciences	47.074	138
Education and Human Resources	47.076	399,063
ARRA- Trans-NSF- Recovery Act Research Support	47.082	14,066
Great Lakes Program	66.469	47,690
Department of Energy	81.unk	68,107
Office of Science Financial Assistance Program	81.049	1,101,810

# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Notes to Schedule of Expenditures of Federal Awards

Program Title	CFDA Number	Amount Provided to Subrecipients
Funds for the improvement of Postsecondary Education	84.116	\$ 58,280
AARA-Trans-NIH Recovery Act Research Support	93.701	9,562
Child Health and Human Development Extramural Research	93.865	158,278
U.S. Agency for International Development	98.unk	<u>54,652</u>
Total provided to subrecipients		<u>\$ 5,361,980</u>

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

October 31, 2012

Board of Control  
Michigan Technological University  
Houghton, Michigan

We have audited the financial statements of the business-type activities and the discretely presented component unit of *Michigan Technological University* (the "University"), as of and for the year ended June 30, 2012, and have issued our report thereon dated October 31, 2012. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States.

Internal Control Over Financial Reporting

Management of the University is responsible for establishing and maintaining effective internal control over financial reporting. In planning and performing our audit, we considered the University's internal control over financial reporting as a basis for designing our auditing procedures 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 over financial reporting. Accordingly, we do not express an opinion on the effectiveness of the University's internal control over financial reporting.

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

Our consideration of internal control over financial reporting 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 financial reporting that might be deficiencies, significant deficiencies, or material weaknesses. We did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses, as defined above.

### Compliance and Other Matters

As part of obtaining reasonable assurance about whether the University's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of 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*.

We noted certain other matters that we reported to management of the University in a separate letter dated October 31, 2012.

This report is intended solely for the information and use of management, the audit committee, the Board of Control, others within the organization, and federal awarding agencies and pass-through entities and is not intended to be and should not be used by anyone other than these specified parties. However, it is a matter of public record, and its distribution is not limited.

A handwritten signature in black ink, reading "Rehmann Johnson". The signature is written in a cursive style with a large, stylized 'R' and 'J'.

INDEPENDENT AUDITORS' REPORT ON COMPLIANCE WITH  
REQUIREMENTS THAT COULD HAVE A DIRECT AND MATERIAL EFFECT  
ON EACH MAJOR PROGRAM AND ON INTERNAL CONTROL OVER  
COMPLIANCE IN ACCORDANCE WITH OMB CIRCULAR A-133

December 11, 2012

Board of Control  
Michigan Technological University  
Houghton, Michigan

Compliance

We have audited the compliance of *Michigan Technological University* ("the University") with the types of compliance requirements described in the OMB Circular A-133 Compliance Supplement that could have a direct and material effect on each of the University's major federal programs for the year ended June 30, 2012. The University's major federal programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs. Compliance with the requirements of laws, regulations, contracts, and grants applicable to each of its major federal programs is the responsibility of the University's management. Our responsibility is to express an opinion on the University's compliance based on our audit.

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 *OMB Circular A-133, Audits of States, Local Governments, and Non-Profit Organizations*. Those standards and OMB Circular A-133 require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the University's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion. Our audit does not provide a legal determination of the University's compliance with those requirements.

In our opinion, the University complied, in all material respects, with the 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, 2012.

## Internal Control Over Compliance

Management of the University is responsible for establishing and maintaining effective internal control over compliance with the requirements of laws, regulations, contracts, and grants applicable to federal programs. In planning and performing our audit, we considered the University's internal control over compliance with the requirements that could have a direct and material effect on a major federal program to determine the auditing procedures for the purpose of expressing our opinion on compliance and to test and report on internal control over compliance in accordance with OMB Circular A-133, 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 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 that is more than inconsequential will not be prevented, or detected and corrected, on a timely basis.

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 deficiencies, significant deficiencies, or material weaknesses. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses, as defined above.

This report is intended solely for the information and use of management, the audit committee, the Board of Control, others within the organization, and federal awarding agencies and pass-through entities and is not intended to be and should not be used by anyone other than these specified parties. However, it is a matter of public record, and its distribution is not limited.

A handwritten signature in black ink, reading "Lehmann Johnson". The signature is written in a cursive, flowing style.

# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Schedule of Findings and Questioned Costs

For the Year Ended June 30, 2012

### SECTION I - SUMMARY OF AUDITORS' RESULTS

#### Financial Statements

Type of auditors' report issued:

Unqualified

Internal control over financial reporting:

Material weakness(es) identified?

\_\_\_\_\_ yes      X no

Significant deficiency(ies) identified?

\_\_\_\_\_ yes      X none reported

Noncompliance material to financial statements noted?

\_\_\_\_\_ yes      X no

#### Federal Awards

Internal control over major programs:

Material weakness(es) identified?

\_\_\_\_\_ yes      X no

Significant deficiency(ies) identified?

\_\_\_\_\_ yes      X none reported

Type of auditors' report issued on compliance for major programs:

Unqualified

Any audit findings disclosed that are required to be reported in accordance with Circular A-133, Section 510(a)?

\_\_\_\_\_ yes      X no

Identification of major programs:

#### CFDA Number

84.007, 84.033, 84.038, 84.268, 84.376  
Various  
47.076

#### Name of Federal Program or Cluster

Student Financial Assistance Cluster  
Research and Development Cluster  
Education and Human Resources

Dollar threshold used to distinguish between Type A and Type B programs:

\$ 2,365,045

Auditee qualified as low-risk auditee?

X yes      \_\_\_\_\_ no

# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Schedule of Findings and Questioned Costs For the Year Ended June 30, 2012

### SECTION II - FINANCIAL STATEMENT FINDINGS

None reported.

### SECTION III - FEDERAL AWARD FINDINGS AND QUESTIONED COSTS

None reported.



# MICHIGAN TECHNOLOGICAL UNIVERSITY

## Summary Schedule of Prior Audit Findings For the Year Ended June 30, 2012

None reported.

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