

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH UNIVERSITY, MS
AGENCY ADDRESS

DANIEL W. JONES, CHANCELLOR
CHIEF EXECUTIVE OFFICER

	Actual Expenses FY Ending June 30, 2014	Estimate Expenses FY Ending June 30, 2015	Requested for FY Ending June 30, 2016	Requested Increase (+) or Decrease (-) FY 2016 vs. FY 2015 (Col. 3 vs. Col. 2)	
				AMOUNT	PERCENT
I. A. PERSONAL SERVICES					
1. Salaries, Wages & Fringe Benefits (Base)	403,751	403,770	403,770		
a. Additional Compensation					
b. Proposed Vacancy Rate (Dollar Amount)					
c. Per Diem					
Total Salaries, Wages & Fringe Benefits	403,751	403,770	403,770		
2. Travel					
a. Travel & Subsistence (In-State)	735	2,000	2,000		
b. Travel & Subsistence (Out-of-State)	10,465	10,500	10,500		
c. Travel & Subsistence (Out-of-Country)					
Total Travel	11,200	12,500	12,500		
B. CONTRACTUAL SERVICES (Schedule B):					
a. Tuition, Rewards & Awards					
b. Communications, Transportation & Utilities		50	50		
c. Public Information	24	250	250		
d. Rents					
e. Repairs & Service					
f. Fees, Professional & Other Services					
g. Other Contractual Services					
h. Data Processing	113,626	114,700	114,700		
i. Other					
Total Contractual Services	113,650	115,000	115,000		
C. COMMODITIES (Schedule C):					
a. Maintenance & Construction Materials & Supplies					
b. Printing & Office Supplies & Materials	500	500	500		
c. Equipment, Repair Parts, Supplies & Accessories					
d. Professional & Scientific Supplies & Materials					
e. Other Supplies & Materials					
Total Commodities	500	500	500		
D. CAPITAL OUTLAY:					
1. Total Other Than Equipment (Schedule D-1)					
2. Equipment (Schedule D-2):					
b. Road Machinery, Farm & Other Working Equipment					
c. Office Machines, Furniture, Fixtures & Equipment					
d. IS Equipment (Data Processing & Telecommunications)	89,985	87,316	116,955	29,639	33.94%
e. Equipment - Lease Purchase					
f. Other Equipment					
Total Equipment (Schedule D-2)	89,985	87,316	116,955	29,639	33.94%
3. Vehicles (Schedule D-3)					
4. Wireless Comm. Devices (Schedule D-4)					
E. SUBSIDIES, LOANS & GRANTS (Schedule E):	76,718	76,718	81,869	5,151	6.71%
TOTAL EXPENDITURES	695,804	695,804	730,594	34,790	4.99%
II. BUDGET TO BE FUNDED AS FOLLOWS:					
Cash Balance-Unencumbered					
General Fund Appropriation (Enter General Fund Lapse Below)	695,804	695,804	730,594	34,790	4.99%
State Support Special Funds					
Federal Funds _____ Other Special Funds (Specify) _____					
Less: Estimated Cash Available Next Fiscal Period					
TOTAL FUNDS (equals Total Expenditures above)	695,804	695,804	730,594	34,790	4.99%
GENERAL FUND LAPSE					
III. PERSONNEL DATA					
Positions Authorized in Appropriation Bill	Permanent: Full Time: 6	6	6		
	Part Time:				
	Time-Limited: Full Time:				
	Part Time:				
Average Annual Vacancy Rate (Percentage)	Permanent: Full Time:				
	Part Time:				
	Time-Limited: Full Time:				
	Part Time:				

Approved by: _____
 Official of Board or Commission
 Budget Officer: Pamela K. Roy / proym@olemiss.edu
 Phone Number: 662-915-5019

Submitted by: _____
 Name
 Title: CHANCELLOR
 Date: July 24, 2014

REQUEST BY FUNDING SOURCE

Name of Agency UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Specify Funding Sources As Shown Below	FY 2014 Actual Amount	% Of Line Item	% Of Total Budget	FY 2015 Estimated Amount	% Of Line Item	% Of Total Budget	FY 2016 Requested Amount	% Of Line Item	% Of Total Budget
1. General State Support Special (Specify)	403,751	100.00%		403,770	100.00%		403,770	100.00%	
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Hurricane Disaster Reserve Fund									
7. Capital Expense Fund									
8.									
9. Federal Other Special (Specify)									
10.									
11.									
12.									
13.									
Total Salaries	403,751		58.02%	403,770		58.02%	403,770		55.26%
1. General State Support Special (Specify)	11,200	100.00%		12,500	100.00%		12,500	100.00%	
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Hurricane Disaster Reserve Fund									
7. Capital Expense Fund									
8.									
9. Federal Other Special (Specify)									
10.									
11.									
12.									
13.									
Total Travel	11,200		1.60%	12,500		1.79%	12,500		1.71%
1. General State Support Special (Specify)	113,650	100.00%		115,000	100.00%		115,000	100.00%	
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Hurricane Disaster Reserve Fund									
7. Capital Expense Fund									
8.									
9. Federal Other Special (Specify)									
10.									
11.									
12.									
13.									
Total Contractual	113,650		16.33%	115,000		16.52%	115,000		15.74%
1. General State Support Special (Specify)	500	100.00%		500	100.00%		500	100.00%	
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Hurricane Disaster Reserve Fund									
7. Capital Expense Fund									
8.									
9. Federal Other Special (Specify)									
10.									
11.									
12.									
13.									
Total Commodities	500		0.07%	500		0.07%	500		0.06%

REQUEST BY FUNDING SOURCE

Name of Agency UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Specify Funding Sources As Shown Below	FY 2014 Actual Amount	% Of Line Item	% Of Total Budget	FY 2015 Estimated Amount	% Of Line Item	% Of Total Budget	FY 2016 Requested Amount	% Of Line Item	% Of Total Budget
1. General State Support Special (Specify)									
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Hurricane Disaster Reserve Fund									
7. Capital Expense Fund									
8.									
9. Federal Other Special (Specify)									
10.									
11.									
12.									
13.									
Total Other Than Equipment									
1. General State Support Special (Specify)	89,985	100.00%		87,316	100.00%		116,955	100.00%	
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Hurricane Disaster Reserve Fund									
7. Capital Expense Fund									
8.									
9. Federal Other Special (Specify)									
10.									
11.									
12.									
13.									
Total Equipment	89,985		12.93%	87,316		12.54%	116,955		16.00%
1. General State Support Special (Specify)									
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Hurricane Disaster Reserve Fund									
7. Capital Expense Fund									
8.									
9. Federal Other Special (Specify)									
10.									
11.									
12.									
13.									
Total Vehicles									
1. General State Support Special (Specify)									
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Hurricane Disaster Reserve Fund									
7. Capital Expense Fund									
8.									
9. Federal Other Special (Specify)									
10.									
11.									
12.									
13.									
Total Wireless Comm. Devices									

REQUEST BY FUNDING SOURCE

Name of Agency UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Specify Funding Sources As Shown Below	FY 2014 Actual Amount	% Of Line Item	% Of Total Budget	FY 2015 Estimated Amount	% Of Line Item	% Of Total Budget	FY 2016 Requested Amount	% Of Line Item	% Of Total Budget
1. General State Support Special (Specify)	76,718	100.00%		76,718	100.00%		81,869	100.00%	
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Hurricane Disaster Reserve Fund									
7. Capital Expense Fund									
8.									
9. Federal Other Special (Specify)									
10.									
11.									
12.									
13.									
Total Subsidies, Loans & Grants	76,718		11.02%	76,718		11.02%	81,869		11.20%
1. General State Support Special (Specify)	695,804	100.00%		695,804	100.00%		730,594	100.00%	
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Hurricane Disaster Reserve Fund									
7. Capital Expense Fund									
8.									
9. Federal Other Special (Specify)									
10.									
11.									
12.									
13.									
TOTAL	695,804		100.00%	695,804		100.00%	730,594		100.00%

SPECIAL FUNDS DETAIL

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH
Name of Agency

S. STATE SUPPORT SPECIAL FUNDS		(1) Actual Revenues FY 2014	(2) Estimated Revenues FY 2015	(3) Requested Revenues FY 2016
Source (Fund Number)	Detailed Description of Source			
	Cash Balance-Unencumbered			
Budget Contingency Fund	BCF - Budget Contingency Fund			
Education Enhancement Fund	EEF - Education Enhancement Fund			
Health Care Expendable Fund	HCEF - Health Care Expendable Fund			
Tobacco Control Fund	TCF - Tobacco Control Fund			
Hurricane Disaster Reserve Fund	HDRF - Hurricane Disaster Reserve Fund			
Capital Expense Fund	CEF - Capital Expense Fund			
Section S TOTAL				

A. FEDERAL FUNDS*		Percentage Match Requirement		(1) Actual Revenues FY 2014	(2) Estimated Revenues FY 2015	(3) Requested Revenues FY 2016
Source (Fund Number)	Detailed Description of Source	FY 2015	FY 2016			
	Cash Balance-Unencumbered					
Section A TOTAL						

B. OTHER SPECIAL FUNDS (NON-FED'L)		(1) Actual Revenues FY 2014	(2) Estimated Revenues FY 2015	(3) Requested Revenues FY 2016
Source (Fund Number)	Detailed Description of Source			
	Cash Balance-Unencumbered			
Section B TOTAL				

Section S + A + B TOTAL				
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C. TREASURY FUND/BANK ACCOUNTS*			(1) Reconciled Balance as of 6/30/14	(2) Balance as of 6/30/15	(3) Balance as of 6/30/16
Name of Fund/Account	Fund/Account Number	Name of Bank (If Applicable)			

* Any non-federal funds that have restricted uses must be identified and narrative of restrictions attached.

**NARRATIVE OF SPECIAL FUNDS DETAIL
AND TREASURY FUND/BANK ACCOUNTS**

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Name of Agency

CONTINUATION AND EXPANDED REQUEST

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH
AGENCY

Program No. _____ of _____ I. Programs

SUMMARY OF ALL PROGRAMS

PROGRAM

	FY 2014 Actual				
	(1) General	(2) State Support Special	(3) Federal	(4) Other Special	(5) Total
Salaries, Wages, Fringe	403,751				403,751
Travel	11,200				11,200
Contractual Services	113,650				113,650
Commodities	500				500
Other Than Equipment					
Equipment	89,985				89,985
Vehicles					
Wireless Comm. Devs.					
Subsidies, Loans & Grants	76,718				76,718
Total	695,804				695,804
No. of Positions (FTE)	5.91				5.91

	FY 2015 Estimate				
	(6) General	(7) State Support Special	(8) Federal	(9) Other Special	(10) Total
Salaries, Wages, Fringe	403,770				403,770
Travel	12,500				12,500
Contractual Services	115,000				115,000
Commodities	500				500
Other Than Equipment					
Equipment	87,316				87,316
Vehicles					
Wireless Comm. Devs.					
Subsidies, Loans & Grants	76,718				76,718
Total	695,804				695,804
No. of Positions (FTE)	5.08				5.08

	FY 2016 Increase/Decrease for Continuation				
	(11) General	(12) State Support Special	(13) Federal	(14) Other Special	(15) Total
Salaries, Wages, Fringe					
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment	29,639				29,639
Vehicles					
Wireless Comm. Devs.					
Subsidies, Loans & Grants	5,151				5,151
Total	34,790				34,790
No. of Positions (FTE)					

Note: FY2016 Total Request = FY2015 Estimated + FY2016 Incr(Decr) for Continuation + FY2016 Expansion/Reduction of Existing Activities + FY2016 New Activities.

CONTINUATION AND EXPANDED REQUEST

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH
AGENCY

Program No. _____ of 1 Programs

SUMMARY OF ALL PROGRAMS

PROGRAM

FY 2016 Expansion/Reduction of Existing Activities					
	(16) General	(17) State Support Special	(18) Federal	(19) Other Special	(20) Total
Salaries, Wages, Fringe					
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Comm. Devs.					
Subsidies, Loans & Grants					
Total					
No. of Positions (FTE)					

FY 2016 New Activities					
	(21) General	(22) State Support Special	(23) Federal	(24) Other Special	(25) Total
Salaries, Wages, Fringe					
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Comm. Devs.					
Subsidies, Loans & Grants					
Total					
No. of Positions (FTE)					

FY 2016 Total Request					
	(26) General	(27) State Support Special	(28) Federal	(29) Other Special	(30) Total
Salaries, Wages, Fringe	403,770				403,770
Travel	12,500				12,500
Contractual Services	115,000				115,000
Commodities	500				500
Other Than Equipment					
Equipment	116,955				116,955
Vehicles					
Wireless Comm. Devs.					
Subsidies, Loans & Grants	81,869				81,869
Total	730,594				730,594
No. of Positions (FTE)	5.08				5.08

Note: FY2016 Total Request = FY2015 Estimated + FY2016 Incr(Decr) for Continuation + FY2016 Expansion/Reduction of Existing Activities + FY2016 New Activities.

SUMMARY OF PROGRAMS
FORM MBR-1-03sum

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH
Agency Name

FUNDING REQUESTED FISCAL YEAR 2016

PROGRAM	GENERAL	ST.SUPP.SPECIAL	FEDERAL	OTHER SPECIAL	TOTAL
1. ACADEMIC SUPPORT	730,594				730,594
SUMMARY OF ALL PROGRAMS	730,594				730,594

CONTINUATION AND EXPANDED REQUEST

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Program No. 1 of 1 Programs

AGENCY

ACADEMIC SUPPORT

PROGRAM

	FY 2014 Actual				
	(1) General	(2) State Support Special	(3) Federal	(4) Other Special	(5) Total
Salaries, Wages, Fringe	403,751				403,751
Travel	11,200				11,200
Contractual Services	113,650				113,650
Commodities	500				500
Other Than Equipment					
Equipment	89,985				89,985
Vehicles					
Wireless Comm. Devs.					
Subsidies, Loans & Grants	76,718				76,718
Total	695,804				695,804
No. of Positions (FTE)	5.91				5.91

	FY 2015 Estimate				
	(6) General	(7) State Support Special	(8) Federal	(9) Other Special	(10) Total
Salaries, Wages, Fringe	403,770				403,770
Travel	12,500				12,500
Contractual Services	115,000				115,000
Commodities	500				500
Other Than Equipment					
Equipment	87,316				87,316
Vehicles					
Wireless Comm. Devs.					
Subsidies, Loans & Grants	76,718				76,718
Total	695,804				695,804
No. of Positions (FTE)	5.08				5.08

	FY 2016 Increase/Decrease for Continuation				
	(11) General	(12) State Support Special	(13) Federal	(14) Other Special	(15) Total
Salaries, Wages, Fringe					
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment	29,639				29,639
Vehicles					
Wireless Comm. Devs.					
Subsidies, Loans & Grants	5,151				5,151
Total	34,790				34,790
No. of Positions (FTE)					

Note: FY2016 Total Request = FY2015 Estimated + FY2016 Incr(Decr) for Continuation + FY2016 Expansion/Reduction of Existing Activities + FY2016 New Activities.

CONTINUATION AND EXPANDED REQUEST

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Program No. 1 of 1 Programs

AGENCY

ACADEMIC SUPPORT

PROGRAM

FY 2016 Expansion/Reduction of Existing Activities					
	(16) General	(17) State Support Special	(18) Federal	(19) Other Special	(20) Total
Salaries, Wages, Fringe					
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Comm. Devs.					
Subsidies, Loans & Grants					
Total					
No. of Positions (FTE)					

FY 2016 New Activities					
	(21) General	(22) State Support Special	(23) Federal	(24) Other Special	(25) Total
Salaries, Wages, Fringe					
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Comm. Devs.					
Subsidies, Loans & Grants					
Total					
No. of Positions (FTE)					

FY 2016 Total Request					
	(26) General	(27) State Support Special	(28) Federal	(29) Other Special	(30) Total
Salaries, Wages, Fringe	403,770				403,770
Travel	12,500				12,500
Contractual Services	115,000				115,000
Commodities	500				500
Other Than Equipment					
Equipment	116,955				116,955
Vehicles					
Wireless Comm. Devs.					
Subsidies, Loans & Grants	81,869				81,869
Total	730,594				730,594
No. of Positions (FTE)	5.08				5.08

Note: FY2016 Total Request = FY2015 Estimated + FY2016 Incr(Decr) for Continuation + FY2016 Expansion/Reduction of Existing Activities + FY2016 New Activities.

PROGRAM DECISION UNITS

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

1 - ACADEMIC SUPPORT

AGENCY

PROGRAM NAME

	A	B	C	D	E	F	G	H
EXPENDITURES:	FY 2015 Appropriation	Escalations By DFA	Non-Recurring Items	Core Operations	Total Funding Change	FY 2016 Total Request		
SALARIES	403,770					403,770		
GENERAL	403,770					403,770		
ST.SUP.SPECIAL								
FEDERAL								
OTHER								
TRAVEL	12,500					12,500		
GENERAL	12,500					12,500		
ST.SUP.SPECIAL								
FEDERAL								
OTHER								
CONTRACTUAL	115,000					115,000		
GENERAL	115,000					115,000		
ST.SUP.SPECIAL								
FEDERAL								
OTHER								
COMMODITIES	500					500		
GENERAL	500					500		
ST.SUP.SPECIAL								
FEDERAL								
OTHER								
CAPITAL-OTE								
GENERAL								
ST.SUP.SPECIAL								
FEDERAL								
OTHER								
EQUIPMENT	87,316			29,639	29,639	116,955		
GENERAL	87,316			29,639	29,639	116,955		
ST.SUP.SPECIAL								
FEDERAL								
OTHER								
VEHICLES								
GENERAL								
ST.SUP.SPECIAL								
FEDERAL								
OTHER								
WIRELESS DEV								
GENERAL								
ST.SUP.SPECIAL								
FEDERAL								
OTHER								
SUBSIDIES	76,718			5,151	5,151	81,869		
GENERAL	76,718			5,151	5,151	81,869		
ST.SUP.SPECIAL								
FEDERAL								
OTHER								
TOTAL	695,804			34,790	34,790	730,594		

FUNDING:

GENERAL FUNDS	695,804			34,790	34,790	730,594		
ST.SUP.SPCL.FUNDS								
FEDERAL FUNDS								
OTHER SP.FUNDS								
TOTAL	695,804			34,790	34,790	730,594		

POSITIONS:

GENERAL FTE	5.08					5.08		
ST.SUP.SPCL.FTE								
FEDERAL FTE								
OTHER SP FTE								
TOTAL FTE	5.08					5.08		

PRIORITY LEVEL:

				1				
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PROGRAM NARRATIVE

Program Data Collected in Accordance with the
Mississippi Performance Budget and Strategic Planning Act of 1994
(To Accompany Form MBR-1-03)

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING

1 - ACADEMIC SUPPORT

AGENCY NAME

PROGRAM NAME

I. Program Description:

The MCSR (Supercomputer) provides to all faculty, students, and staff at all state-supported institutions governed by the Board of Trustees of Institutions of Higher Learning the following:

- (1) Access to high performance shared memory supercomputers, distributed memory cluster computers, and hybrid systems
- (2) Access to appropriate software, including scientific/applications software, compilers, and utilities
- (3) Access to technical assistance and instruction as required by students and faculty

II. Program Objective:

The MCSR objective is to provide a computational resource for research and instruction; to run that resource as effectively, efficiently, and securely as possible; and to provide the high level of technical assistance required to facilitate the winning of highly competitive research grants, the completion of graduate thesis and dissertation research, and the graduation of students who are prepared to compete for high tech jobs.

III. Current program activities as supported by the funding in Columns 6-15 (FY 15 Estimated & FY 16 Increase/Decrease for continuations) of MBR-1-03 and designated Budget Unit Decisions columns of MBR-1-03-A:

(D) Core Operations:

The request reflects an increase of \$34,790, which includes an additional \$29,639 for upgrading high performance computing equipment used by researchers, and \$5,151 for increased utility costs.

PROGRAM PERFORMANCE INDICATORS AND MEASURES
 Program Data Collected in Accordance with the Mississippi Performance Budget and Strategic
 Planning Act of 1994

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING

1 - ACADEMIC SUPPORT

AGENCY NAME

PROGRAM NAME

PROGRAM OUTPUTS: (This is the measure of the process necessary to carry out the goals and objectives of this program. This is the volume produced, i.e., how many people served, how many documents generated.)

	FY 2014 <u>ACTUAL</u>	FY 2015 <u>ESTIMATED</u>	FY 2016 <u>PROJECTED</u>
1 Central Processing Hours Generated, All Systems	7,597,317.00	8,000,000.00	10,000,000.00
2 Batch Jobs Processed, All Systems	55,776.00	60,000.00	70,000.00
3 Number of New Research Accounts Added	291.00	250.00	250.00
4 Funded Research Supported by MCSR (\$s)	16,342,606.00	15,000,000.00	17,500,000.00
5 Number of University Courses Supported with MCSR Resources	3.00	8.00	8.00
6 Number of Students & Faculty Trained at MCSR Workshops	241.00	250.00	250.00
7 Total Amount of Federal Grants, Contracts, & Allocations Requested for MCSR by IHLs in Submitted Applications	119,440.00	300,000.00	300,000.00
8 Total Amount of Federal Grants, Contracts, & Allocations Released to (or spent for) MCSR from Grant Awards to IHLs	300,000.00	250,000.00	250,000.00
9 Total Amount of Federal Grants, Contracts, & Allocations Requested for MS IHLs in Proposals Submitted in Collaboration with MCSR	3,373,586.00	2,500,000.00	3,000,000.00

PROGRAM EFFICIENCIES: (This is the measure of the cost, unit cost or productivity associated with a given outcome or output. This measure indicates linkage between services and funding, i.e., cost per investigation, cost per student or number of days to complete investigation.)

	FY 2014 <u>ACTUAL</u>	FY 2015 <u>ESTIMATED</u>	FY 2016 <u>PROJECTED</u>
1 Cost per CPU Hour - All Systems	0.09	0.09	0.07
2 Return of Investment to Mississippi (\$'s Research Grants/\$'s MCSR Budget)	23.49	23.49	23.95

PROGRAM OUTCOMES: (This is the measure of the quality or effectiveness of the services provided by this program. This measure provides an assessment of the actual impact or public benefit of your agency's actions. This is the results produced, i.e., increased customer satisfaction by x% within a 12-month period, reduce the number of traffic fatalities due to drunk drivers within a 12-month period.)

	FY 2014 <u>ACTUAL</u>	FY 2015 <u>ESTIMATED</u>	FY 2016 <u>PROJECTED</u>
1 To continue to provide access to well-maintained high performance computing systems (xx%)	100.00	100.00	100.00
2 To continue to provide the applications software and compilers requested by MCSR users (xx%)	100.00	100.00	100.00
3 To continue to provide access to highly-qualified technical staff for assistance and instruction	100.00	100.00	100.00

PROGRAM 3% GENERAL FUND REDUCTION AND NARRATIVE EXPLANATION

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

	Fiscal Year 2015 Funding			FY 2015 GF PERCENT REDUCED
	Total Funds	Reduced Amount	Reduced Funding Amount	
Program Name: (1) ACADEMIC SUPPORT				
GENERAL	695,804	(20,874)	674,930	(2.99%)
ST.SUPPORT SPECIAL				
FEDERAL				
OTHER SPECIAL				
TOTAL	695,804	(20,874)	674,930	
Narrative Explanation: Out of state travel to be reduced by \$5,500. Subsidies to be reduced by \$2,301. Purchases of new supercomputing equipment to be reduced by \$13,073.				
SUMMARY OF ALL PROGRAMS				
GENERAL	695,804	(20,874)	674,930	(2.99%)
ST.SUPPORT SPECIAL				
FEDERAL				
OTHER SPECIAL				
TOTAL	695,804	(20,874)	674,930	

BOARD OF TRUSTEES OF INSTITUTIONS OF HIGHER LEARNING MEMBERS

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING

Agency

A. Explain Rate and manner in which board members are reimbursed:

Board members are reimbursed through the Institutions of Higher Learning System Administration budget with a per diem of \$40 plus expenses.

B. Estimated number of meetings FY2015

12 (twelve)

C.	Names of Members	City, Town, Residence	Appointed By	Date of Appointment	Length of Term
1.	<u>Ms. Karen L. Cummins</u>	<u>Oakland, MS</u>	<u>Bryant</u>	<u>May 2012</u>	<u>9 years</u>
2.	<u>Dr. Bradford J. Dye, III</u>	<u>Oxford, MS</u>	<u>Bryant</u>	<u>May 2012</u>	<u>9 years</u>
3.	<u>Mr. Shane Hooper</u>	<u>Tupelo, MS</u>	<u>Bryant</u>	<u>May 2012</u>	<u>9 years</u>
4.	<u>Mr. Hal Parker</u>	<u>Bolton, MS</u>	<u>Bryant</u>	<u>May 2012</u>	<u>9 years</u>
5.	<u>Mr. Ed Blakeslee</u>	<u>Gulfport, MS</u>	<u>Barbour</u>	<u>May 2004</u>	<u>11 years</u>
6.	<u>Mr. Bob Owens</u>	<u>Terry, MS</u>	<u>Barbour</u>	<u>May 2004</u>	<u>11 years</u>
7.	<u>Mr. Aubrey Patterson</u>	<u>Tupelo, MS</u>	<u>Barbour</u>	<u>May 2004</u>	<u>11 years</u>
8.	<u>Ms. Robin Robinson</u>	<u>Laurel, MS</u>	<u>Barbour</u>	<u>May 2004</u>	<u>11 years</u>
9.	<u>Mr. Alan W. Perry</u>	<u>Jackson, MS</u>	<u>Barbour</u>	<u>May 2008</u>	<u>10 years</u>
10.	<u>Ms. Christine L. Pickering</u>	<u>Biloxi, MS</u>	<u>Barbour</u>	<u>May 2008</u>	<u>10 years</u>
11.	<u>Mr. C.D. Smith, Jr.</u>	<u>Meridian, MS</u>	<u>Barbour</u>	<u>May 2008</u>	<u>10 years</u>
12.	<u>Dr. Douglas W. Rouse</u>	<u>Hattiesburg, MS</u>	<u>Barbour</u>	<u>May 2008</u>	<u>10 years</u>

Identify Statutory Authority (Code Section or Executive Order Number)*

Constitutional Amendment 213A of the Constitution of the State of Mississippi

*If Executive Order, please attach copy.

**SCHEDULE B
CONTRACTUAL SERVICES**

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Name of Agency

MINOR OBJECT OF EXPENDITURE	(1) Actual Expenses FY Ending June 30, 2014	(2) Estimated Expenses FY Ending June 30, 2015	(3) Requested for FY Ending June 30, 2016
A. TUITION, REWARDS & AWARDS (61010-61099)			
61010 Tuition			
61020 Employee Training			
TOTAL (A)			
B. TRANSPORTATION & UTILITIES (61100-61299)			
61110 Postage, Box Rent, etc.		50	50
611XX Transportation of Goods (61180-61190)			
61210 Electricity			
61220 Gas			
61230 Water & Sewage			
TOTAL (B)		50	50
C. PUBLIC INFORMATION (61300-61399)			
61310 Advertising & Public Information	24	250	250
61340 Signs & Billboards			
61350 Exhibits & Displays			
TOTAL (C)	24	250	250
D. RENTS (61400-61499)			
61420 Building & Floor Space			
61430 Land			
61440 Office Equipment			
61460 Other Equipment			
61470 Capitol Facilities - Rental			
61480 Exhibits, Displays & Conference Rooms			
TOTAL (D)			
E. REPAIRS & SERVICES (61500-61599)			
61500 Grounds, Walks, Fences & Lots			
61520 Buildings			
61530 Machinery & Field Equipment			
61540 Motor Vehicles			
61550 Office Equipment & Furniture			
61580 Shop Equipment			
61590 Miscellaneous Items of Equipment			
TOTAL (E)			
F. FEES, PROFESSIONAL & OTHER SERVICES (61600-61699)			
61610 Engineering			
61615 SAAS Fees - DFA			
61616 MMRS Fees			
61620 Department of Audit			
6162X Accounting (61621-61624)			
6163X Legal (61630-61636)			
6164X Medical Services (61640-61646)			
61650 State Personnel Board			
6165X Personnel Services Contracts (61651-61653)			
61658 Personnel Services Contracts - SPAHRS			
6166X Court Costs & Reporters (61661-61666)			
61670 Laboratory & Testing Fees			
6168X Contract Worker (61682-61688)			
TOTAL (F)			

**SCHEDULE B
CONTRACTUAL SERVICES CONTINUED**

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Name of Agency

MINOR OBJECT OF EXPENDITURE	(1) Actual Expenses FY Ending June 30, 2014	(2) Estimated Expenses FY Ending June 30, 2015	(3) Requested for FY Ending June 30, 2016
G. OTHER CONTRACTUAL SERVICES (61700-61899)			
61700 Liability Insurance Pool Contributions (Tort Claims)			
61710 Insurance & Fidelity Bonds			
61715 Insurance Computer Equipment			
61720 Membership Dues			
61721 Subscriptions			
TOTAL (G)			
H. INFORMATION TECHNOLOGY (61900-61990)			
61902 IS Professional Fees - Outside Vendor			
61905 IS Professional Fees - ITS	15	15	15
6191X IS Training/Education (61914-61915)			
61917 Service Charges to State Data Center			
61918 Data Entry			
61921 Software Acquisition and Installation	14	14	14
61922 Basic Telephone Monthly - Outside Vendor	2,309	2,500	2,500
61923 Basic Telephone Monthly - ITS			
61924 Long Distance Charges - Outside Vendor			
61925 Long Distance Charges - ITS			
61926 Private Data Line Monthly Charges - Outside Vendor			
61927 Private Data Line Monthly Charges - ITS			
61928 Public Network Access Charges - Outside Vendor	720	750	750
61929 Public Network Access Charges - ITS			
6193X IS Related Rentals (61932-61933)			
61938 Pager Usage Time - Outside Vendor			
61939 Cellular Usage Time - Outside Vendor			
61961 Maintenance/Repair of IS Equipment			
61962 Maintenance/Repair of Telephone Systems (ITS)			
61980 Software Maintenance, Outside Vendor	110,568	111,421	111,421
TOTAL (H)	113,626	114,700	114,700
I. OTHER (61991-61999)			
6199X Prior Year Expense (61996-61998)			
61999 Contractual Services - No PO Required			
TOTAL (I)			
GRAND TOTAL <i>(Enter on Line I-B of Form MBR-1)</i>	113,650	115,000	115,000
FUNDING SUMMARY:			
GENERAL FUNDS	113,650	115,000	115,000
STATE SUPPORT SPECIAL FUNDS			
FEDERAL FUNDS			
OTHER SPECIAL FUNDS			
TOTAL FUNDS	113,650	115,000	115,000

**SCHEDULE C
COMMODITIES**

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH
Name of Agency

MINOR OBJECT OF EXPENDITURE	(1) Actual Expenses FY Ending June 30, 2014	(2) Estimated Expenses FY Ending June 30, 2015	(3) Requested for FY Ending June 30, 2016
A. MAINTENANCE & CONSTR. MATERIALS & SUPPLIES (62010-62099)			
62040 Lumber Parts			
62050 Steel & Other Metals			
62060 Paints			
Total (A)			
B. PRINTING & OFFICE SUPPLIES & MATERIALS (62100-62199)			
62110 Printing Binding	80	100	100
62120 Duplication & Reproduction Supplies			
62130 Office Supplies & Materials	420	400	400
62140 Paper Supplies			
62150 Maps, Manuals, Library Books			
62160 Office Equipment (not capital outlay)			
Total (B)	500	500	500
C. EQUIPMENT REPAIR PARTS, SUPPLIES & ACCES. (62200-62299)			
62210 Fuels - Gasoline			
62251 Repair Vehicle			
62270 Radio & TV Supply & Repair			
62271 Repair of Comm Systems, Parts			
62290 Other Equipment Repair Parts			
62555 IT Repair Parts for Equipment			
Total (C)			
D. PROFESSIONAL & SCI. SUPPLIES AND MATERIALS (62300-62399)			
62330 Photographic Supplies			
62340 Drugs & Chemicals - Medical & Lab Use			
62390 Other Professional Scientific			
Total (D)			
E. OTHER SUPPLIES & MATERIALS (62400-62999)			
62420 Hardware, Plumbing & Electrical			
62450 Janitor Supplies & Cleaning			
62460 Wearing Material			
62470 Food			
62520 Decal Signs			
62530 Uniforms & Wearing Apparel			
62560 Eating Utensils			
62590 Other Supplies & Materials			
62595 Other Equipment (less than \$1,000)			
62998 Prior year expense			
Total (E)			
GRAND TOTAL (A, B, C, D & E) <i>(Enter on Line I-C of Form MBR-1)</i>	500	500	500
FUNDING SUMMARY:			
GENERAL FUNDS	500	500	500
STATE SUPPORT SPECIAL FUNDS			
FEDERAL FUNDS			
OTHER SPECIAL FUNDS			
TOTAL FUNDS	500	500	500

**SCHEDULE D-1
CAPITAL OUTLAY
OTHER THAN EQUIPMENT**

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH
Name of Agency

MINOR OBJECT OF EXPENDITURE	(1) Actual Expenses FY Ending June 30, 2014	(2) Estimated Expenses FY Ending June 30, 2015	(3) Requested for FY Ending June 30, 2016
A. LANDS (63100-63199)			
63110 Land for Buildings			
63120 Land for Right-of-Way			
63130 Land for Aggregates			
63170 Land Purchased for Other Purposes			
TOTAL (A)			
B. BUILDINGS & IMPROVEMENTS (63200-63299)			
63250 Buildings - Purchased, Constructed, Remodeled			
TOTAL (B)			
C. INFRASTRUCTURE & OTHER (63500-63999)			
635XX Other			
TOTAL (C)			
GRAND TOTAL <i>(Enter on Line I-D-1 of Form MBR-1)</i>			
FUNDING SUMMARY:			
GENERAL FUNDS			
STATE SUPPORT SPECIAL FUNDS			
FEDERAL FUNDS			
OTHER SPECIAL FUNDS			
TOTAL FUNDS			

**SCHEDULE D-2
CAPITAL OUTLAY EQUIPMENT**

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Name of Agency

EQUIPMENT BY ITEM	Act. FY Ending June 30, 2014		Est. FY Ending June 30, 2015		Req. FY Ending June 30, 2016		
	No. of Units	Total Cost	No. of Units	Total Cost	No. of Units	Cost Per Unit	Total Cost
A. VEHICLES (see form MBR-1-D-3)							
B. ROAD MACHINERY, FARM & OTHER EQUIPMENT							
63320 Road Machinery							
TOTAL (B)							
C. OFFICE MACHINES, FURNITURE, FIXTURES, EQUIP.							
63330 Office Equipment, Furniture							
TOTAL (C)							
D. IS EQUIPMENT (DP & TELECOMMUNICATIONS)							
63421 IT/IS Equipment							
Staff Laptop PC's (R)	1	2,075					
Data Storage Array	1	23,900					
Supercomputer Replacement Upgrade (R)			1	87,316	1	116,955	116,955
Tape Backup System	1	64,010					
TOTAL (D)		89,985		87,316			116,955
E. EQUIPMENT - LEASE PURCHASE (63460-63476)							
63462 Lease-Purchase - Information Systems Equipment							
63463 Lease-Purchase - Telecom. Infrastructure / Equipment							
63468 Lease-Purchase - Telephone Equipment							
63469 Lease-Purchase - Two-way Radio Equipment							
63476 Lease-Purchase - Other Equipment							
TOTAL (E)							
F. OTHER EQUIPMENT							
63490 Other Equipment							
63396 Betterments or Accessories for Vehicles							
63495 Betterments or Accessories for Other than Vehicles							
TOTAL (F)							
GRAND TOTAL <i>(Enter on Line I-D-2 of Form MBR-1)</i>		89,985		87,316			116,955
FUNDING SUMMARY:							
GENERAL FUNDS		89,985		87,316			116,955
STATE SUPPORT SPECIAL FUNDS							
FEDERAL FUNDS							
OTHER SPECIAL FUNDS							
TOTAL FUNDS		89,985		87,316			116,955

**SCHEDULE D-3
PASSENGER/WORK VEHICLES**

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Name of Agency

MINOR OBJECT OF EXPENDITURE	Vehicle Inventory June 30, 2014	FY Ending June 30, 2014		FY Ending June 30, 2015		FY Ending June 30, 2016	
		No. of Vehicles	Actual Cost	No. of Vehicles	Estimated Cost	No. of Vehicles	Requested Cost
A. PASSENGER & WORK VEHICLES (63310, 63390-63400)							
63310 Passenger, Basic Economy							
63310 Passenger, Basic Sporty							
63310 Passenger, Entry Level							
63310 Passenger, Lower Middle							
63310 Passenger, Traditional Large							
63310 Passenger, Upper Middle							
63310 Passenger, Upper Middle Specialty							
63390 Truck, Compact Pickup							
63390 Truck, Fullsize Pickup							
63390 Truck, Fullsize Utility							
63390 Truck, Midsize Pickup							
63391 Truck, Heavy Duty Station Wagon							
63391 Truck, Heavy Duty Trucks							
63392 Truck, Mini Sport Utility							
63392 Truck, Sport Utility							
63393 Truck, Fullsize Van (Cargo)							
63393 Truck, Minivan (Cargo)							
63393 Truck, Minivan (Passenger)							
63393 Truck, Window Van (Passenger)							
63400 Other Vehicles							
TOTAL (A)							
B. BETTERMENTS OR ACCESSORIES FOR VEHICLES (63395)							
63395 Betterments or Accessories for Vehicles							
TOTAL (B)							
GRAND TOTAL <i>(Enter on Line I-D-3 of Form MBR-1)</i>							
FUNDING SUMMARY:							
GENERAL FUNDS							
STATE SUPPORT SPECIAL FUNDS							
FEDERAL FUNDS							
OTHER SPECIAL FUNDS							
TOTAL FUNDS							

**SCHEDULE D-4
WIRELESS COMMUNICATION DEVICES**

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH
Name of Agency

MINOR OBJECT OF EXPENDITURE	Device Inventory	Act FY Ending June 30, 2014		Est FY Ending June 30, 2015		Req FY Ending June 30, 2016	
	June 30, 2014	No. of Devices	Actual Cost	No. of Devices	Estimated Cost	No. of Devices	Requested Cost
A. CELLULAR PHONES (63435)							
63435 Cellular Phones							
Total (A)							
B. PAGERS (63434)							
63434 Pagers, Paging Equipment							
Total (B)							
C. WIRELESS PERSONAL DIGITAL ASSISTANTS (63435)							
63435 Wireless PDAs, Blackberry, etc							
Total (C)							
GRAND TOTAL <i>(Enter on Line I-D-4 of Form MBR-1)</i>							
FUNDING SUMMARY:							
GENERAL FUNDS							
STATE SUPPORT SPECIAL FUNDS							
FEDERAL FUNDS							
OTHER SPECIAL FUNDS							
TOTAL FUNDS							

**SCHEDULE E
SUBSIDIES, LOANS & GRANT**

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Name of Agency

MINOR OBJECT OF EXPENDITURE	(1) Actual Expenses FY Ending June 30, 2014	(2) Estimated Expenses FY Ending June 30, 2015	(3) Requested for FY Ending June 30, 2016
A. SCHOOL GRANTS TO COUNTIES & MUNICIPALITIES (64000-64599)			
TOTAL (A)			
B. GRANTS TO I.H.L. & OTHER POLITICAL SUBDIVISIONS (64600-64699)			
TOTAL (B)			
C. GRANTS TO NON-GOVERNMENT INSTNS & INDS (64700-64999)			
TOTAL (C)			
D. DEBT SERVICE & JUDGEMENTS (65000-65399)			
65040 Interest on Lease Purchases			
TOTAL (D)			
E. OTHER (66000-89999)			
Utility Costs	76,718	76,718	81,869
TOTAL (E)	76,718	76,718	81,869
GRAND TOTAL <i>(Enter on Line I-E of Form MBR-1)</i>	76,718	76,718	81,869
FUNDING SUMMARY:			
GENERAL FUNDS	76,718	76,718	81,869
STATE SUPPORT SPECIAL FUNDS			
FEDERAL FUNDS			
OTHER SPECIAL FUNDS			
TOTAL FUNDS	76,718	76,718	81,869

NARRATIVE
2016 BUDGET REQUEST

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING

Name of Agency

The MCSR Mission

The primary mission of the Mississippi Center for Supercomputing Research (MCSR) is to provide high performance computing (HPC) facilities and services to all of the Mississippi Institutions of Higher Learning (IHLs) in support of academic instruction and research.

Description of MCSR Resources & Services

The MCSR currently supports an SGI UV 2000 shared memory supercomputer, an SGI Altix XE Multi-core Xeon Linux Cluster, a Web server, network attached data storage devices, and a tape backup system. The supercomputer and cluster host a variety of mathematics, scientific, and engineering applications, and sequential and parallel software development environments (MPI, C, C++, FORTRAN 90) for students and researchers. Any student or faculty member at any Mississippi IHL may have access to these systems at no charge for research or instructional use. Staff members provide operational support for these systems, as well as end-user support and training to the faculty and students who use them for research.

Value of the MCSR Project to Mississippi

The primary benefit of the MCSR is its payoff in federal research funds; in FY2014, the MCSR supported over \$23 in federal grants for every \$1 in the MCSR budget. The centralization of personnel and equipment resources also avoids duplicating these expenses at the individual campus level and gives an equality of access to any individual faculty member at the smaller institutions. A secondary benefit to Mississippi from the MCSR is the presence of a centralized technical staff, which is available to all of the institutions for matters including, but not limited to, high-performance computing. In particular, assistance has been provided to the smaller campuses in meeting many diverse needs: campus network strategic planning and installation, system administration of servers and workstations, e-mail services prior to campus e-mail server installation, and many other needs pertaining to UNIX system administration, e-mail issues, user instruction, and network issues. The institution-neutral position of the MCSR has made possible the winning of national grants, which placed networked personal computer laboratories at both Alcorn State University and Mississippi Valley State University. The MCSR has also played a critical role in developing the Ph.D. program in Chemistry and the multidisciplinary Ph.D. program in Environmental Science at Jackson State University, and helped the JSU College of Science, Engineering, and Technology to meet the federal matching funds requirements for several key grants.

The MCSR has made major contributions in recent years to the implementation of advanced networking at many of the state's IHLs. In the last three years, the MCSR provided vital support to the research universities and the Office of the Governor to construct the Mississippi Optical Network (MissiON), an inter-institutional network with 10X the bandwidth previously available to the member institutions. MissiON is in service now and will facilitate inter-institutional collaboration and allow Mississippi researchers to compete nationally for data-intensive research projects for years to come. Furthermore, the MCSR provided support for Mississippi's successful effort to secure an Internet2 access point in Jackson, MS, enabling Mississippi universities to participate in this advanced national optical network on an equal footing with institutions around the nation. In FY2014, the MCSR added a further 100TB of data storage space that is available to all Mississippi researchers. This improves the cost effectiveness, reliability, safety and security of research data storage in Mississippi. With researchers now required to submit Data Management plans along with every federal grant proposal, the availability and reliability of this data storage service will be a major contributor to researcher competitiveness for years to come.

Impact of Reduced or Increased Funding on MCSR

The MCSR continues to perform major hardware upgrades with the general goal of doubling computing power each year. This approximate annual doubling is necessary to meet Mississippi researchers' demands for more

NARRATIVE
2016 BUDGET REQUEST

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING

Name of Agency

comprehensive studies and greater physical realism in computer models, as they compete against researchers from other states for limited federal grants and contracts. The MCSR's effect on researcher competitiveness is directly reflected in the Center's very high return on investment: in FY2014, the MCSR supported \$23.49 of federal grants for each \$1 of state funds in the MCSR budget. Increases in the MCSR budget can be expected to result in even larger increases in outside funding for the state's Institutions of Higher Learning. Reductions in the MCSR budget will, over time, degrade the competitiveness of Mississippi researchers and reduce the Center's return on investment.

What MCSR is doing to Leverage Existing Funding and Maximize Value to Mississippi

In recent years, the MCSR has accelerated efforts to augment state funding for supercomputing replacements by pursuing federal grants, contracts, and allocations, in collaboration with the research faculty and offices of the IHLs. In FY2013, the Director of the MCSR was a co-Principal Investigator for a proposal to the National Science Foundation's Major Research Instrumentation program. This proposal was awarded under NSF Award #1338056 in FY2014. The \$300,000 award will be used to procure a new cluster, to be shared between the researchers of the consortium and the broader Mississippi research community. With a high-speed General Purpose Graphics Processing Unit (GP-GPU) in each node, this cluster is a new high performance computer of a type not currently available to most researchers in Mississippi. Its installation in early FY2015 will more than triple the Center's total computing power and will provide Mississippi students with their first ever hands-on access to this new and revolutionary type of machine.

For future years, the MCSR remains uniquely positioned to facilitate inter-institutional collaborations. The Center is institution-neutral, and has a great track record of operating shared equipment with great utilization and broad impact to institutions, researchers and students who are historically underserved by this type of resource. While these types of federal programs provide a possible alternative funding source for the MCSR during lean budget years, for these proposals to be competitive, the MCSR must demonstrate stable funding that will assure reviewers that sufficient technical staff and infrastructure will be available to support the proposed equipment through and beyond the grant period; the MCSR cannot reasonably apply to many of the most attractive of these programs because their often leading-edge nature suggests a support burden that is not compatible with the MCSR's current staffing levels, or because they require cost sharing of anywhere from 20 to 50% of total project fund. Therefore, the more state funds the MCSR receives, the greater leverage the Center will have to secure additional funding to maximize resources offered to Mississippi faculty and students.

Success in Achieving Goals

The MCSR supported over 7.5M hours of computation and \$16.3 million in research contracts and grants during FY2014, on a budget of \$695,804, for a return on investment of \$23 to \$1, and at a cost of 9 cents per CPU hour.

Demand for supercomputing services continues to rise statewide, with 291 faculty and student research accounts added in the last year alone.

MCSR education, outreach, and collaboration initiatives broadened the MCSR's impact statewide. MCSR supported class accounts for 3 courses in Fall 2013 and Spring 2014. In addition, 241 students and faculty received extra-curricular computational training at MCSR workshops during the year. For the third consecutive year, the MCSR also provided training to students in the UM McNair program for undergraduate students from historically underrepresented groups. The MCSR is also an active partner of the UM Chemistry Department's NSF-funded Research Experience for Undergraduates program, and provided computing support and extensive training to the REU students in the summer of 2013 and 2014.

In FY2014, MCSR actively collaborated with researchers at MS IHLs in submitting over \$3,300,000 in federal research grant proposals. This far exceeds the Center's very ambitious goal of \$2,000,000 in collaborative grant

NARRATIVE
2016 BUDGET REQUEST

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING

Name of Agency

proposals for the year.

FY2014 Additions to Facilities

In FY2014, raw computing power (as measured by combined theoretical peak performance of all the Center's HPC systems) declined from 17.44 TOP to 16.43 TOP. This decrease reflects the retirement of the Center's 10-year-old SGI Altix 3700. While this retirement causes a slight downward tick in the Center's total computing power, it dramatically increases the overall efficiency of the Center. The Altix 3700 had fallen into disuse in recent years and was, in the considered judgment of the Center's management, no longer producing science in proportion to the cost of its continuing operation.

In lieu of purchasing a major new supercomputer, the Center made significant improvements in its data storage facilities. A major overhaul of the Center's tape backup system --- retiring an old SpectraLogic T50e and replacing it with a new SpectraLogic T380 --- positions the Center to carefully back up and protect researchers' increasingly large data sets for the foreseeable future. Furthermore, the Center expanded its existing disk arrays by 100TB of usable space, and increase of more than 100% over total capacity in FY2013. This data storage array can meet researchers' long-term data storage needs for many years to come.

Justification for FY2016 Funding Request

Academic Support

The specific request for a FY2016 funding increase includes one Program Decision Unit:

1)Core Operations -- This request reflects an increase of \$34,790, which includes \$29,639 for adding CPUs and memory to the high performance computing Equipment used by researchers, plus an increase of \$5151 to cover increased utility costs (Subsidies/Transfers). The increase in the equipment budget is mission-critical to the MCSR, the primary purpose of which is to provide access to High Performance Computers, and can be expected to yield the excellent return on investment that the MCSR has historically produced.

**OUT-OF-STATE TRAVEL
FISCAL YEAR 2014**

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Agency Name

Note: All expenditures recorded on this form must be totaled and said total must agree with the out-of-state travel amount indicated for FY 2014 on Form Mbr-1, line I.A.2.b.

Employee's Name	Destination	Purpose	Travel Cost	Funding Source
Hopkins, Brian	Anaheim, CA	EDUCAUSE 2013 Annual Conference	2,069	General Fund
Hopkins, Brian	Denver, CO	Supercomputing 13 Conference	2,742	General Fund
Henry, Rachel	Denver, CO	Supercomputing 13 Conference	1,776	General Fund
Henry, Rachel	San Jose, CA	SGI User Group Annual Meeting	2,146	General Fund
Miller, Brian	Denver, CO	Supercomputing 13 Conference	1,732	General Fund
Total Out of State Travel Cost			\$10,465	

FEEES, PROFESSIONAL AND OTHER SERVICES
(EXPENDITURE CODES 61600-61699)

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING RESEARCH

Name of Agency

TYPE OF FEE AND NAME OF VENDOR	Retired w/ PERS	(1) Actual Expenses FY Ending June 30, 2014	(2) Estimated Expenses FY Ending June 30, 2015	(3) Requested for FY Ending June 30, 2016	Fund Num.
61610 Engineering					
TOTAL 61610 Engineering					
61615 SAAS Fees - DFA					
TOTAL 61615 SAAS Fees - DFA					
61616 MMRS Fees					
TOTAL 61616 MMRS Fees					
61620 Department of Audit					
TOTAL 61620 Department of Audit					
6162X Accounting (61621-61624)					
TOTAL 6162X Accounting (61621-61624)					
6163X Legal (61630-61636)					
TOTAL 6163X Legal (61630-61636)					
6164X Medical Services (61640-61646)					
TOTAL 6164X Medical Services (61640-61646)					
61650 State Personnel Board					
TOTAL 61650 State Personnel Board					
6165X Personnel Services Contracts (61651-61653)					
TOTAL 6165X Personnel Services Contracts (61651-61653)					
61658 Personnel Services Contracts - SPAHRS					
TOTAL 61658 Personnel Services Contracts - SPAHRS					
6166X Court Costs & Reporters (61661-61666)					
TOTAL 6166X Court Costs & Reporters (61661-61666)					
61670 Laboratory & Testing Fees					
TOTAL 61670 Laboratory & Testing Fees					
6168X Contract Worker (61682-61688)					
TOTAL 6168X Contract Worker (61682-61688)					
GRAND TOTAL (61600-61699)					

VEHICLE PURCHASE DETAILS

UM - MISSISSIPPI CENTER FOR SUPERCOMPUTING

Name of Agency

Year	Model	Person(s) Assigned To	Vehicle Purpose/Use	Replacement or New?	FY2016 Req. Cost
				New	0
					<hr/>
					0
TOTAL VEHICLE REQUEST					0

**VEHICLE INVENTORY
AS OF JUNE 30, 2014**

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Name of Agency

Veh. Type	Vehicle Descript.	Model Year	Model	Person(s) Assigned To	Purpose/Use	Tag Number	Mileage On 6-30-14	Average Miles per Year	Replacement Proposed	
									FY 2015	FY 2016

Vehicle Type = Passenger/Work

**PRIORITY OF DECISION UNITS
FISCAL YEAR**

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Agency Name

Program	Decision Unit	Object	Amount
Priority # 1			
Program # 1 : ACADEMIC SUPPORT			
	Core Operations		
		Equipment	29,639
		Subsidies	5,151
		Total	34,790
		General Funds	34,790

CAPITAL LEASES

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Name of Agency

Vendor/ Item Leased	Original Date of Lease	Original Number of Months of Lease	Number of Months Remaining on 6-30-14	Last Payment Date	Interest Rate	Amount of Each Payment			Total of Payments to be Made								
						Principal	Interest	Total	Actual FY 2014	Estimated FY 2015			Requested FY 2016				
										Principal	Interest	Total	Principal	Interest	Total		
/	//	0	0	//	.000												

Summary of 3% General Fund Program Reduction to FY2015 Appropriated Funding by Major Object

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Major Object	FY2015 GENERAL FUND REDUCTION	EFFECT ON FY2015 STATE SUPPORT SPECIAL FUNDS	EFFECT ON FY2015 FEDERAL FUNDS	EFFECT ON FY2015 OTHER SPECIAL FUNDS	TOTAL 3% REDUCTIONS
PERSONAL SERVICES					
TRAVEL	(5,500)				(5,500)
CONTRACTUAL SERVICES					
COMMODITIES					
OTHER THAN EQUIPMENT					
EQUIPMENT	(13,073)				(13,073)
VEHICLES					
WIRELESS COMM. DEVICES					
SUBSIDIES, LOANS, ETC	(2,301)				(2,301)
TOTALS	(20,874)				(20,874)