

R30B34
University of Maryland Center for Environmental Science
University System of Maryland

Operating Budget Data

(\$ in Thousands)

	FY 05 <u>Actual</u>	FY 06 <u>Working</u>	FY 07 <u>Allowance</u>	FY 06-07 <u>Change</u>	% Change <u>Prior Year</u>
General Funds	\$13,152	\$14,006	\$15,462	\$1,456	10.4%
Other Unrestricted Funds	5,572	4,439	4,439	0	0%
Total Unrestricted Funds	18,724	18,445	19,901	1,456	7.9%
Restricted Funds	<u>17,237</u>	<u>17,856</u>	<u>17,856</u>	<u>0</u>	<u>0%</u>
Total Funds	\$35,961	\$36,301	\$37,757	\$1,456	4.0%

- In the fiscal 2007 allowance, general funds increase \$1.5 million, or 10.4% above the fiscal 2006 level. Overall, the 2007 allowance increases 4%.

Personnel Data

	FY 05 <u>Actual</u>	FY 06 <u>Working</u>	FY 07 <u>Allowance</u>	FY 06-07 <u>Change</u>
Regular Positions	283.11	283.11	283.11	0.00
Contractual FTEs	<u>37.00</u>	<u>37.00</u>	<u>37.00</u>	<u>0.00</u>
Total Personnel	320.11	320.11	320.11	0.00

Vacancy Data: Regular Positions

Turnover, Excluding New Positions	18.26	6.45%
Positions Vacant as of 12/31/05	5.00	1.80%

- The fiscal 2007 allowance does not include any additional regular or contractual positions.

Note: Numbers may not sum to total due to rounding.

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Analysis in Brief

Major Trends

Grants Received That Exceeded \$300,000 Decrease: After a sharp increase in fiscal 2004 to 19 grants, only 11 grants were awarded in fiscal 2005. This is short of the objective of 22.

K-12 Education Programs Focus on Teachers: The University of Maryland Center for Environmental Science (UMCES) has a goal to strengthen K-12 education and teacher training in environmental education programs. The number of K-12 students participating in these programs has leveled off. However, the number of teachers participating in the programs has increased.

Issues

Measuring Performance Is Difficult without Peers: UMCES has not identified a performance peer. However, UMCES is ranked in the top ten of colleges and universities with environmental programs in terms of research and development expenditures.

Efficiency Initiative in First Year: In October 2004, the University System of Maryland (USM) unveiled its effectiveness and efficiency plan. USM estimates that the fiscal 2007 savings as a result of the initiative will be \$18.7 million. UMCES's share of the savings is estimated to be \$155,803.

Personnel Studies Continue: The UMCES personnel level exceeds the level it was before the recent cost containment. Research faculty account for almost 60% of the filled regular positions in fiscal 2006.

Recommended Actions

1. Concur with Governor's allowance.

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Operating Budget Analysis

Program Description

The University of Maryland Center for Environmental Science (UMCES) is a research institution for environmental studies. Its research focuses on the watersheds, estuaries, and coastal areas of the State of Maryland and the greater Chesapeake Bay region. One of the institution's goals is to use research to help predict conditions in Maryland's ecology.

UMCES includes three geographically distinct laboratories under a single administration. The labs are:

- Appalachian Laboratory at Frostburg;
- Chesapeake Biological Laboratory at Solomon's Island; and
- Horn Point Laboratory at Cambridge.

Each of the laboratories serves as a regional center. To support the institution's goal of strengthening K-12 education and teacher training in environmental education, each site offers education programs about natural sciences to teachers and students from K-12 schools. Environmental education programs also serve environmental interest groups and institutions within and beyond the University System of Maryland (USM) that are concerned with environmental research, education, and service.

UMCES provides advisory services to local Chesapeake Bay industries and also is the principal source of independent scientific information on environmental matters for Maryland's lawmakers, State agencies, and regional and national coastal management programs. To shore up financial support for its services, UMCES seeks to increase contract and grant agreements and contributions from private sources.

While UMCES does not grant degrees, its faculty members contribute to graduate education by advising, teaching, and supervising the research of students enrolled in the systemwide Marine-Estuarine-Environmental Sciences program. Additional graduate education activities include cooperative programs in fisheries, wildlife management, and toxicology. These activities further the institution's goals of providing quality research and graduate education and helping to build an educated workforce.

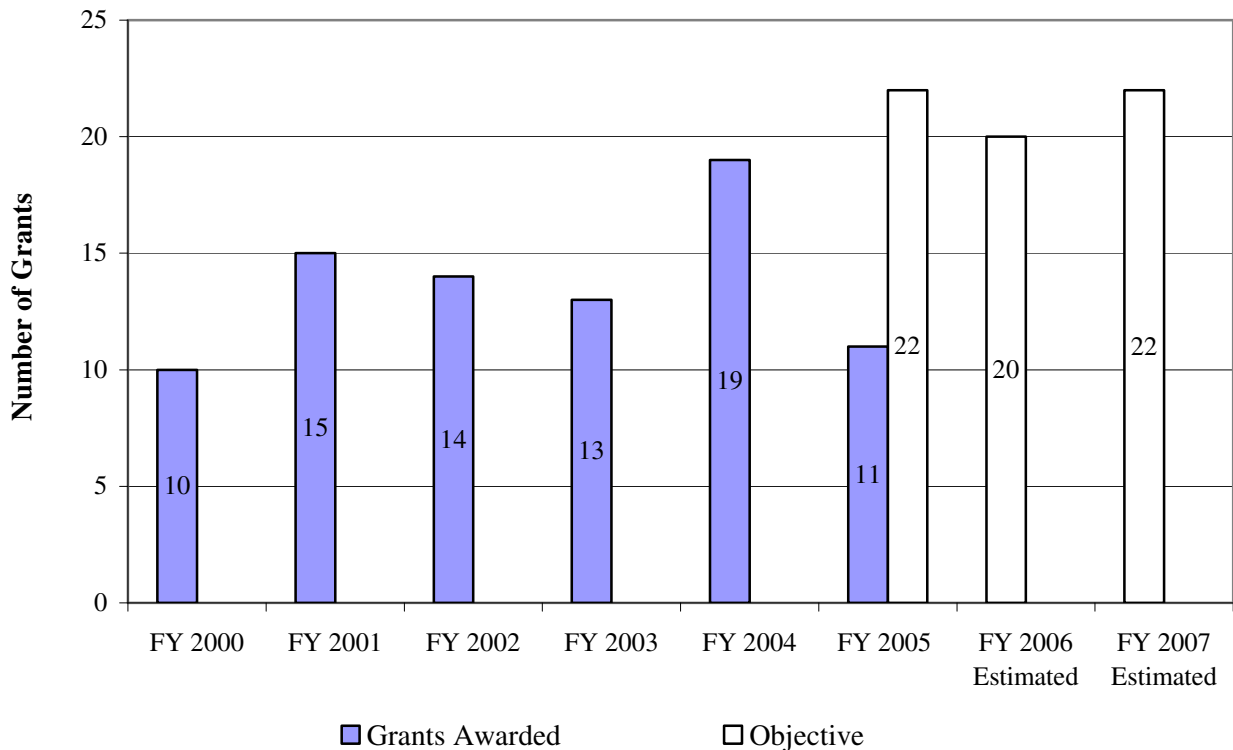
Performance Analysis: Managing for Results

Research is central to the mission of UMCES. Overall, performance measures on research are on track. The number of Chesapeake Bay restoration projects increased to 209 in fiscal 2005. The mean number of citations per peer-reviewed publications attributed to UMCES faculty also increased.

Grants Received Exceeding \$300,000 Decrease

Another research-related measure is the number of grants awarded that exceed \$300,000. After a sharp increase in fiscal 2004 to 19 grants, only 11 grants were awarded in fiscal 2005, as shown in **Exhibit 1**. The objective was 22 grants. UMCES reports this is due to several faculty members leaving UMCES. UMCES has successfully recruited new faculty and, as of January 2006, UMCES has already received 11 grants in fiscal 2006. Therefore, UMCES expects to reach the fiscal 2006 objective of 20 grants in excess of \$300,000.

Exhibit 1
UMCES Grants Awarded in Excess of \$300,000
Fiscal 2000 – 2007

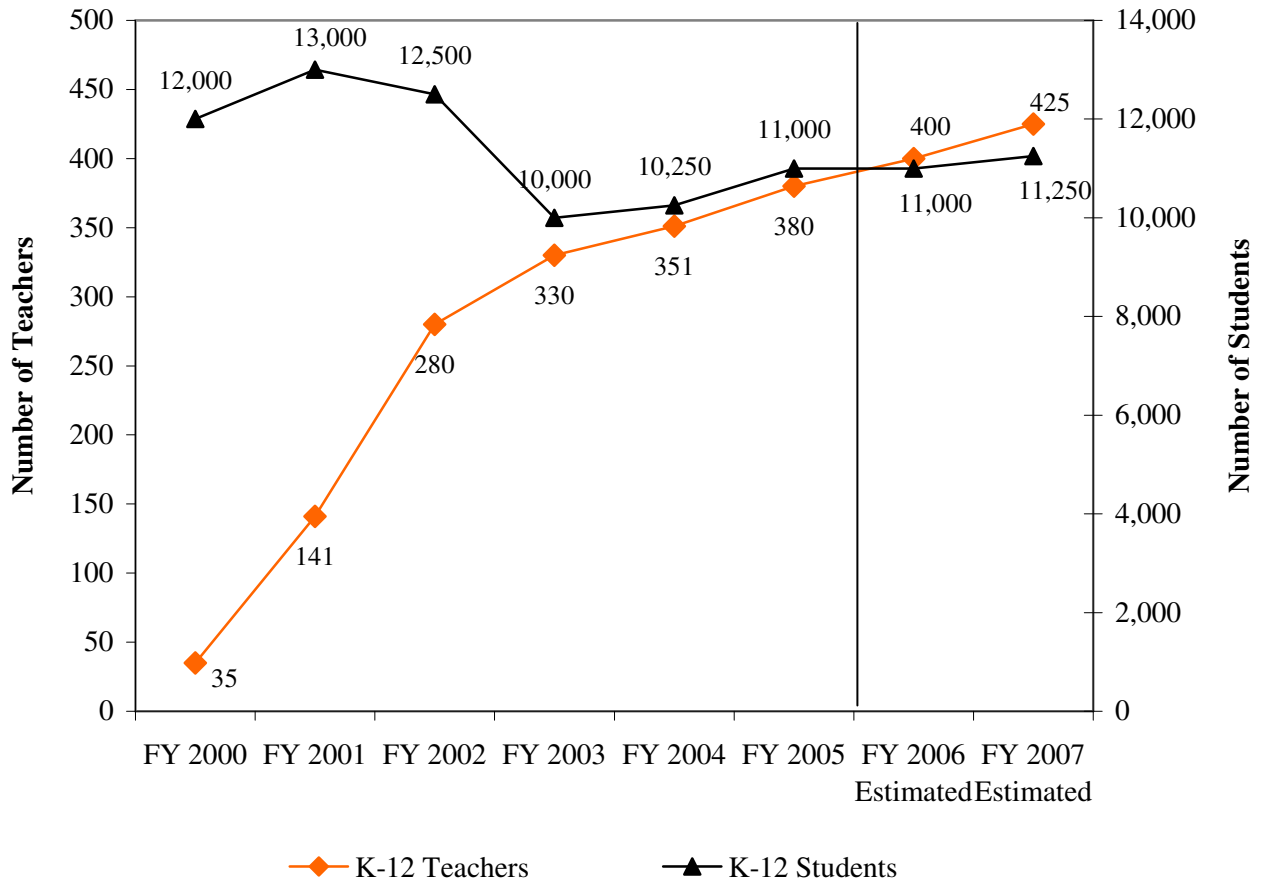


Source: Maryland State Budget Books

K-12 Education Programs Focus on Teachers

In addition to research, UMCES has a goal to strengthen K-12 education and teacher training in environmental education programs. The number of K-12 students participating in these programs has leveled off to about 11,000, as shown in **Exhibit 2**. However, the number of teachers participating in the programs has increased from 351 in fiscal 2004 to 380 in 2005, exceeding the objective of 375.

Exhibit 2
K-12 Teachers and Students
Participating in Environmental Education Programs
Fiscal 2000 – 2007



Source: Maryland State Budget Books

Governor's Proposed Budget

The general fund allowance for fiscal 2007 is \$1.5 million above the 2006 level, an increase of 10.4%, as shown in **Exhibit 3**. UMCES reports that \$0.6 million of the additional general funds will be used to support a new facility and facility renewal, \$0.3 million for salary increments, \$0.3 million for utility increases, and \$0.3 million for other current services cost increases such as health care, pension, and workers' compensation. The new facility is an extension to the Chesapeake Biological Laboratories (CBL). Specifically, \$65,152 is allocated for utilities, supplies, and equipment and a part-time maintenance position. General funds are the only increase in the UMCES budget resulting in an overall budget increase of 4%.

Exhibit 3
Governor's Proposed Budget
University of Maryland Center for Environmental Science
(\$ in Thousands)

	FY 05	FY 06	FY 07	FY 05-06	% Change
	<u>Actual</u>	<u>Working</u>	<u>Allowance</u>	<u>Change</u>	<u>Prior Year</u>
General Funds	\$13,152	\$14,006	\$15,462	\$1,456	10.4%
Other Unrestricted Funds	5,572	4,439	4,439	0	0.0%
Total Unrestricted Funds	18,724	18,445	19,901	1,456	7.9%
Restricted Funds	17,237	17,856	17,856	0	0.0%
Total Funds	\$35,961	\$36,301	\$37,757	\$1,456	4.0%

Note: Numbers may not sum to total due to rounding.

UMCES' State-supported budget by program is shown in **Exhibit 4**. For fiscal 2007, State-supported funds account for 45.6% of the total budget. Of the State-supported amount, general funds are about 90%. In the fiscal 2007 allowance, institutional support is set to increase 15.3% over fiscal 2006. UMCES reports that this primarily reflects the fact that a significant portion of the additional State funds related to the fundraising initiative and the facility renewal effort are classified in institutional support. The remaining increase is due to merit and fringe benefit increases. Expenditures related to the physical plant are set to increase 14.2%. UMCES reports that this increase is due to utility rate increases and utilities for the CBL extension.

Exhibit 4
UMCES State-supported Budget Changes by Program
Fiscal 2002, 2006, and 2007
(\$ in Thousands)

Expenditures	<u>FY 2002</u>	<u>Working FY 2006</u>	<u>% Change FY 02-06</u>	<u>Allowance FY 2007</u>	<u>\$ Change FY 06-07</u>	<u>% Change FY 06-07</u>
Research	\$7,873	\$9,389	19.2%	\$9,926	\$537	5.7%
Plant	3,821	3,798	-0.6%	4,336	538	14.2%
Institutional support	3,682	2,489	-32.4%	2,870	381	15.3%
Public service	72	74	2.8%	74	0	0.0%
Total	\$15,448	\$15,750	2.0%	\$17,206	\$1,456	9.2%
Revenues						
General Funds	\$13,479	\$14,006	3.9%	\$15,462	\$1,456	10.4%
Other State Support	1,969	1,744	-11.4%	1,744	0	0.0%
Use of Fund Balance	0	0	0.0%	0	0	0.0%
Total	\$15,448	\$15,750	2.0%	\$17,206	\$1,456	9.2%

Source: University of Maryland Center for Environmental Science

Issues

1. Measuring Performance Is Difficult without Peers

UMCES has an unusual structure in that it is an independent research institution not affiliated with a single university. Research institutions usually are part of larger research universities and are closely linked with particular colleges or departments.

The unique structure of UMCES prevents meaningful comparison to other institutions on most performance measures related to its mission. Neither UMCES nor the University of Maryland Biotechnology Institute has peer institutions identified. However, UMCES conducts comparisons when data from professional organizations are available. Many universities have departments or schools that have similar fields of study. UMCES reports that it is difficult to compare itself to these departments on a regular basis because the departments are embedded in a larger institution that does not report data regarding its specific departments. Therefore, many of these departments and UMCES report data to national organizations that occasionally collect performance data. The Consortium for Oceanography Research and Education, the National Association of Marine Laboratories, and the Association of Ecosystem Research Centers are three of these organizations that occasionally request data from their members and then share this data. UMCES participates in this effort and reviews the results. During the past year, however, no data comparisons have been made by the professional organizations.

UMCES can compare itself to the amount of research and development expenditures by all universities as reported by the National Science Foundation (NSF). The most recent data available from NSF on the measures with which UMCES can compare itself are from fiscal 2002. In terms of research and development expenditures in environmental sciences at universities and colleges, UMCES ranked number 10 with \$38.5 million. The number one institution was the University of California, San Diego (UCSD), which had over \$114 million in expenditures. UMCES ranked fifth in research and development expenditures in the subcategory of oceanography in the same NSF report. Specifically, UMCES had \$34.4 million in expenditures. UCSD ranked first in the subcategory with almost \$78 million in expenditures. **The President should comment on the outlook for identifying peer institutions.**

2. Efficiency Initiative in First Year

In October 2004, USM unveiled its effectiveness and efficiency plan. The system will pursue more than a dozen initiatives which began in fiscal 2006 and will continue through fiscal 2008. USM estimates that the fiscal 2007 savings will be \$18.7 million. These savings are built into the 2007 allowance, meaning estimates of current services cost increases would be \$18.7 million higher without the efficiency savings.

As shown in **Exhibit 5**, UMCES's share of the savings is estimated to be \$155,803. UMCES reports they will achieve these savings by increasing use of automated services, energy saving initiatives, software integration for grant and contract proposals, and perhaps on-site electrical generation by gas fired turbine generator.

Exhibit 5
UMCES's Expected Efficiency Savings
Fiscal 2006 – 2007

	<u>Fiscal 2006</u>	<u>Fiscal 2007</u>
University of Maryland Center for Environmental Science	\$148,597	\$155,803

Note: The expected savings represent 1% of the State-supported funds.

Source: University System of Maryland

Result of Structural Study of UMCES

As part of the efficiency initiative, USM studied the organizational structure of UMCES to determine if it should remain administratively aligned with USM. UMCES is considered a special purpose institution because it is primarily a research center and does not generate tuition revenue. Meetings took place between the Board of Regents and the president of UMCES to determine the proper alignment for UMCES. One area that USM noted as an issue is the financial viability of UMCES since it does not generate tuition. UMCES is dependent upon State funding since indirect cost recovery from research grants is not sufficient to cover operational expenses. USM will work with UMCES to develop a model for assessing and funding budgetary requirements of UMCES. As a result of the study, the Chancellor made the recommendation that UMCES remain a USM institution.

3. Personnel Studies Continue

The total UMCES workforce has surpassed the level it was before recent cost containment. In fiscal 2002, full-time equivalent regular and contractual personnel totaled 294, and in 2005 the total reached 320. These numbers include filled and unfilled positions. The number of personnel has not increased since then, and the fiscal 2007 allowance does not provide for any additional personnel.

Since UMCES classifies all of its personnel as research, the Department of Legislative Services (DLS) cannot evaluate changes in the composition of personnel by program, which include operations and maintenance of plant, institutional support, and public service. However, DLS evaluated personnel across USM – including UMCES – by faculty, exempt, and non-exempt categories. These data are for filled regular positions only as of December 2005.

At UMCES, faculty account for 59.9% of the fiscal 2006 total filled regular positions. Although some UMCES faculty teach courses, all are categorized as research faculty. For USM as a whole, the faculty proportion is 38.7%. Exempt personnel, who generally are higher-paid administrators and managers and are exempt from overtime pay, account for 19% of the total personnel. Non-exempt personnel account for 21.1%.

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Many of the research faculty at UMCES are non-tenure/tenure track faculty. Therefore, from a human resources perspective, they are considered contractual. However, these faculty receive health and retirement benefits. Therefore, from a budget perspective, they are considered regular employees. In fiscal 2006 UMCES has a total of 237 filled regular positions – 45 are exempt, 142 are faculty, and 50 are non-exempt.

Recommended Actions

1. Concur with Governor's allowance.

Current and Prior Year Budgets

Current and Prior Year Budgets University of Maryland Center for Environmental Science (\$ in Thousands)

	<u>General Fund</u>	<u>Other Unrestricted Fund</u>	<u>Total Unrestricted Fund</u>	<u>Restricted Fund</u>	<u>Total</u>
Fiscal 2005					
Legislative Appropriation	\$13,015	\$4,403	\$17,418	\$16,556	\$33,974
Deficiency Appropriation	0	0	0	0	0
Budget Amendments	137	1,300	1,437	715	2,152
Reversions and Cancellations	0	-130	-130	-34	-164
Actual Expenditures	\$13,152	\$5,573	\$18,725	\$17,237	\$35,962
Fiscal 2006					
Legislative Appropriation	\$13,893	\$4,381	\$18,274	\$17,056	\$35,330
Budget Amendments	113	58	171	800	971
Working Appropriation	\$14,006	\$4,439	\$18,445	\$17,856	\$36,301

Note: Numbers may not sum to total due to rounding.

Fiscal 2005

The University of Maryland Center for Environmental Science received additional general funds of \$0.1 million through budget amendment for State employee cost-of-living increases. Other unrestricted funds increased \$1.3 million also through budget amendments. This amount reflects indirect cost recovery from grant and contract activity. Restricted funds increased \$0.7 million from additional overhead costs due to federal and State contracts and grants.

At the end of fiscal 2005, UMCES cancelled \$0.1 million in other unrestricted funds and \$0.03 million in restricted funds.

Fiscal 2006

For fiscal 2006, general funds increased \$0.1 million through budget amendment for State employee cost-of-living increases. Also through budget amendment, unrestricted funds increase \$57,880 due to an increase in federal and State contract and grant activity. Restricted funds increase \$0.8 million due to the same contract and grant activity.

Audit Findings

Audit Period for Last Audit:	August 28, 2000 – May 18, 2003
Issue Date:	October 2003
Number of Findings:	4
Number of Repeat Findings:	1
% of Repeat Findings:	25%
Rating: (if applicable)	n/a

Finding 1: Cash Receipts: Cash receipts were not adequately controlled.

Finding 2: Accounts Receivable: The approval process for certain critical adjustments was not adequate.

Finding 3: Payroll: Payroll processing duties at one laboratory were not adequately separated.

Finding 4: **Equipment: Adequate accountability and control were not established at two laboratories.**

*Bold denotes item repeated in full or part from preceding audit report.

**Object/Fund Difference Report
University of Maryland Center for Environmental Science**

<u>Object/Fund</u>	<u>FY05 Actual</u>	<u>FY06 Working Appropriation</u>	<u>FY07 Allowance</u>	<u>FY06 - FY07 Amount Change</u>	<u>Percent Change</u>
Positions					
01 Regular	283.11	283.11	283.11	0	0%
02 Contractual	37.00	37.00	37.00	0	0%
Total Positions	320.11	320.11	320.11	0	0%
Objects					
01 Salaries and Wages	\$ 21,410,437	\$ 21,520,585	\$ 22,266,720	\$ 746,135	3.5%
02 Technical & Spec Fees	408,097	30,000	30,000	0	0%
03 Communication	260,275	419,381	419,381	0	0%
04 Travel	820,271	736,347	736,347	0	0%
06 Fuel & Utilities	1,561,154	1,537,485	1,864,152	326,667	21.2%
07 Motor Vehicles	362,223	388,709	380,786	-7,923	-2.0%
08 Contractual Services	8,154,746	7,745,231	7,678,028	-67,203	-0.9%
09 Supplies & Materials	1,858,205	1,718,387	1,708,795	-9,592	-0.6%
10 Equip - Replacement	0	224,915	224,915	0	0%
11 Equip - Additional	494,347	1,088,992	1,083,526	-5,466	-0.5%
12 Grants, Subsidies, and Contributions	8,126	16,980	16,980	0	0%
13 Fixed Charges	611,622	685,872	687,853	1,981	0.3%
14 Land & Structures	11,899	188,175	659,303	471,128	250.4%
Total Objects	\$ 35,961,402	\$ 36,301,059	\$ 37,756,786	\$ 1,455,727	4.0%
Funds					
40 Unrestricted Fund	\$ 18,724,323	\$ 18,445,020	\$ 19,900,747	\$ 1,455,727	7.9%
43 Restricted Fund	17,237,079	17,856,039	17,856,039	0	0%
Total Funds	\$ 35,961,402	\$ 36,301,059	\$ 37,756,786	\$ 1,455,727	4.0%

Fiscal Summary
University of Maryland Center for Environmental Science

<u>Program/Unit</u>	<u>FY05 Actual</u>	<u>FY06 Wrk Approp</u>	<u>FY07 Allowance</u>	<u>Change</u>	<u>FY06 - FY07 % Change</u>
02 Research	\$ 35,961,402	\$ 36,301,059	\$ 37,756,786	\$ 1,455,727	4.0%
Total Expenditures	\$ 35,961,402	\$ 36,301,059	\$ 37,756,786	\$ 1,455,727	4.0%
Unrestricted Fund	\$ 18,724,323	\$ 18,445,020	\$ 19,900,747	\$ 1,455,727	7.9%
Restricted Fund	17,237,079	17,856,039	17,856,039	0	0%
Total Appropriations	\$ 35,961,402	\$ 36,301,059	\$ 37,756,786	\$ 1,455,727	4.0%