

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

Operating Budget Data

(\$ in Thousands)

	<u>FY 02</u> <u>Actual</u>	<u>FY 03</u> <u>Approp.</u>	<u>FY 04</u> <u>Allowance</u>	<u>FY 03-04</u> <u>Change</u>	<u>FY 03-04</u> <u>% Change</u>
General Funds	\$13,479	\$13,865	\$13,166	-\$700	-5.0%
FY 2003 Cost Containment	0	-700	0	700	
Contingent & Back of Bill Reductions	0	0	0	0	
Adjusted General Funds	\$13,479	\$13,166	\$13,166	\$0	0.0%
Other Unrestricted Funds	5,146	4,563	4,563	0	0.0%
Total Unrestricted Funds	18,625	17,728	17,728	0	0.0%
Restricted Funds	15,396	16,556	16,556	0	0.0%
Adjusted Grand Total	\$34,020	\$34,284	\$34,284	\$0	0.0%

- The fiscal 2003 proposed general fund reduction for the University of Maryland Center for Environmental Science (UMCES) is only 5%, rather than 8%, due to its inability to raise tuition revenue.
- This institution budgets other unrestricted fund and restricted fund amounts conservatively, assuming no increase from fiscal 2003 to 2004.

Personnel Data

	<u>FY 02</u> <u>Actual</u>	<u>FY 03</u> <u>Working</u>	<u>FY 04</u> <u>Allowance</u>	<u>Change</u>
Regular Positions	230.02	295.02	295.02	0.00
Contractual FTEs	64.00	37.65	39.00	1.35
Total Personnel	294.02	332.67	334.02	1.35

Vacancy Data: Regular Positions

Budgeted Turnover: FY 04	3.22	1.09%
Positions Vacant as of 9/31/02	11.00	3.73%

- The additional 1.35 contractual positions in the allowance are related to contract and grant activity.
- Neither the fiscal 2003 nor 2004 figures reflect the anticipated elimination of 2 positions due to cost

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

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containment.

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Analysis in Brief

Major Trends

Research Success Continues: In the most recent year for which actual data is available, the institution has exceeded estimated performance in citations per peer-reviewed publication and the two-year running average of extramural research funding. Although it did not meet the fiscal 2002 estimate for the number of grants awarded in excess of \$300,000, it anticipates a rebound and continued growth in fiscal 2003 and 2004.

Focus on Teachers in Environmental Education: The institution has made the strategic decision to focus its environmental education program on providing training and research opportunities for K-12 teachers. The programs will continue to serve K-12 students at the Horn Point Environmental Education Center.

Issues

A Transparent Budget Structure: Due to the specialized nature of the institution, UMCES funding is budgeted in only one program, Research. Several other budget programs appear to be relevant to UMCES, including Public Service, Institutional Support, and Plant operations and maintenance. Understanding the costs of public service, administration, and facilities is especially important as the State and institutions face budget constraints. **The Department of Legislative Service recommends budget narrative encouraging the institution to work with the University System of Maryland, the University of Maryland Biotechnology Institute, and the Department of Budget and Management to develop a means for increasing the transparency of expenditures related to administration, plant, and public service in the institution's budget, while minimizing any adverse impact on the institution's indirect cost recovery rate.**

Recommended Actions

1. Adopt committee narrative encouraging the University of Maryland Center for Environmental Science to develop a more transparent budget structure to make clear the cost of administration, public service, and facilities.

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University System of Maryland

Operating Budget Analysis

Program Description

The University of Maryland Center for Environmental Science (UMCES) is a research institution for environmental studies. It primarily focuses its research 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 strengthen the predictive ecology for Maryland through highly relevant research programs.

UMCES includes three geographically distinct laboratories under a single administration:

- Appalachian Laboratory at Frostburg;
- Chesapeake Biological Laboratory at Solomons Island; and
- Horn Point Laboratory at Cambridge.

Each of the three UMCES laboratories serves as a regional center. Furthering 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 that are concerned with environmental research, education, and service. UMCES provides advisory services to local Chesapeake Bay industries and is also the principal source of independent scientific information on environmental matters for Maryland's lawmakers, State agencies, and regional and national coastal management programs. While serving a broad audience, UMCES seeks the support of external entities through increased support from contract and grant and private sources.

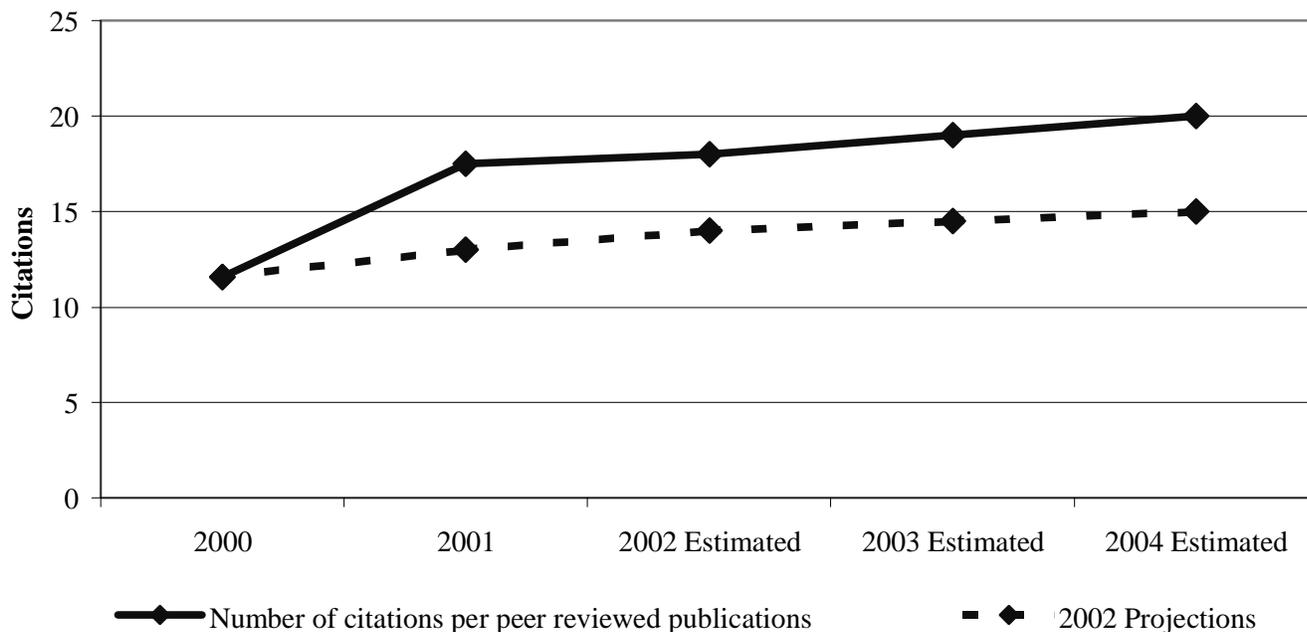
While UMCES does not grant degrees, its faculty members contribute to graduate education by advising, teaching, and supervising the research of students enrolled in the systemwide Marine-Estuarine-Environmental Sciences program. Additional graduate education activities include cooperative programs in fisheries and wildlife management and toxicology. These activities further the institution's goals of providing quality research and graduate education and ensuring that students who earn degrees under the direction of UMCES faculty are productive members of the work force and society.

Performance Analysis: Managing for Results

Research is central to the mission of UMCES, and some research measures continue to show strong progress. As shown in **Exhibit 1**, the number of citations per peer reviewed publication is a measure of the relevance and importance of the institution's research in the scientific community. Citations per peer

Exhibit 1

Citations per Peer Reviewed Publication



Source: Maryland State budget books, fiscal 2003 and 2004

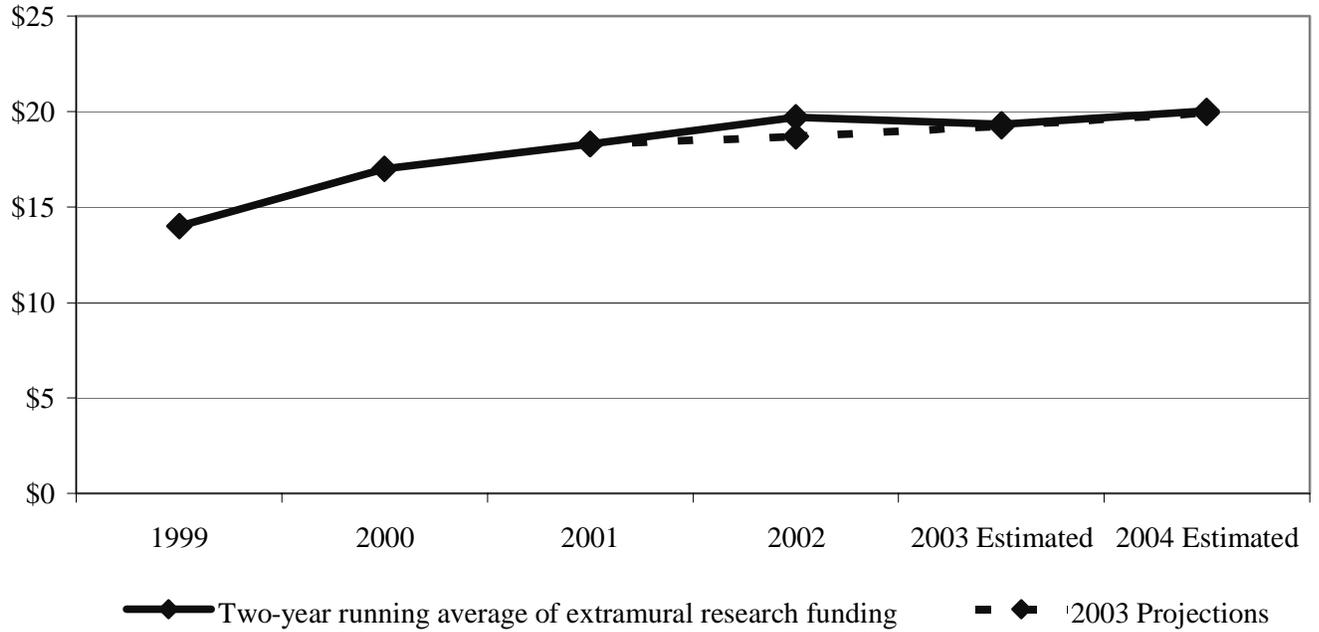
reviewed publication exceeded expectations in 2001, which is the last year for which actual data is available. The institution has revised its projections for 2002 through 2004 because it anticipates continued success in this area, barring significant faculty turnover.

The institution also reports the two-year running average of extramural research funding. On this measure also, the institution exceeded expectations for the most recent year of actual data, in this case, fiscal 2002. As shown in **Exhibit 2**, despite the institution’s continued increases in extramural funding in recent years, it has not revised its projections upward for fiscal 2003 and 2004 because it expects granting agencies to have less funding available until the country’s overall economic situation improves.

On another research-related measure, the number of grants awarded in excess of \$300,000, the institution failed to meet its 2002 projection by 17%, or three grants. As shown in **Exhibit 3**, the institution did not revise its estimates for fiscal 2003 and 2004. The institution reports that for fiscal 2003 to date, it has received 11 grants in excess of \$300,000 with several additional awards pending.

Exhibit 2

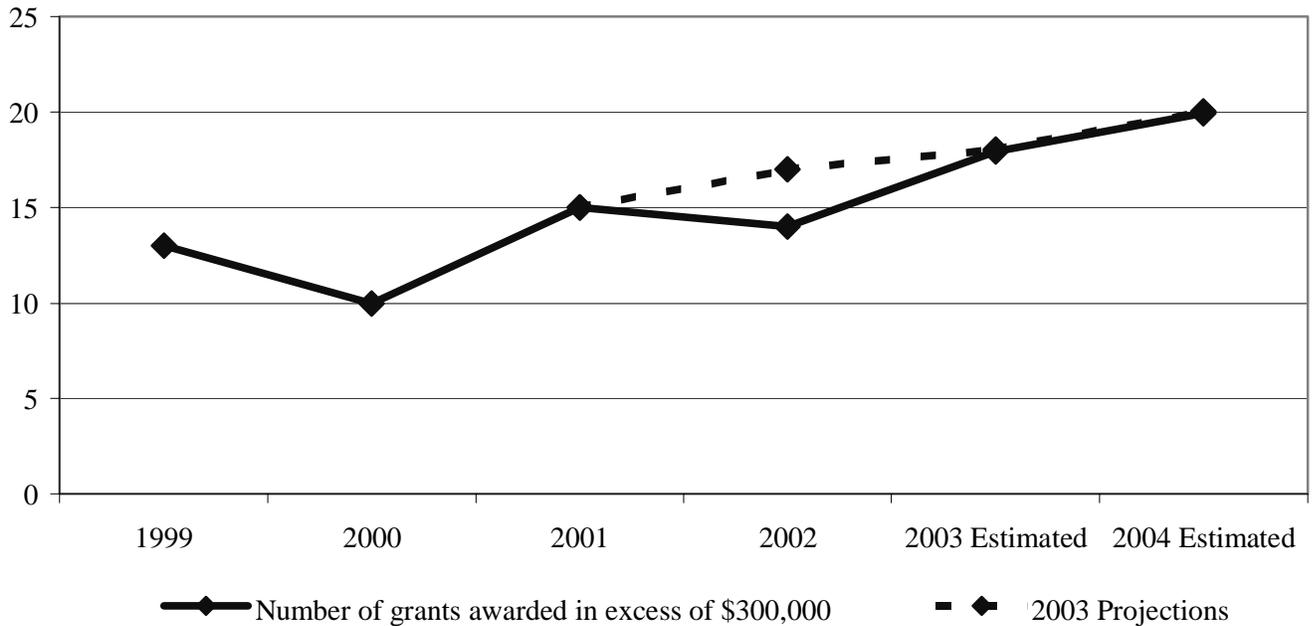
Two-year Running Average of Extramural Research Funding
(\$ in Millions)



Source: Maryland State budget books, fiscal 2002 through 2004

Exhibit 3

Number of Grants Awarded in Excess of \$300,000

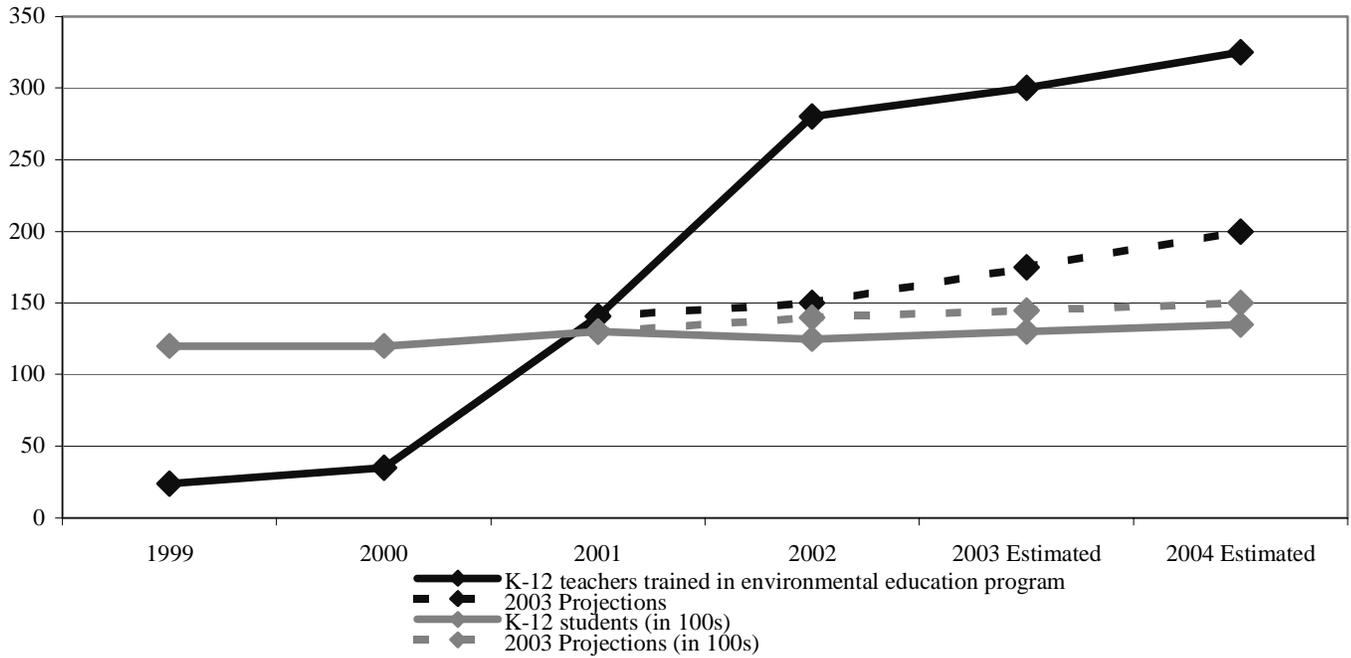


Source: Maryland State budget books, fiscal 2002 through 2004

The institution also has a goal to strengthen the K-12 education and teacher training in environmental education programs. Related to this goal, the institution reports the numbers of K-12 students and teachers participating in environmental education programs. As shown in **Exhibit 4**, it did not meet its estimate in fiscal 2002 for the number of students participating but significantly exceeded its estimate for the number of teachers participating. The institution has revised its future estimates also, because the shift is a conscious decision of the institution to direct its education efforts to teachers. While the Horn Point Environmental Education Center will continue to serve students directly, the institution has focused on providing more opportunities for teachers at all three laboratories.

Exhibit 4

**K-12 Students and Teachers
Participating in Environmental Education Programs**



Source: Maryland State budget books, fiscal 2002 through 2004

Fiscal 2003 Actions

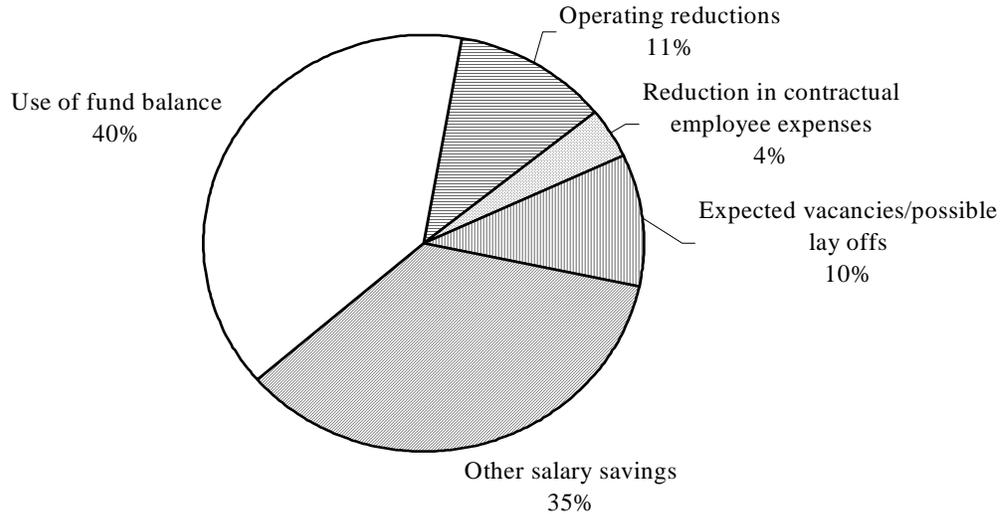
Impact of Cost Containment

Through the combined cost containment proposals of the previous and current administrations, general fund support for UMCES will decline \$699,635, or 5% in fiscal 2003. The percentage reduction to UMCES is less than the average of 8% for institutions other than the historically black institutions. The Board of Regents allocated smaller reductions to the components of the system that cannot generate tuition and fee revenue.

Exhibit 5 illustrates the contribution of various strategies to address the reduction in general funds in fiscal 2003. The institution plans three areas of personnel-related savings, totaling 50% of necessary general fund reductions. First, the institution will reduce contractual employee expenses. Second, through attrition or lay off, if necessary, the institution will eliminate 2 positions and expects up to 3.5

Exhibit 5

Fiscal 2003 Cost Containment Measures
\$699,635



Source: University of Maryland Center for Environmental Science

additional vacancies by the end of the fiscal year. Third, some savings are available due to employees on extended leave of absence. In addition to personnel-related savings, the institution anticipates \$79,495 in operating reductions and use of \$273,446 in fund balance.

Governor's Proposed Budget

The allowance for fiscal 2004 continues fiscal 2003 levels of general fund support, providing no increase in general funds. (See **Exhibit 6**.)

The allowance does not assume growth in other unrestricted funds or restricted funds, as this institution typically budgets prior year amounts and uses budget amendments to increase appropriations as necessary. The institution may increase both unrestricted and restricted fund appropriations through budget amendment prior to the close of fiscal 2003.

Exhibit 6

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

	<u>FY 02 Actual</u>	<u>FY 03 Approp.</u>	<u>FY 04 Allowance</u>	<u>FY 03-04 Change</u>	<u>FY 03-04 % Change</u>
General Funds	\$13,479	\$13,865	\$13,166	-\$700	-5.0%
FY 2003 Cost Containment	0	-700	0	700	
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Adjusted Grand Total	\$34,020	\$34,284	\$34,284	\$0	0.0%

Where It Goes:

Personnel Expenses

Health insurance and other fringe benefit adjustments..... \$719

Other Changes

Repay energy conservation/environmental safety improvement loan 49

Reduce spending on contractual services -517

Reduce spending on laboratory equipment -150

Delay server replacement -100

Total **\$0**

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

Impact of Cost Containment

As shown in Exhibit 6, the institution will reduce spending on contractual services and laboratory equipment and delay the replacement of a server. These reductions will help offset increases in health insurance and energy conservation and environmental safety improvement loan repayment.

Issues

1. A Transparent Budget Structure

Due to the specialized nature of the institution, UMCES funding is budgeted in only one program, Research. Its expenditures and employees, regardless of their function, are considered part of the Research program.

Several other budget programs appear to be relevant to UMCES. For example, the institution has made a strong commitment to its K-12 environmental education programs. They are outreach and education programs and do not further research. In another institution, they might be in the Public Service program. Second, the institution has three laboratory locations across the State, including a technologically advanced, mechanically complex new laboratory at Horn Point. The operation and maintenance of UMCES' laboratories and other facilities would fall under the Plant program at any other institution. Finally, the institution has leadership, administrative, and fiscal staff. At any other institution, that general administration activity would be considered Institutional Support.

Classifying positions and expenditures related to public service, administration, and facilities as research obscures the institution's true overhead costs, prevents a thorough examination of the institution's budget, and may skew systemwide analyses. The implications of the State's investment in facilities and the institution's difficulties providing operating support to open the new laboratory building would be more apparent if the institution used the Plant budget program. Understanding the costs of public service, administration, and facilities is especially important as the State and institutions face budget constraints.

Using all relevant budget programs may have disadvantages also. According to the institution, an exclusively Research program budget provides an advantage in the negotiation of indirect cost recovery rates on federal grants. Federal indirect cost recovery provided 7% of the institution's unrestricted budget in fiscal 2002, third to State appropriations (72%) and educational sales and services (25%). Using Institutional Support, Public Service, and Plant programs could reduce the basis of the institution's current indirect cost recovery rate.

The Department of Legislative Service recommends the addition of budget narrative encouraging the institution to work with the University System of Maryland, the University of Maryland Biotechnology Institute, and the Department of Budget and Management to develop a means for increasing the transparency of expenditures related to administration, plant, and public service in the institution's budget, while minimizing any adverse impact on the institution's indirect cost recovery rate.

Recommended Actions

1. Adopt the following narrative:

Institution Budget Structure: Due to the specialized nature of the institution, the University of Maryland Center for Environmental Science (UMCES) funding is budgeted in only one program, Research. Several other budget programs appear to be relevant to UMCES, including Public Service, Plant, and Institutional Support. Understanding the costs of public service, facilities, and administration is especially important as the State and institutions face budget constraints; however, using all relevant budget programs may reduce the basis of the institution’s current indirect cost recovery rate. The committees encourage the institution to work with the University System of Maryland, the University of Maryland Biotechnology Institute, and the Department of Budget and Management to develop a means for increasing the transparency of expenditures related to administration, plant, and public service in the institution’s budget, while minimizing any adverse impact on the institution’s indirect cost recovery rate.

Current and Prior Year Budgets

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

	<u>General</u> <u>Fund</u>	<u>Other</u> <u>Unrestricted</u> <u>Fund</u>	<u>Total</u> <u>Unrestricted</u> <u>Fund</u>	<u>Restricted</u> <u>Fund</u>	<u>Total</u>
Fiscal 2002					
Legislative Appropriation	\$13,672	\$3,715	\$17,388	\$15,326	\$32,714
Deficiency Appropriation	0	0	0	0	0
Budget Amendments	0	1,700	1,700	630	2,330
Reversions and Cancellations	-194	-269	-463	-560	-1,024
Actual Expenditures	\$13,478	\$5,146	\$18,625	\$15,396	\$34,020
Fiscal 2003					
Legislative Appropriation	\$13,865	\$4,216	\$18,080	\$15,456	\$33,537
Budget Amendments	0	347	347	1,100	1,447
Cost Containment	-700	0	-700	0	-700
Working Appropriation	\$13,165	\$4,563	\$17,728	\$16,556	\$34,284

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

Fiscal 2002

In fiscal 2002 the institution spent \$1.3 million more than its legislative appropriation. The increase was virtually all in unrestricted funds. Through budget amendment, the institution increased its unrestricted fund appropriation by \$1.7 million, as a result of increased sales of analytical services and increased indirect cost recovery on federal and State contracts and grants. The unrestricted fund budget was reduced by \$194,181 in general funds, due to cost containment and hiring freeze savings. An additional \$269,342 was cancelled because certain payments (\$120,000) did not become due until early fiscal 2003 and because unrestricted expenditures were less than expected.

The institution increased its restricted fund appropriation through amendment by \$630,000. Funds were available as a result of increased contract and grant activity. Nearly 90% of that increase was subsequently cancelled because the institution received a no-cost extension into fiscal 2003 on one large grant (\$185,000) and because newly awarded grant funds were not spent as quickly as anticipated (\$375,279).

Fiscal 2003

In fiscal 2003 the institution experienced a general fund reduction of about \$700,000 due to cost containment. It has increased other unrestricted funds and restricted funds through budget amendment due to increased federal contract and grant activity.

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

<u>Object/Fund</u>	<u>FY 02 Actual</u>	<u>FY 03 Working Appropriation</u>	<u>FY 04 Allowance</u>	<u>FY 03 - 04 Amount Change</u>	<u>Percent Change</u>
Positions					
01 Regular	230.02	295.02	295.02	0	0%
02 Contractual	64.00	37.65	39.00	1.35	3.6%
Total Positions	294.02	332.67	334.02	1.35	0.4%
Objects					
01 Salaries and Wages	\$ 21,042,478	\$ 21,018,527	\$ 21,391,037	\$ 372,510	1.8%
02 Technical & Spec Fees	125,290	35,807	35,807	0	0%
03 Communication	478,095	460,272	445,228	-15,044	-3.3%
04 Travel	880,143	754,007	754,007	0	0%
06 Fuel & Utilities	813,651	865,287	913,872	48,585	5.6%
07 Motor Vehicles	434,207	547,489	540,991	-6,498	-1.2%
08 Contractual Services	6,765,934	7,360,666	6,501,825	-858,841	-11.7%
09 Supplies & Materials	2,142,518	1,661,368	1,704,772	43,404	2.6%
10 Equip - Replacement	0	224,915	224,915	0	0%
11 Equip - Additional	863,288	1,406,422	1,119,018	-287,404	-20.4%
12 Grants, Subsidies, Contr	31,418	13,525	13,525	0	0%
13 Fixed Charges	389,471	394,319	397,972	3,653	0.9%
14 Land & Structures	53,957	241,277	241,277	0	0%
Total Objects	\$ 34,020,450	\$ 34,983,881	\$ 34,284,246	-\$ 699,635	-2.0%
Funds					
40 Unrestricted Fund	\$ 18,624,690	\$ 18,427,842	\$ 17,728,207	-\$ 699,635	-3.8%
43 Restricted Fund	15,395,760	16,556,039	16,556,039	0	0%
Total Funds	\$ 34,020,450	\$ 34,983,881	\$ 34,284,246	-\$ 699,635	-2.0%

Note: Fiscal 2003 appropriations and fiscal 2004 allowance do not include cost containment and contingent reductions.

Fiscal Summary
USM – University of Maryland Center for Environmental Science

<u>Unit/Program</u>	<u>FY 02 Actual</u>	<u>FY 03 Legislative Appropriation</u>	<u>FY 03 Working Appropriation</u>	<u>FY 02 - 03 % Change</u>	<u>FY 04 Allowance</u>	<u>FY 03 - 04 % Change</u>
02 Research	\$ 34,020,450	\$ 33,536,508	\$ 34,983,881	2.8%	\$ 34,284,246	-2.0%
Total Expenditures	\$ 34,020,450	\$ 33,536,508	\$ 34,983,881	2.8%	\$ 34,284,246	-2.0%
Unrestricted Fund	\$ 18,624,690	\$ 18,080,469	\$ 18,427,842	-1.1%	\$ 17,728,207	-3.8%
Restricted Fund	15,395,760	15,456,039	16,556,039	7.5%	16,556,039	0%
Total Appropriations	\$ 34,020,450	\$ 33,536,508	\$ 34,983,881	2.8%	\$ 34,284,246	-2.0%

Note: Fiscal 2003 appropriations and fiscal 2004 allowance do not include cost containment and contingent reductions.