

structure can be described as follows: the Office of Development has primary responsibility for development and fundraising. A revised position title of Vice President for Development has been recently filled. The Office of Community Relations and Public Service is headed by the new Vice President for Community Relations and Public Service and has primary responsibility for institutional relations (including communication, public relations, and publications). The Society of the Alumni has primary responsibility for alumni affairs. It is important to note at the outset that while each of these offices holds primary responsibility for particular aspects of institutional advancement, the three units have numerous opportunities to interact and reinforce each other's efforts.

Office of University Development:

The Office of University Development (previously called the Office of University Advancement) has made tremendous strides since the 1984 Self-Study. Perhaps the most tangible evidence of this progress is the successful completion of a \$153 million campaign in October of 1993, the College's Tercentenary year. The success of this effort points to greater sophistication in fundraising strategy and methodology (e.g., in the numbers and types of staff, the computer system, and the research methods employed).

Effectiveness: The Campaign can be credited with increasing annual voluntary private support from \$5.1 million in 1983 to \$16.9 million in 1993, a period of relatively low inflation and, from the late 1980s on, economic stagnation. During that same period, the College's endowment increased from \$48 million to \$126 million through a combination of new gifts and aggressive management. Costs of fundraising during this period remained stable in the range of 15 to 17 cents per dollar raised. The national average is 16 cents. (During some years this figure was higher if there were large fixed expenditures such as a new computer system, etc.).

During this period, the College has seen a significant increase in alumni participation and donor involvement. In 1983, the College reported alumni donor participation of 21 percent. In 1993, the overall alumni donor participation rate was 32.6 percent, with almost a 30 percent participation rate in the William and Mary Annual Fund alone. During the Campaign, almost 44,000 individuals, corporations, and foundations participated. Of those, 26,000, or 54 percent were alumni. The increase came about by holding rating and screening sessions, using volunteers in greater

numbers than has been the case previously, the creation of a National Campaign Steering Committee, and a strengthened Endowment Association. The College, in cooperation with the Alumni Society, also made progress in the establishment of strong volunteer-lead 25th and 50th reunion class gift programs in the six-figure range. Finally, the College re-instituted a class-agent program in its William and Mary Annual Fund which brought a number of alumni back in touch with William and Mary and involved them in a volunteer capacity raising funds from their classmates. All these steps resulted in a higher participation rate.

Increased staffing and technological sophistication have led to more interaction with donors and volunteers. Each of the three major components of the development operation --Capital Support, Annual Support, and Corporate and Foundation Relations-- have had staff added. Most of the additions in the development arena came with the formation of the Campaign. Post-Campaign, the staffing in each of these areas is being reviewed with an eye towards the goal of maintaining the current cashflow or increasing it. Similar efforts are underway in the Advancement Systems area to ensure adequate support. Deficiencies in the stewardship and estate planning area are likely to receive the most attention. The departments of Advancement Research and Donor Stewardship were moved into the systems operation to create better channels of communication and to identify opportunities for computerization.

A New Era: When reviewing these changes, it must be remembered that the landscape has changed radically since the last Self-Study. In the early 1980s, the College received about 70 percent of its funding from the state, with about 30 percent coming from tuition, private sources, overhead costs recovery, and auxiliary services. These figures have effectively reversed in 1994, with only 26 percent of the College's overall budget coming from the Commonwealth. In addition, capital projects which, in the past, were considered the responsibility of the Commonwealth, now often have at least some private component. An example of this would be the College's Tercentenary Hall, currently under construction. The building has a total cost nearing \$9 million, but the Commonwealth is underwriting only \$6 million of it.

From all indications, this trend is expected to continue and will put new pressures on the advancement operation. Of course, ongoing needs such as support for faculty positions, scholarships, and the library will continue to have high priority and

visibility. However, the greatest need the institution faces is for unrestricted support. Unrestricted giving through the William and Mary Annual Fund has increased from \$1.2 million in 1991 to almost \$1.7 million in 1993 and Dennis Slon, the Vice President for Development, indicated to the committee that we are expecting to cross the \$2 million mark in 1995.

Vice President Slon reported to the committee that, with the strong staff now in place, the Development Office should be able to continue fundraising at the current level of \$17 to \$20 million annually. The strategic planning process in which the College has been engaged has identified new priorities with implied funding goals. Once the strategic planning process is complete, including plans for implementation, the Development Office should assess its ability to raise the established goals from the donor constituency we have identified. At that time, some determination will also be made about the size of the current staff and the need for additional resources. In the short term, need exists for greater staffing in the area of donor stewardship.

The Vice President also reported that, from the systems perspective, the greatest challenges in the next few years will be in the area of computing services. The current computer system must be analyzed and compared to others on the market to determine whether a new system for recordkeeping should be purchased.

Recommendations

Given the new financial challenges resulting from a significantly decreased share of funding from the Commonwealth, we encourage the administration to move as quickly as possible to the next campaign.

In addition, we recommend that:

- stewardship operations be brought to an effective level;
- overall staffing of the Office of Development move upward commensurate with attaining a high yield on such resource expenditure;
- the development fundraising activities at the College continue as a relatively centralized system;
- with the end of the Tercentenary celebration, ways should be found to build on that experience and coordinate special events with development activities.

Office of Community Relations and Public Service:

For the period during which most of the committee's deliberations occurred, the Office of University Relations functioned as a separate entity, with the director reporting to the president. Early in Spring of 1994, a new position and office was created --Vice President for Public Affairs and the Office of Public Affairs under which the Director of University Relations functions. This office has been restructured and renamed to its current name, the Office of Community Relations and Public Service (headed by the Vice President for Community Relations and Public Service). Since this office is new and its organizational structure and interrelationships with the Office of University Relations is evolving, we proceed in the following way. First, we provide what is essentially a brief history of the university relations function at William and Mary. Second, we present some of the goals and strategies suggested by a Strategic Planning subcommittee on communications issues. (The Chair of the Institutional Advancement Committee of the Self-Study served as liaison to this Strategic Planning subcommittee in an effort to coordinate the knowledge base and recommendations where possible.) Third, we include the job description of the new Vice President for Community Relations and Public Service. Fourth, we offer a short list of recommendations.

History: The communications function developed relatively late in the College's history. The first formal communications program began in the 1950s, and a professional public relations program evolved through the 1960s and 1970s. Like any other element of the administration, the communications area has taken its lead from the incumbent President, and established its priorities accordingly.

The Office of University Relations has two units --the Office of Publications and the Office of Public Information. The mission of the Office of University Relations is to promote the advancement of the College by supporting its programs in Admissions, Development, Community Relations, and Legislative Relations; to address the public relations needs of the College and all of its academic divisions and administrative units; and to serve as the communications arm of the administration, planning and implementing internal and external communications strategies and techniques. Despite the growth in activity and responsibility in the public relations area, the present condition of the Office of University Relations is that resources devoted to the public relations function are at a

lower point now than they were at the time of the last Self-Study a decade ago.

In the area of publications, the Office of University Relations produces the primary publication for internal communications, the *William and Mary News*. In cooperation with the Society of the Alumni, the Office of University Relations produces two other publications that serve to communicate major academic and administrative developments to alumni and parents -- the *Alumni Gazette* and the *William and Mary Magazine*.

As previously noted, the Office of Community Relations and Public Service has just recently been formed. The Strategic Planning subcommittee on communications issues (cited above) has suggested goals and strategies for this newly formed unit. The Institutional Advancement Committee of the Self-Study (the Chair of which served as liaison to this Strategic Planning subcommittee) endorses the ideas embodied in the communications goal. In particular, the goal is to come up with a "comprehensive university-wide communications plan which will enable William and Mary to present a consistent and effective message to all of its internal and external constituencies." We summarize the strategies for attaining this goal.

Strategies for Internal Communications:

- Provide for clear, consistent communication of the institution's priorities by the College's leadership to the internal constituencies.
- Create an Advisory Council to the Vice President for Community Relations and Public Service to assist in setting policies and procedures for communicating the university's priorities. This Council would serve in both internal and external communications.
- Develop a campus policy which designates a structure for communication and media relations.
- Use technology currently available on campus to generate more effective internal communications.
- Ensure that the College's publications and other public relations activities which have an internal audience carry consistent themes and messages.
- Ensure that vehicles used for both internal and external communications, e.g., the *William and Mary News*, are responsive, in a timely and comprehensive manner, to the

campus communities' information needs.

- Ensure that staffing levels for the Office of Vice President for Community Relations and Public Service are commensurate with fulfilling the goal and strategies.

Strategies for External Communications:

- Ensure that the College's publications and other public relations activities which have external audiences carry consistent themes and messages, stating clearly the College's priorities.
- Ensure that the College represent itself more effectively at local, state, and national levels by both expanding its sphere in the dissemination of information to appropriate government officials, and developing more effective mechanisms for that dissemination.
- Ensure that the Vice President for Community Relations and Public Service will be actively involved in the planning, coordination and execution of all College external communications efforts. Individual campus units -- that currently do much of their own external communications -- will keep the Office of Community Relations and Public Service informed and seek its advice when appropriate.
- Identify clearly the appropriate official spokespersons who can speak for the College on various issues and activities.
- Give particular attention, in the development of the comprehensive communications plan, to ways of using the electronic media (i.e., television and radio) to assist in the area of external communications, and to use professionally developed multimedia to tell the College's story in the areas of recruitment, admission, development, alumni relations, staff orientation
- Ensure that the Vice President for Community Relations and Public Service, working with the deans and the faculty, identify strategies and aggressively market faculty interests and expertise to the media.
- Explore the possibility of encouraging new linkages with the Society of the Alumni to promote the university more effectively through matching alumni contacts with talents and expertise of the faculty.

- Work with the Development Office to ensure that a comprehensive stewardship program with current and prospective donors is in place and functioning at a high level across the university.
- Work with the Development Office to inform the university community as to the use of the monies raised by the Development Office.
- Ensure that vehicles for primarily external communications, e.g., the *Alumni Gazette* and the *William and Mary Magazine*, receive sufficient financial support to be able to continue their important and effective outreach role.
- Ensure that all publications emanating from any College entity carry the William and Mary name.

Job Description: Vice President for Community Relations and Public Service: The Vice President for Community Relations and Public Service is responsible to the President for developing and managing programs that include: economic assistance; public service and outreach; publications and printing; communications; special events; and government relations. In this position, the Vice President will make recommendations to the Administration and manage programs that include:

Economic Assistance: Develop and implement strategies to support economic development opportunities on the Peninsula and across the Commonwealth.

Bureau of Business Research: Assist the Bureau in targeting opportunities to provide forecasting and analytical data to local, regional and state economic development agencies.

Peninsula Center: Formulate and execute strategies to ensure that the Peninsula Center meets the part-time and continuing and professional education needs of regional business, their employees and the citizens of the area.

Public Service and Community Outreach: Develop an aggressive program to link community needs with college capabilities, while providing opportunities for the campus community to engage in public service.

Publications and Printing: Manage the development of campus publications and printed materials.

Communications: Coordinate the College's response to its diverse constituents including students, parents, faculty and the public.

Special Events: Manage the organization of special activities at the College including regional, state, national and international events.

Government Relations and Information: Manage the College's response to local, state and federal legislative officials.

Recommendations

The Institutional Advancement Committee identified the critical need for the creation of a new position to deal with legislative relations and generally help to articulate the College's message to external groups. The new position of Vice President for Community Relations and Public Service serves such a role and is endorsed by the committee. We encourage the administration to find ways to staff this new office adequately so it can perform its important tasks.

In addition, the Office of Community Relations and Public Service needs to come up with a comprehensive university-wide communications plan.

Specific strategies need to be developed in order to capitalize on the momentum generated by the Tercentenary. General awareness is at a high level, and our challenge will be to translate that awareness into specific knowledge about the College and its programs and people. The media relations program should focus on the promotion of faculty expertise and academic programs as well as make a strong case to prospective students and their parents as admissions becomes increasingly competitive.

Society of the Alumni:

The Articles of Incorporation of the Society of the Alumni state that "the purposes for which the Society is formed are to aid, strengthen, and expand in every proper and useful way in the College of William and Mary in Virginia and its work, and to develop, strengthen, and utilize the bonds of interest, sympathy, and affection existing between the College and its alumni/ae, and among the alumni themselves."

The Society of the Alumni of the College of William and Mary, established in 1842, is an incorporated non-profit alumni association for all former students of the College who attended a minimum of one semester. A non dues-paying organization, the Society has 65,000 members. It

is governed by a 15-member Board of Directors, elected by the active membership, and supported by three advisory groups --the Olde Guard Council, the Young Guard Council, and the Student Alumni Liaison Council. A fourth advisory council, a Graduate Alumni Council, is in the formation stages.

The Society is headed by an Executive Vice President who manages four functional areas through departmental directors. These departments are Alumni Affairs, Alumni Communications, Society Services, and Administration and Records. By invitation, the Executive Vice President is a member of the College of William and Mary's President's Administrative Staff, the University Policy Advisory Committee and serves on several university committees. Although the Executive Vice President is hired as the Society's CEO, there is a dotted-line reporting relationship to the President.

The Alumni Board of Directors has four standing committees: executive, finance and operations, alumni service and college relations. These committees are charged with evaluation and review of programs, development of Society objectives, establishment of board policies, the submission of an annual budget to the College's Board of Visitors and identification and nomination of alumni for boards, committees, awards, and degrees.

Of the 65,000 living alumni of record, more than 88 percent have current valid addresses through the Society's records system. Each year the data base grows by more than 1,600 new graduates. Alumni are found throughout the United States and in more than 50 foreign countries. Approximately 50 percent of the alumni live within the Commonwealth of Virginia.

Located in the building dedicated for its use, the Society is the principal depository for all non-academic alumni records. Plans to expand that facility are currently under way. The alumni program at the College is predicated on service to alumni and the institution. To achieve this, a highly effective communications effort must be combined with diverse programming, membership services and a records and research capability that can meet the informational demands of university and constituents.

Alumni Communications: The *Alumni Gazette* is a tabloid publication sent six times per year to all alumni, parents of current students, faculty, staff and friends. It is a publication which contains campus news, features and alumni invol-

vement articles. The *William and Mary Magazine*, published twice annually, is sent to the same constituency as the *Alumni Gazette*, but because of its content and makeup it is also utilized by the admissions office for prospective students, parents and high school guidance counselors. It is a magazine which frequently has features on alumni and faculty, articles about campus life, and interviews with professors and other members of the university community. Other communication occurs through news releases, the publication of brochures, informational pamphlets, and other newsletters. In addition, The King and Queen Press is the book/workbook publishing arm of the Society. The press has published academic workbooks, *Traditions, Myths and Memories* and, most recently, the *William and Mary Cookbook*.

Alumni Affairs: There are many traditional as well as non-traditional programs which afford alumni and friends opportunities for involvement with their alma mater. Examples of some that have been developed include: Class Reunions; Class Gift Administration; Alumni Chapters; Homecoming; Olde Guard; Young Guard; New York Auction Weekend; Alumni Admissions Network; Career Services; Student Alumni Liaison Council; Campaign for the Fourth Century; Continuing Education; Student Recognition; Alumni and Faculty Awards; Pre-game and Post-game Tentgaters.

Alumni Records: The Society depends upon its professional staff and a computer system to keep track of members. Research efforts assist in the identification of biographical information, address updates and names of deceased or lost alumni. As a service component the Records Office routinely provides alumni information, directories and mailing labels to student organizations and academic units.

Awards: Over the past six years the Society has been accorded over twelve awards from the Council for Advancement and Support of Education (CASE) and the International Association of Business Communicators (IABC). In 1990 the Society was awarded a Gold Medal Award from CASE as the single most improved alumni association in the United States. The Society's most recent award is the Grand Gold Medal for Total Alumni Program awarded by CASE. This was awarded based on a review of the period March 1, 1993 to March 1, 1994. Among the national awards that alumni associations can receive, this medal is the most comprehensive and prestigious.

The Present and Future: The Society of the Alumni is an essential element in the life of the

College. The relationship of the Society with the College is a strong one and the role played by the Society during the Campaign for the Fourth Century was crucial to the success of the Campaign.

Almost all areas cited for improvements in the last Self-Study have been resolved. The relationship with the College, and most notably the Development Office, has improved greatly and is much more cooperative. The alumni records system, shared jointly with the development office, is one of the most comprehensive found at any small public university --reflecting both extensive alumni records as well as extensive donation information. Throughout the Campaign for the Fourth Century, the Society actively participated in --and played a key role in-- the identification and cultivation of prospective donors.

The Executive Vice President of the Society identified several issues for the committee that are currently under consideration by the Society. They are:

- whether to institute a complex dues structure to provide increased funds for programs, services and publications;
- how to obtain adequate funding for the publication of the *William and Mary Magazine* and the *Alumni Gazette*;
- how to involve an increasing number of faculty in academic programs on and off the campus --including the involvement of more faculty in the selection process for awards, boards and committees;
- how to better serve a growing alumni body that now has nearly 50 percent of its population outside the state of Virginia;
- identify ways the Society, as an independent non-profit organization, can assist the College in legislative relations;
- incorporate additional programs which can aid students in their career paths and job searches; and
- work more directly in the recruitment of minority students, faculty and staff.

Recommendations

As noted above, the relationship between the Society of the Alumni and the College is a very strong and positive one. To build on this relationship, the committee recommends that the agree-

ment ratified over twenty years ago, between the Society and the College, be jointly (by the Society and the College) re-examined and updated as appropriate. The agreement was ratified in a previous era, a difficult period of strained relations between the Society of the Alumni and the College, and the document has not been examined or revised since that time. Now, over twenty years later and looking ahead to the next ten years, it is, in the view of the committee, essential that that document be re-examined and updated to fit the current role of the Society and its emerging relations with other parts of the university, including its constituent alumni organizations, the Office of University Development, and the Office of Community Relations and Public Service. While the much improved relations between the Society of the Alumni and the College could easily lead one to conclude that no change is needed, the committee believes that an updating of the agreement in these more amiable times could prove to be quite helpful for all concerned and strengthen opportunities for cooperation between the Society and the College.

The Society is a private, non-profit entity. Per agreement with the College, a large portion of its funds come from unrestricted private monies from the university. Because of this the committee recommends increased communication between the Society's Executive Vice President and the College's Vice President for Planning and Budget.

The committee recommends that the Society continue to coordinate data with the Development Office. The current system works well, but the challenges become greater as data systems become upgraded and perhaps more complex, and as donor stewardship strategies call for further implementation.

The committee recommends the explicit involvement of a faculty member (perhaps a member of the Society) as liaison with the Society's Board to help enhance and coordinate the significant efforts by the Society to create meaningful linkages to, and dialogue with, the faculty.

SUMMARY OF RECOMMENDATIONS

The next steps regarding institutional advancement will depend critically on the long-range planning goals and priorities set in the process of completing the university Self-Study and the Strategic Plan. With an appreciation of the dynamic processes involved, the following is a summary of the primary recommendations of the Institutional Advancement Committee of the Self-Study:

Development:

1. the administration should move as quickly as possible into the next campaign so as to help offset the declining financial contribution by the Commonwealth;
2. the overall staffing of the Office of University Development should grow commensurate with attaining a high yield on such resource expenditure;
3. the development fundraising activities at the College should continue as a relatively centralized system.

Community Relations and Public Service:

4. the new position of Vice President for Community Relations and Public Service, which will help deal with legislative relations and generally help to articulate the College's message to external groups, is endorsed by the committee, and this new office should be staffed adequately so it can perform its important tasks;
5. the Office of Community Relations and Public Service should come up with a com-

prehensive university-wide communications plan.

Alumni Relations:

6. the College and the Society should jointly re-examine and update as appropriate the agreement between them ratified over twenty years ago;
7. communication between the Society's Executive Vice President and the College's Vice President for Planning and Budget should be increased;
8. the Society should continue to coordinate data with the Development Office and work to keep the records current as data system upgrades become available;
9. the Society should explicitly involve a faculty member (perhaps a member of the Society) as liaison with the Society's Board to help enhance and coordinate the significant efforts by the Society to create meaningful linkages to, and dialogue with, the faculty.

Chapter Fourteen**Financial Resources**

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INTRODUCTION

This section describes the financial resources of the university, their sources, uses, and management. It also describes the inventory, risk management, and control policies used by the institution. For each of these tasks, the College has published detailed procedures --including lines of authority-- which are readily available to employees, students and others who may do business with the university.¹

The College of William and Mary uses a continuous process of assessment of its financial resources to determine how effectively they are employed in meeting the mission of the university. Therefore, in addition to annual financial statements and budget-making, analyses are conducted on both a regular and an ad hoc basis to guide policy decisions. These studies normally involve faculty, as well as student, committees --and are available to the university community.

For example, during the past three years the College conducted a study of faculty salaries comparing William and Mary salaries at all ranks with those of peer institutions. Faculty participated both in the study and in its evaluation. Also, an in-depth analysis was done of student fees covering their levels, allocations, client-value, and possibilities for changes --all from the perspective of William and Mary students.

In addition, in the past four years each department has drawn up alternative budget scenarios to represent various levels of state funding including the possibilities of cuts. Through this process, adjustments to reduction in State funds were enabled without reducing faculty size or closing departments. Our library budget has been restored (at least in dollar terms) and appears healthy even though it had been cut in previous years as the college attempted to adjust to changes in state appropriations. Because the library is central to the university's mission, it is essential that the resources always be maintained at an adequate level. It is important that the university set a target rate of growth to make the library system second to none among universities of our size and program mix.

Scheduled increases in salaries which were postponed or slowed during the recession have essentially been restored. The College and its supporters may well be proud that it weathered the financial disasters that visited campuses throughout the country. Yet, we remain conscious that even successful financial adjustments have the potential of impairing the competitiveness of a university. (The following section numbering is that for "Financial Resources" in the Southern Association's *Criteria for Accreditation*.)

¹ Procedures manuals, organization charts, recent audits, various reports mentioned in this chapter, and detailed financial information are on file with the Self-Study document collection.

6.3.1 Financial Resources

Table 2 (following page) shows the total amount of financial resources available for operating the College over the five-year period fiscal years 1990 through 1994. It also shows the sources and uses of these dollars. During each of these years, the College has had a positive fund balance giving it a firm financial foundation for each subsequent year.

The principal (but declining) source of revenues for the College is an annual appropriation by the Commonwealth of Virginia. Over the five-year period, these appropriations have varied from roughly 33 to 23 percent of university revenues. This variation is due to a decline in state funding

offset by increases in tuition and fees which are steadily rising to about 30 percent of all revenues.

The expenditure categories have remained reasonably steady, with the principal expenditure being for instruction. This category has remained at about 30-33 percent of revenues over the past five years. Auxiliary services and related corporations continue to make a net positive contribution (revenues exceed expenditures) to the College's unrestricted funds. Unrestricted funds account for about 90 percent of all revenues, reflecting substantial financial flexibility.

Table 1 shows the breakdown of per student E&G expenditures over the past five fiscal years.

Table 1: Educational and General Expenditures per FTE Student --FY 90 through 94

Fiscal Year	1990	1991	1992	1993	1994
Total FTE Students (Fall Semester)	7,299	7,173	7,264	7,298	6,964
A: According to federal Department of Education HEGIS/IPEDS reporting					
Total E&G Expenditures (in millions)	\$72.2	\$75.3	\$77.1	\$81.4	\$84.9
E&G Expenditures/FTE Student	\$9,887	\$10,494	\$10,620	\$11,150	\$12,190
B: According to state Appropriation Act					
Total E&G Expenditures (in millions)	\$58.1	\$58.1	\$58.6	\$60.7	64.2
E&G Expenditures/FTE Student	\$7,965	\$8,106	\$8,068	\$8,316	\$9,226

The College reports each year to the U.S. Department of Education through the Integrated Postsecondary Education Data System or IPEDS (before 1987 called Higher Education General Information Survey or HEGIS). For this report, "Educational and General" expenditures include: Instruction, Research, Public Service, Academic Support, Libraries, Student Services, Institutional Support, Operation and Maintenance of Plant, and Scholarships and Fellowships (also "Transfers"). For the Commonwealth of Virginia, "Educational and General" does NOT include Scholarships and Fellowships and within the Research category does NOT include sponsored research. Therefore, the "federal" numbers are larger. In neither case is VIMS (a separate agency) included.

For comparison with other institutions, the federal HEGIS/IPEDS numbers must be used because they are "universal."

FTE numbers are those reported in the *University Databook* (William and Mary Office of Institutional Research; a new volume produced each year). For comparison with other institutions, again, federally reported numbers must be used because a factor is used to decrease the part-time FTE numbers. The above numbers are not reduced by this factor, but in any other FTE comparisons with other institutions in this Self-Study, the HEGIS/IPEDS numbers are used.

Table 2: College of William and Mary Revenues and Expenditures, FY 1990 - 1994

Item	Current Funds Revenue				
	FY 90	FY91	FY92	FY93	FY94
Tuition and Fees	25,828,560	28,108,054	31,870,799	34,590,884	37,299,496
State Appropriation	34,720,821	32,678,208	28,803,234	29,223,866	29,216,826
Federal Unrestricted	620,119	741,269	880,625	974,306	1,216,475
Federal Restricted	4,057,956	4,703,511	5,304,389	5,711,293	5,696,514
State Unrestricted	160,507	64,291	101,388	100,488	142,468
State Restricted	2,021,828	2,249,486	2,147,700	2,657,898	3,005,687
Local Unrestricted	0	22,075	12,365	4,128	4,335
Local Restricted	1,120,492	125,984	115,636	148,430	125,826
Gifts Unrestricted	1,404,444	1,474,631	1,587,093	1,870,315	1,929,529
Gifts Restricted	1,402,846	3,338,728	3,434,797	3,194,096	3,096,425
Endow. Income Unrestricted	862,290	832,579	556,561	748,903	697,606
Endow. Income Restricted	464,058	492,595	476,260	597,074	633,273
Educational Sales	69,733	89,668	20,149	15,116	13,388
Auxiliary Enterprise	32,610,542	35,189,613	36,480,035	38,556,703	41,222,358
Other	424,411	445,488	2,000,774	629,205	1,146,656
TOTAL	105,768,607	110,556,180	113,791,805	119,022,705	125,446,862
Item	Current Funds Expenditures				
	FY 90	FY91	FY92	FY93	FY94
Instruction	34,692,311	36,531,571	37,916,838	39,026,298	39,096,684
Research	7,682,563	8,883,282	8,774,804	9,449,856	10,187,093
Public Service	8,536	8,052	8,010	8,350	8,613
Academic Support	6,167,809	5,719,961	5,468,282	6,078,668	7,298,764
Libraries	4,785,372	4,560,349	4,708,290	5,150,456	6,181,785
Student Services	3,544,829	3,657,564	3,323,932	3,491,982	3,841,072
Institutional Support	7,935,534	8,151,891	7,727,725	8,659,706	8,703,737
O&M of Plant	4,985,692	4,878,236	5,758,926	5,407,948	5,126,648
Scholarships/Fellowships	3,254,139	3,561,506	4,193,822	4,969,738	5,331,747
Transfers	(893,321)	(676,542)	(735,517)	(870,597)	(886,170)
Auxiliary Enterprise	32,996,535	34,438,856	35,044,761	35,446,204	44,526,227
TOTAL	105,159,999	109,714,726	112,189,873	116,818,609	129,416,200

The Committee estimates that, assuming anywhere from a zero to a three percent inflation rate through 1998, the per student expenditure (calculated with "state" --not "federal"-- Educational and General Expenditure figures) for the university could vary from \$8,366 to \$10,642 and that the required revenues for operating the university while maintaining the current fund balance would vary from \$157,684,180 to \$175,256,479 in 1997-98.²

While this projection gives us an operating target, the reality may well be that a larger fund balance may be required if state contributions decline, enrollment increases, inflation is larger than projected, a recession causes a decline in outside contributions, the university intensifies its commitment to excellence by introducing new programs and technologies, or even if there is a substantial change in unfunded requirements either by the federal or state governments. In any event, a continuous review of all fund balances, not just the general funds, is desirable. This review should focus on whether all funds are at prudent levels and operating in a coordinated manner to meet the overall mission of the university. While respecting donor, legal, and fiscal prudence considerations on the use of funds, accumulations may also imply excessive cost shifting to tuition or fees, or less than adequate expenditures on matters critical to the mission of the university.

The university, therefore, needs a continuous process of assessing the short and long-run impacts of certain options. For example, what is the net benefit of increasing enrollment beyond a certain threshold? Is the increase projected in the university's long-run plan still in keeping with current economic realities? While increased enrollment may provide more revenues from tuition and fees, there are real financial and nonfinancial costs. These may include the need to provide greater financial aid in order to maintain the ideal mix of students (in-state and out-of-state, graduate and undergraduate), the need to provide more non-self-financing student services, larger class size which may diminish individualized training, and, eventually, the need to provide greater physical capacity with greater maintenance costs.

Similarly, the university must continue to as-

sess the potential of increasing net unrestricted revenues so as to minimize increases in tuition, fees and enrollment to prejudicial levels. In this regard, the university has just successfully completed its Tercentenary fund raising campaign that yielded approximately \$153 million.

The College maintains a capital budget as part of its long-term plan. It is periodically reviewed (at least every two years) by state law. The capital plans for the next ten years project an expenditure of approximately \$127,000,000. This includes planned addition to academic space and to Swem Library as well as additions to or modifications of residential space.

Borrowing to finance capital projects occurs through general obligation bonds (which are obligations of the state) or through revenue bonds which are obligations of the College. Currently debt service by the College amounts to 2.6 percent of all the College's annual expenditures.

Most of the outstanding debt of the university is supported by revenues from the specific projects such as housing debt being paid by dormitory fees. Interest payments account for one percent of current annual expenditures. There is no indication that the university is approaching a leverage problem.

6.3.2. Organization for the Administration of Financial Resources

While the university operates in a decentralized mode giving each School and operating center a range of authority to carry out its individual mission, the Board of Visitors is the overseer and the final authority on the financial activities of the university. The Rector appoints members of the board to a Committee on Financial Affairs which considers and makes recommendations to the board relative to the general direction and control of financial matters at the College.

The Board delegates to the President the operating responsibility and accountability for the administrative, fiscal, and program performance of the College. The President, in turn, appoints a Vice President for Administration and Finance, a Vice President for Budget and Planning and a Provost. They, along with the Comptroller (who reports to the Vice President for Administration and Finance)

2. These estimates were requested by the Committee based upon specific assumptions, i.e., that the university student population will grow at its adopted planned rate and that the fund balance will increase annually at a positive amount of \$8.1 million. This was the amount of annual increase during the previous five-year period, 1988-1992.

and the Internal Auditor (who is appointed by and reports directly to the Board of Visitors), are the key persons in setting policies and in accounting for the overall management, control and custody of the financial resources of the university.

The Vice President for Administration and Finance is responsible for payrolls, purchasing, handling of financial contracts, and the preparation of annual fiscal reports. The Comptroller, directors of auxiliary services, information technology, the campus police, facilities management, and personnel services, along with the bursar and cashiers, all report to the Vice President. [A chart showing the organization of that office is on file with the Self-Study documents collection].

The Vice President for Budget and Planning is responsible for all budget development activities including the operating and capital budgets. This vice president is also responsible for the allocation of resources and oversight of expenditures and for the conducting of studies to assist in the setting of budget priorities. This vice president is assisted by the Office of Institutional Research.

The Internal Auditor is appointed by and reports directly to the Board. The position carries a comprehensive mandate covering both financial and nonfinancial functions; i.e., data management which is critical to the university. We describe this role more fully in the section on audits which appears later.

6.3.3. Budget Planning and Development

During the initial phase of annual and biennial budget development, numerous discussions are held campus-wide to establish priorities concerning college needs. The primary forum for these discussions is UPAC (University Policy and Advisory Committee). This committee includes the Provost, Deans, Vice Presidents, student representatives, and the Executive Committee of the Faculty Assembly.

In addition to establishing priorities, it is necessary to develop revenue estimates to identify the level of funding required to support on-going activities as well as new initiatives. A current year revenue estimate is provided by the Office of the Bursar. This report is used by the Vice President for Budget and Planning in developing future-year estimates, with factors such as anticipated enrollment, miscellaneous revenue, etc. taken into consideration. These revenue and expenditure projections are by function and are done on a monthly as well as an annual basis. Actual revenue and expenditures can be compared with projected

revenue and expenditures for past as well as future years.

Priorities established by UPAC, budget submissions, and future-year revenue estimates, serve as the basis for subsequent discussions among the President, Provost, Vice President for Administration and Finance, and the Vice President for Budget and Planning. These discussions result in the final proposal which (once approved by the President) is submitted to the Board of Visitors of the College for approval. The document given to the Board for its consideration and approval gives not only the numbers, but explains the expenditure priorities.

Because of the nature of budgets as policy documents, the university may well wish to consider institutionalizing open budget hearings with participation of the faculty, students and other stakeholders during the drafting and planning stages. The Faculty Assembly should be directly involved in basic budgetary choices. Currently, the university does provide for basic information sessions for these constituencies including visits to departmental faculties by the President and Provost.

6.3.4 Budget Control

The budget office, under the direction of the Vice President for Budget and Planning, monitors expenditures campus-wide with the use of data from the automated financial reporting system which the College maintains. The budget office also maintains an internally generated spreadsheet which allows it to do a wide range of analyses, including up-to-date calculations that allow it to spot possible deviations from planned expenditures.

All departments are required to operate within budgeted allocations determined annually and modifiable through specific requests submitted to the Office of Planning and Budget. To provide departments with data necessary to monitor their financial status, printouts are mailed monthly identifying total budget and expenditures to-date. This information is generated from the automated Financial Records System (FRS) of the College.

In addition, the Budget Office and various offices on campus, have the capability of accessing data by department on-line through FRS. This information is available real-time, therefore providing more up-to-date detail than data contained in the reports generated at the end of each month.

6.3.5 External Controls

The university, through the Board of Visitors,

controls its financial behavior. It is not beholden to any outside group or donor. Restricted funds account for roughly 10 percent of its entire revenues. Although the College of William and Mary is an independent state agency, the influence of the state over its finances is limited. The state determines the amount it will appropriate to the university (but does not micro manage fund-raising, revenue streams, expenditures or allocation). The state is not a participant in the fiscal planning of the college. The state's contribution is determined biannually through the normal budget process which provides for the university to present its case to the governor and to the legislature.

The state may, as it has, dictate whether the university may increase its tuition. Thus, the combination of a decline in state aid matched by a restriction on tuition increases or a mandate to increase tuition, will always result in forcing the making of trade-offs which may be prejudicial to the university. Accordingly, the university must continuously assess alternative scenarios when planning and it must always seek maximum flexibility when negotiating state assistance.

6.3.6 Accounting, Reporting and Auditing

Since 1976, the College of William and Mary has been processing and maintaining comprehensive financial records in an automated environment. The Financial Accounting System (FAS) was the original application implemented in 1976 as a batch accounting and reporting system. In mid-1985, the College began to acquire and implement a new on-line automated accounting and reporting system. In 1985, the College sought funds to purchase and install Information Associates' Series Z Financial Reporting System (FRS).

FRS consists of three major subsystems: Financial Accounting, Accounts Payable, and Purchasing. The College of William and Mary implemented the Financial Accounting and Accounts Payable subsystems July 1, 1987. The Purchasing subsystem was implemented effective July 1, 1990, and enhanced in 1992. FRS is designed in accordance with the National Association of College and University Business Officers (NACUBO) university fund accounting principles to meet the needs of a university's financial operations and fiscal management. It provides current financial data through on-line inquiry, edit and/or update at the time of data entry, and is a fully integrated disburs-

ing and accounting package.

An annual audit is performed by the Commonwealth of Virginia's Auditor of Public Accounts (APA). These statements include an unqualified opinion from APA. The audit for the year ended June 30, 1993, is currently underway. The expected date for completion and issuance of the audit opinion is July 1994.³

The Auditor of Public Accounts reports directly to the Legislature of the Commonwealth of Virginia through the Joint Legislative Audit and Review Committee. There is no direct connection between the Auditor and the College of William and Mary.

The Director of the Office of Internal Audit is appointed by and reports to the Board of Visitors. Each year the office conducts 20 to 25 audits. Each audit entails one or more of the following objectives: security of assets; economy and efficiency; compliance with federal, state and College rules and regulations; financial statement review; procurement of assets; construction; computer systems development; or academic program review.

In addition, each of the seven largest related corporations of the College has its own audit done by an outside auditor. In these cases, the auditor's reports are directed to the boards of the independent corporations, but must be shared with the President of the college. None of any of the above mentioned audits has revealed any major infractions.

6.3.7 Part A: Purchasing

The College follows very detailed procurement and inventory control policies which appear in readily available manuals. The overriding objective of its procurement policy is to obtain goods and services of high quality but at the most economical cost. Additionally, the procurement procedures are written to promote fairness, competition for all purchases exceeding \$1000, impartiality, and conformity with state rules and regulations.

In this connection, some of the materials, supplies, equipment and printing requirements are acquired through centralized purchasing by the state. Further, procurement sources are prioritized. Thus, before seeking other suppliers the College must consider if the item is available through (a) an existing state contract, (b) the state correctional facilities, and (c) the Department of the

Visually Handicapped. The rules also call for inclusion of female, small and minority suppliers on the bidders list. Purchases are further controlled by limiting the amount that can be bought directly by departments from sales representatives to \$2000.

The College may wish to explore if there are economies to be derived from increasing contracting with small and local businesses and those owned by minorities, female and handicapped persons. Currently, by law, a considerable amount of purchasing by the university and other state agencies is centrally done by the state.

6.3.7 Part B: Inventory Control

The College has a detailed set of procedures to be followed at every point from the receipt to the disbursal of inventory. These procedures recognize variations in types of inventory, time or day of delivery, point of delivery, necessity for storage, and specific problems attendant to the delivery or disbursal of items in stages.

The procedures call for verification of items --by quality, amount and characteristics. For example, vendor and delivery slips must be verified, signed and filed with any disagreements noted. In addition, the storage of hazardous products must follow prescribed steps. For example, "NO SMOKING" signs may be required, temperatures kept at prescribed levels, items kept in safe containers and access restricted. Medical supplies must be handy. There has been no report of serious loss of inventory or incident of injury attendant to the delivery, storage or disposal of inventory.

6.3.8. Refund and Tuition Payment Policies

William and Mary's policy on refunds and tuition payments is published in the Catalog and applicable portions appear in promotions of college programs including special educational programs (e.g., summers abroad and non-credit seminars), each of which may have its own withdrawal policy. Written verification of scholarships from outside the College is required before these amounts can be applied by the Bursar's Office.

For full-time students who withdraw from the College, all charges are considered fully earned upon completion of registration by the student. No refunds will be made to a student who has been required by the College to withdraw, regardless of the date of withdrawal. A full-time student who withdraws within five days after classes begin is entitled to a refund of all payments less any

deposits required by the College as evidence of intent to enroll. A full-time student who withdraws within the 6 through 30 day period following the first day of classes will be charged 25% of tuition and fees. No refund will be due after 60 days following the first day of classes. Meal plan and rent charges of students who withdraw during the refund period will be pro-rated weekly based on the last date of use.

A part-time student who withdraws from the College during the add/drop period will be charged \$50 to cover administrative costs. A part-time student who withdraws from the College after the add/drop period but within 60 days following the first day of classes will be refunded 50 percent of tuition. Meal plans are refunded on a weekly pro rata basis. No refunds will be made to a part-time student who withdraws after 60 days following the first day of classes or who is required by the College to withdraw.

A part-time student who withdraws from a course after the add/drop period and remains registered for other academic work will not get a refund except for certain Physical Education courses that are not scheduled on a semester basis.

William and Mary has approved participation in four commercial tuition payment plans. These are: Richard C. Knight Insurance Agency, Inc.; The Tuition Plan; Academic Management Services; and Tuition Management Systems, Inc.

The W&M Card debit program allows students, faculty and staff members to deposit money, in increments of \$25.00. Balances are given at the end of each transaction and are carried forward from semester to semester while the student is enrolled or the faculty/staff member is employed. Refunds may follow: (1) withdrawal from school, (2) academic or disciplinary dismissal, or (3) termination of employment. Balances under \$10.00 which remain in an individual's account revert to the College. Refunds must be requested in writing within 60 days after withdrawal. They are mailed within 30 days after receipt of written request. Credit, not cash, is given for returned merchandise.

6.3.9 Cashiering

All cashiering activities come under the Vice President for Administration and Finance and are governed by readily available written policy. This policy requires that deposits be made at least once every five working days or when \$100.00 has accumulated, whichever comes first. Each deposit must be accompanied by a transmittal form which gives dates, lists checks, amounts, and other con-

3. Audited statements on file with the Self-Study documents collection.

trol data to insure proper recording. The policy also requires monies to be safeguarded in a locked vault, locked file cabinet or other approved limited-access area until deposited.

All employees of the College are bonded in the amount of \$500,000 through the Commonwealth of Virginia's insurance program. The Cashiers for the College are additionally bonded through our Commercial Crime Coverage. Covered are: (a) dishonest acts by one or more employees resulting in an intentional loss to the College and/or gain to the employee or other person, (b) damages to the premises of the College related to the dishonest act such as the destruction of a vault, (c) loss of money or securities off the College premises such as from a messenger, vehicle or structure containing the cash or security, (d) losses due to counterfeit currency or money order, and (e) losses sustained through forgery or alteration of, on or in any check, draft, promissory note, bill of exchange, or similar written promise purportedly made or drawn by the College or on its behalf.

The cashiering function is subject to audit by the Internal Auditor and the Auditor of Public Accounts. Cashiers report directly to the Bursar who reports to the Vice President for Administration and Finance.

6.3.10 Investment Management

The Board of Visitors of the College of William and Mary is responsible for establishing and maintaining the policies by which the College conducts its investments and financial operations. The Investment Policy For Endowment states the philosophy, procedures and guidelines used by the Board in its fiduciary role. Its Financial Affairs Committee must review the policy at least once every three years. The Board also appoints and evaluates investment managers and negotiates their fees.

The Board requires investment managers to provide quarterly updates describing assets under their management, asset allocation, investment performance and the like. These managers submit comprehensive reports twice a year covering the quarterly updates as well as information on earnings, capital appreciation, and realized gains and losses along with a narrative on portfolio performance and market forecasts.

Based on this and other information, the Board approves portfolio allocation ranges within which investment managers are free to operate in the interest of the College. Current policy allows the following range per asset class:

Cash and Short-Term Securities	0 - 30%
Bonds	20 - 50%
Equities	40 - 75%

As to quality and maturity of investments, the bond portion of the portfolio cannot appreciably exceed ten years in average maturity. The purchase of bonds rated BAA is now allowed. Investment managers search for BAA bonds which they consider candidates for upgrade (to A or higher) by rating agencies. Yields are higher on these bonds and so too are possibilities for price appreciation. BAA bonds are limited to 15% of the bond portion of the portfolio.

Current policy permits investment in asset- and mortgage-backed securities, pass-through securities, and collateralized mortgage obligations (CMOs) which are in the top four ratings. This policy also permits the use of mutual funds to achieve broad international exposure, greater than that provided by a few international securities. This policy limits the international equity component to no more than 20% of the market value of the total equity investment.

Concerning the custodial duty, all state funds of the College are held by the Treasurer of Virginia who is responsible for the collection, disbursement, custody and investment of state funds.

Certain deposits and investments are held by the College or are represented by identifiable securities held by the Treasurer of Virginia for the College. Such deposits and investments are reported separately either as cash equivalents or as investments. Cash and cash equivalents represent deposits and short-term investments with maturities of less than one year. (Investments are securities with maturities in excess of one year that are expected to be held until maturity.)

Deposits with banks and savings institutions are covered by federal depository insurance or are collateralized in accordance with the Virginia Security for Public Deposits Act.

All of the College's investments are conducted to minimize credit risks; i.e., that the College may not be able to obtain possession of its investment instrument or collateral at maturity. Risk category 1 includes investments which are insured or registered or for which the securities are held by the College or its safekeeping agent in the College's name. Risk category 2 includes uninsured or unregistered investments for which the securities are held by the broker or dealer, or by its trust department or safekeeping agent but not in the College's name. There are no investments with greater credit

risk.

The Board also sets payout (spending) policies; i.e., currently, payout will be no more than 5.5 percent of the average market value of the investment portfolio at the end of the previous three calendar years. For those endowments given to the College which are in support of the Eminent Scholars Program funded through the Commonwealth of Virginia, the payout will be no more than 7.5 percent of the average market value of the investment portfolio at the end of the previous three calendar years. This higher level of payout is desired as the Commonwealth will match income earned on Eminent Scholar funds. Historically, the Commonwealth matches between 70% to 100% of earned income that is submitted for qualification in the program. The 7.5% payout enables the College to qualify for more dollars with the Commonwealth, thereby maximizing its match, but preserving the value of the corpus. Any income in excess of the following year's budgeted expenditures is retained by investment managers and reinvested as quasi endowment.

Clearly, the Board of Visitors has increased the maturity, asset type and allocation to prudent ranges in order to get better yields and investment performance while diversifying the portfolio to minimize risk. It has also limited spending to prudent levels to preserve the corpus so as to meet future needs. By using a three-past-year average to determine payout, it gives stability to the payout levels. Payout is therefore not determined by one-year ups or downs in portfolio earnings. These are all acceptable industry procedures. The principal issue is increasing the dollar amounts of gifts and donations which the College receives and places under management. The College has just completed a successful campaign. Sustaining this high level of contributions will allow greater discretionary funds and an internal financial buffer against changes in the economy as well as state appropriations.

6.3.11 RISK MANAGEMENT AND INSURANCE

The risk management program of the university can be divided into three large categories: (a) risks associated with operations, (b) risks associated with property, and (c) risks associated with employees and other agents. Insurance to cover risks under (a) and (b) are provided through a state contract covering state agencies and employees. See the earlier section on cashiering for bonding and risks associated with the handling of money or securities.

Under the first type of risks, the internal auditor of the university, following a carefully designed risk assessment procedure, ranks and identifies those areas of the university operation where risks might be highest. The auditor proceeds on a periodic basis to assess those risks and make recommendations. The functions may be financial or may be nonfinancial parts of the operation; i.e., data and record collection, processing and storage.

The Office of Internal Audit updates its annual and five-year audit plans every year. Adjustments are made based on the updated risk assessments for individual activities by the director of the Office of Internal Audit, and by request of the Board or the President of the university.

The university minimizes its property risk exposure through regular maintenance, police protection, signs, alarms and obedience to zoning and building codes. It carries property insurance covering all real and personal property, aircraft, watercraft and energy equipment. Property is covered world-wide or while in transit. The contract is good until canceled or amended and the carrier is committed to accepting costs of defending the university in any claim or suit relative to property or events covered under the plan. Unless otherwise approved, this defense will be undertaken by the Attorney General of the Commonwealth.

The College carries insurance that obligates the carrier to pay for certain coverage associated with the acts or omissions of persons while acting in the capacity of employee or other agency capacity. This plan covers certain tort liabilities, incidental medical payments (even for certain volunteers), participation in student disciplinary proceedings, physical damage to state cars, uninsured motorist exposures, and medical malpractice. Each of these has a claim limit specified in the contract.

Some of the specific exclusions of the plan do not materially relate to activities of the College of William and Mary --an example being the exclusion of health care providers. But as is normal in these plans, there are exclusions for punitive damages and for acts of fraud or dishonesty, acts of intentional malice or wanton misconduct, or any situation leading to profits by the person against whom the claim is being made.

The plan also provides for right of defense protection by the carrier when a covered event occurs. The actual defense, shall unless otherwise approved by the state, be carried out by the Attorney General of the Commonwealth.

The College may well consider the hiring of an attorney in addition to the Director of Affirmative Action (who, currently, is an attorney) who screens overall policies, strategies, and decisions as a means of precluding certain risk exposures due to contracting, and environmental matters.

CONCLUSIONS

Revenues have grown by 119% percent since the last Self-Study (i.e., fiscal year 1984) and expenditures by 127%. The student body (FTE's) has grown by 10%. E&G (educational and general) expenditures per student for the university is currently \$12,190 (see Table 3 below). For the most recent comparative data we have with our alternate peer group (FY 1992), William and Mary's E&G expenditures were \$11,157 per FTE student compared to the mean for the peer group of \$23,150.

The university has never run a deficit and does

not anticipate one. Neither has its financial management ever received a qualified auditor's statement.

As stated in the outset, the university plans to continue its annual reviews and ad hoc studies as events warrant. In the future, there are several alternatives that the college may explore to meet changes in its financial environment. These include (a) evaluating the choice between increasing tuition or increasing fees and how those should be distributed among in-state and out-of-state students, graduate and undergraduate, part-time and full-time --and which fees; (b) reorganization of centers of activity in order to produce economies as well as greater revenues, and (c) consideration of alternative relationships with the Commonwealth that would recognize the Commonwealth's declining contribution to the university. These should all be considerations in university strategic planning.

Table 3: Ten-Year Change in Revenues and Expenditures (also in constant dollars)

	FY 1984	FY 1994	Percent Increase
Total Revenues			
Reported	\$57,279,540	\$125,446,862	119.0%
Constant "1984 dollars"	\$57,279,540	\$88,936,951	55.3%
Total Expenditures			
Reported	\$56,972,612	\$129,416,200	127.2%
Constant "1984 dollars"	\$56,972,612	\$91,751,057	63.0%
Educational and General Expenditures			
Reported	\$37,809,016	\$84,889,973	124.5%
Constant "1984 dollars"	\$37,809,016	\$60,183,692	59.2%
E&G Expenditures per FTE Student			
From Reported E&G	\$5,978	\$12,190	103.9%
From "Constant dollars"	\$5,978	\$8,642	44.6%
FTE Students			
	6,325	6,964	10.1%

Revenues and expenditures as reported to U.S. Department of Education (HEGIS/IPEDS forms). FTE students calculated directly from numbers of students and credit hours taken (reported in *University Data Book*, Office of Institutional Research). Constant 1984 dollars calculated from "Gross Domestic Product Implicit Price Deflator for State and Local Government" (U.S. Department of Commerce).

RECOMMENDATIONS

1. The university needs to formalize a process of assessing the short- and long-run fiscal impacts of major restructuring and budgeting decisions. Milestones for post-implementation audits are recommended.

2. To minimize increases in tuition, fees, and enrollment to levels that may be prejudicial to maintaining a quality and affordable environment, the university should explore options for generating net unrestricted revenues consistent with the institution's image. Royalties from increased licensing of the logo are tax-exempt and positive advertising.

3. Because of the nature of budgets as policy documents, the university should consider institutionalizing open budget hearings with participation of the Faculty Assembly, students, and other stakeholders.

4. The university should consider hiring an attorney, in addition to the Director of Affirmative Action, to provide guidance in minimizing contrac-

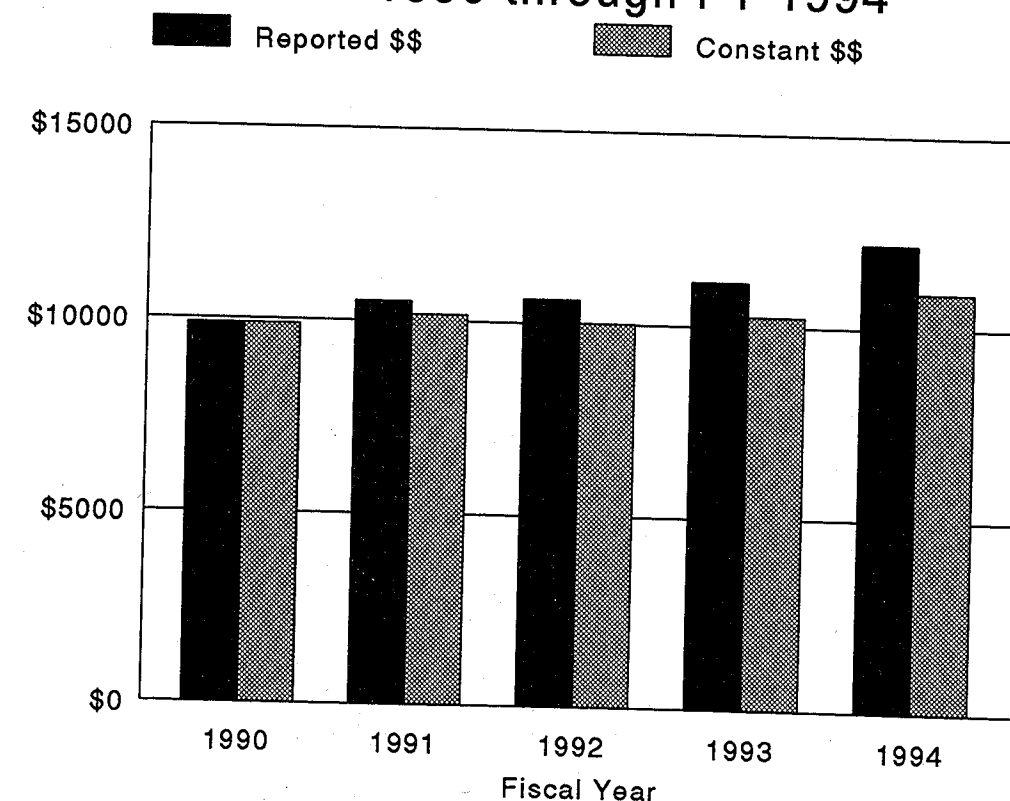
tual, environmental, and other risks.

5. The university needs to explore economies that may be derived from "out-sourcing" certain functions to established national contractors as well as firms owned by minority, female, and handicapped persons.

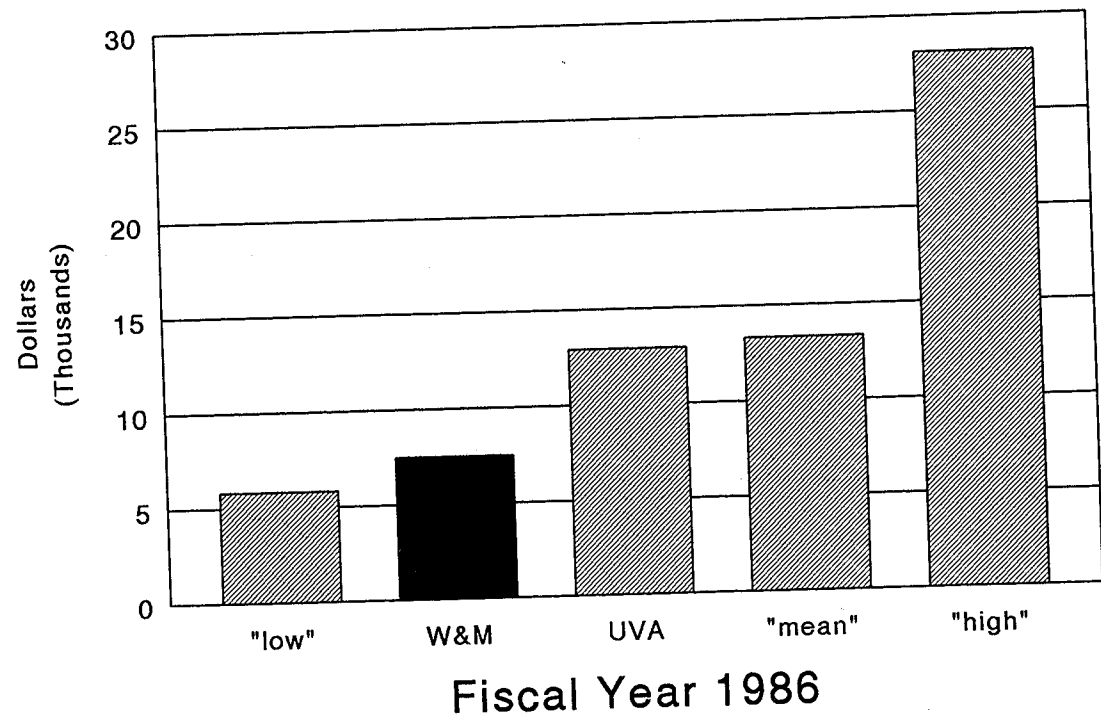
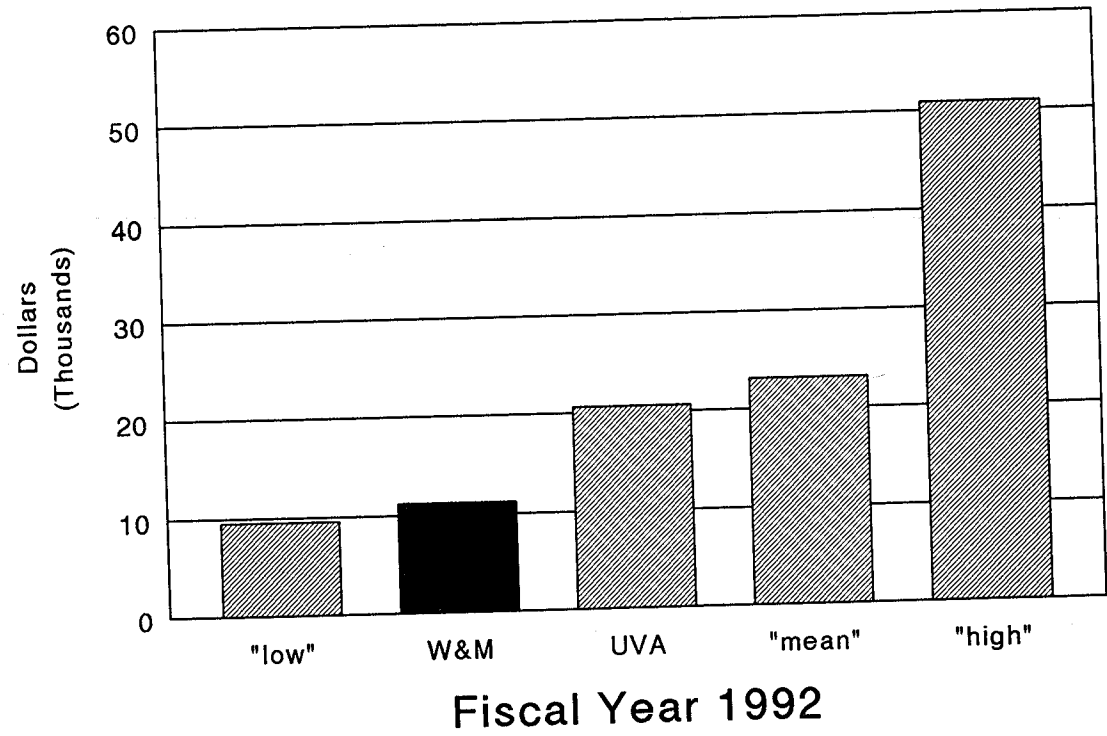
6. The university needs to increase and maintain high funding levels for the library and related research services which are central to the mission of educating its students. It needs to insulate these as much as possible from state budgetary decisions.

7. Fund balances need to be continuously reviewed. Excessive surpluses may invite cutting of state assistance. They may also mean that certain essentials are being foregone to achieve the surplus (or to finance a fund-deficit). A positive target figure for each fund balance should be set as a measure of fiscal prudence. All excesses should be evaluated for reinvestment in the educational mission.

**E&G Expenditures per FTE Student
FY 1990 through FY 1994**



Total E&G Expenditures per FTE Student
W&M Alternate Peer Group



10-Year Changes (FY84 - FY94) in Revenue and Expenditures Categories:
Six Pages of Tables and Graphs

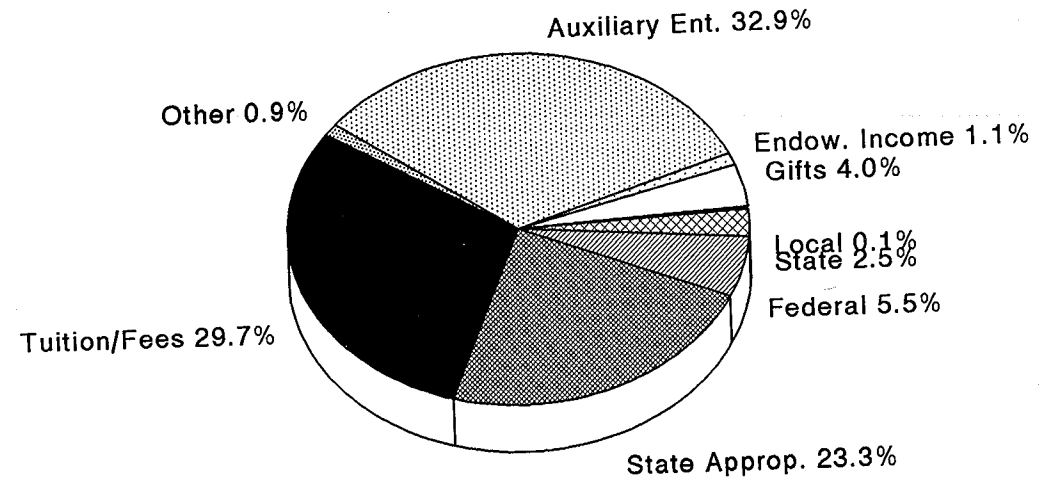
Current Funds Revenue

Item	FY84	FY94
Tuition and Fees	12,452,944	37,299,496
State Appropriation	19,685,204	29,216,826
Federal Unrestricted	311,323	1,216,475
Federal Restricted	2,076,597	5,696,514
State Unrestricted	1,146	142,468
State Restricted	154,570	3,005,687
Local Unrestricted	415	4,335
Local Restricted	16,393	125,826
Gifts Unrestricted	826,991	1,929,529
Gifts Restricted	1,141,322	3,096,425
Endow. Income Unrestricted	77,463	697,606
Endow. Income Restricted	244,459	633,273
Educational Sales	54,037	13,388
Auxiliary Enterprise	19,237,633	41,222,358
Other	999,043	1,146,656
TOTAL	57,279,540	125,446,862

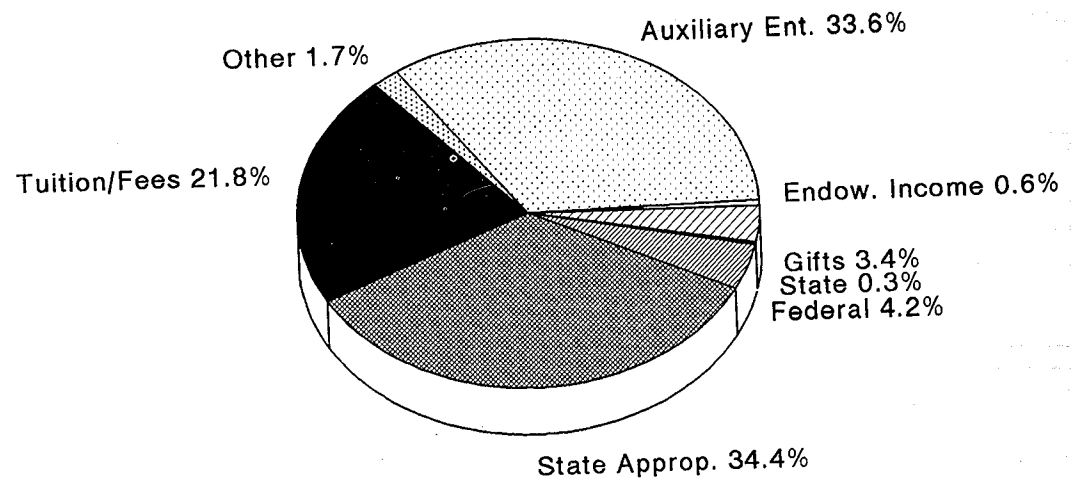
Current Funds Expenditures

Item	FY84	FY94
Instruction	17,347,418	39,096,684
Research	2,628,932	10,187,093
Public Service	393,683	8,613
Academic Support	3,494,744	7,298,764
Libraries	2,670,664	6,181,785
Student Services	1,557,635	3,841,072
Institutional Support	4,502,789	8,703,737
O&M of Plant	3,697,832	5,126,648
Scholarships/Fellowships	1,347,850	5,331,747
Transfers	167,469	(886,170)
Auxiliary Enterprise	19,163,596	44,526,227
TOTAL	56,972,612	129,416,200

Total Revenue Sources

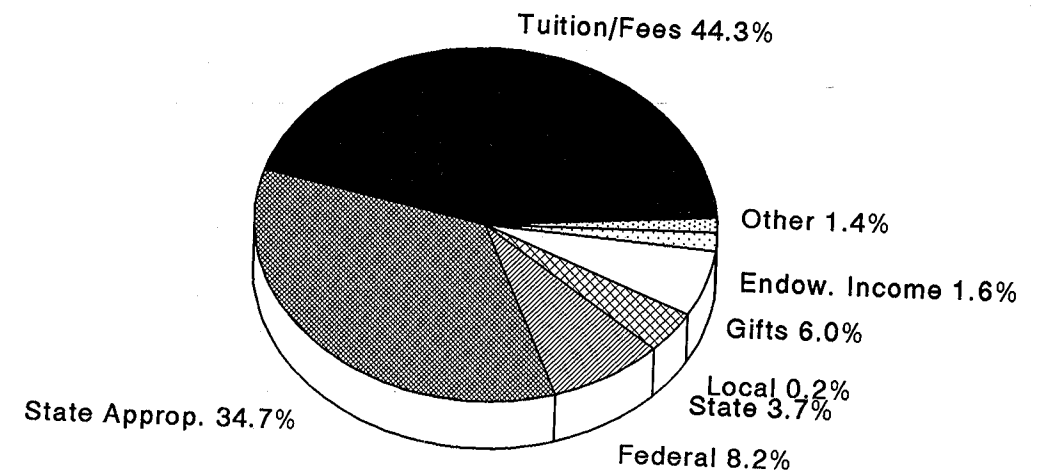


Fiscal Year 1994

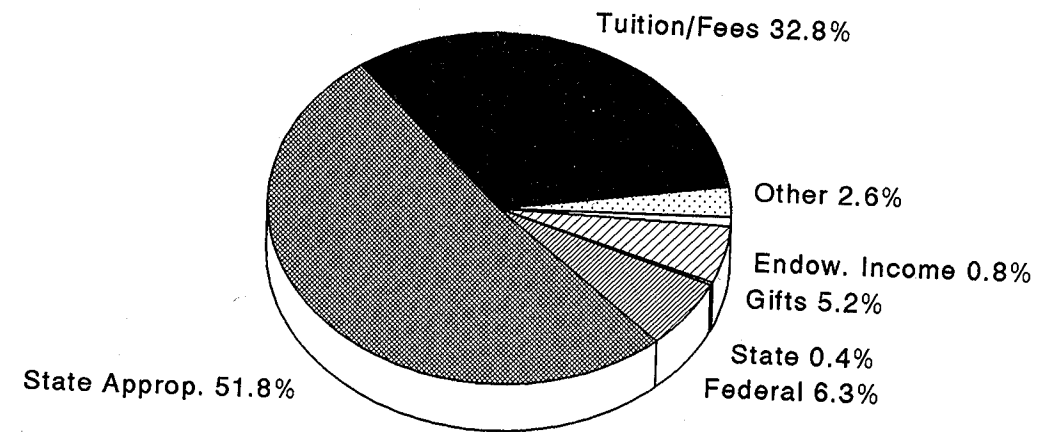


Fiscal Year 1984

Educational and General Revenues

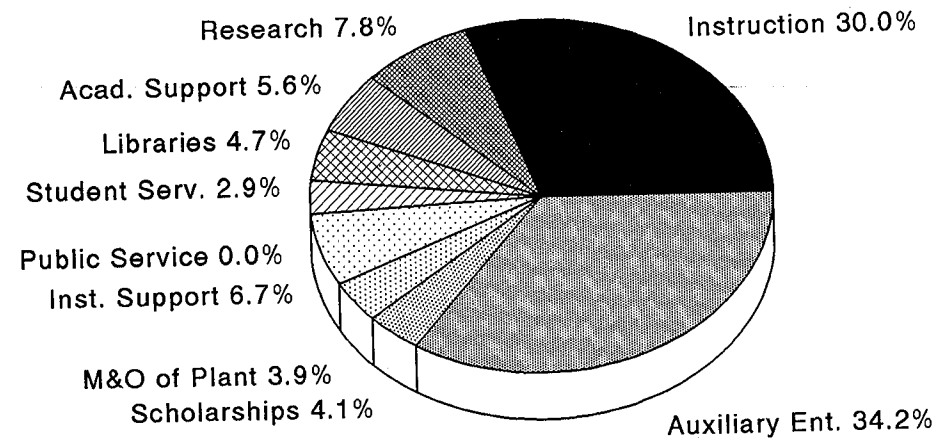


Fiscal Year 1994

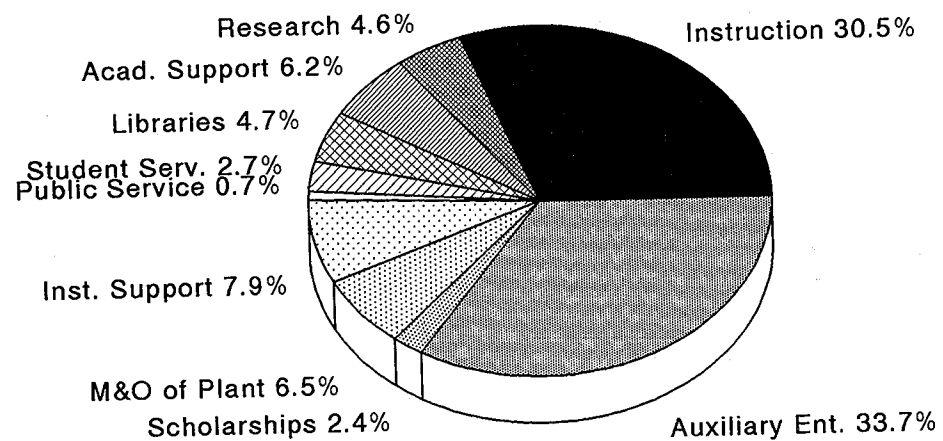


Fiscal Year 1984

Total Expenditures

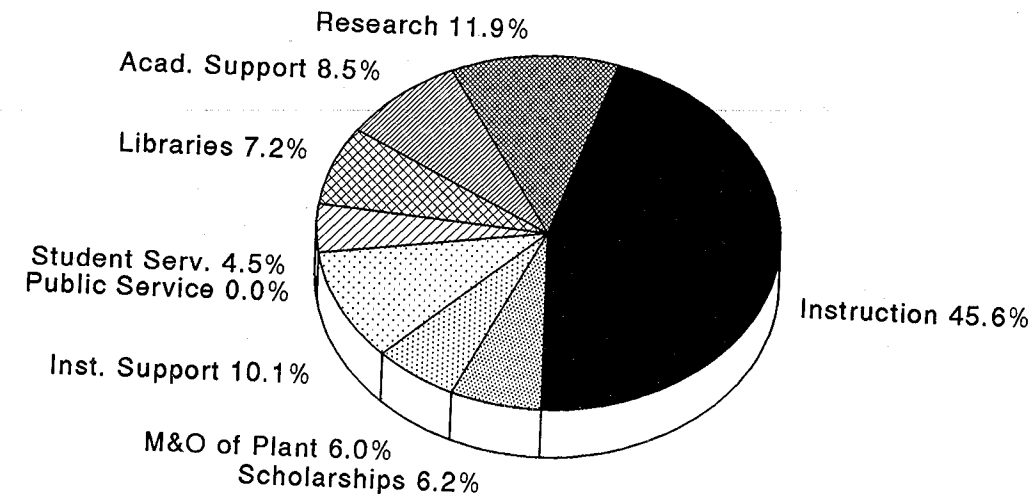


Fiscal Year 1994

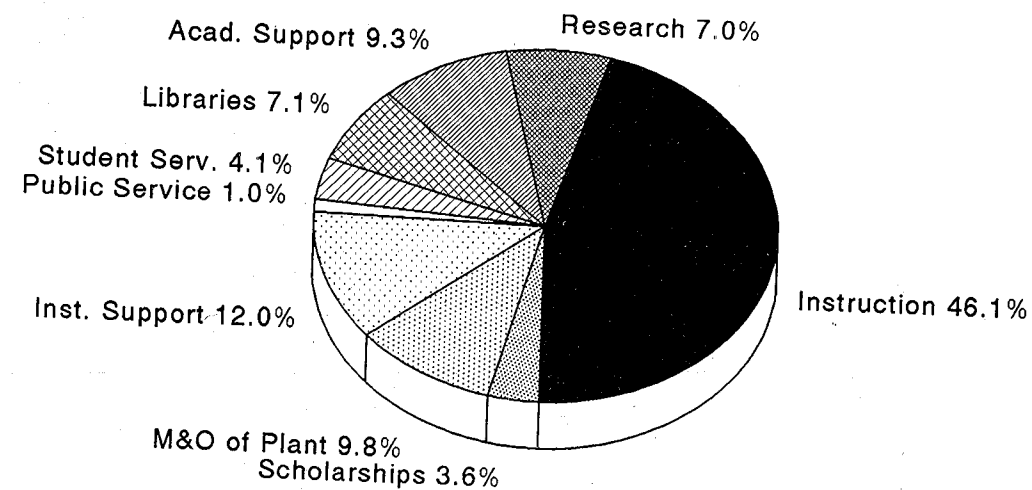


Fiscal Year 1984

Educational and General Expenditures

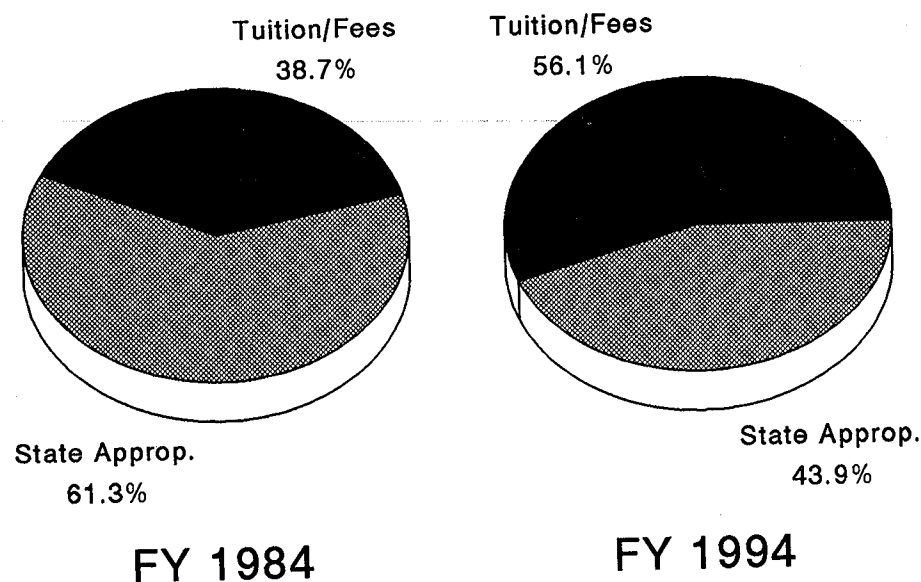


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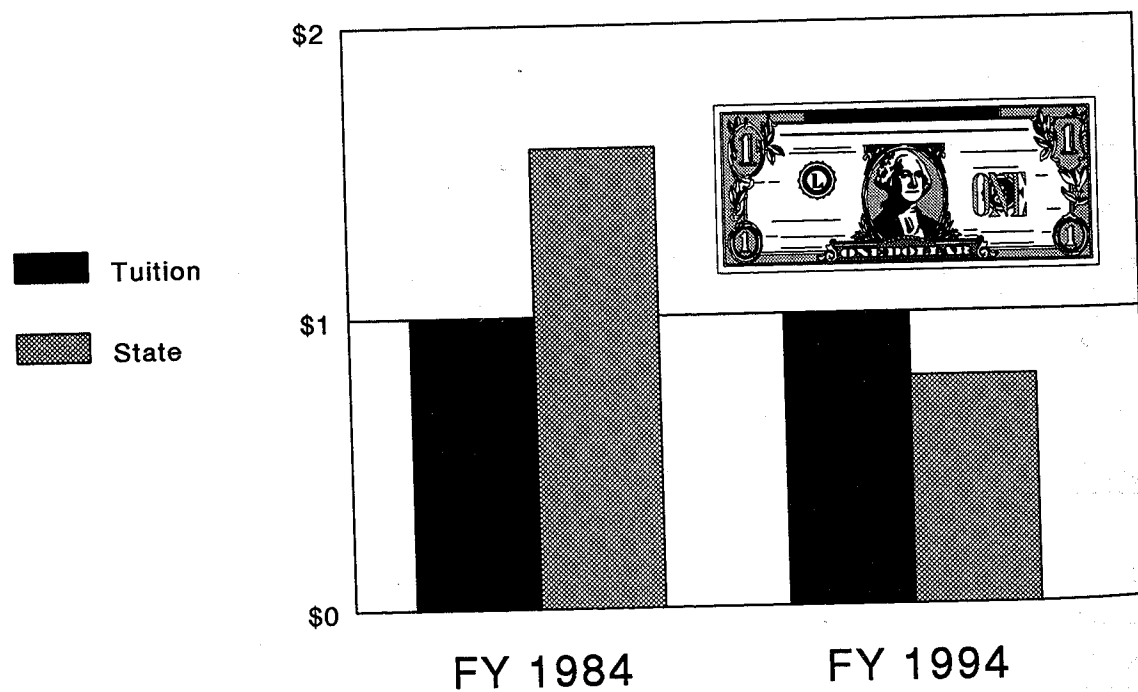


Fiscal Year 1984

Ratio of State Appropriations to Tuition and Fees as a Revenue Source



State Appropriated Contribution for Each Tuition and Fee Dollar



Chapter Fifteen

Physical Resources

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- William H. Hawthorne (Associate Professor of Business Administration)
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1. Introduction

Whether by design or circumstance, the physical resources of the College of William and Mary campuses define the spaces in which members of the college community function: physical structures, public and open spaces, formal and undeveloped landscapes, streets and parking areas, connect, define, and support college community members as well as the physically larger Williamsburg community. Historical associations of certain structures and grounds instill a sense of continuity and embody the college's commitment to scholarly activities --they render the campus a unique state and national resource.

Implicit to the concept of an educational institution is the belief that the creativity of its scholars, the effectiveness of its teachers, the dedication and learning of its students, the activities and proficiency of its administrative and support staff, and the overall well-being of the university community are affected to a large extent by the quality and character of its physical resources. Physical resources are a significant determinant of institutional effectiveness. They encompass not only practical infrastructure needs such as management, planning, effective use of human resources and maintenance, but also aesthetic, cultural, and psychological attributes as well.

This report considers the following areas: the ability of the College to maintain its physical resources; the effectiveness of administrative and support staff, faculty, and student groups in this process; external factors that continue to influence the maintenance and acquisition of physical resources; and mechanisms to respond to immediate needs and planning. Recommendations for

future planning are also provided. The first section of this chapter discusses important recommendations of the 1984 Self-Study "Physical Resources Report" and their resolutions. The remainder focuses on topics the 1994 Physical Resources committee considers important and contains recommendations for future action.

To prepare this report the committee interviewed representatives of the administration, faculty, staff, and student body. Representation on the Physical Resources Committee was drawn from these same groups.

2. The 1984 Self-Study: Physical Resources

The 1984 Self-Study listed a series of "First Priority Needs." Whether or not these have been met was an obvious concern for the 1994 Physical Resources Self-Study Committee and a test of effective planning and implementation. However, this analysis was tempered by the Committee's observation that even the most effective planning and management are easily undone by a lack of adequate funding and personnel.

As a brief overview, the 1994 Self-Study Committee concluded that major recommendations of the 1984 Self-Study were satisfactorily implemented. Despite a restrictive budgetary climate, major capital outlay construction far exceeded the priorities emphasized in the 1984 report and is viewed as very positive. On the other hand, although planning efforts have improved, the absence of consistent and adequate operational funding remains a problem that negatively influences administrative planning and maintenance operations. Monetary restrictions continue to af-

fect the college work force; some programs realized an increase in positions and wages, while others saw little resolution to problems of inadequate staff and salaries. Maintenance operations still need to be computerized; maintenance costs will certainly increase. The committee is not overly optimistic about the future status of the physical plant: extensive costly renovations and upgrades are contemporary needs. Considering projections of continued declines in state support, resolving problems of the physical plant will require effective leadership, creative management, significant fundraising, the cooperation of members of the college community, and very judicious use of existing funds.

a. First priority needs

The 1984 Self-Study recommended a number of basic capital outlay initiatives identified as "first priority". They were completed according to the following schedule and are also summarized in Table 1 (following page).

1. 1988: Expansion/renovation of Ewell Hall for the Music Department was completed.
2. 1989 to 1991: Upgrade/renovation of the Admissions Office through move to Blow Hall when it was renovated. In 1992 the space vacated by Admissions was renovated for the Dean of the Faculty of Arts and Sciences.
3. 1992: Renovation of Washington Hall was completed.
4. 1991: Completed renovation of Blow Gymnasium. This building was transformed from a gymnasium, swimming, and court facility into modern space for the Graduate School of Business, administrative offices for Telecommunications, and now provides space for many student services such as Admissions, Registrar, Bursar, etc.
5. 1988: Completed addition to Swem Library. The library requires additional space to upgrade services and a capital outlay for this request has been submitted.

b. Physical plant

As noted in the 1984 Self-Study report, the physical plant budget "has been an attractive target for revenue cuts". The Committee notes this situation has not changed in 1994. Facilities Management was severely affected by the budget reversions of the FY90-92 biennium, reflected in losses of both personnel and operational funds. Since FY90-92, the Department of Planning and Budget has been able to offer incremental but often

one-time increases to plant operating budgets, but these have been inadequate because of recent capital outlay. Paradoxically, improvements in the physical plant through new construction and renovation are being counteracted by inadequate operational funds for their support and maintenance.

Even a recent major increase to the maintenance reserve formula used by the State Council of Higher Education (SCHEV) to prepare recommendations to the General Assembly for proper appropriation and distribution of maintenance reserve funding will not resolve funding shortfalls. Thus, the 40% increase in maintenance funding the College will receive in 1994-96 (compared with the previous biennium) falls short by 50% of meeting all projects identified in the 1994-96 request. Shortfalls interfere with scheduled needs and preventive maintenance, placing the College in a position of always playing "catch-up".

Total campus facilities --now equivalent to approximately 2.7 million square feet of campus-- in conjunction with anticipated maintenance needs have severely strained the capabilities of the 30-person maintenance crew. The administration completed a number of laudable (and some perhaps less laudable) capital projects not anticipated in the 1984 Self-Study report. These included (a) an addition to Randolph Complex in student housing (1989), (b) construction of a Student Recreational Sports Center (1989), (c) renovation and alteration of the Matoaka Art Studio (1991), (d) construction of a Child Care Center (1992), (e) construction of a Graduate Housing complex of dormitories adjacent to the Law School campus (1992), and (f) a University Center (1994). Tercentenary Hall, now under construction and expected to be completed in 1995, will provide modern and safe facilities for certain science programs. A donor-provided indoor tennis facility, now under construction adjacent to the Graduate Housing complex, will also carry a maintenance burden.

Effective maintenance of education and general administrative buildings is a continuing problem. Facilities Management responded to FY91 budget reversions by reorganizing its personnel into a unique team/zone maintenance structure which is now being examined and emulated by other state institutions. The basis for this system is an emphasis on fostering stewardship and concern of a team for a particular zone or group of buildings. In 1993 maintenance of residence hall facilities was combined with the existing program to complete the scope of the team concept. Four years after its

Table 1: Selected Major Recommendations of 1984 Self-Study Report

Physical Resource	Specific Need(s) Identified	Response(s) Recommended	Resolution
Music Building	Inadequate physical conditions to support academic music program	Requested new building	Expansion/renovation of Ewell Hall for the Music Department was completed in 1988
Admissions Office	Substandard accommodations and facilities	Relocate to renovated space	Moved to expanded and modernized facilities in remodeled Blow Memorial Hall
Washington Hall	Substandard accommodations and facilities	Renovate	Renovation completed 1992
Blow Gymnasium	Substandard facilities	Renovate	Renovated to classroom, meeting room, and administrative space
Swem Library	Lack of adequate space for stacks and study areas	Expand space through additional construction	Addition to library completed 1988
"Physical Plant"	Reduced funding and personnel necessitates coordinated planning	Better planning	See text
Human Resources	Reduced levels of personnel are confronted with greater demands for upkeep; the perception of inadequate representation, especially of custodial staff	Need to provide for adequate voice and representation, franchisement	Developed team/zone approach and shared participation in activities for maintenance personnel; see text
Equipment (M&O-supported)	Inadequate M&O support and lack of replacement policy for obsolete equipment	None	
Computer Support	Inadequate computing facilities	Develop plan to improve computer facilities, installation of upgraded telecommunications hardware, etc	Faculty computers supplied; upgrades to telecommunications now in progress
Intramural and Recreational Facilities	Inadequate to meet needs of student body	Improve lighting on tennis courts; develop indoor facility for intramural sports; create all-purpose playing field	Completion of new recreational center and installation of lighting
Coffee Shop	Need for informal interactive space		Zarathustra's was created
Rustic Park/Morton Hall-Campus Drive	Aesthetic improvement of campus		
General Maintenance/Repair	Signs of inadequate maintenance; signs of neglect; inability to maintain campus grounds as in past	Effective planning; additional revenues; improve morale	Additional budget reversions have occurred

inception, implementation of the team approach generally appears a success in terms of improved service to buildings and occupants. Commensurate with recent new construction, operating costs to support these teams have increased. Despite use of this streamlined and cost-effective approach, each year Facilities Management has operated at increasingly larger deficits. Administrative officials tolerate the under-funding and, in an effort to respond to local and national concerns for deteriorating physical plant status at institutions of higher education, allow these deficits to occur with measured impunity.

Planning was also mentioned in the 1984 Self-Study as a "critical management function" to insure that needs and goals were met despite the "disruption" of budget crises. Planning has improved as communication among and between departments has improved. The committee viewed this as positive but was told planning was more a function of cooperation between personalities than the result of an organized structure. Planning (both organized and informal) does take place to insure that the physical plant requirements, which increase yearly in complexity and number, are met and goals are set. But this is only accomplished under the flexible tutelage and awareness of administrative officials who knowingly allow budgetary constraints to ease and/or be exceeded. Given the everyday exigencies of maintenance and the budgetary shortfalls, College administrators may of necessity adopt this "flexible" system. However, the Committee is perplexed at the reported omission of Facilities Management from the operations budget development process and the lack of an annual departmental budget submission.

c. Human Resources

In the 1984 Self-Study report, the grounds, housekeeping and maintenance workers were cited for a decline in number, low salaries, and victimization by "sometimes arbitrary and ill advised" management decisions. Some of these problems still exist although the demographics of College

employees affected have changed. Full-time maintenance staff is still low in number. Budget reversions and the continued decline in state support (from 60% to 43% over the last three biennia) have lead to use of a much larger pool of hourly (non-classified) and nonbenefitted temporary employment agency employees. Approximately half of the grounds and housekeeping staffs are made up of hourly and temporary workers, who see their low salaries further eroded by a lack of benefits, particularly health care. Under such conditions is it no wonder that some of these workers fail to manifest the performance and "stewardship" evinced by classified workers?

Maintenance teams are the only group that has seen an increase in wages. With assistance from a local General Assembly house delegate, the college's adoption of the team/zone concept¹ forced the Department of Personnel and Training to develop a "multi-maintenance mechanic" class. A clear hierarchical structure and career path now exists for employees in this classification.

Over the past five years, Facilities Management employees have participated more frequently in the department's management processes. During the reorganization to teams, there was some resistance by management, but employee input was sought during implementation and thereafter. Four years into the program, the teams have realized improved wages, freedom, and autonomy. Management has the responsibility for decisions concerning difficult budget, manpower and maintenance situations and dialogue between management and employees has been established.

The committee strongly suggests the administration consider extending the team/zone concept to the custodial staffs by initiating the reclassification process described above based on expanded and/or reworked duties. Housekeepers still suffer from the lowest wages and reclassification could lead to improved morale and productivity.

1. The basic approach behind this concept is to provide conditions that enfranchise groups of workers to certain buildings and facilities. Workers (5-6) of various trades are designated as a team and assigned to a selected number of buildings. Each team is composed of (ideally) a carpenter, plumber, electrician, HVAC technician, and trades utility worker. Members of a team may cross over into other trades, and in fact there is an official job classification and grade for people who master more than one trade, thereby creating a career ladder ("trades utility worker" to "trade" to "master trade" to "multi-trade" to "team leader"). There is one team leader per team who ultimately assigns work orders as they are received from work control. There are currently five teams for the main campus. Team building assignments are not based upon physical proximity or convenient location but chosen to insure a mix of building types. The concept of permanent building assignments to a given team is to foster stewardship, loyalty and pride. Teams judge themselves on how well their areas are maintained.

d. Intramural and Recreational Facilities

The lack of recreational facilities and the age of those available (Blow Gym) were noted in the 1984 Self-Study. In response, the College not only provided lights for the Busch tennis courts, but also built a new and popular recreational facility (1989) and an intramural field (1989) adjacent to William and Mary Hall. Members of the general College community make such extensive use of the recreational facility that, despite warranted dissatisfaction with aspects of its construction, the most frequently leveled criticisms are those of crowding or short operation hours. A private donor-funded indoor tennis facility is now under construction although its benefits to the majority of students appear limited.

e. Computer Model for Maintenance Scheduling

Although a recommendation to automate maintenance administrative and associated processes was made in the 1984 Self-Study, in 1994 the effort remains in the developmental stage. The second phase of a planned computerized work order system is now operational. The Committee believes computerization of various databases should be a high management priority and will ultimately provide significant benefits to the College. Consequently, well before the next Self-Study, databases and supporting software should be in place to expedite various maintenance tasks, including time keeping, inventories, equipment and supply acquisition, fund recoveries, building equipment histories and construction documents, preventive maintenance scheduling, and work orders, etc. Eventually, Facilities Management should provide terminals or computers in each of the zones, with capabilities to access relevant programs and data. Not only would such a system provide for improved day-to-day management and maintenance, but the historical database created would be used to justify future biennial maintenance reserve and capital outlay project requests.

f. School of Marine Science

The 1984 report noted improvement in the School of Marine Science/Virginia Institute of Marine Science facility with the construction of Watermen's Hall. Since the welcome addition of this building with its classrooms, auditorium and modern library facility, active recruitment at the School of Marine Science has added significant numbers of new faculty and staff and its research and educational programs have grown considerably. Space is no longer adequate, and many older

campus buildings require considerable renovation to meet the demands of modern research and provide safe and comfortable work environments. The School of Marine Science/Virginia Institute of Marine Science facility is discussed in more detail in a later section.

g. Campus Coffee Shop

Zarathustra's, which opened during the academic year of 1992-93, finally realized the 1974 Self-Study recommendation and 1984 Self-Study endorsement, of establishing a coffeehouse. Zarathustra's survives through the assistance of Facilities Management, and a great deal of student effort. Students appear to enjoy the facility and this committee encourages the College community to support Zarathustra's as an alternative to alcohol-oriented gathering places.

h. Projections

The final sentence in the physical resources section of the 1984 Self-Study concluded by noting the direction of effort of "improving our ability to maintain and care for what we have" continues. Revisions to maintenance reserve funding and implementation of the team/zone maintenance system have alleviated some of the stress to limited resources, but the more buildings that come on line [e. g., Tercentenary Hall (1995), Facilities Management Complex (1995)], the more space that is air conditioned [(Yates Hall (1995), James Blair Hall (1995)], with no concurrent increase to operating budgets or personnel, the greater the difficulties that Facilities Management and the administration will face. Other strains on maintenance funds are discussed in a following section.

3. Additional Concerns and Recommendations of the 1994 Physical Resources Subcommittee

a. Introduction

The following sections serve to highlight and focus specific concerns and recommendations of the 1994 Physical Resources Committee.

During 1992 and 1993 the College of William and Mary participated in a state-wide survey of the maintenance backlogs at 18 institutions of higher education. A consultant with demonstrated experience in the field of facilities program management (ANADAC Corporation of Arlington, VA) conducted the survey. Based on statistics and a well-defined methodology, institutional records and on-site inspections, ANADAC developed a rather frightening profile of maintenance backlogs at higher educational institutions, concluding that

continued neglect (due to fiscal under-funding and institutional priorities) of the physical plant "will eventually become unmanageable" and resources necessary to correct a geometrically expanding backlog will be unattainable. The reinvestment rate (maintenance and operations expenditures divided by plant replacement value) that best facilitates "maintenance equilibrium" should equal 2-4% of the plant replacement value. In FY 93, the College's reinvestment rate for education and general buildings (including the maintenance reserve) was 1.87%. This observation is cause for the guarded optimism of this Committee's opening general statement over the future of the physical plant.

The Committee believes many of the maintenance concerns identified in the 1984 Self-Study persist. State funding, as we have noted, has been inadequate to meet the maintenance needs of William and Mary for a number of biennia. Since 1984, the addition of new buildings and renovated facilities has for the most part provided modern and expanded capabilities to support the College's educational and research missions and has demonstrated the effectiveness and vision of its administrators. However, as existing campus facilities age, maintenance and renovation requirements naturally have become more acute. The demands on operational and maintenance reserve funding have grown as the College has increased its square footage, and will continue to do so as buildings on the "New Campus" reach or exceed 30 years of operational life.

Since the last Self-Study, Facilities Management has made considerable progress in certain areas such as the installation of backup utility systems for major physical plants on campus. The Committee applauds the improvements made to sanitary systems and stormwater management on campus. Facilities Management now plans utility upgrades to allow for isolation of water, heating and electrical services to individual buildings. This upgrade will provide flexibility in control and is anticipated to yield measurable paybacks in energy costs because unoccupied or malfunctioning buildings can be "taken off line."

The committee is concerned that a reduced maintenance workforce has been, and will be, expected to respond to the special needs and problems that occur with aged buildings and with meager supply budgets. This topic will be discussed in more detail in a later section.

Superimposed on comparatively "straightforward" renovation needs are upgrades and modifica-

tions to campus facilities associated with environmental, safety, and Americans with Disabilities Act (ADA) obligations. The Committee concludes that the College faces many outstanding problems of mandatory compliance to federal regulations. The EPA is enforcing chlorofluorocarbon (CFC) reduction/elimination regulations. Not only does this necessitate a particular replacement path, but it also requires that HVAC technicians be certified, and that detailed records be kept documenting the amount of refrigerant purchased and used. ADA compliance will require major and expensive renovations in all facilities. Meeting these needs will make large demands on College budgets, will test the creativity and patience of the administration, and will need the cooperation and commitment of administration, students and the faculty.

Emphasis from 1994 though the year 2000 should be on renovation, upgrading classroom interiors, and expansion of existing facilities, including the library and various academic buildings (e.g., the Law School, science buildings, Facilities Management building, SMS/VIMS). This is appropriate, in view of limited space for programs or activities, and in places, severely dilapidated or obsolete conditions. Renovation is also appropriate because of the demand for an increasingly interactive and technological classroom. For example, implementation of the new curriculum, with its system of General Education Requirements, will place additional demands for small rooms and large lecture halls to meet the needs of freshman seminars and large classes in the sciences and other disciplines, respectively. The 1994-2000 six-year capital outlay biennial request illustrates the extent of renovation and upgrade requests. Because College community members have been especially critical in the past of construction quality, adherence to architectural design, and renovation, the Committee enjoins the administration to be especially rigorous in monitoring these activities. The Committee believes use of a dedicated and experienced project engineer, a practice used in most College recent construction, in combination with a project committee composed of faculty and staff, should be a mandatory component of the College's construction process.

b. Maintenance and Renovation Issues

1. Main campus

Although many older education and general use buildings are in need of maintenance, renovation (to repair damages from abuse, roofs leaking because of water accumulation, natural aging), and upgrading, and command substantial finan-

cial support overall, the committee believes they are generally in better shape than the residence halls. Residence halls are especially in need of renovation owing to a combination of age and what in some cases is candidly recognized as abuse or neglect. Renovation is also necessary to upgrade facilities to meet ADA and safety requirements.

Conditions of residential life directly affect student attitudes and performance: all students have a right to clean, comfortable, and safe conditions in residence halls. Students have complained chronically and have documented physical inadequacies such as faulty plumbing and heating, loose paint, broken lights, etc., and failure to resolve their concerns. Security issues related to access, adequate lighting, and meeting safety codes are also student concerns. Many if not all of these concerns are probably justified. Renovation and upgrading should address the physical needs.

It is estimated that over \$25,000,000 will be required to restore all residence halls to a "maintenance equilibrium." This investment and commitment is not a hypothetical sum if the College is to remain competitive, attract the best students, justify tuition costs, and maintain its reputation of excellence. The committee notes the administration has developed a ten-year plan for dormitory renovation which it intends to fund using internally-generated sources such as student rents, Conference Services room fees, and possibly bonds. The renovation of dormitories and their use as sources of funding for that purpose obviously needs to be coordinated in advance. The capital outlay department has completed studies addressing the scheduled renovation of residence halls over the next ten years.

The Committee believes students need a system that allows them to effectively communicate maintenance needs to the Facilities Management and obtain feedback. This could ideally be accomplished through use of residential staff as intermediaries using appropriate computer reporting software. However, students must be taught that they are responsible participants in maintaining the quality of life and conditions of their residences. Thus, negligence or purposeful damage should be prohibited, energy-saving behavior practiced, and a cooperative and communicative atmosphere established with the housekeeping staff. A handbook of residential and environmental concerns should be written and given to all students as they enter the university. Students must be made aware that once a facility is renovated or repaired at great cost, it is essential for them to act as responsible cus-

tomers for the next group of residents. To provide guidance, control chronic violators, and increase student accountability, the Committee recommends use of significant damage deposits, peer-imposed fines, eviction, prevention from registration or graduation for offenders, and use of adults as residential staff.

Finally, the Committee notes that the aged Ludwell Apartments complex used by the College for student housing remains a leased property. The administration and other members of the college are rightly concerned over its deterioration and need for compliance with safety and ADA items. At this time there is some uncertainty as to a course of future action. The committee recommends that the administration should determine as soon as possible whether it is cost effective to renovate and upgrade the facility, and the likelihood of that option being performed by the owner. One option to explore would be purchase of the property by the College, razing of the existing structure, followed by construction of new dormitories.

2. Compliance issues that necessitate renovation/upgrading

The College faces mandatory resolution of certain problems in order to comply with federal and state regulations. These include elimination of ozone-depleting chlorofluorocarbon refrigerants, compliance with safety and public health concerns such as fire safety, asbestos and lead paint removal, and ADA compliance.

The first of these issues concerns major components of air conditioning systems known as chillers used for cooling and removing humidity from the air in buildings. The USEPA is enforcing chlorofluorocarbon (CFC) reduction and elimination regulations. Compliance entails that College heating/ventilation/air conditioning (HVAC) technicians be certified, that records be kept detailing amounts of refrigerant purchased and installed each year, and that a regular chiller testing program for leakage and repair occur within 30 days of detecting a leak. Intentional violations or refrigerant releases carry heavy fines. These compliance obligations further support the need for computerization of maintenance.

The overriding concern now is that R11 and R12 refrigerants, which are used in 90% of College chillers, will cease production in January, 1995. Rather than scale back production to the EPA recommended guidelines of 15% of the 1986 production baseline, the major manufacturers (e.g., DuPont) have announced that production will

completely cease. The College has purchased equipment to recover and recycle refrigerant, but this will not significantly extend the useful life of R11 or R12 refrigerants. Because stockpiling is impractical, the College faces a potential shortage of available refrigerant. Facilities Management has developed a schedule for the systematic replacement of affected chillers over the next three to four years for review by administrative officials. Retrofitting to utilize replacement refrigerants is not cost-effective owing to the age and mechanical condition of the existing chillers. Facilities Management believes that capital outlay and maintenance reserve funds could conceivably provide the funding. The expense of chiller replacement exceeds operating or local fund sources.

Predictions suggest lead paint abatement will become a public health concern similar to asbestos removal. Regulations recently put into effect for HUD properties are now being considered for federal and state use and enforcement. If implemented, the cost of interior and exterior painting will increase drastically and the detection of lead in any prior coat of paint will require costly removal. The probability of the costs quadrupling is not an unlikely possibility. The Committee suggests that plans for renovation of existing structures address lead paint abatement and estimated costs as soon as possible.

Hazardous materials are employed and generated through both maintenance and academic activities. Examples of materials associated with maintenance are paints and chemicals, pesticides, herbicides, petroleum products and its derivatives. Laboratories and shops in certain instructional and research disciplines utilize or generate dangerous or toxic compounds and radioactive materials or work with biohazard agents. All members of the College community must be instructed in the appropriate use of hazardous materials and protected from risks of exposure to volatiles, toxic liquids or metals, and bioagents. The College must insure that appropriate ventilation, containment, safety equipment (such as eyewashes and showers), storage and disposal facilities, and response strategies are available as required. This will necessitate creating an inventory of toxic chemicals, providing appropriate storage for chemicals, providing adequate hazardous waste storage areas, developing and enforcing a plan for working with and disposing of toxics, and testing/maintaining ventilation systems. Hazardous waste storage facilities must be compartmentalized to isolate flammables, reactives and toxins. Disposal of hazardous wastes has

become extremely expensive and disposal costs should be considered in all maintenance and academic activities.

The Americans With Disabilities Act (ADA), previously known as the Rehabilitation Act, requires mandatory compliance by the College and violations can be enforced through application of heavy fines and legal action. Compliance with ADA is considerably more demanding and comprehensive than the simple installation of wheelchair-accessible ramps or special restroom facilities. The basic concept of ADA requires accommodating or providing means of facility accessibility to all members of the College community, including the public. In addition to elevator installation and automatic door openers, accessibility must be provided to the visually impaired through the use of cues. Signage should be installed to identify handicapped services, signers should be available for the hearing impaired at conferences as well as special equipment in the form of amplification systems, and other special equipment provided as may be necessary. Attention must obviously be given to accessibility to and in classrooms and other instructional settings. This includes special and costly facilities in laboratories such as fume hoods, and tables and benches that can be lowered.

The College is showing progress in complying, and according to the Director of Affirmative Action, a transition plan will be "fleshed out" to develop a formal compliance plan and to assess required levels of access for campus facilities. Compliance thus far has focused on the installation of ramps and automatic door openers such as found in Tucker, Ewell, Jones, Morton and Tyler Halls; elevators and modified restrooms have been installed in Blow and Washington Halls; William and Mary Hall has an amplification system and an elevator should be operational to the upper floor by the Fall. The Wren Building is technically not compliant and is now being evaluated. There is also a need to install more curb cuts on College sidewalks.

With the exception of the new graduate student housing adjacent to the Law School and Jefferson Hall (recently renovated), student residences are not in compliance with the ADA. The approach to be taken is to achieve ADA compliance as each dormitory is renovated. During these transitional periods efforts must be made to avoid segregation of disabled students, while at the same time recognizing limitations of facilities and the funds to support the necessary adaptations.

The College clearly supports compliance with

the ADA but will face an unspecified but likely large dollar expenditure in this process.

c. School of Marine Science/Virginia Institute of Marine Science campus

The following describes major physical resource concerns of the School of Marine Science/Virginia Institute of Marine Science and has not previously appeared in a Self-Study report.

The Virginia Institute of Marine Science is located at Gloucester Point, Virginia in rural Gloucester County. There is a branch research facility at Wachapreague, Virginia, in Accomack County on the Eastern Shore. The Institute is part of the College of William and Mary, and serves as the graduate School of Marine Science for the institution. In addition, it is also a nationally-recognized independent agency which performs applied research and advisory services in the marine sciences for the Commonwealth. The Institute budget is appropriated as an independent line item and is separate from the College of William and Mary. There are about 120 graduate students currently enrolled in master's and doctoral programs and a combined faculty/technical support staff in excess of 450 persons.

The main campus of the Institute at Gloucester Point is composed of the modern Watermen's Hall (completed in 1985), four other substantial brick buildings of which the latest, Byrd Hall, was constructed in 1969, commercial block buildings (the most recent, Nunnally Hall which was completed in 1990), and a significant collection of wooden frame houses and cottages with their assorted dependencies (some predating the turn of the century) which have been converted to serve as offices, laboratories, shops, storage areas and student and faculty centers.

As on the main campus, a combination of age, renovation requirements related to safety and health concerns, and need to support acceptable levels of technology in a wide variety of aging building types and facilities, have created a significant renovation and maintenance burden. A comprehensive capital outlay request proposal for the period 1994-2000 has been submitted to address maintenance and renovation, construction, and major equipment requirements of the Institute. This document requests substantial improvements within primary and secondary buildings as well as reconstruction of various piers, retaining sea walls and associated research platforms which support Institute research and educational programs. Requests have also been

submitted to replace aging salt water pumping systems to major buildings and for repair of a variety of structural and HVAC-related items required to comply with OSHA and safety concerns, and the ADA. New construction, acquisition of land, new vessels and support facilities, and aircraft upgrade are also included in the capital outlay proposal.

More immediate relief will come during the 1996-98 biennium with construction of a 62,000 square foot building providing a variety of marine science disciplines with modern and safe laboratory facilities for education and research. The building will comply with ADA requirements and will be equipped with state-of-the-art equipment for removal of hazardous substances from experimental systems and waste streams. Following completion of this building, renovations to the structures being vacated are planned.

Currently, fire protection and sprinkler systems have been installed in major buildings, and the connection of the Institute's sewer system to the Hampton Roads Sanitation District is anticipated. The Institute is proceeding during the current biennium with the necessary work in connection with these two projects plus the additional required hook-ups to the Gloucester County metered water system. In accordance with the new Master Site Plan produced in 1993, State Route 1208 is now being realigned.

As described in the capital outlay request proposal for the period 1994-2000, the administration's comprehensive program of major repair will be aimed at reducing maintenance costs and improving energy efficiency throughout the Institute. This will be accomplished by addressing structural defects and making repairs in certain buildings, and updating and overhauling HVAC, plumbing and lighting systems in other areas on campus. Should these projects be funded, the research and educational programs of the Institute/School of Marine Science will be greatly enhanced. Productivity will improve, as will energy efficiency. The scientific community will become more cohesive, and the synergism brought about by the interaction of scientific disciplines will benefit all scientific and educational activities.

If requested projects are not funded, the Institute and School of Marine Science will continue on its present course, unable to fully serve the Commonwealth in the manner legislatively mandated. Total cost associated with the six-year capital outlay requested is approximately \$21,000,000.

One item the not specifically addressed in the Master Site Plan or the capital outlay request is residential housing for graduate students and visiting scientists. Currently, students are responsible for their housing arrangements off-campus. However, accommodations for transient visiting scientists and graduate students are no longer available on campus because of the acute space shortage. A facility dedicated as a residence hall would be beneficial to both research and educational programs as well as attracting visiting scientists who wish to stay for short periods of time. Nominal rents should be charged to offset maintenance costs.

d. Facilities Management

Maintenance of College facilities is largely driven by the adequacy of funds. Under-funding maintenance coupled with aging facilities and the demands of mandated compliance items is not unique to William and Mary but is a national problem. According to the Director of Facilities, an increase in productivity within Facilities Management is contingent upon an increase in department funding. As stated earlier, Facilities Management runs a consistent deficit, but even given that additional allowance, Facilities Management will never quite "catch-up" because the time devoted to management of daily crises absorbs the time and limited personnel resources that should be devoted to preventive maintenance.

Facilities Management reported that each year the amount of funds allocated for maintenance are exceeded by the demands. Many campus buildings are aging and increased maintenance costs are anticipated. Since 1984, funding requirements have increased for various compliance issues including specialized support personnel, ADA and safety/health concerns. Compliance is mandatory even though funds are insufficient; health risks associated with asbestos, lead and other hazardous substances must be minimized. Environmental regulations such as the phasing out of ozone-degrading chlorofluorocarbons used in air conditioning units are anticipated to give rise to very expensive maintenance costs. That older College buildings have been maintained as well as they have reflects the efforts and commitment of Facilities Management administrative personnel and the dedication and creativity of its support staff.

1. Need to establish databases for effective planning and maintenance purposes

Besides funding limitations, maintenance ef-

orts are also hampered by the lack of easily accessible physical plant data (computerized) that can be manipulated for a variety of tasks. Thus, capital outlay has recognized the need for blueprint availability with FY95 goals to reorganize its flat files, record new buildings using computer aided design (CAD) software, and eventually transfer construction history to a computer format. Facilities management has recognized the need for a comprehensive database of maintenance histories and other related information that could tie into an expanded work order system for the generation of preventive maintenance programs. In a system of this kind maintenance could be automatically scheduled at selected intervals.

These databases would also provide a basis to evaluate and prepare maintenance reserve and capital outlay budget requests. This information could document to state agencies, such as the State Council of Higher Education for Virginia (SCHEV), that operating budgets have been inadequate to supplement the College's maintenance reserve fund by 50%, as previously assumed by SCHEV. Facilities Management must also be represented in the budget planning process so maintenance needs can be addressed in a coherent fashion for all college facilities. Cooperative and effective leadership will be required to achieve this condition and to prioritize maintenance needs as these are identified from a campus-wide perspective.

In view of the significant expenditures anticipated to renovate and upgrade residential housing and to provide for upgrade of other facilities, it is essential that these investments be protected. One of the most cost effective methods is to use modern computer technology to design and implement preventive maintenance programs by a well-trained staff.

2. Need for campus-wide coordination of maintenance and renovation activities

Practical implementation of maintenance and renovation programs will require coordination and cooperation of disparate groups. For example, the renovation of the residence halls should be coordinated with Conference Services; the requirement for cleanliness in classrooms can be achieved with the cooperation of the faculty through careful attention to scheduling of janitorial personnel. Use of computers to aid in this process should be relatively uncomplicated but will require that someone input teaching schedules, etc.

Some faculty interviewed believe the janitorial

staff performs below expectations in cleaning classrooms and offices, and materials they use are substandard. Yet, efforts to formally communicate these concerns seemed somewhat unfocused. A potential solution to this and other maintenance problems would be implementation of a formal and effective building "proctor system." The proctor is the key representative for each facility through which all maintenance requests, problems, etc., are directed by building personnel, and who in turn can report problems and make requests to Facilities Management. The proctor would provide a mechanism to document communication and feedback and would allow (in conjunction with a computerized database) tracking of costs associated with maintenance requests and costs for each facility. Proctors should be given credit for performing this task.

3. Future maintenance personnel concerns

Facilities Management administrative personnel described the dedication and self-sacrifice of the existing maintenance workforce. Many career individuals use their personal tools to keep aging and "jury-rigged" systems functioning because of inadequate funds or work beyond regular hours to deal with emergencies. This performance occurs in a fiscally-tight budgetary arena where compensation still fails to completely recognize their contributions. There is considerable concern over meeting maintenance needs in the near future when these dedicated and knowledgeable workers retire and are replaced by perhaps more pragmatic younger persons who may not display the dedication of current individuals. Furthermore, "special" information, for example, the locations of utilities or valves buried under streets or "modifications" made in the past must be accessed through debriefing and archived in a computerized database containing building and infrastructure history, or it may be lost. Maintenance may also slip if retired positions are not filled because of limited funds. A major turnover in maintenance personnel is anticipated within the next 5-10 years as current staffers reach retirement age. With their loss may come a subsidence of loyalty and "stewardship." The College must take immediate steps to improve the workplace through employee training, especially for use of more demanding technology, and job opportunity and growth. Funds must be allocated to train existing personnel to meet the technical demands of new buildings and upgraded equipment such as chillers.

4. Recycling

In addition to the manifold responsibilities of

Facilities Management, recycling now has fallen under its auspices and carries its own mandates. Recycling was initiated at the College as a voluntary program of social responsibility. Currently the College is recycling 28% of its total waste stream, which is ahead of the Commonwealth's state mandated requirement of 25% by 1995. The College's projected goal for FY95 is 32%. Recycling does have its costs and problems in terms of personnel (for example, inexperienced student drivers), equipment (containers are used for trash or stolen), and storage (fire code violations) required to make it work. Some faculty have suggested waste containers must be clearly labeled and secured, organized neatly, and emptied regularly. With a building proctor system in place these problems should be easily corrected.

5. The motor pool

The motor pool provides vehicles in support of maintenance, security and grounds operations. Vehicles also provide transportation for students to and on campus, for attending extracurricular activities such as meetings or sports events, and for instructional and field activities. Certain programs such as athletics have their own vehicles. The committee believes that many (if not the majority) of motor pool vehicles have exceeded their effective service lifetimes to the point where reliability, personal safety concerns, and emissions quality mandate replacement. Faculty requiring reliable vehicles for field trips have resorted to expensive private rentals. Motor pool trucks used for maintenance and support services by Facilities Management are in poor to marginal condition--that many operate at all is a testament to the ingenuity and dedication of support personnel. To economize, the College has attempted to downsize the buses it uses. The Committee notes that the administration plans a study of motor pool vehicles to identify motor pool needs, usage demands, scheduling and replacement of older vehicles. This should be undertaken as soon as possible because a timely resolution to the motor pool problem is necessary. The administration is also considering a lease/purchase approach to obtaining vehicles because, although leasing might cost more, maintenance costs would be significantly reduced because these are performed by the lease agent.

e. Grounds

1. Lawns and plantings

One of the more treasured (and most visible) assets of the William and Mary campus is the

landscaping with its beautiful lawns, shrubs, trees and colorful flower beds. The appearance of the College grounds influences not only the impression that others gain of the College, but also contributes to the education, aesthetics and well-being of students, staff and faculty, and the pride of the alumni. Faculty, staff and alumni have planted, contributed to plantings or encouraged the planting of unusual specimen trees and a variety of shrubs, making the campus not only aesthetically pleasing but an unusual conservatory of plants of academic value.

A combination of maintenance personnel and volunteers have managed to keep much of the campus in reasonable condition. Reflecting fiscal shortages, maintenance of grounds and many plants has suffered in recent years from lack of care aggravated by reduced staff and funding, and adverse weather conditions. Elsewhere pedestrian and automobile traffic has damaged extensive areas of campus lawns, especially near high traffic areas such as residence halls. The community should not be allowed to remove pine needles or other natural mulch materials from the hilly area adjacent to Adair. Attempts to grow grass under trees on the old campus have and will be unsuccessful because the trees shade and the roots preclude growth of other plants. Especially noticeable are the beech-shaded areas around the Sunken Garden. Grass is virtually impossible to grow there and the paucity of grass encourages pedestrian traffic under the trees. These areas need permanent mulch covers or low-maintenance, beech-tolerant herbaceous plants. The committee recommends that Facilities Management representatives and the faculty Landscape, Environment and Energy Committee meet to address troublesome or problematic areas and to develop a plan for their resolution.

During the past 12 years, Facilities Management grounds personnel have been reduced from 26 to 11 full-time classified positions and include one mechanic to maintain grounds machinery. These individuals have done an outstanding job of intensively maintaining 350 acres of a total of 1100 acres. As their responsibilities increased, it became necessary to hire temporary hourly help for seasonal work. In recent years, enthusiastic volunteers have augmented the efforts of the maintenance staff and planted beautiful flower beds at various locations in and around the campus. Donations of plants and bulbs have been used to beautify the campus and a continual supply of plants and bulbs and staffing are needed to provide continuity to this program.

The committee notes that Facilities Management lacks a large open shed for storage of its expensive motorized equipment and suggests the old landfill on South Henry street might be an appropriate location for construction of a shed. A not insubstantial capital outlay anticipated in the near future relates to replacement of certain motorized equipment. This is because the USEPA has mandated that exhaust emissions of current two-cycle engines are excessive and must be substantially reduced.

Approaches to encourage the responsible use of and pride in appearance of the grounds, lawns, and plantings on the campus should be fostered, including educational campaigns, production and distribution to students of an environmental handbook explaining the environmentally-detrimental aspects of plant and landscape damage, and economic incentives such as gifts. Flower and bulb planting needs to be encouraged and supported by construction of a nursery/bedding plant and a new greenhouse facility, possibly at the old landfill site or the Dillard Complex. Plants now used indoors at various campus special events are rented and these could be generated at this facility at reduced cost. A new greenhouse could be operated by volunteers under supervision of College staff.

2. Roadways

Campus roadways are maintained by the state and carry not only College vehicles and bicycle traffic but also local residential and tourist vehicles. Main campus roads are congested by vehicular traffic and constricted by the roadside parking. To reduce the risk of pedestrian, cyclist and vehicular accidents, certain campus roads have been converted to one-way traffic flow. Student bicycle use has exploded with development of "mountain bikes" and the recent creation of a bikeway along Campus Drive has reduced some bicycle traffic problems in the central part of campus. Additional bikeways are probably warranted but these will compete for space with existing parking lanes. However, the problem still appears that there is too much automobile traffic across campus and ultimately measures to reduce non-essential traffic by allowing driving on campus only by permit, restricting access to students with special needs, and using traffic checkpoints for enforcement may be required. Clearly, a fair and reasonable traffic strategy must be developed. This will reduce to danger to pedestrians and bicycle riders and move the College in the direction of a safer "closed" campus. Development and enforcement of access to peripheral parking areas will be

an integral part of this process. In keeping with these recommendations, the cross-campus roadway now identified in the existing Master Plan should be eliminated.

The Lake Matoaka dam serves as the roadway for Jamestown Road (Virginia State Road 31). Unfortunately, the west bound lane appears to be failing, apparently by slumping into the lake. Although this does not threaten the lake, if catastrophic failure occurs, it could endanger life and property. The committee recommends a formal evaluation of the dam and roadway by Virginia Department of Transportation. If repairs are necessary, funds to an escrow account may be required of the College and the City of Williamsburg.

3. Sidewalks and paths

Older sidewalks and walkways on the main campus are in varying degrees of disrepair. Brick walks are worn uneven and are commonly at a lower elevations than the adjoining areas; consequently they become flooded and slippery during rains. They constitute a safety hazard under these conditions and should be rebuilt and elevated. Pedestrians and bicycle riders have established paths across grassed areas through continuous use. Facilities Management has responded by placing crushed rock over some areas and neglecting others. Eroded paths located on slopes continue to release sediment to Lake Matoaka. Service vehicles and those from commercial vending companies should not be permitted to use walks as access roads. Wherever possible highly erodible areas should be blocked to traffic using plantings or physical barriers and walkways modified to prevent them from being used for vehicle access.

4. College Woods and Lake Matoaka

The College Woods and Lake Matoaka constitute the largest outdoor classroom and recreational area on any campus in the Commonwealth and are unique in this respect. They contain a varied flora and fauna, with forests in various stages of development, including one of the most mature tracts in Virginia, exceptional geologic formations, fossils and landforms, and a substantial aquatic environment. The Woods and Lake are used extensively by the Departments of Biology, Geology, Kinesiology and Military Sciences for instructional purposes. These include courses in aquatic ecology, terrestrial ecology, paleontology, geomorphology, stratigraphy, orienteering, canoeing, adventure games, and others. This area is also utilized by public schools for their biology courses

and by the summer Governor's School in Science and Technology (a program sponsored by the College and the Virginia Department of Education for gifted Virginia high school science students). The fauna, flora and microbiota are the subject of continuing professional research by faculty and students of the College. Landforms and groundwater studies are also being conducted.

Unfortunately, the Lake and Woods continue to be threatened by development in the upper drainage basin of College Creek and from the College. The overall condition of the woods and lake has significantly deteriorated over the past decade. The waters of the lake have been enriched by sewage spills and displaced by sediment delta formation. The woodlands in the drainage basin have been noticeably reduced by construction and slopes have been damaged by human misuse.

A substantial amount of sediment has been deposited into the northwest, north and east branches of the Lake. This sediment has come from construction sites such as Chambrel, more recently the Williamsburg Community Hospital, the Recreation Center, and from erosion of valley floors in the upper reaches of streams from uncontrolled concentrated stormwater runoff (St. Bedes area, Ace Peninsula Hardware area, Berkeley School, William and Mary Hall parking area), from the City of Williamsburg, James City County and the College campus. The deltas have grown and now displace or underlie at very shallow depths more than 20 percent of the original lake area.

The waters of the lake are hypereutrophic. This term, which refers to an over enriched nutrient state, appears to be related to sewage spills, polluted runoff from urban areas, and from lesser sources such as natural and contaminated groundwater. Over-enriched conditions cause algal blooms, result in oxygen-deficient waters, support the growth of nuisance plant species, and result in an aesthetically displeasing appearance. Several major sewage spills from the College, the City of Williamsburg and the Hampton Roads Sanitation District lines in James City County occurred during the last decade. Sewage effluent contains large quantities of nutrients, especially phosphate and nitrates, and microorganisms, some of which are pathogenic to humans. In fact, it was only after biology students working in shallow parts of the lake developed extensive skin lesions on exposed limbs --possibly from the bacterium *Aeromonas hydrophila*, a well documented cause of skin lesions and abundant in sewage-- that the lake was closed in 1990 to all College-supervised education-

al and recreational activities.

The current administration responded in an environmentally sensitive manner to reduce and control the occurrence of College-derived pollution. New and larger sewer lines, new lift station pump facilities, and systems to alert maintenance personnel of failures to the system were installed. Sediment entrapment structures were also built during the last five years at various campus locations to reduce the influx of sediment into the lake from the College. Crim Dell was recently drained for removal of entrapped sediment and restored. The College has also supported public health monitoring and research on the biological and chemical aspects by personnel from the School of Marine Science and Department of Biology.

The Lake Matoaka and College Woods drainage basin also serves an important recreational function. Its trails are enjoyed by hikers, runners, and bicyclists from the College and community and its birds, flowers and other plants and animals attract people from all walks of life. The solitude and aesthetics of the Woods and Lake provide a setting for contemplation and meditation. Unfortunately, unauthorized fishing, swimming, horseback riding, motorcycling, camping, setting of campfires, and hunting also take place in the area. Trash has been dumped on trails off Strawberry Plains Road and abandoned equipment from College-sponsored research found in the woods.

Misuse and neglect over the past five decades have caused damage to the slopes, trails, floodplains and biota of the Woods. The extensive Woods trail system installed in the 1930's is rutted, culverts are filled with sediment, and guard rails have rotted away. The erosion of paths is a consequence of neglected maintenance and misuse by trail bikes. Bicyclists cross slopes where there are no trails and cause erosion, aesthetic blight and threaten endangered or rare plant species. The Committee supports the recommendation of the Matoaka Task Force that mountain bikes should be excluded from these areas or at least restricted to improved surfaces. Sediment eroded from the slopes and rails clog culverts creating ponded conditions upstream and fill the shallow areas of the Lake. This has resulted in inadvertent alteration of the flora in the deltaic areas. In many places, protruding steel rods on rotten guard rails constitute a safety hazard.

Water quality has been monitored regularly and in 1993 the Lake was reopened to instructional sports activities. However, issues that relate to sediment transport from within the noncampus

portion of the watershed have not been as easy to address. Although dialogs have been established between the College and the local community governments, it is likely that sediment transport and degradation of water quality will continue until a community stormwater management plan can be designed and implemented.

To plan for the future, President Sullivan established (1993) a Matoaka Lake and Woods task force composed of faculty, students, and community members. The task force proposed a number of recommendations among which was to designate the lake and watershed as a preservation area. The lake/watershed was recognized as a unique ecological resource and of great value in support of both research and formal education activities. In 1993 the College of William and Mary Board of Visitors endorsed the report prepared by the task force and passed a resolution designating the lake and contiguous Woods a preserve. The Board's action places limitations on construction and other activities in proximity to the Lake, requires designation of certain areas as limited access, enjoins the College to develop a cooperative program with local jurisdictions to prevent further deterioration of the Lake, and to repair and maintain the existing paths. A basin-wide (College of William and Mary, City of Williamsburg, James City County) stormwater management plan needs to be drawn and implemented. This plan should call for improved erosion and sedimentation measures, reduction in stormwater discharge, and improvement in chemical quality of water flowing into the lake. A plan, schedule, and cost analysis for restoration of the trails through the College Woods should be developed by Facilities Management. Fundraising from private sources, and ideas for restoration of the trails using volunteer efforts should be developed in concert with the Landscape, Environment and Energy Committee. Protection of the watershed against damage now caused by activities such as offroad bicycling, motorcycling, horseback riding, and erosion and limiting access to hunters will require vigilance and creative administrative action. As previously noted, an environmental handbook should address these issues and be provided to every entering student. Two recent cases of rabies transmitted by domestic cats emphasize the need to educate students to the public health dangers of feeding or harboring pets which use the College Woods as a refuge.

Other recommendations include (1) closing the western branch of the Lake and Squirrel Point to recreational and other non-scientific users to protect and encourage wildlife (wildlife activity in-

creased when the lake was closed); (2) hire a conservationist to oversee the College Woods and Lake Matoaka whose responsibilities would be to monitor activities in the Woods and Lake, make recommendations for enhancement and preservation, and to inform proper authorities of misuse or unlawful use of woods; (3) when funds are available, partially draw Lake and dredge major deltas to restore the Lake and increase its longevity; (4) install additional sediment traps on the major tributaries to intercept sediment before it enters the Lake; and (5) acquire available parcels of land on the perimeter of the Matoaka woods to insure the integrity of both woods and Lake. It is unrealistic to assume that recommendations that require College maintenance personnel and funds will reach a level of high priority in view of continued fiscal limitations, state budget reversions, and pressing renovation needs. Consequently, creative thinking, donations of funds and materials from private sources, grant funds and other strategies must be explored. Civic-minded groups such as the Kiwanis or Boy Scouts might provide donations of work.

5. The Matoaka amphitheater and adjacent facilities

The developed area along the southeastern part of Lake Matoaka includes the adventure games facility, a boat house and dock, a picnic area and enclosure, the Common Glory amphitheater and adjoining storage and dressing rooms, the Matoaka Arts Center, and associated roads and walkways. Construction of the Matoaka Art Center provided much needed instructional studios for faculty and students of the Department of Art and Art History. However, this section of the College Woods receives excessive pedestrian usage and consequently has large tracts of bare soil and eroding slopes. These areas will continue to cause sedimentation into the nearby lake. The Common Glory theater is a terraced, partially grassed area without proper stormwater drainage. Student groups have been active in partial restoration of the seating areas. Towers adjacent to the stage are open, in a disheveled state, as are some of the old dressing rooms to the north. Several former dressing rooms have been reroofed and made serviceable for the Department of Kinesiology. The main road leading to the boat building has suffered erosion and sediment clogs the stormwater drainage system and has built a delta near the boat dock. The road needs periodic grading and the eroded paths need restoration. Mulching the picnic area would reduce the area of bare ground and reduce the influence of foot traffic on the trees around the shelter and improve retention of water. Careful

monitoring and maintenance of the grounds (mulching and other practices) should be implemented to preserve the forest in this area.

4. Safety and Security

a. Campus Safety Plan

The Director of Safety and Environment (within Facilities Management) maintains, assesses, and upgrades at least annually the Campus Safety Plan. The Director of Campus Police maintains and evaluates the Campus Emergency Plan.

b. Campus Police

In an effort to provide the campus community with a safe and secure educational environment, the College operates a 24-hour, full-service police department. On College-controlled properties and adjacent streets and sidewalks, officers of the William and Mary Campus Police hold the same statutory authority and responsibility as all Virginia municipal police. The 18 full-time and three part-time sworn officers are trained to understand and respond to the particular needs of modern campus environments and communities. In total, the Department spent 4,000 man-hours on training in 1994.

In addition to normal patrols and investigations, the Campus Police provide first aid to injured persons, traffic control and enforcement, escorts after dark, bicycle registration, lost and found, delivery of emergency messages, student volunteer training, and crime prevention/safety tips, programs, and literature. In 1994, the Crime Prevention unit distributed over 10,000 pieces of literature, conducted over 50 awareness/prevention programs, and addressed almost 3,200 students, faculty, and staff.

Of Virginia institutions, William and Mary has the highest percentage of students living on campus. Campus Police responded to 20,830 service calls during 1994, none of which involved stranger-perpetrated robbery, rape, or serious assault. The Director of Campus Police reports the Department to be "reasonably staffed" to do its job. Recent reorganization has streamlined the chain of command (one Lieutenant rather than three; four Sergeants rather than three), increased Sergeants' responsibilities, and freed up one additional officer for street patrols.

Improvements in the Department and in the functioning of the Campus Police Station have taken place under the leadership of the current Director. A Campus Police "Annual Report" was