



Budget Model Primer

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Preface

The University of Maine's Strategic Vision and Values: A Framework for the University's Future articulates a set of goals that will guide the university through the next several years of its development. Goal 2 addresses the university's mission *through processes that ensure effectiveness, efficiency, and quality*. Subgoal 2.2.3 focuses on the university budget process: *We will develop a budgeting process that is responsive and transparent, aligns resources with strategic priorities, and creates incentives/reward structures that support advancement toward the university goals*. Before progress can be made toward this goal, it is important to understand the status quo. What is UMaine's current budget model?

A budget model is a set of budget-related practices utilized by an institution to create its annual budget. Depending upon how strictly they are defined, there are about four to six budget models commonly used in higher education. While most universities' approaches to budgeting can be categorized into one of these four to six models, many use some combination of practices that are hybrids of two or more approaches.

The purpose of this document is to provide an overview of the University of Maine's budget model or, more accurately, budget practices in 2019. The reader will note that revenues and expenses are described in general terms (e.g., "about \$84M") rather than specific dollar amounts throughout this document. This is intentional. This is not an accounting document. Dollar amounts are included to provide a sense of size and scope, not to provide an accounting of how every dollar is collected and spent. The primary focus of the Budget Model Primer is on budget building processes.

Beyond a description, this document includes commentary on some of the more common challenges associated with UMaine's budget model. These challenges are based upon my experience, as well as information gathered from vice presidents, deans, research center directors, faculty members, and staff.

The goal is for the readers of this document to have a shared understanding of the status quo, a shared set of assumptions about how things currently work, and a shared vocabulary. In order to progress toward subgoal 2.2.3, it is important to first answer the following questions about UMaine's current budget model:

How *responsive and transparent* is the current model?

How well does it align *resources with strategic priorities*?

Does it create *incentives/reward structures that support advancement toward the university goals*?

I. UMaine's Budget Model

For the most part, the University of Maine utilizes an incremental budget model, which is the traditional approach to budgeting in higher education and continues to be the most common approach used by universities in the United States (Barr & McCellan, 2018; EAB, 2016). In the incremental approach, budgets are adjusted "incrementally" from year to year. That is, the unit director (e.g., vice president or dean) is informed by the central administration that his/her budget for the coming year will be the same as it was the prior year, plus or minus some amount or percent. In most years (e.g., 11 of the last 12), most

unit directors have had to adjust their budgets by reducing expenses (i.e., “making cuts”). In “budget cut” years, the size of units’ total budgets may actually increase because of increases in salaries and the benefit rate. The unit directors have no control over these increased expenses and, consequently, have to make cuts in areas over which they have control (e.g., open faculty or staff lines, operating expenses) in order to balance their budgets.

Comments on Incremental Budgeting. Incremental budgeting is the most efficient approach to budget building in that it requires the least amount of data collection and analysis, and the major budget decisions are made centrally by a relatively small group of senior leaders. This approach assumes that the basic objectives of the university are the same from one year to the next. It is generally recognized that incremental budgeting is a suboptimal approach to resource allocation. It is not responsive to changes in enrollment patterns and there are no financial incentives for unit leaders to grow revenue or cut costs. Another common criticism of incremental budgeting is the relative lack of transparency.

The University of Maine’s budget model is highly *centralized*. That is, major budget decisions (e.g., investments or reductions) are made centrally, and vice presidents and deans are informed of these decisions and required to act upon them. While they have some discretion over how they manage their budgets (e.g., where to take cuts, what vacated positions to fill), these decisions are subject to approval by the central administration.

Comments on Centralized (as Opposed to Decentralized) Budgeting. A highly centralized budget model allows the senior leadership to drive toward strategic goals through central investments and oversight. As an example, under the Blue Sky Strategic Plan, UMaine sought to grow its signature areas of excellence and emerging areas of distinction and set ambitious goals for enrollment growth. Under the plan, central investments were made in signature areas (e.g., Engineering, Honors, STEM Education) and emerging areas (e.g., faculty with expertise in Aging; graduate assistants in Sustainability). Similarly, investments were made in areas with significant enrollment growth and growth potential (e.g., Nursing, Business, Engineering), as well as areas needed to support that growth (e.g., lecturers and teaching assistants in Mathematics and Chemistry) and in financial aid. The costs of these investments were dispersed in the form of budget cuts to other areas.

In *decentralized* budget modeling, units within the university have greater responsibility for budget decisions and resources shift to areas of high growth. For example, in a total *Responsibility Centered Management* (RCM) approach to budgeting, most tuition dollars flow back to the units that generate them and the unit is responsible for the costs of its operation (e.g., salary and benefits, space, IT etc.), as well as a share of the university’s overhead e.g., library, Bursar’s office, facilities, student services, etc.).

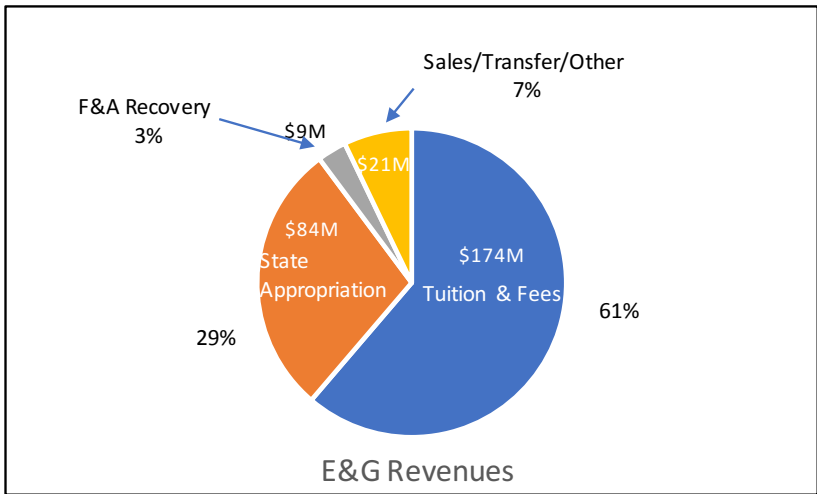
Starting in the 1990s and accelerating in the 21st century, the trend in higher education was away from incremental/centralized budgeting and toward RCM/ decentralized budgeting. In recent years, many universities are moving back toward greater central control of budgets, typically through some form of hybrid budget modeling (EAB, 2016).

II. Education and General

E&G Revenues

What are E&G funds and where do they come from?

Education and General (E&G) funds make up the largest component of UMaine’s budget, about \$288M in FY2020.¹ Revenues that flow into the E&G budget fall into four broad categories: tuition and fees (\$174M), unrestricted state appropriation (\$84M), F&A recovery (sometimes called Indirect Cost Return or ICR, \$9M), and sales/transfers/other (\$21M).



Let’s examine each component of E&G revenues separately.

Tuition and Fees

Tuition

Tuition dollars include undergraduate and graduate tuition, as well as tuition from early college programs. All tuition that is assessed contributes to E&G, and even some tuition that is not collected. For example, when a student receives a scholarship funded by the university (i.e., “institutional aid,” see E&G Expenses page 6) the student pays less than the full tuition, but the university counts the full tuition amount. The aid the student receives is considered an expense (the tuition is considered “discounted”).

Tuition revenue is not treated differently from other sources of E&G revenue when E&G dollars are allocated to expense lines (i.e., there are no expense lines that are designated as funded by tuition revenue as opposed to any other source of E&G revenue). Similarly, graduate and undergraduate tuition revenue is treated together.

¹All dollar amounts subsequently referenced in this document are for fiscal year (FY) 2020, unless otherwise indicated.

Fall 2020 per credit hour tuition rates are:

	In-State	Out-of-State	NEBHE/Canadian
Undergraduate	\$300	\$977	\$495
Graduate	\$450	\$1466	\$743

Anticipated FY2020 revenue:

Residency	Undergraduate	Graduate
In-State	\$47.5M	\$7.5M
Out-of-State	\$89.5M	\$10M
Total	\$137M	\$18M

Total Tuition Revenue: **\$155M.**

Fees

All UMaine students pay the following fees².

Fee	How much
Unified Fee	\$1,035 for 12-15 credit hours
Communication Fee	\$15 for 6+ credit hours
Activity Fee	\$53 for 6+ credit hours
Rec Center Fee	\$146 for 6+ credit hours

The Unified Fee is the largest fee and is paid by every student. This fee was created in FY2003 by combining several fees, including the Comprehensive Fee, Course Fees, Technology Fee, Energy Fee, Memorial Union Fee, Transcript Fee, and New Student Fee. In FY2020, UMaine anticipates collecting about \$17.5M in Unified Fees.

Some students are also charged program fees³.

Fee	Who pays	Amount
Business Program Fee	All students taking BUA courses	\$33 per credit hour
Nursing Program Fee	Nursing students taking Nursing clinicals and labs	\$33 per credit hour
Nursing Kaplan Fee	Nursing students in their last four semesters	\$33 per credit hour
Social Work Program Fee	Social Work students taking Social Work practicums	\$25 per course
Social Work TK20 Fee	Social Work students	\$139 one time
Engineering Program Fee	All students taking ENG courses	\$100 per course
Spatial Program Fee	All students taking SIE courses	\$100 per course

²Amounts and credit hour minimums listed are for undergraduate students. Graduate students pay similar fee amounts, but with lower credit hour minimums.

³These fees were created in FY2004 to offset the relatively expensive nature of these degree programs.

MBA Program ⁴ Fee	All MBA students	\$80 per credit hour
Education TK20 Fee	Education students	\$110 one time
Communication Sciences & Disorders Fee	Communication Sciences & Disorders graduate students	\$600 per semester (four semesters maximum)

In addition to the above, students are charged \$25 per credit hour for online courses. Music majors who take Applied Music Courses pay a fee of \$100 per half hour of private lessons. Finally, there are additional fees for Travel Study Courses and a small number of highly experiential courses.

State Appropriation

In FY2020, the University of Maine receives approximately \$84M in state appropriation. These are “unrestricted” state funds, meaning that the state does not limit (or “restrict”) what the university can use these funds to support, as long as they are being used for legitimate reasons to support the tripartite mission of the university. After tuition and fees, the state appropriation accounts for the largest portion of E&G revenue.

Facilities and Administrative (F&A) Recovery (Indirect Cost Recovery or IDC)

Many activities at UMaine are funded by grants from federal or state agencies, private foundations, and business and industry. Most grants support research activities. In FY2019, UMaine received grant awards totaling over \$90M. In addition to covering the direct costs of carrying out the specific research activity (e.g., salaries, equipment and operating costs), grants are also charged a certain amount to cover the indirect costs to the university related to the grant. These costs are referred to as facilities and administrative (F&A) costs and sometimes indirect costs (IDC). In this document, they will be referred to as F&A costs and the revenue derived from them as F&A recovery. F&A costs include things such as accounting services, utilities, space and administration. In FY2019, over \$14M in F&A revenue was awarded as part of the \$90M+ in grants received.

Every year, when the university builds its budget for the next year, it estimates how much F&A recovery (i.e., revenue) will be in that year. These funds are included in the base budget. For FY2020, it is estimated that the university will recover \$9M in F&A costs.

If UMaine was awarded over \$14M in F&A cost in FY2019, why would the university only budget \$9M in F&A recovery in FY2020? The answer to this question has to do with how F&A costs are recovered. F&A is charged as a percentage of the direct costs for the grant. F&A costs are not recovered until the funds are expended. So, while UMaine faculty, staff and students were awarded over \$90M in grant funding in FY2019, many of those grants are for projects that will extend over multiple years. Thus, the \$14M in F&A costs will also be recovered over the lifetime of the projects.

In FY2020, it is estimated that UMaine will recover \$9M in F&A costs of the projects expensed.

⁴The MBA Program Fee will be eliminated in FY2020.

Sales & Services

There are several revenue accounts included in the E&G budget. The largest is Athletics. Other sales and services include the Department of Industrial Cooperation, Conferences and Institutes, the Psychological Services Center, the Conley Speech and Hearing Center and the Intensive English Institute. These areas project the amount of revenue they anticipate bringing in for the fiscal year and this amount is base-budgeted as part of the E&G revenue. (For additional information see E&G Revenue Accounts below.)

Auxiliary Services Transfer

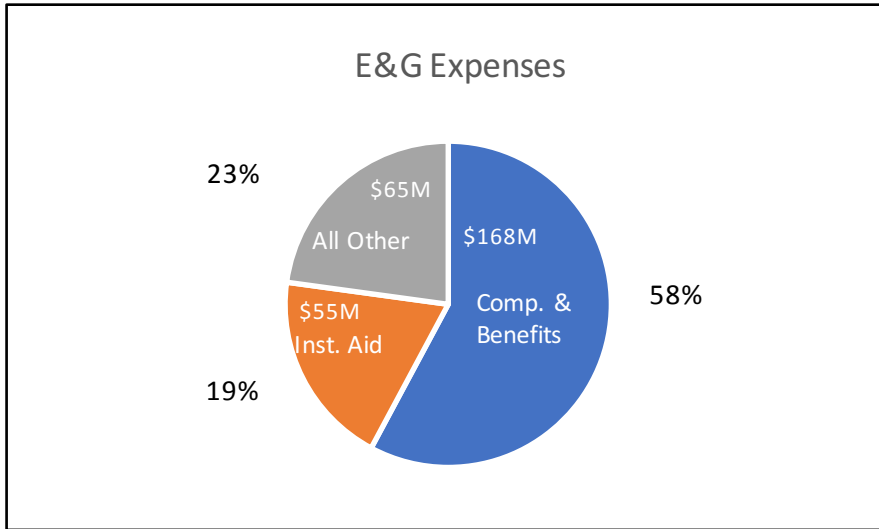
Auxiliary Services refers to a set of operations that are completely self-funded (i.e., these areas operate on the revenue they generate and are not subsidized by state appropriation or tuition/fee dollars). Auxiliaries include Dining Services, the Bookstore, residence halls and others (see Auxiliary Services page 18).

Each year, UMaine's Auxiliary Services balances its budget to meet expenses that include transfer of funds to the E&G budget to support costs of shared and other direct expenses, such as student billing, Human Resources and Procurement services. In the FY2020 budget, Auxiliary Services has budgeted \$3.3M in transfers to the E&G budget.

E&G Expenses

What expenses are covered by E&G funds?

There are different ways of answering this question. One way is to look at broad categories of expense, aggregating across units. From this perspective, the lion's share of the E&G expenses is for compensation and benefits (\$168M). The next largest single category of expense is financial aid (\$55M). The latter is sometimes referred to as "institutional aid," to distinguish these funds from other restricted sources of financial aid students receive (e.g. federal and state funds, privately funded scholarships). All other E&G expenses total \$65M.



“All other” expenses include fuel, electricity, debt service, library acquisitions, UMS Shared Services, travel and others.

A different way to look at E&G expenses is to look at the funds expended in different areas of the university. Table 1 provides this information for broad areas of campus operation.

Table 1

University Division	FY2020 Base Budget	Percent of Total E&G Budget
Academic Affairs	\$167M	58%
Research & Graduate School	\$20M	7%
Student Affairs	\$6M	2%
President’s Areas	\$15.5M	5%
Administration and Facilities	\$18M	6%
Advancement	\$3.5M	1%
Institutional Finance	\$52M	18%
Other	\$6M	2%
Total	\$288M	

E&G Revenue Accounts

How are revenue-generating accounts handled within the E&G budget?

The E&G budget includes several revenue operations. Every year, when building their base budgets for the next fiscal years, units with revenue accounts estimate the amount of non-tuition revenue they anticipate bringing in the coming year. This amount is built into the base budget of the revenue account. A matching amount of funds is built into the expense side of the unit's budget. As long as the unit hits its revenue target and stays within its expense budget, everything balances. If a unit produces less revenue than expected, it must curtail its expenses to an amount equal to the revenue shortfall. If a unit produces more revenue than anticipated, the additional revenues can be used to cover increased expenses or can carry forward to reserves for that unit (see Carry Forward page 9).

Most revenue (i.e., sales and services) operations that are included in the E&G budget are not fully revenue dependent. Rather, they operate with a combination of E&G base and revenue dollars generated by the unit. For example, in some units, the salary and benefits for the director and most of the staff are base funded, while the operating funds and some staff positions rely on revenues. There are a few units included in the E&G budget whose operations are fully funded by their revenues (Maine Campus newspaper, Intensive English Institute). However, most units that are completely self-supporting are not part of the E&G budget, but are included in the Auxiliaries budget (see Auxiliary Services page 18).

Salaries and Benefits

What is the connections between salary and benefits in the E&G budget?

Salary and benefits are linked in the E&G budget. For every salary line there is an accompanying benefit line that, in FY2020, includes 53.4% of the salary amount. Part-time and temporary salary lines, overload, and additional compensation lines have a 7.9% benefits rate attached. Student wage lines have no associated benefits. The benefit rate changes from year to year and is based upon things such as the cost of health care insurance. Other benefit costs include the university's contribution to retirement, dependent tuition waivers, and other benefits. The cost of benefits is included in the units' base budgets. If a faculty or staff line is added to a unit, the unit's budget increases by the total of the salary and benefits. Conversely, if a unit eliminates a faculty or staff line to reduce its base budget to meet a cut, the reduction is the total of the salary and benefits.

Salary and benefits de-couple when a faculty or staff line is vacant or if a position is "bought out" with grant funds. The college is allowed to use the available salary for one-time expenses (e.g., hiring adjunct faculty to teach, start-up funds, travel, etc.). However, the benefits made available by the empty faculty/staff line revert to the central administration. An exception to this is fully revenue supported units, which retain unused benefit lines to use for other purposes.

Carry Forward

What happens to funds that are not spent by the end of the fiscal year?

At the end of a fiscal year, there are usually some funds remaining in expense lines in units' budgets. Funds can be "left over" at the end of the fiscal year for a variety of reasons. For example, it is difficult to predict a year in advance exactly how much will be spent on travel, copying or other operational expenses in a given year. Units are allowed to move funds between expense lines to balance them out (e.g., if a unit spent more on travel than expected, but less on copying, funds from the copy line can be moved to the travel line so that the line does not end the year in the red). Units may purposely hold off on spending operational funds (even though there may be dozens of legitimate uses for them) in order to build up funds for an anticipated expense (e.g., start-up funds for an anticipated hire). Finally, another common reason for colleges to have leftover funds at the end of a fiscal year is because a faculty or staff line is vacant. The salary carries forward to the next year and the college can use it for one-time expenses. The benefits do not carry forward but are reclaimed centrally.

At the end of the fiscal year, all unspent E&G funds are considered part of the university's E&G reserves (see Reserves below).

At UMaine, units are allowed to keep the funds (except benefits) that are left over at the end of the fiscal year (i.e., revenues minus expenses). These are referred to as "carry forward" funds because they carry forward from one fiscal year to the next.

Reserves

Where do the university's reserve funds come from?

The university's E&G reserves are the total amount of E&G money that is available at the end of the fiscal year. These funds are accumulated over time. As indicated above, funds not fully expended in any unit's E&G budget at the end of the fiscal year is considered part of the university's reserves. These reserves, therefore, are dispersed throughout the university. Every year there is about \$10M in unspent E&G funds that are held in departments/units that are included in the university's total reserves.

In addition, the university maintains a pool of funds centrally. These are sometimes called "central reserves." UMaine's central reserve pool is created with benefit funds that become available when faculty and staff lines are vacant, or when a portion of faculty or staff members' time is bought out by a grant. The university "scoops" these benefit dollars into its reserves. Other unspent funds, such as savings in utilities, add to the reserves. UMaine typically holds about \$10M in central reserves.

It should be noted that reserve funds are one-time funds, not base budget funds. That is, once they are expended they are gone.

E&G Budget Build

How is the E&G budget created?

The E&G budget is built annually. Given that the decisions made in one fiscal year impact subsequent years, there is no clear starting point for the building of next fiscal year's budget. However, there is an annual cycle to the process. The revenue side of the budget drives the expense side. The university is required to have a balanced budget so expenses cannot exceed revenue.

As we have already seen, 90% of the E&G revenue comes from two sources: 1) state appropriation and 2) tuition and fees. The size of the state appropriation is determined by the Legislature. Oftentimes, the state's budget is not finalized until late in the legislative session (e.g., June). Generally, the university assumes that the appropriation will be slightly increased over the prior year. The state builds its budget on a two-year cycle, so the university knows how much the state appropriation will be for two fiscal years. However, it is not uncommon for the Legislature to pass a supplemental budget, or to experience an unanticipated shortfall, in the second year of the biennium that may result in a change in the appropriation.

Tuition and fee revenue, of course, is based on student enrollment. When building the budget, the university estimates the total number of credit hours students will take in the subsequent year. Total credit hours is influenced by a variety of factors, including enrollment of new first-year students, retention rate of current students, the size of the graduating class, and the average number of credits students take. The revenue generated by these credit hours is impacted by the mix of in-state, out-of-state, e-rate, early college, NEBHE, undergraduate and graduate students who will take them.

As you can see, projecting the revenue that will be produced from tuition and fees in the subsequent fiscal year is a challenging endeavor. And, while somewhat easier to predict, the state appropriation is also subject to fluctuation.

The expense side of the budget is also impacted by a variety of factors, several of which are not under the direct control of UMaine's administration. The largest single expense is salary and benefits. How these will change from year to year is determined to a large extent by the union contracts. Often these contracts are not finalized in a timely fashion. For example, in FY2020 most of the union contracts were not finalized until October – three months after the start of the fiscal year. Other expenses include “shared services” (the amount of money UMaine is charged for services, such as Human Resources, Equal Opportunity, Procurement, and IT that are provided by the University of Maine System) fuel, utilities and debt service. Finally, centrally determined strategic investments, such as new faculty lines in high-priority areas, is another additional expense, as are investments made with one-time funds that need to be added to the base budget.

The timeline for building the budget looks something like this:

July–September:	Tuition and fee revenue, and state appropriation are projected; estimates of major expenses (e.g., salary/benefits, fuel/utilities/shared services) are made; strategic priorities are determined
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October–November:	Decisions about strategic investments are made; Deans/VPs are informed about investments, as well as adjustments to their base budgets. Preliminary reallocation decisions are made
December–January:	First iteration of next fiscal year’s budget is updated into MaineStreet
February–March:	UMaine administration reviews budget with the Finance, Facilities and Technology Committee of the Board of Trustees
April–May:	Final adjustments are made to the budget and it is submitted to the BOT for final approval in the Board’s May meeting

Challenges/Problems/Concerns regarding E&G Budget model

Challenge 1: Revenue/Expense Disconnect

One of the main concerns about the UMaine E&G budget model is that there is a disconnect between the revenue and expense sides. With a few exceptions, there is no direct connection between the revenue units generate and their expenses. For example, if enrollments in an academic unit’s courses grow, more tuition and fee revenue is generated, yet no additional resources come to the department. Consequently, the department cannot increase its expenses (e.g., hire additional full- or part-time faculty) to address the additional workload. Similarly, if a unit generates additional F&A recovery because its faculty are highly productive in funded research, none of the additional revenue returns to the unit. At the academic unit level, “success” as defined by more majors, more credit hours or more funded grants results in more work for the unit, but not more resources for the unit to use to carry out the additional work.

Exceptions

There are a handful of areas within the university where there is a clearer connection between revenues generated and funds available to expend.

College of Engineering Program Fee: The College of Engineering was permitted to charge a program fee for Engineering students in 2004. The rationale for this additional fee was that Engineering education is expensive to deliver and Engineering graduates, on average, earn more than other UMaine graduates. The College receives 100% of the funds generated by the Engineering Fee. Currently, the fee is set at \$100 per ENG course⁵. With the Engineering Program Fee, the College receives increased expendable funds if enrollment in ENG courses increases and less if it decreases. In FY2020, it is anticipated that the College will receive about \$800,000 from the Program Fee.

Enrollment in Engineering programs was 1,230 in fall 2003, the year prior to the introduction of the fee, and grew to 1,980 by fall 2018.

⁵The Spatial Information Science program in the School of Computing & Information Science also pays a program fee of \$100 per course and 100% of these funds are returned to the unit. This is a legacy from when this program was housed in the College of Engineering.

Maine Business School Program Fee: The Maine Business School created the Business Program Fee in 2004. The Business Fee works like the Engineering Fee, only students are charged a per credit hour fee rather than per course. Currently, students pay \$33 per credit hour. In FY2020, the Maine Business School will have about \$700,000 available to expend.

Since the inception of the Business Program Fee, enrollment in the Maine Business School has grown from 862 (fall 2003) to 1,341 (fall 2018).

Unified Fee distribution: Two colleges disperse Unified Fee funds to the units within their college, based upon units' "productivity."

The College of Engineering disperses 100% of budgeted Unified Fee funds, using the previous three-year average enrollment of each of the five academic departments. The College determines the percentage of the total college enrollment for each department, and disperses accordingly. So, for example, the FY2019 percentages were based on the average of the official headcounts for fall 2018, fall 2016 and fall 2017.

The College of Liberal Arts & Sciences builds a set amount of money into its base budget each year based upon its historical allocation of the Unified Fee (see Challenge 2 below).

The College distributes a portion of its Unified Fee funds to all 24 of its departments, schools and programs using a formula based on the number of credit hours, majors and minors in the unit during the prior year. The current formula used by the college is:

- \$0.80 per student credit hour taught
- \$7.00 per major or graduate student
- \$3.00 per minor

The Colleges of Engineering and Liberal Arts & Sciences distribute Unified Fee funds to the units following their respective formulas to provide additional operating dollars to units. In this way, the colleges try to address the problem of grossly inadequate operating budgets for all units (see Challenge 2: Operating Funds page 13) and provide financial incentives for increased productivity (i.e., majors, minors, and/or credit hours).

UMaineOnline Fee: The Division of Lifelong Learning supports online course and program offerings. In 2015, a \$25 per credit hour fee for online courses was created. In FY2020, the fee will generate about \$900,000 in revenue. These funds stay in DLL and are used to support online programs. Most of the funds (about \$800,000) is used to pay the salary and benefits of the UMaineOnline staff who provide instruction design assistance, student support, faculty support, and advising to online students.

Since the inception of the UMaineOnline fee, enrollment in online courses has grown by about 40% or 10,000 credit hours.

UMaineGOLD: In 2015, the Graduate School and the Division of Lifelong Learning

developed the graduate online degree program – UMaineGOLD – to increase enrollment in fully online graduate programs and to expand the number of fully online graduate programs. Criteria for GOLD status were established and programs that meet these criteria receive a portion of the tuition revenue generated by the students enrolled in their fully online programs. The programs receive \$200 per student enrolled in each course that meets the GOLD standard.

Enrollment in full online graduate degree programs has grown from 122 (fall 2014) to 611 (fall 2019). During the same time period, enrollment in graduate certificate programs grew from 94 to 264. Finally, the number of fully online graduate degree programs has increased from 7 to 17 since the creation of UMaineGOLD and there are two more degree programs due to go fully on line this academic year.

F&A recovery return to principal investigators:

At most research universities, a portion of the F&A revenue is returned to principal investigators to provide funds for them to use to advance their research programs. Until recently, UMaine did not return any portion of F&A revenue to PIs. The university kept 100% of F&A revenue centrally as a component of E&G revenue. In FY2018, UMaine began to return some funds to PIs, based on the amount of F&A revenue their grants produced. The amount of money returned to PIs has increased every year since the inception of this policy, with \$250,000 in FY2018, \$375,000 in FY2019, and \$500,000 in FY2020 provided to PIs⁶. Faculty fully funded by grants (“soft-money” faculty) receive 25% of the net F&A revenue they generate. Tenure-track faculty and professional staff receive a portion of the total amount of the available F&A recovery funds equal to the portion of the total F&A recovered produced by their grants in the prior fiscal year. There are guidelines for how the F&A recovery funds returned to faculty members are to be used. Generally, the funds must be used to advance the faculty member’s research program.

Challenge 2: Operating Funds

The amount of money base-budgeted for operating expenses for most units at UMaine has not increased in decades. In some cases, operating budgets are smaller than they were 20 years ago because decisions were made to reduce the size of some operating budgets to manage budget cuts. In terms of purchase power, of course, operating budgets are a fraction of the size they were when they were first established due to inflation. The cost of start-up packages, travel, student wages, supplies, etc. increase every year, while the amount of funds budgeted to cover these costs has remained the same.

Vice presidents, deans, department chairs, research center directors and other administrative leaders have to be innovative to cover operating expenses for their units. As described above, units in the College of Engineering and the College of Liberal Arts & Sciences receive supplements to their operating budgets from the Unified Fee. In CLAS, the dean has less than \$40,000 in the college’s base budget for discretionary expenses. Unified Fee funds are used to fund facility and equipment upgrades, program review expenses, start-up packages, and other college priorities. The College of Engineering and the Maine Business School use their program fees to cover expenses that would typically be included in an operating budget. Other strategies employed by unit leaders include

⁶The following amounts were built into the E&G budgets as expenses: \$125,000 in FY2018, \$250,000 in FY2019, and \$250,000 in FY2020. The balance of the funds distributed to PIs (\$125,000 in 2018, \$125,000 in FY2019 and \$250,000 in FY2020) was taken from university reserves.

using a portion of the funds made available when faculty “buy out” of teaching or salary funds available when positions are temporarily vacated to cover operating costs. In the College of Natural Sciences, Forestry, and Agriculture, the dean will frequently hold off on filling vacated faculty lines for a year so that the funds made available by the empty lines can be used for one-time expenses, such as faculty start-up packages. In some research centers, there is a “use fee” tacked on to industry contracts to cover operating expenses. In at least one department, faculty time is charged to some industry contracts, but the funds are not used to “buy out” the faculty members time. Rather the funds (salary plus benefits) are available to cover operating expenses in the department.

Challenge 3: Unified Fee

UMaine consolidated several student fees into a single “Unified Fee.” The Unified Fee combined: Comprehensive Fee, Course Fees, Technology Fee, Energy Fee, Memorial Union Fee, Transcript Fee, New Student Program Fee, and others. The decision to unify student fees was made in FY2002 and the Unified Fee was instituted in FY2003. Funds from the Unified Fee were built into the budgets of colleges, Student Life, Athletics, the Library and other units. The Unified Fee is described to students as follows: *“The Unified Fee is used to cover fixed costs of providing educational services that may not be directly related to the number of credit hours for which a student is enrolled. This fee supports activities such as student services, the operation of facilities such as student centers, and student-utilized, instruction-related technologies.”* (Bursar’s website)

Like tuition, state appropriation, and F&A recovery, the total amount of Unified Fee collected is built into the E&G budget as revenue. There is not a corresponding set of expenses in the E&G budget that are identified as Unified Fee expenses. In 2003, a set amount of money was built into units’ base budgets. In the 17 years since the Unified Fee was created, various decisions made at different levels of the institution have resulted in the current situation in which it is not clear that the revenue produced by Unified Fee is always being used in ways that are consistent with the description provided to students.

At the level of the central administration, the decision was made to apply increases in the revenue generated by the Unified Fee to reduce the size of the gap between revenues and expenses so that the size of the budget cut that had to be managed by units was decreased. Let me explain. Typically, when the Board of Trustees approved an increase in tuition rates, it also approved the same level increase in the rate of fees. So, if there was a 3% increase in the tuition rate, there was also a 3% increase in the fee rate. In most years, even with increases in tuition and fee rates, there was a gap between revenues and expenses (i.e., expenses increased at a rate greater than revenues). The additional revenue generated by the higher Unified Fee rate appeared as E&G revenue, but there was not a corresponding increase on the expense side. In this way, the increased revenue was used to lower the revenue-expense gap so that the budget cut would be smaller. This decision was made repeatedly, over many budget cuts, often with little reflection about unintended consequences. In FY2020, about \$17M appears in the E&G budget as Unified Fee revenue. A corresponding \$17M does not appear as distinct items on the expense side of the E&G budget.

The other important decisions that have resulted in the situation UMaine finds itself in now were made at the college level. The Unified Fee is managed differently by each college and

as college deans have turned over, how these funds are used has evolved within colleges, as well. How the Colleges of Engineering and Liberal Arts & Sciences manage Unified Fee funds is described above. The College of Education & Human Development uses the funds to cover the costs associated with students completing the student teaching requirement. In the College of Natural Sciences Forestry, and Agriculture, approximately 50% of the funds was added to the base budgets of the schools and departments within NSFA to be used to cover operating expenses. The remaining funds are held by the college to be used for larger expenses, such as replacing more expensive equipment/technologies in teaching laboratories (i.e., \$20,000 to \$50,000 range). The Maine Business School receives a small amount of Unified Fee funds that it uses, along with its Program Fee, to meet college operational expenses. For other units (e.g., Athletics, Collins Center for the Arts, Student Life) the Unified Fee funds they received do not appear as separate budget lines but are embedded in various expense lines.

With the creation of the Unified Fee, academic units are no longer allowed to create or raise course fees. The units must work with their deans if they need additional course fees. Given how different colleges managed the Unified Fee funds, there is not a consistent process for faculty to request additional funds for instructional support (e.g., funds to support new teaching technologies).

Challenge 4: F&A Recovery

UMaine treats F&A recovery as a source of E&G revenue. For example, in FY2020, \$9M in revenue from F&A recovery is built into the E&G budget. The amount returned to principal investigators is treated as an expense (\$500,000 in FY2020). There is no functional connection between the total F&A recovery revenue for a particular year and the amount of money distributed to PIs. The amount distributed is set by the administration. If the F&A recovery exceeds projection (e.g., greater than \$9M for FY2020) the amount of money returned to PIs does not increase. If the F&A recovery does not meet the projection (e.g., less than \$9M in FY2020), the amount returned to PIs does not change.⁷

Returning a portion of F&A recovery to PIs is considered best practice and supports the growth of funded research. However, returning a portion to the research office, colleges, departments and research centers is also considered best practice and is common at most research universities. These units could use the F&A recovery they receive to cover facilities and administrative costs associated with research and to foster research growth (e.g., start-up funds, seed grants).

Challenge 5: Budget-Building Timeline

The timeline within which UMaine builds its E&G budget is not conducive to strategic decision making. The fact that the budget is built one year at a time makes it difficult to do long-term planning. And the time between when the revenue and expense estimates are completed (late October) and when the budget plan for the final year is due (early December) is too short. Deans and other key decision makers are not provided the information they need to make hiring and budget reallocation decisions in a timely fashion. Consequently, decisions about where to cut expenses are limited to what is available to cut during the brief window between when they know how large the cut will be and when

⁷It should be noted that in four of the five most recent years, the projected F&A recovery was less than projected.

they need to make a final decision. Typically, budget cuts are managed by cutting vacated faculty or staff lines. Units lose much-needed lines because they happen to be empty at the point in time when the decision about the cut had to be made. In the words of one dean, “you end up scarfing up whatever is available to make your cut.” This type of crisis-driven decision making is not conducive to strategic long-term planning.

III. MEIF

The Maine Economic Improvement Fund (MEIF) was created by the Maine Legislature in 1997 to leverage economic development through targeted investment in university research, development, and commercialization. The Legislature designated seven strategic technology areas:

- Advanced Technologies for Forestry and Agriculture
- Aquaculture and Marine Sciences
- Biotechnology
- Composites and Advanced Materials Technologies
- Environmental Technologies
- Information Technologies
- Precision Manufacturing

The University of Maine may use MEIF funds to “invest in applied research and development in the target areas” and to “support the development of private enterprise based upon research and development” (Maine Statute, 1997, rev., 2011).

When MEIF was created, a \$500K appropriation appeared in the FY1998 budget, of which UMaine received \$400,000. The MEIF state appropriation rose to \$10.2M by FY2004 and \$14.7M by 2009. There were no additions to the MEIF appropriation again until FY2016 when \$2.65M was added, bringing the total to \$17.35M. In FY2020, it remains at \$17.35M, with UMaine receiving about \$13.25M MEIF.

MEIF funds are “restricted,” in that the university is restricted in how these funds can be used. Basically, MEIF funds can be used to support research, development and commercialization in the seven sectors. Some staff, professional and faculty lines are funded, fully or in part, with MEIF. These positions must work in one of the seven designated areas.

UMaine’s total MEIF budget is about \$19.75M, with the university contributing about \$6.5M. The major categories of MEIF expenses include:

Faculty Salaries & Benefits	\$9.2M
Staff Salaries & Benefits	\$5.5M
Administration	\$0.1M
Matching Funds	\$2.6M
Operating	\$2.9M

Total: \$20.3M

The category “operating” includes start-up as well as support for graduate students, one-time requests, service contracts, and memberships/fees.

Challenges/Problems/Concerns regarding MEIF

The creation of MEIF was an important milestone in UMaine's development as a research university. These funds have had a significant impact on UMaine research, development, and commercialization. Nonetheless, there are challenges and concerns that have accompanied this investment.

Challenge 1: Unfunded salary and benefit increases

The amount of MEIF funding UMaine receives has not increased since FY2016 and the last increase before that was in FY2009. A significant portion of UMaine's MEIF is budgeted for salaries and benefits. When faculty and staff receive negotiated, promotional or merit salary increases, there are no additional MEIF funds available to cover them. The additional expenses must be absorbed by the E&G budget. Most of the E&G contribution to the MEIF budget is to support these increases. UMaine matches the state's \$13.25M, with \$6.5M in FY2020 to fund the accumulation of 20 years of salary and benefit increases.

Challenge 2: Inflation

The state's support for MEIF has not kept pace with inflation. When the FY2020 \$17.35 MEIF appropriation is adjusted for inflation, it is worth about \$11M in 1998 dollars. The last time there was an increase in MEIF was in FY2016. At that time the inflation adjusted appropriation was worth about \$11.8M in 1998 dollars – the highest level of inflation-adjusted funding in the history of MEIF.

Challenge 3: MEIF deficit

The careful reader will have noted that while UMaine's total MEIF funding for FY2020 is \$19.75M, the total expenses is \$20.3M – a gap of about \$600,000. This is not an unusual circumstance. The \$20.3M in expenses can be more accurately described as \$20.3M in "commitments." For example, start-up funds committed in FY2020 will be spent over FY2020, FY2021, and FY2022. Similarly, a portion of the matching funds committed are committed to match grant funds that the university may not receive (i.e., if the grant proposal is not funded, the matching funds become available for other uses).

Over the 20 years since its inception, expenses have frequently exceeded revenue in the MEIF budget. Consequently, there is an accumulated negative ending balance (i.e., deficit) in the MEIF budget. In FY2020, the projected MEIF deficit is about \$7.7M. Any year-end gap in the MEIF balances are mitigated by the University of Maine's overall net position in both unrestricted and restricted funding. In other words, the MEIF deficit is covered on the balance sheet by non-MEIF funds.

IV. Auxiliary Services

Auxiliary Services is a set of operations within the University of Maine that charge fees for goods and services, and operates on the revenue produced. Dining and Housing Services make up the largest portion of UMaine's Auxiliary budget. The University Bookstore (including Bear Necessities) and Printing Services are the other significant operations within Auxiliary. Auxiliary receives no direct support from E&G (i.e., no state appropriation, tuition, fees, or F&A recovery is included in the Auxiliary revenue budget). However, E&G funds are used to purchase Auxiliary services (e.g., catering, printing) and E&G-funded areas support the Auxiliary operations. For example, Conferences and Institutes markets UMaine facilities to external entities, and supports conferences and related activities sponsored by internal or external groups. Much of the revenues generated by Conferences (i.e., catering, housing) goes to Auxiliary Services for the services it provides. Conferences and Institutes does not charge a fee to Auxiliary Services for the services it supplies that generate Auxiliary revenue.

Auxiliary Services at UMaine will produce over \$50M in revenue in FY2020, with dining and residence accounting for about 80% of that revenue. Auxiliary builds expenses for depreciation, as well as reserve funds, into its budget so that it can replace furniture and equipment on a regular schedule, update technology as needed, and fund major project renovations.

As indicated above, Auxiliary Services supports UMaine's E&G budget. In FY2020 \$3.3M will be transferred from Auxiliary to the E&G budget as revenue for services it receives from E&G operations.

V. Restricted Federal Funds

The University of Maine receives funds through the federal appropriation. Like the state's MEIF funds, these are restricted funds in that they can only be used for specified purposes.

Cooperative Extension

UMaine's Cooperative Extension Services is partially funded through the USDA with Smith-Lever funds. The Smith-Lever Act of 1914 established the Cooperative Extension Services in connection with land grant universities. The original mission of Cooperative Extension Services was to educate rural Americans about advances in agriculture practices and technologies. The mission has expanded to include youth development through 4-H programs, home economics, and leadership.

UMaine Cooperative Extension receives about \$3M in Smith-Lever funds annually. In order to receive these funds, the university must provide matching funds on a one-to-one basis. In FY2020, UMaine provides about \$7.75M in E&G funds to support Cooperative Extension.

Maine Agriculture and Forestry Experiment Station (MAFES)

The Maine Agricultural and Forest Experiment Station is partially funded through federal appropriations. The majority of these funds come through the Hatch Act (1887) and McIntire-Stennis Act (1962). The Hatch Act initially established agricultural experiment stations at land grant universities with annually appropriated funding, and the McIntire-Stennis Act provided expanded funding in natural resource areas. The breadth of research activities under the Hatch and McIntire-Stennis acts, and their current management by USDA are key to understanding current budgets of experiment stations, including at UMaine. The Hatch Act supports research in agriculture, aquaculture, foods, natural resources, environment, rural communities and recreation, and much of the basic sciences that underpin these applied areas. The McIntire-Stennis Act expanded federal funding to stations for research on forests, rangelands, natural resources and their use. It is typical for land grant universities to place the research-portions of their budgets for programs in food science, agriculture, natural resources and environmental, and related biotechnology programs within their experiment stations to spread the benefits from USDA funding across many academic units and gain the benefits of USDA research management systems. Currently, there are nearly 90 faculty (two-thirds) in the College of Natural Sciences, Forestry, and Agriculture with approved research programs in the station. This in large part results in UMaine showing a large university match to its federal funding. Also relevant, the size of the match is a positive factor in one of the formulas determining the size of the USDA's annual allocation of federally appropriated funds to UMaine.

As noted above, there are significant benefits to administering the full breadth of food, agricultural, natural resource and ecological research programs at UMaine as part of the experiment station. The research program development and approval process of the UMaine experiment station and USDA for individual faculty members provides a mechanism for setting strategic research direction and oversight that is valuable for program success. This process is unique at UMaine. Also, while the majority of the station funds at UMaine are used for the research portion of faculty salaries, academic units and faculty members formally part of station have access to funds for research activities, including graduate research assistantships, travel support, publication costs, and general research support. Also, with the current program breadth in the UMaine station, federal funds can be used for a significant portion of college administrative costs. The station director, who is also the dean, controls these funds.

The Maine Agricultural and Forest Experiment Station receives about \$3.4M in federal funds annually through the Hatch Act, McIntire-Stennis Act and other smaller federal appropriations. To receive these federal funds, there must be a minimum of a one-to-one match of state funds, with university funds qualifying as state match. University of Maine funds provide 100% of the required state match to the federal allocation. In FY2020, there were \$6M in UMaine E&G funds as match in the experiment station budget.

Both the federal and matching funds are tightly managed by USDA for compliance on allowable use under the funding acts and current USDA policy. UMaine's match is largely dedicated to covering faculty and administrative compensation (88%), including a portion of the college dean and associate deans. The federal appropriation caps retirement benefits at a level lower than that included in the university benefit rate making our current rate

unallowable. The research farms and forest are supported through match funding and their own revenue generation, and they provide significant teaching benefits. However, teaching costs are not allowable reported match. The remaining match funding is part of budgeted support of research operations of academic units in the college. The match is managed to make as much available for cost sharing of external grant proposals as possible.

Challenges/Problems/Concerns regarding Restricted Federal Funds

The federal government's fiscal year runs from October 1 through September 30, not in sync with UMaine's July 1 - June 30 fiscal year. This disconnect presents budgeting and planning challenges.

The faculty and staff in Cooperative Extension and MAFES are represented by the faculty and staff unions. As such, they receive negotiated across-the-board, merit, and longevity increases. Typically, these increases are funded through the E&G budget. Consequently, the university's support for these units has increased so that the university provides much more than the one-to-one match needed to access the federal funds.

Private Support

UMaine receives significant financial support from private sources. Every year about \$15M to \$20M from various private sources is available for use. Some of these funds come from the income from endowments paid over annually. The University of Maine Foundation holds the lion's share of UMaine's endowment (about \$230M). The Pulp and Paper Foundation and the 4-H Foundation are smaller and support specific areas. UMaine also receives funds annually from endowed funds that are held at the University of Maine System endowment. In total, these foundations hold about \$340M in endowed funds. The total annual pay over from all endowed funds is usually around \$8M, this amount varies depending upon the performance of the various investment funds that hold the money.

In addition to the funds that the university receives from endowments, annual gifts also provide significant support. Unlike endowed funds, which are permanently invested and support the university with the revenue they produce, annual gifts tend to be expendable. That is, they are not part of a permanent investment but are intended to be fully spent.

In addition to endowed funds and annual gifts, some private funds come from private philanthropic foundations. Well-known Maine examples include the Harold Alfond Foundation, the Libra Foundation, and the Stephen and Tabitha King Foundation. Funds from these organizations are typically disbursed via competitive grants and have to be used for the specific purposes described in the grant proposal.

The following table includes the amounts of expendable donations and endowed funds that were transferred to UMaine in fiscal year 2019 and the broad areas they supported.

	Expendable Donations	Endowment Income	Total
Unrestricted	\$1,202,057	\$387,338	\$1,589,395
Academic Divisions	\$1,743,437	\$905,305	\$2,648,742
Faculty and Staff Compensation	\$82,553	\$854,829	\$937,382
Research	\$2,689,101	\$67,830	\$2,756,931
Public Service & Extension	\$1,493,410	\$178,523	\$1,671,933
Library	\$55,876	\$93,460	\$149,336
Operations, Maint. of Plant	\$132,609	\$299,081	\$431,690
Student Financial Aid	\$1,165,050	\$4,581,479	\$5,746,529
Loan Funds	\$4,366	\$463,634	\$468,000
Athletics	\$591,682	\$77,784	\$669,466
Other	\$344,531	\$207,041	\$551,572
Total	\$9,504,672	\$8,116,304	\$17,620,976

Here are a few important things to remember about funds UMaine receives from private sources.

- These funds are not included in the E&G budget.
- About 98% of these funds are restricted. They can only be used for purposes designated by the donors. Even the funds included in the category "Unrestricted" in the above table have some restrictions. Most of these funds are held in gift accounts associated with specific units and must be used to support those units.
- The foundation that holds the funds (e.g., the University of Maine Foundation) acts as the trustee of the funds to assure that they are used in accordance with the donor's intent.
- Student financial aid receives the most private support. When loan funds are added to the student financial aid, the total amount used to directly support students is over \$6.2M

Infrastructure

UMaine budgets funded depreciation each year to cover the costs of preserving, renovating, and replacing the physical plant (e.g., buildings, parking lots, labs, etc.). In FY2020, for example, UMaine budgets in E&G about \$6.9M to cover depreciation. The true cost of covering the depreciation to UMaine's physical plant is far greater than the amount budgeted annually (\$6.9M is about 43% of the true FY2020 depreciation cost of \$15.9M). Because the university has never fully funded the cost of depreciation, the deferred maintenance cost (i.e., the amount of money that would be needed to carry out all scheduled maintenance on every UMaine asset) is estimated to be over \$350M.

The university maintains, improves and replaces some assets on a scheduled basis. For example, there is a schedule for paving parking lots. Some depreciation funds are used for emergency repair and replacement. And some funds are combined with funds provided by colleges, research centers or other units for renovation/repair/replacement of assets. While no college has a line in its base budget for infrastructure maintenance, all colleges (and many research centers) frequently use one-time funds to renovate or improve spaces they control. For some colleges this represents a significant annual expense. For example, in a typical year the College of Natural Sciences, Forestry, and Agriculture spends about \$300,000 on infrastructure. Often, units will work with Facilities Management to share renovation costs.

Sometimes the university receives funding from the state for restricted purposes related to improvement of the physical plant. These funds typically come through state bonds that must be approved by the Legislature and Maine voters. In the past, for example, bond funding has been approved to renovate teaching laboratories. Like state appropriation, bond funds are allocated to the System, rarely to specific universities within UMS. The System then distributes the funds among the universities.

University of Maine System and the UMaine Budget

The University of Maine is one of the six universities that make up the University of Maine System. The System is governed by a Board of Trustees that has ultimate fiduciary responsibility for all aspects of UMS. Given the relationship between UMaine and UMS, it is reasonable to ask what is the relationship between the UMS budget and UMaine's budget. The University of Maine receives state appropriation funds through the University of Maine System and is assessed charges by the System.

Revenues

State Appropriation. The amount of funds the state appropriates to support the University of Maine System is determined by the Legislature and must be approved by the governor as part of the state's overall budget. It is important to understand that the state appropriates money to the System – not to UMaine (or any of the other UMS universities). The System distributes the state appropriation to the university. Appendix A describes how the state appropriation is distributed to the six universities.

As we have seen, after tuition and fees, state appropriation is the second largest source of revenue for UMaine. In FY2020, about \$84M in revenue comes from the state appropriation. The percentage of the university's total budget provided by the state appropriation has been decreasing for over two decades so that now about 32% is covered by the state appropriation.

MEIF. Similar to the state appropriation, MEIF-restricted funds are provided to the System by the Legislature and the System distributes these funds to the universities. UMaine receives about 75% of the MEIF funds appropriated by the state.

Expenses

Shared Services. In 2014, UMS began a process of centralizing certain services to increase efficiency and reduce costs. IT, Human Resources, Equal Opportunity, Procurement, Capital Planning, Safety & Environmental Management, and Finance are provided by the University of Maine System and the campuses are charged for these services. UMaine receives a single assessment (i.e., fee) for all of these centralized services (i.e., we are not charged a fee for IT and another for HR etc.). Appendix B describes how the shared services fee is determined.

Insurance. The University of Maine System is self-insured. UMaine is assessed a fee annually to cover its portion of the cost of the insurance.

Parameters

In addition to the revenues and expenses determined by the System office, the System sets certain parameters that impact UMaine's revenue and expenses.

Tuition Rate. The UMS Board of Directors determines the tuition rate that can be charged to Maine residents.

Labor Costs. Most UMaine employees are represented by one of six unions. The unions contract with the System, not the individual universities. For example, UMaine does not negotiate a contract with the faculty union. UMS and AFUM (the faculty union) engage in collective bargaining. The UMS Board of Trustees must approve all collective bargaining agreements.

The union contracts determine across-the-board salary increases, and provides parameters for promotion and merit increases, as well as other benefits.

Benefit Rate. As described above, for every salary line there is an accompanying benefit rate. The benefit rate changes from year to year and is based on things such as the cost of health care insurance. Other benefit costs include the university's contribution to retirement, dependent tuition waivers, and other benefits. The System determines the benefit rate.

Depreciation. The Board of Trustees sets parameters for minimal amount the university must budget for depreciation annually.

Beyond the revenue, expenses, and parameters described above, the University of Maine System does not control the University of Maine budget. Given the revenues and expenses allocated by the System, and within the parameters set by the System, UMaine determines its own budget processes.

This is probably a good time to dispel myths that occasionally gain some traction. The University of Maine System does not receive any tuition or fees paid by UMaine students, nor does the System receive any F&A recovery funds or any other funds from grants and contracts. UMaine keeps 100% its revenues to fund its operations.

Key Terms

Base budget

This is the ongoing funding that a unit uses to function. Units' base budgets are used to support activities that are ongoing. For example, a base-budgeted faculty line includes the funding for the salary (and accompanying benefits) to pay a faculty member. If the faculty member leaves the university, the funds are available to hire another faculty member. Units have base-funded operating budgets, as well. These are the funds that the unit has available to cover its non-personnel expenses (e.g., copying, travel, etc.). The operating budget is spent down over the course of the fiscal year, but is replenished at the start of the next fiscal year. Base budgets are not set in stone. Whenever faculty or staff members receive a raise, the additional funds are added to the unit's base budget. Similarly, the unit may be asked to cut its base budget due to a revenue-expense gap. Unit leader might eliminate a vacant faculty position, for example, in order to reduce the unit's base budget.

Carry forward

Funds that have not been expended by the end of one fiscal year are available for use in the next or subsequent fiscal years. There is no central assessment (i.e., tax) on these funds (i.e., 100% are available). These funds are included in the university's total reserves. The University of Maine is the only UMS university that allows units to maintain their carry forward funds. All other UMS universities retain unused funds centrally.

Discount rate

The average reduction in tuition and fees resulting from institutional aid (i.e., scholarships or tuition waivers). Discount rate is typically defined as the total institutional aid divided by tuition and fees. For example, the discount rate for first-year, full-time students at UMaine in 2016-2017 was about 35%. Meaning, on average students received institutional aid that covered 35% of the cost of tuition and fees.

Financial & Administrative costs

Financial and administration or F&A costs are the costs associated with carrying out grant-funded activities that do not directly support grant activities. The cost of utilities, administrative support etc. are included in F&A costs. The university is allowed to “recover” F&A costs by charging the granting agency a percentage of the direct costs of the grant activity. F&A costs are sometimes called indirect costs or IDC. Different granting agencies allow for different rates of F&A cost recovery. Some private grant-giving foundations do not allow for F&A cost recovery. F&A costs are also charged to business and industry contracts.

Fiscal year

The fiscal year is an accounting year. A simple way to think about a fiscal year is as follows: At the start of the fiscal year, units’ base budgets are filled. Over the course of the year, the base budget is spent down (e.g., faculty and staff are paid, operating expenses are paid). Ideally, units would expend all or nearly all of their base budget over the course of the 12-month fiscal year. Funds that are not expended “carry forward” (see above) to the next year. At the University of Maine, the fiscal year starts on July 1, and ends on June 30.

Indirect costs

See Financial & Administrative costs.

One-time funds

These are funds that are available to use one time. Once these funds are expended they are gone and are not replenished with the start of a new fiscal year. One-time funds are distinguished from base-budget funds (see previous page).

Reserves

Funds not expended during one fiscal year become part of the university’s reserves and are available for one-time expenses up to a certain amount. About half of UMaine’s reserves are held centrally and the other half is held in units accounts across campus. At this time, any transfer of funds from reserves greater than \$500,000 requires the UMS Treasurer’s approval, and in some cases, Board of Trustees approval. The university strives to maintain enough funds in reserves to sustain the institution’s operations for six months.

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Appendix A

UNIVERSITY OF MAINE SYSTEM APPROPRIATION ALLOCATION MODEL

The Allocation section of the final Unified Budget proposal – Recommendation #2 – recommends that the UMS transition to a new funding model that recognizes costs in the distribution of state appropriation. This recommendation was adopted by the UMS Board of Trustees in September 2016. The following team was formed to research and draft such a model.

Team Members

Miriam White, UMS VP Budgeting & Financial Analysis
 Pamela Ashby, UMFK CBO
 Laurie Gardner, UMF CBO
 Buster Neel, USM CBO
 Claire Strickland, UMaine & UMM CBO
 David Jones, UMS Financial Analyst
 Robert Placido, UMS Assoc. Vice Chancellor for Academic Affairs

Goal

To develop a State appropriation model that distributes new appropriation funds to campuses based on the principle of peer cost comparisons. “Parity” is the key concept of this model as calculations are performed to determine the percentage that each UMS university is under- or over-funded as compared to the calculated needed State appropriation. The goal is to distribute new appropriation to the universities based on the percentage of their current unmet need. The institution with the highest percentage of unmet need will receive the highest percentage of any new appropriation. Conversely, the institution with the lowest percentage of unmet need will receive the lowest percentage of any new appropriation.

Overview

This is a formula-driven model used to calculate the State appropriation required to support an institution’s Education and General (E&G) operations. This model accounts for the E&G operating costs that are impacted by student enrollment, as well as other factors such as the number of employees and the value of asset value at individual campuses. The foundation of the model is based on comparative peer data. The UMS contracted with the Hanover Research Council LLC to provide a choice of peer institutions for each university. Each UMS university then selected peers for its institution to be used in the allocation model. The model is based on considering three-year rolling cost averages for specific expense categories and applicable measurement factors.

Data Source

The team initially attempted to use CUPA (College & University Professional Association) data to collect instructional costs at the discipline and faculty level. After further research, however, it became evident that this was not an appropriate source of information as all universities are not required to report to CUPA and, for those that do report, they may not submit data annually and/or they may not submit sufficient detailed data for this analysis. Only one year (the most recent year) of peer data is available from CUPA, thus precluding the application of any multi-year averaging methodology. The team also initially worked with the UMS Chief General Services Officer and Sightlines (UMS facilities strategic assessment consultant) to incorporate facilities data in the model by utilizing the ongoing Sightlines data analysis. Although at first this seemed promising, unfortunately the majority of the universities' peers selected through the Hanover Peer Selection Process were not clients of Sightlines and, therefore, Sightlines did not have the peer information needed. The team agreed that the best solution would be a single, reliable source of data. The source must: a.) provide concise definitions and standards for the collection and categorization of the data, b.) collect data for all our peers, c.) store multiple years of data and, d.) include cost information for the sectors of higher education expenses, referred to as the "Functional Expense Classifications" (see example below).

Thus after further exploration, the team determined that the most reliable and concise source of data is the National Center for Education Statistics (NCES). NCES is the primary federal entity for collecting and analyzing data related to education in the U.S. The center is located within the U.S. Department of Education and the Institute of Education Sciences. NCES fulfills a Congressional mandate to collect, collate, analyze, and report complete statistics on the condition of education, and conduct and publish reports. NCES utilizes the Integrated Postsecondary Education Data System (IPEDS) to collect and report data. IPEDS is an interactive tool, thereby allowing UMS to download a host of data for a single or multiple institutions of higher learning. Hanover Research also used IPEDS to prepare the analyses utilized by the campuses to select the most appropriate peers.

Data Collection

Based on the peers selected by each university, a dataset was constructed using IPEDS Human Resources, Financial, and Enrollment data for the three most recent fiscal years posted to IPEDS. At the time of this writing, the most recent fiscal years are FY2014 (final), FY2015 (final) and FY2016 (provisional). Unless noted otherwise in this documentation, the reference to any peer data is in reference to the three most recent years. The financial data selected is based on the Functional Expense Classification categories (FEC) identified below:

- Instruction
- Research
- Public Service
- Academic Support
- Student Services
- Institutional and Administrative Support
- Facilities – Operations & Maintenance
- Depreciation and Interest
- Student Financial Aid

Below is a glossary of terms, as defined by IPEDS, which includes definitions for each of the FECs and other data elements utilized in the model.

Alphabetically Listed

Term	Definition (IPEDS)	UMS Comment
ACADEMIC SUPPORT	A functional expense category that includes expenses of activities and services that support the institution's primary missions of instruction, research, and public service. It includes the retention, preservation, and display of educational materials (for example, libraries, museums, and galleries); organized activities that provide support services to the academic functions of the institution (such as a demonstration school associated with a college of education or veterinary and dental clinics if their primary purpose is to support the instructional program); media such as audiovisual services; academic administration (including academic deans but not department chairpersons); and formally organized and separately budgeted academic personnel development and course and curriculum development expenses. Also included are information technology expenses related to academic support activities; if an institution does not separately budget and expense information technology resources, the costs associated with the three primary programs will be applied to this function and the remainder to institutional support. Institutions include actual or allocated costs for operation and maintenance of plant, interest, and depreciation.	<p>a.) Costs for operation and maintenance of plant, interest, and depreciation have been extracted and are reflected separately.</p> <p>b.) Academic Support department examples:</p> <ul style="list-style-type: none"> • Academic Affairs • International Programs • Technology Services • Administration/Dean costs for various colleges • Distance Education • Libraries
DEPRECIATION	The allocation or distribution of the cost of capital assets, less any salvage value, to expenses over the estimated useful life of the asset in a systematic and rational manner. Depreciation for the year is the amount of the allocation or distribution for the year involved.	

Term	Definition (IPEDS)	UMS Comment
HEADCOUNT EMPLOYEES	Fall employee headcount for the most recent three years available in IPEDS for each peer institution is utilized in the model. Each employee equals one headcount regardless of the scheduled hours of work.	
HEADCOUNT STUDENTS	Fall student headcount for the most recent three years available in IPEDS for each peer institution is utilized in the model. Each student enrolled in a course equals one headcount regardless of the credit hour load.	
INSTITUTIONAL GRANTS AND SCHOLARSHIPS (Unrestricted Resources)	Institutional scholarships, fellowships and grants funded by the institution and/or individual departments within the institution from resources that are not restricted to any particular purpose.	<ul style="list-style-type: none"> • E&G Institutional Scholarships • E&G Waivers (Native American, Early College, etc.)
INSTITUTIONAL SUPPORT	A functional expense category that includes expenses for the day-to-day operational support of the institution. Includes expenses for general administrative services, central executive-level activities concerned with management and long range planning, legal and fiscal operations, space management, employee personnel and records, logistical services such as purchasing and printing, and public relations and development. Also includes information technology expenses related to institutional support activities. If an institution does not separately budget and expense information technology resources, the IT costs associated with student services and operation and maintenance of plant will also be applied to this function.	<p>a.) Costs for operation and maintenance of plant, interest, and depreciation have been extracted and are reflected separately</p> <p>b.) Institutional Support departments examples:</p> <ul style="list-style-type: none"> • Business Office/Bursar • Media Services • Institutional Studies • Alumni Relations • President • Shared Services <ul style="list-style-type: none"> -Human Resources -Procurement

Term	Definition (IPEDS)	UMS Comment
INSTRUCTION	A functional expense category that includes expenses of the colleges, schools, departments, and other instructional divisions of the institution and expenses for departmental research and public service that are not separately budgeted. Includes general academic instruction, occupational and vocational instruction, community education, preparatory and adult basic education, and regular, special, and extension sessions. Also includes expenses for both credit and non-credit activities. Excludes expenses for academic administration where the primary function is administration (e.g., academic deans). Information technology expenses related to instructional activities if the institution separately budgets and expenses information technology resources are included (otherwise these expenses are included in academic support). Institutions include actual or allocated costs for operation and maintenance of plant, interest, and depreciation.	<p>a.) Costs for operation and maintenance of plant, interest, and depreciation have been extracted and are reflected separately</p> <p>b.) Instruction department examples:</p> <ul style="list-style-type: none"> • Nursing • Writing Center • Continuing Education • Honors • Wildlife Ecology • English • Humanities • Philosophy
PLANT OPERATION AND MAINTENANCE (O&M)	An expense category that includes expenses for operations established to provide service and maintenance related to campus grounds and facilities used for educational and general purposes. Specific expenses include: janitorial and utility services; repairs and ordinary or normal alterations of buildings, furniture, and equipment; care of grounds; maintenance and operation of buildings and other plant facilities; security; earthquake and disaster preparedness; safety; hazardous waste disposal; property, liability, and all other insurance relating to property; space and capital leasing; facility planning and management; and central receiving. This expense does include amounts charged to auxiliary enterprises, hospitals, and independent operations. Also includes information technology expenses related to operation and maintenance of plant activities if the institution separately budgets and expenses information technology resources (otherwise these expenses are included in institutional support).	<p>a.) O&M department examples:</p> <ul style="list-style-type: none"> • Custodial Services • Utilities • Building Maintenance • Landscaping • Insurance

Term	Definition (IPEDS)	UMS Comment
PLANT, PROPERTY AND EQUIPMENT – ENDING BALANCE	Ending balance for plant, property and equipment is the book value at the end of the fiscal year of total assets for plant, property and equipment. Plant, property and equipment include: land and land improvements, infrastructure, buildings, equipment, art and library collections, property obtained under capital leases and construction in progress.	This is a gross value i.e., before the calculation of accumulated depreciation
PUBLIC SERVICE	A functional expense category that includes expenses for activities established primarily to provide non-instructional services beneficial to individuals and groups external to the institution. Examples are conferences, institutes, general advisory service, reference bureaus, and similar services provided to particular sectors of the community. This function includes expenses for community services, cooperative extension services, and public broadcasting services. Also includes information technology expenses related to the public service activities if the institution separately budgets and expenses information technology resources (otherwise these expenses are included in academic support). Institutions include actual or allocated costs for operation and maintenance of plant, interest, and depreciation.	<p>a.) Costs for operation and maintenance of plant, interest, and depreciation have been extracted and are reflected separately</p> <p>b.) Public Service department examples:</p> <ul style="list-style-type: none"> • Acadian Archives • Conferencing Services • Margaret Chase Smith Ctr for Public Policy • Center on Aging • Legal Aid Clinic • Cooperative Extension
RESEARCH	A functional expense category that includes expenses for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. The category includes institutes and research centers, and individual and project research. This function does not include non-research sponsored programs (e.g., training programs). Also included are information technology expenses related to research activities if the institution separately budgets and expenses information technology resources (otherwise these expenses are included in academic support.) Institutions include actual or allocated costs for operation and maintenance of plant, interest, and depreciation.	<p>a.) Costs for operation and maintenance of plant, interest, and depreciation have been extracted and are reflected separately</p> <p>b.) Research department examples:</p> <ul style="list-style-type: none"> • Darling Marine Center • Climate Change Institute • Cutler Institute • Office of Research Compliance

Term	Definition (IPEDS)	UMS Comment
STANDARD DEVIATION	A measure of the dispersion of a set of data from its mean. It is calculated as the square root of variance by determining the variation between each data point relative to the mean. If the data points are further from the mean, there is higher deviation within the data set.	The model establishes the upper and lower bounds of the standard deviation at 2.5
STUDENT SERVICES	A functional expense category that includes expenses for admissions, registrar activities, and activities whose primary purpose is to contribute to students emotional and physical well-being and to their intellectual, cultural, and social development outside the context of the formal instructional program. Examples include student activities, cultural events, student newspapers, intramural athletics, student organizations, supplemental instruction outside the normal administration, and student records. Intercollegiate athletics and student health services may also be included except when operated as self-supporting auxiliary enterprises. Also may include information technology expenses related to student service activities if the institution separately budgets and expenses information technology resources (otherwise these expenses are included in institutional support.) Institutions include actual or allocated costs for operation and maintenance of plant, interest, and depreciation.	<p>a.) Costs for operation and maintenance of plant, interest, and depreciation have been extracted and are reflected separately</p> <p>b.) Student Services department examples:</p> <ul style="list-style-type: none"> • Recruitment and Admissions • Registrar • Career Center • Financial Aid Operations • Athletics
TENURED AND TENURE-TRACK TEACHING FACULTY	<p>Teaching Faculty – Faculty whose initial assignments are made for the purpose of conducting instruction, research, or public service as a principal activity or activities. The definition of teaching faculty would exclude personnel who may be considered faculty but whose primary role is administrative such as presidents, provosts, deans, etc.</p> <p>Tenured – Status of a personnel position with respect to permanence of the position.</p> <p>Tenure Track – Personnel positions that lead to consideration for tenure.</p>	

Measurements

The model incorporates five different measurements as illustrated in the chart below.



- 1. Full-time, Tenured and Tenure-Track Teaching Faculty** (see IPEDS definitions) – The model utilizes the number of full-time tenured and tenure-track teaching faculty as reported in IPEDS for each peer. This measurement is used in the calculation of the peer average E&G cost per tenured and tenure-track teaching faculty for Research and Public Service. The result of this calculation will then be multiplied by the UMS institution's most recent three-year average number of these faculty. Note this is NOT the most recent IPEDS years. To reflect UMS tenure trends, the most recent year of UMS Human Resources information is weighted at a factor of 0.5; second year at 0.3; oldest year at 0.2.
- 2. Student Headcount** – Fall student headcount for each peer institution is utilized in the model. Each student enrolled equals one headcount regardless of the credit hour load. This measurement is used to calculate the peer average E&G cost per student headcount for Academic Support, Student Services, and Institutional and Administrative Support as these services are used by all students and the scope of that usage may not correlate with the number of credit hours for which they are enrolled. This measurement is also used in combination with employee headcount in the calculation of Facilities Operations & Maintenance costs. The peer E&G cost per headcount is then multiplied by the UMS institution's most recent three-year average headcount. Note these are NOT the most recent IPEDS years. To reflect UMS enrollment and employment trends, the most recent year of UMS student enrollment information is weighted at a factor of 0.5; second year at 0.3; oldest year at 0.2.

- 3. Credit Hours Converted to Student FTEs** – Annual credit hour IPEDS data for each peer institution are converted to FTEs based on the following: 1 Undergraduate FTE = 30 credit hours 1 Graduate or Law FTE = 18 credit hours This measurement is used in the calculation of the peer average E&G cost per FTE for Instruction and Student Financial Aid. The estimated peer E&G cost per FTE is then multiplied by the UMS institution's most recent three-year average FTE using the same conversion factors. Note these are NOT the most recent IPEDS years. To recognize the impact of UMS enrollment trends, the most recent year of UMS student enrollment information is weighted at a factor of 0.5; second year at 0.3; oldest year at 0.2.
- 4. Employee Headcount** – Fall employee headcount data in IPEDS is used in the Model. Each employee equals one headcount regardless of position or scheduled work hours. This measurement is combined with Student Headcount in the calculation of Facilities Operations & Maintenance costs. The estimated peer E&G cost per headcount (student and employee) is then multiplied by the UMS institution's most recent three-year average headcount. Note these are NOT the most recent IPEDS years. A UMS institution's headcount has also been adjusted to reflect physical location of Governance & University Services personnel on each campus. To recognize the impact of UMS employment trends, the most recent year of UMS Human Resources information is weighted at a factor of 0.5; second year at 0.3; oldest year at 0.2.
- 5. Total Plant, Property and Equipment (PP&E)** (see IPEDS definition) – The model uses total PP&E ending values in IPEDS as a metric in the calculation of Depreciation and Interest costs. This measurement is used to determine the value of a UMS institution's PP&E (numerator) as compared to its peers' PP&E (denominator). The resulting percentage is then multiplied by the average peer cost for depreciation and interest.

IPEDS Financial Data Adjustments

After the IPEDS data for each peer in each FEC has been extracted, the data is analyzed and organized for use in the Allocation Model. The first step is to express the prior years' cost information in current values. This is done by applying the Bureau of Labor Statistics CPI percent change for All Urban Consumers to the costs of salaries & wages and the Commonfund Higher Education Price Index (HEPI) to employee benefits and non-compensation costs. HEPI is a recognized inflation index designed specifically to track the main cost drivers in higher education and is a more accurate indicator of changes in costs for colleges and universities than CPI. It measures the average relative level of prices in a fixed basket of goods and services purchased by colleges and universities each year through current fund educational and general expenditures, excluding research.

Next, it is necessary to quantify the amount of variation or disparity for each set of peer data within each FEC through the application of a standard deviation formula. Due to the small number of peers, the allowable upper and lower bounds were established at 2.5 standard deviations of the mean.

Once any data points outside the allowable upper and lower bounds have been eliminated, then the costs per peer, per FEC, per measurement, must be calculated. The model is based on applying an average at each appropriate point. First, the average is calculated

for each peer for the three-year period. Then those averages are averaged to calculate the overall peer average for each FEC. The peer data may be null in certain instances. The following two scenarios address how blank data will be considered in the averaging calculation.

Scenario A: If a peer has no data for any year for Research or Public Service, then the peer is excluded completely in deriving the overall average for that FEC, i.e., the data count in the denominator of the averaging formula is reduced by the number of peers with no data.

Exhibit A – UMA's Peers

Peer Data		Peer Research Costs (Per FT, Tenured, Tenure-track, Teaching Faculty)			
		FY15	FY14	FY13	Average
IPEDS Data CV	Bluefield State College	35,502	106,242	184,626	
	Dalton State College	-	-	-	
	Lewis-Clark State College	353,953	234,250	216,744	
	Montana State University-Northern	525,128	425,995	417,300	
	Rogers State University	62,981	59,497	45,000	
	University of Hawaii-West Oahu	26,273	92,533	30,228	
	Standard Deviation	199,588	140,903	144,318	
	Upper Bound	666,275	505,344	509,779	
	Lower Bound	(331,663)	(199,171)	(211,813)	
IPEDS Data CV, normalized	Bluefield State College	35,502	106,242	184,626	
	Dalton State College	-	-	-	
	Lewis-Clark State College	353,953	234,250	216,744	
	Montana State University-Northern	525,128	425,995	417,300	
	Rogers State University	62,981	59,497	45,000	
	University of Hawaii-West Oahu	26,273	92,533	30,228	156,458
Average Per FT Tenured, Tenure- track Teaching Faculty	Bluefield State College	\$ 623	\$ 1,832	\$ 2,978	\$ 1,811
	Dalton State College	\$ -	\$ -	\$ -	\$ -
	Lewis-Clark State College	\$ 2,809	\$ 2,092	\$ 1,988	\$ 2,296
	Montana State University-Northern	\$ 9,725	\$ 7,745	\$ 7,874	\$ 8,448
	Rogers State University	\$ 969	\$ 850	\$ 740	\$ 853
	University of Hawaii-West Oahu	\$ 411	\$ 1,814	\$ 687	\$ 971
					\$ 2,876

Excluded from Avg.

Denominator = 5

Scenario B: If a peer has data in at least one year of a FEC, then the data count in the denominator of the averaging formula will be 3 for that peer. Because the data indicates that the peer has/had some Research and/or Public Service activity, the blank cells are considered zero.

Exhibit B – UMA’s Peers

Peer Data		Peer Research Costs (Per FT, Tenured, Tenure-track, Teaching Faculty)			
		FY15	FY14	FY13	Average
IPEDS Data CV	Bluefield State College	35,502	106,242	184,626	
	Rogers State University	62,981	59,497	-	
	Lewis-Clark State College	353,953	234,250	216,744	
	Montana State University-Northern	525,128	425,995	417,300	
	Rogers State University	62,981	59,497	45,000	
	University of Hawaii-West Oahu	26,273	92,533	30,228	
	Standard Deviation	192,025	131,565	144,318	
	Upper Bound	657,867	491,914	509,779	
	Lower Bound	(302,261)	(165,909)	(211,813)	
IPEDS Data CV, normalized	Bluefield State College	35,502	106,242	184,626	
	Rogers State University	62,981	59,497	-	
	Lewis-Clark State College	353,953	234,250	216,744	
	Montana State University-Northern	525,128	425,995	417,300	
	Rogers State University	62,981	59,497	45,000	
	University of Hawaii-West Oahu	26,273	92,533	30,228	163,263
Average Per FT Tenured, Tenure- track Teaching Faculty	Bluefield State College	\$ 623	\$ 1,832	\$ 2,978	\$ 1,811
	Rogers State University	\$ 969	\$ 850	\$ -	\$ 606
	Lewis-Clark State College	\$ 2,809	\$ 2,092	\$ 1,988	\$ 2,296
	Montana State University-Northern	\$ 9,725	\$ 7,745	\$ 7,874	\$ 8,448
	Rogers State University	\$ 969	\$ 850	\$ 740	\$ 853
	University of Hawaii-West Oahu	\$ 411	\$ 1,814	\$ 687	\$ 971
					\$ 2,497

Denominator = 3

If any data is removed from the calculation as a result of exceeding the standard upper and lower bounds, the data count in the denominator of the averaging formula is reduced.

Converting FEC Peer Cost Data to UMS Institutions

This example outlines the steps for the Research FEC

A. Peer Cost Calculation Methodology:

Step 1: Calculate the cost per peer, per year, per measurement; for research, the measurement would be tenure and tenure track faculty.

Step 2: The average for each year from Step 1 is averaged to obtain the peer institution’s three-year average Research cost per tenure and tenure track faculty.

Step 3: The single average per peer from Step 2 is then average to obtain the overall average for all peers.

Calculation Example: (See Exhibit B Data above)

Step 1: The Research costs for Bluefield State College for FY2015 are \$35,502. This cost is divided by the number of FY2015 tenure and tenure track teaching faculty at Bluefield to derive a cost per faculty of \$623. This process is repeated for FY2014 (\$1,832) and FY2013 (\$2,978).

Step 2: The 3 averages identified in Steps 1 are averaged to derive the average cost per tenure and tenure track teaching faculty for Bluefield for this three-year period (\$1,811). Steps 1 & 2 are repeated for all peers.

Step 3: The three-year averages for each peer are then averaged to obtain the average Research cost per tenure and tenure track teaching faculty for the peer group (\$2,497)

B. Applying Peer Averages to UMS Metrics

IPEDS financial data includes all financial funds – both restricted and unrestricted. Since state E&G Appropriation is used to fund unrestricted operations (excluding Auxiliary), it is necessary to derive what percentage of the peer costs are unrestricted costs. Only the cost of unrestricted scholarships can be determined directly from IPEDS data. For all other FECs, the Model assumes that the peer cost ratio of unrestricted costs to total costs is the same as the applicable UMS institution's ratio. To calculate these ratios, the UMS campus financial statements for the past 3 years were reviewed and the percentage of Unrestricted Costs (excluding Auxiliary) was determined by expense category as follows:

Exhibit C

E&G SPENDING AS A % OF TOTAL SPENDING Three-Year Average

	UM	UMA	UMF	UMFK	UMM	UMPI	USM
Instruction	96.36%	99.78%	91.84%	98.81%	98.54%	99.21%	95.39%
Research	19.16%	92.65%	0.02%	18.86%	2.59%	7.85%	18.93%
Public Service	52.97%	7.81%	1.80%	47.06%	62.36%	18.67%	16.79%
Academic Support	90.12%	98.03%	90.26%	95.74%	93.11%	89.01%	90.98%
Student Services	89.86%	97.62%	93.91%	94.06%	96.48%	92.08%	90.69%
Institutional Support	94.99%	96.57%	92.01%	96.27%	95.66%	92.82%	95.36%
Facilities-Ops/Maint	90.81%	98.32%	87.31%	91.03%	83.82%	88.40%	90.17%
Depreciation and Int	65.00%	98.19%	72.78%	65.43%	58.61%	89.63%	81.23%

The final step in this calculation is to multiply the average peer research cost per tenure and tenure track teaching faculty by the applicable UMS institution's percentage of unrestricted research spending. Since this example is for UMA, the model would multiply the average Research cost per tenure and tenure track teaching faculty for UMA's peer group (\$2,497) by UMA's percentage of unrestricted research spending 92.65 percent (See Exhibit C) for a total of \$2,313 per UMA tenure and tenure track teaching faculty. This amount (\$2,313) would then be multiplied by the three-year average number of UMA tenure and tenure-track teaching faculty to derive total research costs. This process to convert peer cost data to UMS institutions is repeated for each FEC by applying the appropriate measurement.

Needed State Support

University E&G operations have historically received approximately two-thirds of the necessary educational funding from state appropriation with the remaining one-third from student tuition. As a result of appropriation reductions and subsequent flat funding, however, this ratio has changed to state support providing one-third of the funding and student tuition providing two-thirds. The calculation of the needed state support in the model is based on returning to the two-thirds state and one-third student tuition funding allocation.

Public higher education institutions set tuition rates lower for in-state students because state appropriations, generated by state taxpayers, “subsidize” the cost for in-state students. Out-of-state students and their families have not paid state income tax; therefore, the tuition rate is higher. The model recognizes this distinction in the calculation of needed state support as outlined below.

1. The total peer-converted costs for all FECs are divided by the UMS institution’s three-year average student FTE’s to derive an average cost per student FTE.
2. This average is then multiplied by the number of in-state FTE students and out-of-state FTE students.
3. Only the total cost associated with in-state students is used for the appropriation calculation; i.e., state appropriation is not requested for out-of-state students.
4. The total calculated cost for in-state students is further separated by undergraduate and graduate student FTEs.
5. Based on the historic ratio of state-to-student funding for the cost of education, the model assumes that state appropriation should equal 60% of the undergraduate cost and 40% of the graduate cost of education.

COST SHARE: STATE AND STUDENT

Cost Share: Student and State Appropriation									
UMaine	Total Peer Cost	State's Suggested Share		Student FTE Percent		State Calculated Support		Student Calculated Support	
		Resident	Non-Res	Resident	Non-Res	Resident	Non-Res	Resident	Non-Res
Undergraduate	\$ 227,281,608	60.00%	0.00%	66.23%	33.77%	\$ 90,314,089	\$ -	\$ 60,209,393	\$ 76,758,126
Graduate (Masters/Doctoral/Law)	\$ 32,248,791	40.00%	0.00%	68.39%	31.61%	\$ 8,822,191	\$ -	\$ 13,233,287	\$ 10,193,313
Total Required State Support	\$ 259,530,399					\$ 99,136,280	\$ -	\$ 73,442,680	\$ 86,951,439



Parity

The final step in the model is to compare the needed state support with the current appropriation for each university to derive the percentage funded and the disparity percentage, which is based on the unfunded portion. The lower the percentage funded, the higher the disparity percentage. Any new appropriation received will be allocated based on the disparity percentage. The campus with the lowest percentage funded – i.e., the highest disparity percentage will receive the largest share of any new appropriation. With adequate state support, each university could be funded at 100 percent.

PARITY CALCULATION

								New Appropriation	
								\$ 1,435,714	
								\$ 430,714	
								\$ 5,000	
								\$ 1,000,000	
Public service - Incentive	Total E & G	Required State Support	FY20 Appropriation Allocation*	Net Variance	% Funded	Disparity Factor	Disparity Percent	Parity Allocation	
UMaine	\$ 259,530,399	\$ 99,136,280	\$ 85,459,572	\$ (15,676,708)	84.2%	15.81	14.32%	\$ 143,242	
UMA	\$ 42,044,514	\$ 24,158,278	\$ 17,415,314	\$ (6,742,964)	72.1%	27.91	25.28%	\$ 252,833	
UMF	\$ 30,925,222	\$ 15,129,572	\$ 12,365,939	\$ (2,763,633)	81.7%	18.27	16.55%	\$ 165,464	
UMFK	\$ 19,385,020	\$ 9,556,047	\$ 6,871,862	\$ (2,684,185)	71.9%	28.09	25.44%	\$ 254,439	
UMM	\$ 9,215,307	\$ 4,620,787	\$ 5,200,175	\$ 579,588	112.5%	0.00	0.00%	\$ -	
UMPI	\$ 16,785,557	\$ 8,568,615	\$ 7,500,556	\$ (1,068,059)	87.5%	12.46	11.29%	\$ 112,910	
USM	\$ 109,753,728	\$ 51,785,122	\$ 47,719,740	\$ (4,065,382)	92.1%	7.85	7.11%	\$ 71,112	
		\$ 212,954,701	\$ 180,533,358			110.40	100.00%	1,000,000	

- The disparity factor is the inverse of the percentage funded for each campus
- The disparity percentage equals the campuses' percentage of the sum of the disparity factor

Future Model Update — IPEDS Data

The most recent IPEDS data will be input into the model on an annual basis. In April of each year, IPEDS posts provisional data for the latest fiscal year reported. When calculating the FY2020 appropriation allocation, the calculation of parity will be based on provisional cost information for FY2016 and final data for FY2015 and FY2014. When calculating the FY2021 appropriation allocation, the calculation of parity will be based on provisional cost data for FY2017 and final data for FY2016 and FY2015. In this example if the FY2016 final data differs from the provisional data, there will be no retroactive adjustment to the FY2020 appropriation allocation.

The model is subject to change based on future IPEDS and GASB changes in reporting standards such as FECs or data definitions.

Future Model Review

Allocation Recommendation #4 of the Unified Budget plan states: "Beginning in FY2021 and at least every three years after, the Chief Financial Officer (VCFA) will review the allocation model with the Chief Business Officers of each campus and recommend any modifications that may be necessary to the Chancellor and Board." While it is important for the tenants of the model to exhibit some measure of consistency from year to year, the Allocation Team definitely supports this concept and would recommend that the Model be reviewed every two years during the first few years of implementation. The review process will coincide with the state's biennium budget schedule as outlined below.

Peer Changes

1. Each campus will have the opportunity to request one peer change every two years. A peer change is defined as any one of the following:
 - a. Add one peer (total number of peers increases) OR;
 - b. Reduce one peer (total number of peers decreases) OR;
 - c. Delete one peer and replace with another peer (no change in total number of peers)

A campus may choose only ONE of these options every two years.

2. The president must submit a written request to the vice chancellor of finance and Administration (VCFA) by March 31 of any even-numbered year. The request must detail the filters applied and the similarity score obtained from the Hanover Research Peer Selection database, and a written narrative of the rationale and process used for the peer selection.
3. The VCFA will review the request with the Presidents' Council and make a final determination by June 30. The review of the peer change will include, but not be limited to, the following factors:
 - a. Impact on the UMS institution's range of peer similarity scores
 - b. Impact on the UMS institution's average peer similarity score
 - c. Consistency of IPEDS cost data with existing peers
4. If approved, the peer change will become effective in the next biennium. (The State biennial budget periods are 7/1/odd year through 6/30/odd year.)

Example – State's Biennium is July 1, 2021 (FY2022) through June 30, 2023 (FY2023). A request for a peer change must be submitted to the VCFA by March 31, 2020 for review. Request will be approved or denied by June 30, 2020. Approved changes will be implemented for the FY2022 appropriation allocation.

The Allocation Team recommends that each UMS institution have a minimum of eight peers, if possible. In selecting additional peers, however, the criteria for Similarity Scores and IPEDS cost data referenced above is applicable.

Appropriation Reduction (tentative language – yet to be finalized)

In situations where state appropriation is reduced, the System will explore the utilization of Budget Stabilization, Temporary Investment Income, or other sources of centrally held funds to mitigate the curtailment. If it becomes necessary to reduce campus allocated appropriation, then the following steps would be applied:

- a.) If new appropriation was distributed in the year of a curtailment, then the funds distributed would be retracted to offset the curtailment. If the curtailment was less than the funds distributed, then an equally proportionate amount thereof would be retracted from each campus.
- b.) If the curtailment was greater than the new funds distributed in that year OR no funds were distributed in that year and all campuses were under-funded, then the curtailment would be applied in such a way that the campus with the highest percentage of appropriation funded would receive the largest portion of the curtailment and the campus with the lowest percentage of appropriation funded would receive the lowest portion of the curtailment.
- c.) If the curtailment was greater than the new funds distributed in that year OR no funds were distributed in that year and any campus was over-funded, then appropriation equal to 10 percent of the overfunded amount would be retracted from each over-funded campus to offset the curtailment. The remainder of the curtailment would be applied to the remaining campuses in such a way that the campus with the highest percentage of appropriation funded would receive the largest portion of the curtailment and the campus with the lowest percentage of appropriation funded would receive the lowest portion of the curtailment.

Appendix B

ALLOCATION OF UNIVERSITY SERVICES

University Services costs allocated to each campus are categorized as either 1) Campus Services or 2) Unified Services

Campus services are comprised of operating budgets and positions that primarily have responsibilities for a specific campus. (In some instances, positions service two campuses). Examples of Campus Services positions are HR business partners (and campus HR supporting staff), CBOs (and campus supporting staff), and facilities directors. These areas work collaboratively for the System, but their primary responsibility is to assist in the oversight of their respective campuses.

University services are comprised of budgets and positions that have responsibilities in areas systemwide. Examples of Unified Services positions are the controller, IT software support analysts, payroll and benefits. While these areas work closely with the campuses and may engage in special campus-based projects, their responsibilities are System-wide.

Allocation of University Services:

Any cost classified as "Campus Services" is allocated directly to the campus being served. For example, the CBO at UMF and the supporting office staff are part of University Services, but their primary responsibility is to service UMF. Therefore, their operating budgets are charged back to UMF as part of their University Services cost allocation.

Any cost classified as "Unified Services" is allocated to all campuses based on an applicable metric from the following table:

University Services Area	Metric (based on 5-year totals)
IT, Univ. Counsel, Inst. Res, Other Institutional and Academic Support	FTE Students and FTE Employees
Human Resources	Employee Headcount
Student Services/Support	FTE Students
Shared Processing Center	Loan Accounts, Admission Applications, Exit Interviews, Immunization Records
Facilities, Capital Planning, Safety	Building Square Footage
Finance	Operating & Interest Expense
Procurement	Procured Goods, Services, and Travel

For example, the Payroll and Benefits Department's budget is allocated to campuses based on the number of employees per campus for the past 5 years. In this example, UMaine had 46.6% of the total employees over the past 5 years; therefore, 46.6% of the Payroll and Benefits departmental budget will be charged to UMaine.

Funding University Services

University Services does not receive any appropriation; University Services is funded directly by the charge-back of budgeted services to the campuses (both Campus Services and Unified Services). Because Campus Services are a direct cost to the campuses receiving the service, campuses may choose to increase or decrease the cost and level of service. In our example, if the UMF CBO determined an additional finance support staff was necessary for UMF, then the cost associated with that additional support staff would be allocated to UMF only. Conversely, any savings resulting from a reduction of finance support staff would be realized solely by UMF.

Due to the nature of Unified Services and the services provided to all campuses, the budget for these services is finalized through a collaborative review process with the CBOs and presidents. Because there is not a mechanism in place to determine the exact utilization of each service by campus, the allocation method outlined previously is used. As part of this process, State appropriation may be redistributed as costs shift between Unified and Campus Services.

So why does my University Services Allocation change?

1. Campus Services may have increased or decreased and you can directly influence this change by adjusting the budget.
2. Unified Service costs for the same services have increased or decreased.
3. Additional Unified Services have been added or removed.
4. A shift may occur between Campus Services and Unified Services. For example, in FY2018 Capital Planning moved from a Campus Service cost at USM and UMaine to a Unified Service being provided and allocated to all campuses.
5. Updated data for the 5-year rolling metric. For example, the budget for the Shared Processing Center may remain unchanged, but if your campus' percentage of admissions applications has increased or decreased, then your amount of the cost allocation will change proportionately.

When reviewing your University Services Allocation, it is important to remember that any or all of the items listed above could be impacting your allocation amount. It is also important to remember that changes in items 2–5 above result in a shift in appropriation. In the example in item 4, appropriation was distributed to the campuses to offset this new allocation.

