

Resource Allocation Workgroup Executive Summary

Historically the University of Montana has used an incremental budgeting system, also called base-plus budgeting. In this model, budget allocations are based upon the previous year funding levels and only new revenue is allocated. Budget cuts are made as a percentage of the institution's budget and are typically across-the board cuts.

The resource allocation workgroup was charged with developing a budget model that is demand driven, establishes a mechanism to build an institutional contingency, provides allocation rationale for instructional areas at the unit/college level, encourages and rewards good stewardship rather than a "spend it all or lose it" system, and allocates funds at the vice president level. The workgroup determined a campus budget can be divided into three very unique functions (Instructional, Non-Instructional, and Facilities). The model should identify metrics for each function that drive the areas funding level. The workgroup was able to identify metrics for some of these functions but more work needs to be done to define clear and fair metrics for all functions in the model. While the workgroup doesn't have all of the details on the model completed yet, the following represents some basic principles the model should incorporate:

- The model should provide a means for funding distribution to university divisions based upon common variables.
- The model will provide a funding source for university strategic initiatives and contingency.
- For the FY15 model, the formula will provide "base budget" funding to non-instructional functions including staffing and an operating budget. The University Budget Committee (UBC) will develop metrics for the future allocation to these non-instructional areas.
- The model will include an institutional cost factor to equalize departments/units that have external constraints.
- Metrics for instructional areas have been developed and are used to determine the instructional budget. The model only identifies the amount of funds to be provided to the Provost to support instructional units.
 - Budgets for instructional areas will be driven by student SCH (student credit hours).
 - SCH is divided by a determined minimum class size to determine the full-time faculty equivalents (FFTE) to be funded.
 - FFTE will be multiplied by the ratio of full-time vs. part-time faculty and funded accordingly.
 - Recognition of departmental uniqueness and faculty research should be built into the basic model calculations.
 - In addition to the faculty budget, instructional areas will be funded for support positions and operating budgets.

Recommendations for Next Steps:

- The University Budget Committee develops metrics for non-instructional staffing levels and operating budgets. Identify some areas, like IT and Athletics, where it might be appropriate to look at the units entire budget and then determine a percent that should come from general funds.
- The University Budget Committee develops a phase-in plan so departments funding levels are not seriously hurt in any one year.
- The University Budget Committee, working closely with financial managers throughout the campus, identifies processing or data needs to ensure accuracy of the base data fed into the model. Where necessary, solutions for areas of concern should be brought from this committee to the University Budget Committee for implementation.
- The University Budget Committee fully documents the formula calculations and develops a timeline to ensure the budget discussion happens in a timely manner for all concerned parties.
- The University Budget Committee should identify data problems and inconsistencies that currently exist and hamper proper data reporting. Resolutions to these data problems should be implemented. Example would be coding faculty research time in a research index.

- The University Budget Committee should evaluate the potential budget impacts on controlling positions in a more centralized fashion.

I. Work Group Name:

Resource Allocation Workgroup reporting to the Budget Committee

II. Charge:

This group is chaired by Larry Gianchetta and Jim Hirstein. There are 12 participants in this group with an additional five ex-officio / staff participants. Their charge is:

- Allocates funds at the vice-president level (treat each vice president as a “sector”) for non-instructional areas
- Provides allocation rationale for instructional areas at the unit/college level
- Provides a multi-year projection (three year minimum)
 - Will require close collaboration with enrollment management and their factors
- Is demand driven (resources shift based on student/service demand)
- Establishes a mechanism to build an institutional contingency (rainy day fund) with corresponding policy on when to utilize these funds (trigger)
- Evaluate and assesses the effectiveness and need of programs and services (may need to involve assessment workgroup)
- Encourages and rewards good stewardship rather than a “spend it all or lose it” system
- Is flexible enough to accommodate, or encourage, alternative revenue streams (not just state appropriate or tuition)

III. Target Completion Date:

The resource allocation workgroup met approximately 12 times from June – October 2013. The workgroup has been able to develop some basic principles for a new allocation model and outlined a structure for allocation. This report should be considered a final report from the Resource Allocation Workgroup but it will be necessary for the University Budget Committee to refine aspects of the model.

IV. Introduction/Background/Climate:

Traditionally the University of Montana has implemented an allocation model called incremental budgeting or base-plus budgeting. In this type of model, budgets are based on the previous year levels with only slight changes to the previous year’s values. Using the planning-assessment continuum, UM attempted to allocate new funds strategically while decreases in budget were typically an across the board percent cut. This type of model is simple and offers stability for departments but it provides little incentive to conduct a comprehensive review of

the budget, causing inefficiencies and budgetary slack to be automatically rolled into new budgets.

Explanation of how the FY14 budget was created

Each year the office of planning, budgeting, and analysis (OPBA) must estimate the available general funds revenue. General fund revenues are comprised of tuition and fees revenue, state appropriations, and a small amount of other appropriations like a pre-determined amount of sector carry forward, interest, and pass-thru appropriations for units like the Digital Academy and program tuition. OPBA, working with an enrollment projection committee, estimates the enrollment for the coming summer, fall, and spring. These figures were used to generate an expected tuition revenue amount. The worksheet used by OPBA to model budget development can be found in appendix A. It shows an itemized breakdown of available revenues for the FY14 budget totaling \$161,357,639 along with the estimated annual FTE enrollment for summer 2013, fall 2013, and spring 2014.

OPBA calculated the amount of expenditures for the coming year. The remaining 1.5 pages of appendix A show the detail for the FY14 expenditures. The expenditures represent any change from the previous year, not the entire cost of the item. The expenditure calculation begins by listing the previous year expenditures and then reversing any one-time-only (OTO) items. In the early stages of model building, OPBA itemizes every known increase in expenditures and shows the difference between the known revenues and expenditures. As the process continues eventually additions or subtractions will be made to the expenditures until they are equal to the revenues, leaving a zero balance.

One of the roles of the University Budget Committee (UBC) is to finalize the addition and subtraction to the expenditures until they equal the total revenues. Once the budget is balanced, it is passed on to the Council of VPs and the President for approval and implementation. Once approved, OPBA works with the campus individual units to identify the details on unit budget changes. These changes are built into the campus worksheets and eventually loaded into the electronic budgets in Banner.

While the campus unit additions and modifications for a total budget change do have an opportunity to bring those items forward through the Planning Committee within the Planning-Assessment Continuum, there is no full review of the unit's budget at any point in this process. The resource allocation workgroup was charged with determining a better way to create the campus budget.

Resource Allocation Workgroup Activities

The workgroup began its activities by looking at definitions of some other possible models. An example of a model used on many other campuses was found. This model incorporated several of the bullets found in the committee's charge. It allocates funds at a sector head level; it is basically demand driven; it provides an allocation rationale for instructional areas. It was the committee's decision to explore this model more and instructed OPBA to populate the model with UM data.

In order to respond to the demand driven need of the charge, the committee felt it was necessary to determine metrics for different areas. In the sample model the workgroup was replicating, the metric used for instruction was generated student credit hours, however the non-instructional areas in this model still used a base plus approach to funding, carrying over the previous year's expenditures and modifying as necessary. The workgroup felt it was important to find metrics for the non-instructional areas so they asked leadership from the different sectors to present their budgets to the workgroup and identify measures that could be used for metrics. It quickly became apparent that standard metrics for these type areas do not exist and would require much more work to develop.

V. References/Methods:

The workgroup was able to obtain a full model used on other campuses and began it works by placing UM data into the model. Although the model was run exactly the way it works on other campuses, it was determined that some tweaks needed to be performed to deal with unique situations at UM. This decision was reached by reviewing the UM data in the model and comparing to the current budget. Some significant shifts occurred in the figures, especially at the detail level but mainly focused on the sector level totals, per the directive in the charge, to ensure those totals are producing reasonable results.

Several limitations were discovered while going through this exercise. First, the workgroup all recognized that release time for faculty research and incentives for research need to be built into the model. However, the practice on campus is to code the majority of these faculty activities in the instructional category, not the research category. At least this practice is true for the use of general funds, which is all the resource allocation workgroup was working with. This means data is not readily available to show amount of general fund dollars that are provided to faculty to perform research. Second, as mentioned above, identifying metrics for non-instructional areas was a challenge and that work was not completed by the workgroup. Third, the availability and reliability of campus data was found to be a challenge. The workgroup felt it was necessary to ensure accurate information is fed into the model in order to produce usable results. Processes on the campus will need to be evaluated and modified in order to produce valid data.

VI. Discoveries/Results:

While the workgroup was not able to prepare a final model, it was able to come up with principles that need to be incorporated into a model and a plan to complete the development of the model. For illustration purposes here, the model will be divided into two different areas and addressed separately. Those areas are instructional and non-instructional. Additional consideration should be put into creating a third area, facilities. Based on discussion with the director of Facilities, as well as common practice in other models, a facilities budget should be calculated by considering the total amount of square footage to maintain. Timing did not allow

the workgroup to develop a model this way and it should be noted that the facilities budget is calculated using the same rational as other non-instructional areas.

For all areas, the workgroup strived to make the model produce the final numbers but it was recognized that in some instances, flexibility needs to be available for special situations. To this end, a cost factor component was added to the model. This factor would allow for a campus wide adjustment to the calculations, a sector head adjustment, or detailed unit adjustment. The model is suppose to determine the allocation amount for sector heads so if a change is to be made to the sector amount, the University Budget Committee (UBC) will need to incorporate the cost factor into its calculation. Once the amount of dollars provided to each sector is determined, the sector head may use the cost factor to adjust their model, staying within the total amount of dollars allocated to them.

Instructional

Metrics for the instructional area are mainly centered on generated student credit hours. Credit hours are linked to a department or academic index based on the workload of the faculty the unit paid. This means all credit hours generated by a faculty member are awarded to a department. This is particularly important when dealing with service departments who offer general education courses for other department's majors. A challenge that does occur is that faculty members are not always paid out of the correct unit. One example of this is the pooled positions for non-tenured faculty who are sometimes paid out of a Dean's or Provost reserve and those expenses are never transferred to the department.

For instruction the model basically calculates the number of faculty needed to instruct the generated credit hours and a total salary amount for that faculty. The parameters used to calculate an instruction budget are:

- The average number of credits generated by a section is 3.
- The percent of sections taught by tenure track and non-tenure track faculty. Department specific figures were used in the final calculation.
- Department specific faculty workload was determined and used in the calculation.
- Once the number of faculty needed to produce the credit hours generated was calculated, those full-time equivalent numbers were multiplied by a discipline average salary.

At this point the model has produced the number of faculty a department should need and a salary amount associated with those faculty. A departmental budget will also get administrative and operating budgets.

- Operating budgets are determined by taking the total number of budgeted staff times a set operating amount. For modeling purposes a figure of \$3,500 was used.
- For support staff the model determines the number of support staff needed per an amount of faculty. For current modeling purposes one classified staff is added for each 14 faculty FTE.

Appendix B illustrates how the model could work for a single department and uses the best known data at this point. As discussed in the recommendations, the workgroup outlines how and when final model data could be calculated. The only change to the example would be the final model parameters.

Non-instructional

The model will develop a metric to determine the number of FTE needed in non-instructional units. Since those final metrics have not been developed yet all non-instructional units use the same FTE in the formula that they currently have. Those FTE are then multiplied by a campus average salary in a classified or contract position. Operating budgets are calculated by taking the total FTE times a \$3,500 per staff budget.

VII. Recommendations

The workgroup made significant progress towards developing but there is still much work to be done to prepare for the model for an FY15 implementation. The workgroup recommends the following activities be accomplished by the University Budget Committee:

- The University Budget Committee develops metrics for non-instructional staffing levels and operating budgets. Identify some areas, like IT and Athletics, where it might be appropriate to look at the units entire budget and then determine a percent that should come from general funds.
- The University Budget Committee develops a phase-in plan so departments funding levels are not seriously hurt in any one year.
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APPENDIX A

The University of Montana-Missoula		
FY14-15 Missoula Budget Plan 8.0		
Payplan:	FY14 - 3%, OCT Implementation	Res Tuition Inc 0.00%
	FY15 - 3%, OCT Implementation	NR Tuition Inc 3.00%
Health Ins:	\$880/\$968	Pay Plan 3.00%
Tuition:	FY14: Res-0%, NR-3%, MC-0% (Fall implementation)	
	FY15: Res-0%, NR-3%, MC-0% (Summer implementation)	
GF & Millage based on Proposed Allocation Policy		
14/15 enrollment projections April 22, 2013		
Rev Date August 6, 2013		
Projected FTE		FY14
	Resident	8,823
	Non-Resident	2,680
	WUE	712
	Total	12,215
Projected Revenue		
General Fund & Millage (University, Travel Research & Yellow Bay)		54,059,335
Performance Based Funding Allocation (Assumes 100% of withheld amount)		
1% ORP Refund		460,000
Transfer from Designated Reserve		1,320,976
Additional Appropriation (ie. Audit)		478,898
Reallocation of GF		
HB13 -- Payplan		1,741,412
Montana Digital Academy Support		1,168,000
Montana Digital Academy Support OTO		715,000
Carry Forward of Restricted OTO funds from Prior Fiscal Year		350,365
Interest		216,972
Tuition		95,995,913
Program Tuition		3,354,447
GF Student Fees		1,336,458
Dept of Administration Fees (Fed)		159,863
Total Revenue		\$161,357,639
Expenditures		
FY13 Budget		\$161,911,539
Reverse OTO's		(2,562,203)
Base Budget		159,349,336
Required Base Adjustments		
Personal Services		
Pay plan - Base Salary Increase		2,017,038
Annualization of Salary Increases		598,370
Longevity Increase		35,412
Longevity Annualization		22,034
Faculty Promotions & Merits		331,118
Pay plan - Health Insurance & Benefits Adjustments		2,715,389
Faculty Market Adjustments		65,460
Faculty Inversion & Compression Pool		79,271
Classified Career Ladder Pool		25,000
Forestry Station		2,315
VP Integrated Communications Adjustment		22,459
Computer Science Faculty		42,977
VP for Research & Creative Scholarship Adjustment		40,272
VP for Administration & Finance Adjustment		12,999
Director of Veterans Affairs		70,343
Veterans Affairs Staff		11,000
Legal Counsel Adjustment		2,400
LIUNA Revised CBA		7,716
Minimum Entry Rate Settlement		72,139
New Position		-
Other Operating Expense		
Program Tuition Distribution Increase/(Decrease)		60,927
Utilities Increase		100,000
O&M - Facilities - new space		-
Library Inflation (8%)		207,769
IT Fixed Costs		68,207
Fixed Cost Pass Thru - D of A		263,346
Rental Increases		(87,486)
Administrative Assessment		(137,263)
F&A support to GF		-
Biennial Audit Increase/(Decrease)		206,681
Debt Obligation (ISB Finish Out)		

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Institutional Memberships	-
Faculty Computers	-
Forestry Station Adjustment	-
Travel Research Adjustment	188,350
Settlements and Charges	-
Montana Digital Academy Adjustment	-
Tuition Assistance	-
Tuition rate-related waiver increase	79,442
Incremental Fee Waivers - Utilization	-
Yellow Ribbon Adjustment	96,171
Need-Based Resident Scholarship Initiative	375,000
Additional LAS awards	-
Base Adjustment for indentified waiver shortfall	10,000
Total Required Adjustments	\$7,604,856
Revised Base Expenditure Budget	\$166,954,192
Base Reallocations	-
Strategic Reallocation	\$319,610
COT Instruction	-
CAS Instruction	-
Intercollegiate Athletics Five-year Plan	250,000
Operating Expenses for Sectors	(5,075,518)
UM Foundation Support	75,000
Adjust Contingency	(29,276)
Adjust President's Reserve	(200,000)
Adjust VP A&F Reserve	(75,000)
Adjust Unallocated Reserve	-
Total Base Reallocations	-\$4,735,184
Total Proposed Base Expenditure Budget	\$162,219,008
Non-Base Adjustments	-
Classified Days Adjustment	-
Biennial Audit Savings	-
International Programs Project Specialist	-
Chemistry Faculty	125,387
President Emeritus	59,025
NCAA Settlement	100,000
Clery Settlement	250,000
OTO - Adjust Contingency	-
OTO - Operating Expenses for Sectors	-
OTO - Operating Expenses for Central	(622,424)
OTO - Enrollment Services	-
OTO - Faculty Termination Pool	(250,000)
OTO - Adjust Utility Reserve	(100,000)
OTO - GF Expense to Delay Network Wiring Allocation	(100,000)
OTO - GF Expense to Delay Classroom Technology Allocation	(475,000)
OTO - GF Expense to Verizon Fund Balance	(75,000)
OTO - GF Expense to Enhanced Business Practices Fund Balance	(250,000)
OTO - GF Expense to Grant Leave Pool Interest Earnings	(900,000)
OTO - GF Expense to Plant Fund Interest Earnings	(300,000)
OTO - GF Expense to Auxiliary Fund Interest Earnings	(200,000)
spectrUM Funding (FY14-FY18)	10,000
New OTO	-
Travel Research (OTO use of Fund Balance)	169,111
Digital Academy (OTO)	715,000
OTO - NSF EPSCoR Match	645,606
OTO - NSF EPSCoR Match (OTO use of Fund Balance)	181,254
OTO - Federal Match Fund	-
OTO - Federal Match Fund (OTO use of Fund Balance)	-
Sector Carry Forward	155,672
Year-end Transfer to Designated Reserves	-
Total	(861,369)
Total Budgeted Expenditures	\$161,357,639
Revenue less Expenditures	\$0

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Appendix B

Instruction Department Budget Calculation
Example: Department X

FY12 Students:

Lower Division:	18,038
Upper Division:	1,232
Grad	896
Total	20,166

Fall 11 Actual Class Size:

Lower Division:	45
Upper Division:	15
Grad	5
Overall	32

Calculated Sections (3 hours per section):

(Credit hours / 3) / average class size

Lower Division:	134
Upper Division:	27
Grad	60
Overall	221

Percent of SSCH taught by T/TT Faculty (fall 11)

Lower Division:	25%
Upper Division:	92%
Grad	99%

Modeled Faculty FTE (Mountain Campus example)

Assumes

- T/TT faculty teach 15 credit hours (5 sections) per fiscal year on the Mountain Campus
- NTT faculty teach 29 credit hours (9.5 sections) per fiscal year on the Mountain Campus
- T/TT faculty teach 24 credit hours (8 sections) per fiscal year at Missoula College
- N/TT faculty teach 40 credit hours (13.3 sections) per fiscal year on the Mountain Campus

T/TT Faculty: $(25\%*134)/5 + (92\%*27)/5 + (99\%*60)/5 = 23.6$

NTT Faculty: $(75\%*134)/9.5 + (8\%*27)/9.5 + (1\%*60)/9.5 = 10.8$

Average Faculty Salary:

TT Faculty	\$66,287
NTT Faculty	\$31,424

Faculty Budget:

TT Faculty = $66287*23.60 = \$1,564,523$

NTT Faculty = $31424*10.82 = \$339,949$

Total = $1,564,373 + 339,949 = \$1,904,473$

Support staff: One per 14 faculty FTE.

$$(23.6+10.8) / 14 = 2.5$$

2 support staff

Average classical staff salary: \$43,713

Support staff salary:

$$43713*2 = \$87,426$$

Operating Budget \$3,500 per FTE

TT Faculty FTE	23.60
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NTT Faculty FTE	10.82
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Support staff FTE	2
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Total staff	36.42
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Operating Budget = $36.42 * 3500 = \$127,471$

Total Department Budget:

Faculty Salaries	\$1,904,473
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Classified Salaries	\$87,426
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Operating Budget	\$127,471
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Grand Total	\$2,119,219
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FY13 expenses:	\$2,085,783
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