# Measure C Computer Refresh Program Analysis

# **Executive Summary**

ETS conducted an analysis of Measure C expenditures and deployment rates for computers to determine:

- What is the average cost of computers being replaced on Measure C refresh funds?
- Will existing Measure C funds for computer refresh allow computer replacement to continue through the end of the 15-year Measure C Bond project timeframe?
- What Measure C budget shortfalls exist to achieving the stated computer replacement program objective of a four-year refresh cycle?
- What options exist for managing the computer refresh cycle?

Each of these questions is addressed below:

# A. WHAT IS THE AVERAGE COST OF COMPUTERS BEING REPLACED ON MEASURE C REFRESH FUNDS?

The average cost of <u>acquisition</u> for a computer purchased under Measure C funding for the district is \$1,438 as compared to the planned cost of \$1,800. The total cost of <u>acquisition and the labor</u> to install and dispose of computers is \$2,039 for Foothill College and \$2,040 for the district overall.

#### B. WILL EXISTING MEASURE C FUNDS FOR COMPUTER REFRESH ALLOW COMPUTER REPLACEMENT TO CONTINUE THROUGH THE END OF THE 15-YEAR MEASURE C BOND PROJECT TIMEFRAME?

Yes and No.

When looking at the district as a whole there are enough acquisition and labor funds to support the <u>current average rate</u> at which we are replacing computers considering all known costs.<sup>1</sup>

This is actually good news considering that the computer inventory for the district has grown from the 5,127 computers used in Measure C project planning to the current inventory of 6,082 computers. De Anza College's inventory has grown by 18%. Foothill College's / Central Services' inventory has grown by 20%. (Central Services' inventory cannot be broken out separately from Foothill College with the data available, but we believe that the most if not all of the 20% growth is due to Foothill College.) However, further expansion of the inventory may reduce our capability to provide timely replacements of older computers.

Finally, if some acquisition funds are not used to supplement labor funding, the Measure C funding dedicated to providing labor for replacing and disposing of obsolete computers is insufficient to sustain the current replacement rate. As an example, Measure C Bond funds for labor will support only 185 computer replacements per year district wide versus the current rate of 436 computer replacements per year for Foothill College alone.

<sup>&</sup>lt;sup>1</sup> Based on the amount of remaining (unexpended) Measure C funds (acquisition and labor). Assumes both acquisition and labor funding accounts are combined to jointly fund purchase and implementation costs. When looking at the numbers for Foothill College alone, Foothill's current average replacement rate exceeds the maximum sustainable rate possible through Measure C. Foothill funds will be exhausted in 11 more years if they continue with the same annual replacement rate.

#### C. WHAT MEASURE C BUDGET SHORTFALLS EXIST WITH REGARDS TO ACHIEVING THE STATED COMPUTER REPLACEMENT PROGRAM OBJECTIVE OF A FOUR-YEAR REFRESH CYCLE<sup>2</sup>?

Using only the existing Measure C funds (for both acquisition and labor costs) over the life of the bond to refresh all 6,082 computers in the inventory will extend the original desired replacement cycle of **four** years to more than **six** years.

The District's Measure C budget is short \$1,282,120 annually (in both acquisition and labor costs) to provide a <u>four</u>-year refresh cycle.<sup>3</sup>

If we extend the original replacement cycle from four to <u>five</u> years then the Measure C budget is short only \$661,641 in acquisition and labor costs for the district (annual costs). To provide a five-year refresh cycle, we would also need to add an additional .9 FTE of an ETS technician to the staff who are already assigned to Measure C deployments, to sustain this rate.

Any further increase in the computer inventory will exacerbate the budget problem.

#### D. WHAT OPTIONS EXIST FOR MANAGING THE COMPUTER REFRESH CYCLE?

#### 1. Continue as is (e.g. change nothing)

Measure C funding available for computer <u>purchases</u> will be sufficient to sustain current replacement rates for most of the duration of the Measure C Bond term. However, It is likely that De Anza College will increase the number of computers replaced per year because their replacement rate (as used in this analysis) has been lower than Foothill's, while De Anza has more computers in their inventory. Increasing the rate of replacement will expend Measure C funds faster.

Notwithstanding, Measure C funding for labor is <u>insufficient</u> to fund all associated costs associated with the purchase and disposal of computers. We will need to continue to use non-Measure C funds for labor costs in addition to the designated Measure C funds. Because of budget cut backs, the probable reduction in the number of ETS technicians available to install new computers will diminish our capacity to install computers even at the current replacement rates.

Under current conditions, we will have a refresh cycle of more than six years for computers and this cycle time will increase if the amount in inventory continues to expand and number of technicians decrease.

Finally, if computer purchases are not evenly spread across the refresh cycle, we may create peaks and valleys in funding requirements for future computer replacements as well as uneven demands on technicians involved in installation and disposal.

#### 2. Spread computer purchases over the refresh cycle

The intent of this option is to spread the replacement of computers evenly across the term of the Measure C Bond so that an equal number of computers are replaced annually by each organization.

One method of doing this is to allocate Measure C computer acquisition and labor funds by equal annual amounts to the colleges and Central Services organizations instead of the current practice of providing block allocations of funds that last several years.

This will also ensure that Measure C funds for replacing computers will be available on a consistent basis throughout the life of the Bond program.

<sup>&</sup>lt;sup>2</sup> Another assumption in the Bond planning was to have three refresh cycles in the 15 years of the Bond term. Note that this assumption is consistent with a five-year refresh cycle.

<sup>&</sup>lt;sup>3</sup> Considering just acquisition costs alone, the Measure C budget is short \$232,736 annually for Foothill College and \$477,719 annually for the whole district.

#### 3. Fully fund all associated labor costs through Measure C funds

To fully fund labor costs, we would need to dedicate some acquisition funds (associated with the replacement of computers) for labor to provide enough resources for the purchase, disposition, and installation of computers. As an example, at Foothill College, approximately 25% of acquisition funds would be assigned to provide labor for installation.

#### 4. Fully fund all labor costs and implement a five-year refresh cycle

To implement a five year refresh cycle, we would need to augment the existing Measure C funding with approximately **\$662,000**<sup>4</sup> in new funds <u>annually</u> and acquire an additional FTE in ETS to handle replacement / disposal tasks.<sup>5</sup>

### **Recommendations from Chancellor's Staff**

- Implement Options 2, 3 and 4 as described above
- Conduct a review in 2012 to assess the effectiveness of the program

<sup>&</sup>lt;sup>4</sup> If Measure C Bond funds are shifted from another project then this number will be approximately 5 to 6% higher due to the need to deduct project management costs associated with Gilbane – Maas' management of the contract. <sup>5</sup> A nominal amount of funding would be provided to other departments (purchasing, facilities, etc.) to pay for their labor costs.

# **Computer Refresh Funding Allocation Strategy - Central Services**

		Percentage of	Total	Total					
		Computers	Funding for	Funding for	ETS	Acquisition	Acquisition	Labor	Total
#	Year	Refreshed	Acquisition	Labor	Labor \$	\$ for Labor	Shortfall	Shortfall	Shortfall
1	2009-2010	50%	27,999	7,856	7,856	0	0	0	0
2	2010-2011	100%	55,998	15,712	15,712	0	0	0	0
3	2011-2012	100%	55,998	15,712	8,413	7,299	0	0	0
4	2012-2013	100%	55,998	15,712	0	15,712	0	0	0
5	2013-2014	100%	55,998	15,712	0	15,712	0	0	0
6	2014-2015	100%	55,998	15,712	0	15,712	0	0	0
7	2015-2016	100%	55,998	15,712	0	15,712	0	0	0
8	2016-2017	100%	55,998	15,712	0	15,712	0	0	0
9	2017-2018	100%	55,998	15,712	0	15,712	0	0	0
10	2018-2019	100%	55,998	15,712	0	15,712	0	0	0
11	2018-2020	100%	55,998	15,712	0	15,712	0	0	0
12	2020-2021	100%	55,998	15,712	0	15,712	0	0	0
13	2021-2022	100%	55,998	15,712	0	15,712	0	0	0

Indicates the amount of computers to be replaced as a percent of what is needed to maintain a five year replacement cycle

Indicates the funds allocated in each year to refresh computers

Provides a breakdown of funding allocated to labor. Acquisition funding is shifted into labor for some years.

Indicates the amount of funding short of what is necessary to achieve a five-year replacement cycle.

# **Computer Refresh Funding Allocation Strategy - De Anza College**

		Percentage of	Total	Total					
		Computers	<b>Funding for</b>	Funding for	ETS	Acquisition	Acquisition	Labor	Total
#	Year	Refreshed	Acquisition	Labor	Labor \$	\$ for Labor	Shortfall	Shortfall	Shortfall
1	2009-2010	50%	551,631	232,560	232,560	0	0	0	0
2	2010-2011	100%	1,103,263	465,119	465,119	0	0	0	0
3	2011-2012	100%	1,103,263	465,119	300,191	164,928	0	0	0
4	2012-2013	100%	1,103,263	465,119	0	465,119	0	0	0
5	2013-2014	100%	1,103,263	465,119	0	465,119	0	0	0
6	2014-2015	70%	772,284	325,584	0	325,584	330,979	139,536	470,515
7	2015-2016	68%	750,219	316,281	0	316,281	353,044	148,838	501,882
8	2016-2017	65%	717,121	302,328	0	302,328	386,142	162,792	548,934
9	2017-2018	62%	684,023	288,374	0	288,374	419,240	176,745	595,985
10	2018-2019	59%	650,925	274,420	0	274,420	452,338	190,699	643,037
11	2018-2020	56%	617,827	260,467	0	260,467	485,436	204,653	690,088
12	2020-2021	53%	584,729	246,513	0	246,513	518,534	218,606	737,140
13	2021-2022	50%	549,619	231,711	0	231,711	553,644	233,408	787,052

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## **Computer Refresh Funding Allocation Strategy - Foothill College**

		<b>Percentage of</b>	Total	Total					
		Computers	Funding for	Funding	ETS	Acquisition	Acquisition	Labor	Total
#	Year	Refreshed	Acquisition	for Labor	Labor \$	\$ for Labor	Shortfall	Shortfall	Shortfall
1	2009-2010	50%	399,243	168,315	168,315	0	0	0	0
2	2010-2011	100%	798,486	336,630	336,630	0	0	0	0
3	2011-2012	100%	798,486	336,630	217,263	119,367	0	0	0
4	2012-2013	100%	798,486	336,630	0	336,630	0	0	0
5	2013-2014	100%	798,486	336,630	0	336,630	0	0	0
6	2014-2015	62%	495,061	208,711	0	208,711	303,425	127,919	431,344
7	2015-2016	61%	487,076	205,344	0	205,344	311,409	131,286	442,695
8	2016-2017	59%	471,107	198,612	0	198,612	327,379	138,018	465,397
9	2017-2018	58%	463,122	195,245	0	195,245	335,364	141,385	476,749
10	2018-2019	56%	447,152	188,513	0	188,513	351,334	148,117	499,451
11	2018-2020	54%	431,182	181,780	0	181,780	367,303	154,850	522,153
12	2020-2021	52%	415,213	175,048	0	175,048	383,273	161,582	544,855
13	2021-2022	50%	396,742	167,261	0	167,261	401,743	169,369	571,112

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Indicates the amount of funding short of what is necessary to achieve a five-year replacement cycle.