

Operating Cost Study of
Massachusetts State Public
Housing

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**Phase One Preliminary
Results**

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Prepared For:

Citizens' Housing and Planning Association (CHAPA)
Massachusetts Chapter of National Association of Housing and Redevelopment Officials
(Mass-NAHRO)

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Introduction

Citizens' Housing and Planning Association (CHAPA), in conjunction with the Massachusetts Chapter of the National Association of Housing and Redevelopment Organizations (Mass-NAHRO), contracted with Gregory Byrne & Associates (GBA) to estimate the cost to operate State-funded public housing in Massachusetts. Massachusetts has the largest State-funded program in the country, with approximately 47,000 units.

The work on this project would be conducted in three phases:

- First, GBA would apply the same model developed by Harvard's Graduate School of Design under the Federal Public Housing Operating Cost Study to estimate the cost to operate each State-funded property in Massachusetts.¹ The Harvard Model is based on operating costs of some 1.5 million units of multifamily housing insured by the Federal Housing Administration (FHA).
- Second, GBA would compare the actual costs of properties financed by MassHousing (formerly the Massachusetts Housing Finance Agency) against model estimates for that portfolio. The MassHousing database includes more properties than the FHA database for Massachusetts. Potentially, the MassHousing database could lead to refinements in the Harvard Model for Massachusetts. Under the Harvard Model, for example, Massachusetts is divided into three geographic areas – the Boston MSA, a Southern New England MSA, and New England non-metro. The MassHousing database might indicate smaller geographic groupings for the purposes of estimating operating costs (see Attachment A for distribution of State-funded public housing by these geographic areas).
- Third, utilizing the model estimates, GBA would prepare a limited number of sample operating budgets for various State public housing properties. The Harvard Model only provides an aggregate spending figure for each property. These sample budgets would illustrate spending under model estimates at the line-item level, e.g., maintenance labor, materials, insurance, etc.

This paper provides a preliminary analysis of the results from the first phase.

¹ See *Final Report, Public Housing Operating Cost Study, Harvard University Graduate School of Design, June, 2003* (www.gsd.harvard.edu/phocs).

Background

Public housing authorities (PHAs) in Massachusetts are awarded operating subsidy essentially in accordance with the following rules, which, except for minor adjustments, have been in place for a number of years:

- For utility costs, PHAs are funded dollar-for-dollar.
- For non-utility operating costs, PHAs are assigned an Allowable Non-Utility Expense (ANUEL), based on the type of program (see below).
- A PHA's estimated utility costs, plus its ANUEL, are added together to obtain a total allowable operating cost figure. From this total amount, the PHA subtracts projected rental and other revenue, with the difference representing its eligible operating subsidy.

ANUELS for 2005 are as follows (expressed in per-unit monthly amounts, or PUMs):

Program	ANUEL
Chapter 200	\$286.62
Chapter 667	\$157.60
Chapter 705	\$313.66

ANUELS were last increased in 2002.

Context

PHAs that operate both State and Federal public housing have long-observed that the State formula results in funding levels that are substantially less than Federal levels. Overall, Federal public housing in Massachusetts is funded at levels that are about 50% higher than State public housing (these figures do not control for any differences in the housing stock between the two programs – for example, there is a higher percentage of elderly units in the State program than the Federal program). PHAs have also informally noted that the operating funding for State public housing appears to be substantially less than what other operators of assisted housing spend locally, e.g., properties financed through MassHousing. The main question for this study, therefore, is, “What should it cost to operate State public housing in Massachusetts?”

The Federal cost study was charged with the same basic question. For that study, Harvard used a “benchmark” or “proxy” approach, wherein it estimated the cost to operate Federal public housing based on the operating costs of properties insured by FHA, which includes some 1.0 million assisted units and 0.5 million unassisted units. Harvard determined that there were ten factors that played a significant role in operating costs, from the number of bedrooms per unit to the incidence of poverty in the surrounding neighborhood. (See Attachment B for a list of these “coefficients”.) Harvard found that, nationally, allowable expense levels for Federal public housing should be increased 5% to make them consistent with what other non-profit operators of assisted housing would spend to

operate housing with similar characteristics. For Massachusetts, the Harvard model estimated that Federal public housing expense levels should be increased 16%, or from \$305 PUM to \$353 PUM (2002 figures).

Under the Negotiated Rulemaking Agreement on the Operating Fund Rule (June, 2004), the Harvard Model was accepted as the method for determining Federal public housing operating subsidies, beginning in 2006.²

Preliminary Phase One Results

Summarized in the table below are the results of applying the Harvard model to State public housing in Massachusetts.³ Statewide, the Harvard Model results in a non-utility operating cost figure for 2002 of \$341 PUM, or an increase of 69% over formula expense levels assigned by the State. The highest increase is in the Chapter 667 (elderly) program, where expense levels would increase 92%, or from \$158 PUM to \$303 PUM. Readers should note that these estimates are not final and may be adjusted once costs from the MassHousing database can be examined and after other statistical tests. Further, the actual impact on any particular PHA may not be the same. PHAs with a higher percentage of Chapter 667 units, for example, would experience a higher rate of increase than PHAs with predominantly Chapter 200 or Chapter 705 units.

Current vs. Model-estimated Expense Levels, FY 2002				
Note: ANUELS have not increased since 2002				
<u>Weighted by project size</u>				
	All	Chapter 200 (Family)	Chapter 705 (Scattered Site)	Chapter 667 (Elderly)
Current ANUEL	\$202	\$287	\$314	\$158
Model Estimate	\$341	\$422	\$399	\$303
% Increase	69%	47%	27%	92%
Total Number of Projects	1,326	120	623	583
Total Number of Units	47,312	12,552	2,965	31,795

² Implementing regulations forthcoming.

³ Included with the application of the Harvard Model are the “out-of-model” adjustments of (1) a floor of \$200 PUM and \$215 PUM for senior and family properties, respectively, (2) a ceiling of \$420 for family properties, and (3) a 4% reduction in model values greater than \$325. For further details, see *Cost Study Final Report, June, 2003*.

The distribution of model values is shown below, with a minimum of \$216 PUM, a maximum of \$441 PUM, and a mean of \$341 PUM.

Distribution of Model Values for State Public Housing	
Weighted by project size	
Category	Model Estimate (PUMs)
Minimum	4216
25 Percentile	\$287
Mean	\$341
Median	\$324
75 Percentile	\$397
Maximum	\$441

Fiscal Impact

The annual appropriation for operating subsidies for State public housing in Massachusetts is around \$30-\$35 million.⁴ Based on this preliminary analysis of applying the Harvard Model to State-funded public housing, operating subsidies would need to increase by around \$79 million annually to match the spending patterns observed in the FHA inventory. This estimate assumes that rents remain constant, i.e., the increase in ANUELS is funded entirely with operating subsidy.

Item	Amount/Figure
2002 Median ANUELS	\$202
Times: number of Units	<u>x 47,312</u>
Equals: monthly ANUELS	\$9,557,024
Times: 12 months	<u>x 12</u>
Annual ANUELS	\$114,684,288
2002 Cost Model Estimate	\$341
Times: number of Units	<u>x 47,312</u>
Equals: monthly Non-Utility Expense Levels under Cost Model	\$16,133,392
Times: 12 months	<u>x 12</u>
Annual Non-Utility Expense Levels under Cost Model	\$193,600,704
Annual Difference between Actual and Estimated Cost Levels	\$78,916,416

⁴ Funding for 2005 was \$34.8 million, which included \$4.5 million in supplemental funds to cover higher-than-projected utility costs in 2004.

Comment

In the Federal study, Harvard noted that, in many of the markets with relatively high model estimates, it was likely that reported operating costs included some degree of non-routine expenditures – mostly, items that might otherwise be funded through a replacement reserve account. This situation is quite likely to be the case in Massachusetts. While this pattern of non-routine spending might overstate routine operating costs, it does not imply that this spending is unnecessary. All rental properties require a source of funding for the regular replacement of building systems and other non-routine expenditures, regardless of the source of funding or where the costs are accounted for.

It should also be noted that the Harvard Model assigns to Federal public housing a 10% cost differential for non-profit ownership (10% higher than FHA properties with ownership structures that may take unlimited dividends). The Harvard study found that the operating and regulatory environment of Federal PHAs to be more closely aligned to non-profit ownership of FHA housing than owners who were not restricted in the dividends they could take. The same relationship might not exist for State public housing. The regulatory environment, for example, in State public housing is far less onerous than in Federal public housing and there are certain costs that State PHAs do not incur that are present in the FHA database. For example, in the State public housing program, PHAs are not required to produce property-level audits and certain insurance costs are covered directly by the State. These preliminary estimates do not attempt to control for any such special considerations.

Next Steps

Additional work under Phase One of this project will include:

- Preparing tables of model results on a property-by-property and agency-level basis.
- Further statistical testing.

Attachment A
Geographical Distribution of State-funded Public Housing in Massachusetts

The Harvard Model divided Massachusetts into three geographic areas for the purposes of assigning a “geographic coefficient.” The table below shows the distribution of properties by these three geographic areas, as well as the coefficient that was assigned.

Location	Coefficient	Number of Projects	Number of Units
Boston MSA	33%	618	26,434
South New England MSA	19%	616	19,697
New England Non-Metro	12%	92	1,181

Attachment B
Harvard Model Coefficients

<u>Size</u>		<u>Building Type</u>	
0-150 units	0%	Walkup/Garden	0%
> 150 units	-1%	Detached/Semi-detached	-2%
		Row/Townhouse	0%
		High-Rise/Mixed	0%
<u>Age</u>		<u>Occupancy</u>	
0-8 years	0%	Family Property	0%
9 years	0%	Senior Property	-6%
10 years	1%		
11 years	1%	<u>Location</u>	
12 years	1%	Rural	0%
13 years	1%	Metropolitan: Non-Central City	0%
14 years	2%	Metropolitan: Central City	3%
15 years	2%		
16 years	2%	<u>Neighborhood Poverty Rate</u>	
17 years	3%	0%-20%	0%
18 years	3%	20%-30%	2%
19 years	4%	30%-40%	4%
20 years	4%	Greater than 40%	7%
21 years	5%		
22 years	6%	<u>Percent Assisted</u>	
23 years	7%	0%	0%
24 years	7%	0%-20%	2%
25 years	8%	21%-80%	2%
26 years	9%	81%-99%	5%
27 years	9%	100%	6%
28 years	10%		
29 years	10%	<u>Ownership Type</u>	
30 or more years	10%	Non-Profit	10%
		For-Profit (unlimited dividend)	0%
<u>Unit Size</u>		Limited Dividend	8%
Percent of 2 BR units	18%		
Percent of 3 BR units	38%		
Percent of 4 or more BR units	49%		
<p>Note: The Harvard Model also includes an adjustment for the property rent level (the effect of which is to benchmark public housing operating costs equal to properties renting between 90% - 110% of the Fair Market Rent). For further information, see Appendix A of the <i>Cost Study Final Report</i>.</p>			