

Washington State Affordable Housing Portfolio Study

*A study of the physical condition of the Housing Trust Fund
and Low Income Housing Tax Credit portfolios*

Prepared for
Washington State Department of Commerce and
Washington State Housing Finance Commission



Department of Commerce
Innovation is in our nature.



WASHINGTON STATE
**HOUSING FINANCE
COMMISSION**

Opening doors to a better life

By Housing Development Center

Housing
DEVELOPMENT
CENTER

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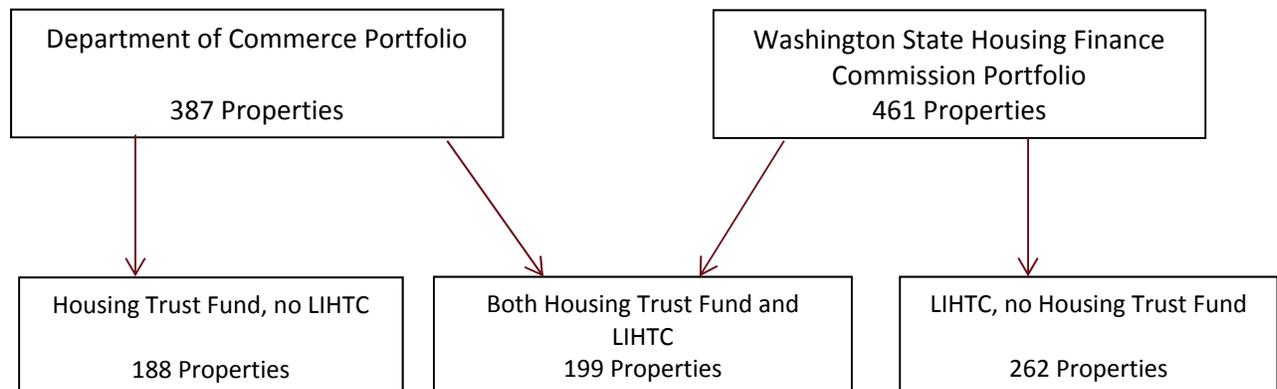
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Executive Summary

The Washington State Department of Commerce (Commerce) and Washington State Housing Finance Commission (the Commission) jointly commissioned Housing Development Center (HDC) to conduct the Washington State Affordable Housing Portfolio Study (the WSAHPS or the Study). The goal of the Study is to examine the need for additional capital investments in rental properties funded by the Housing Trust Fund (HTF) and Low Income Housing Tax Credit (LIHTC) programs. The Study focuses on the expected needs of Commerce’s and the Commission’s multifamily housing portfolios over the next five years. It also estimates the financial capacity of project owners to address those needs. Finally, the Study seeks to estimate resources required of Commerce and the Commission in order to preserve its investments in the stock of affordable housing.

The state has invested HTF and LIHTC resources to help create or preserve over 1,656 properties across Washington, totaling over 78,000 units. Given limited study resources, Commerce and the Commission elected to focus this Study on those properties most likely to represent the bulk of needed reinvestment over the next five years. Consequently, the Study was limited to properties that are 10 or more years old and have 10 or more dwelling units, because it is assumed that this segment of the portfolio is most likely to have the greatest capital needs and capital needs costs per property. The Study also excluded emergency shelters, transitional housing and dormitory-style projects such as seasonal farmworker housing. Though equally important to the state’s housing mission, these types of projects are distinct from typical multifamily projects and are less likely to have project resources to support their capital needs costs. This delineation by age, project size and project use yielded a Study universe of 649 properties containing approximately 38,000 units.

Within this Study universe, the properties can be divided by agency: Commerce’s projects (with and without LIHTC), the Commission’s projects (with and without HTF), or by funding type (HTF only, LIHTC only, or both HTF and LIHTC). The Study found that overall, properties’ needs and their abilities to address those needs varied more significantly by funding type (HTF, LIHTC or both) than by agency. Therefore, this Study discusses the findings primarily by funding type, although additional information is provided to show how results would be distributed between Commerce and the Commission’s projects (that is, taking into account the properties that have both HTF and LIHTC funding and evaluating those properties separately).



It is hoped that the information contained in this Study will enable Commerce and the Commission to better anticipate and plan for additional public capital investments in the HTF and LIHTC portfolios over the next five years.

Brief Note on HDC's Research Methodology

HDC's research methodology was designed to gather and integrate information from a variety of sources. HDC selected sources of information that would help identify and estimate the current physical and financial condition of the properties. The major data sources included the following:

- A. Owner responses to an online capital needs survey developed by HDC (owners were asked to complete one survey per property);
- B. Capital needs reports completed in 2009 and later, which were submitted by owners;
- C. Capital needs assessments, completed by Walsh Construction Co. (Walsh), for six properties;
- D. Model cost data developed by Walsh that provide ranges of pricing on building systems and components; and
- E. Data from Washington's Web-Based Annual Reporting System, which provides financial performance information on the properties (WBARS Tables 4, 4(a), & 4(b)).

Detailed descriptions of these data sources and study methodology are contained in Appendix B, Methodology.

A data workbook has been prepared to help Commerce and the Commission project capital needs over a longer term.

The Physical Condition of Our Affordable Housing

HDC estimates that the 649 properties in the Study universe are facing minimum capital costs and related soft costs of approximately \$391 million for the five-year period ending in 2019. This equates to an average of \$10,330 per unit across the portfolio, which contains nearly 38,000 units. "Capital costs" refers to expenditures for the replacement or rejuvenation of major building systems such as roofs, heating and cooling mechanisms, elevators, etc. "Related soft costs" are the architecture, project management and other expenses involved with the above-described work. HDC's estimate includes an inflation factor to account for expected cost increases during the five-year period. (These capital and soft costs are collectively referred to as Capital Needs Costs in this Study.)

As shown below, properties financed by the HTF had the highest per-unit capital needs, while LIHTC-only projects had the lowest per-unit capital needs, on average:

Capital Needs Costs Per Property and Per Unit by Funding Source(s)

Funding Source	Capital Needs Costs			Properties in Study		Units in Study	
	Total	% of Total	Avg. Per Unit ¹	Count	% of Study	Count	% of Study
HTF only	\$80,600,533	21%	\$13,921	188	29%	5,790	15%
LIHTC only	\$198,465,276	51%	\$9,226	262	40%	21,512	57%
Both	\$111,557,831	29%	\$10,610	199	31%	10,514	28%
Total	\$390,623,639	100%	\$10,330	649	100%	37,816	100%

- Department of Commerce Portfolio:** The 387 properties that were financed with HTF dollars (with or without LIHTCs) have about \$192 million in Capital Needs Costs.
- Washington State Housing Finance Commission Portfolio:** The 461 properties that were financed with LIHTCs (with or without HTF) have about \$310 million in Capital Needs Costs.
- Compared to Commerce’s portfolio, the Commission’s portfolio has greater capital needs because it is larger (461 properties compared to 387 properties) and because it contains more units overall and more units per project, on average. Indeed, the Commission’s portfolio has almost twice as many units as Commerce’s portfolio: 32,026 units compared to 16,304 units. The average number of units per project in the Commission’s portfolio is 69, compared to 42 for Commerce’s portfolio.
- Overlap of HTF and LIHTC projects:** Since there are 199 properties that were funded with both HTF and LIHTC (representing \$112 million in Capital Needs Costs), adding the numbers in the top two bullets together does not provide a portfolio total.²

The Capital Needs Cost estimate for the Study universe was derived from a combination of known costs and extrapolated costs, explained in Appendix B, Methodology. The estimate is conservative because the Study methodology, consistent with internationally recognized American Society for Testing and Materials (ASTM) models, focused on major building systems and, unless specifically included by project owners, did not include elective upgrades (e.g., to increase energy efficiency) or the costs of routine interior upgrades.

In addition, the Capital Needs Costs identified in the Study do not represent the total needs of the HTF and LIHTC portfolios. This is because, first, the Study excludes emergency shelters, transitional housing and dormitory-style projects such as seasonal farmworker housing from the HTF portfolio; and, second, there may be some properties in the HTF or LIHTC portfolio that are less than 10 years old with “premature” capital needs, most typically due to construction defects or very limited rehabilitation completed at acquisition. The per-unit averages are low, also, since there are a number of properties in

¹ These average per-unit numbers are based on the entire Study portfolio including properties with capital needs ranging from none to much higher than average. There are more detailed calculations provided below that focus on only those properties in the Study portfolio with projected Capital Needs Costs within the five-year period.

² To obtain the capital need number in the matrix above, one would subtract the jointly funded projects from the Commerce and Commission portfolio numbers: (\$192 million plus \$310 million minus \$112 million equals @\$390 million).

each funding category that do not have capital needs. If those properties are excluded from the totals, the average Capital Needs Costs per project and per unit increase.

How Will Needed Improvements Be Paid For?

Rent-restricted affordable housing properties provide homes for more than 77,000 households across Washington. These properties represent a significant public investment by local, state and national funders. As with market-rate properties, affordable housing building systems (roofs, siding, windows and heating systems, etc.) need replacement over time. However, affordable housing faces some unique challenges when it comes to paying for these improvements. With deed restrictions limiting rent increases, affordable housing owners cannot generally use market-rate strategies such as property sales or large rent increases to fund long-term capital needs (these deed restrictions may even survive the sale of properties). Furthermore, the restricted rents on affordable housing, intended to achieve an important affordability mission, also mean less cash flow from operations to support refinances or to directly pay for capital improvements. For properties targeted to very low-income residents, restricted rents in combination with rising operating costs may result in gradually declining financial viability, even in well-managed properties. Without sufficient routine maintenance and proper capital infusion, it is possible that significant portions of the public sector's initial public investment, especially investments in those properties with the lowest rents serving the poorest households, will be lost.

Although most affordable housing properties set aside reserves to address upcoming capital needs, this Study found that most of the properties in the study universe have insufficient reserves to meet expected capital needs over the next five years. In fact, only four percent of the properties have sufficient funds in their replacement reserves to cover 75% to 100% of projected capital needs. Another 25% of the properties have reserve funds sufficient to cover 25% to 50% of five-year capital needs. The vast majority of the properties will need to rely on resources other than reserve funds to maintain the viability of the housing units.

In addition to using property replacement reserves, if a property has high net operating income (due, for instance, to low existing debt levels) or if a property has a high current interest rate on one or more of its loans, refinancing the primary loan may be an option. HDC found that refinance is an option for about 228 properties—about 35% of the Study universe. However only 189 of these 228 properties can fully cover their capital needs through refinancing. For the remaining 89 properties, proceeds from refinancing would cover only a portion of the capital needs costs. For purposes of this estimate, the Study considered refinance as an option when the net proceeds from the refinance were greater than the Capital Needs Costs less replacement reserves.

The Study found that projects funded with LIHTCs are more likely to be able use this refinancing strategy than are properties financed only with HTF dollars. Many HTF properties serve populations of 30% area median income (AMI) and below. With such low rental revenues, these properties are much less likely to have sufficiently high net operating income to support a refinancing that would cover their full Capital Needs Costs. This is true whether the properties' fitness for refinancing is assessed from a valuation perspective or a net operating income perspective.

The Role of Public Funders

HDC estimates that the properties in the Study are facing a collective financing gap of approximately \$201 million to address their five-year (2015 – 2019) Capital Needs Costs.

HDC modeled the amount that could be raised through property refinancing using a moderately conservative loan with a 15-year loan term, a 30-year amortization period and a 5.5% interest rate. For purposes of this analysis, Commerce, the Commission and HDC recognize that these loans would need to be refinanced again at the end of their 15-year terms. Using these loan terms, HDC calculated that approximately \$190 million could be raised by applying property reserves and funds from refinancing, where feasible, to address the properties' capital costs and related expenses. The analysis assumes all existing must-pay debt is retired. Subtracting the \$190 million in funds that could be provided through property resources from the \$391 million in five-year (2015 – 2019) Capital Needs Costs results in a remaining need or gap of \$201 million from other than property resources, as shown in the calculation below:

	Financing Gap Assuming a 15- Year Loan
Capital Needs Costs	\$390,623,638
Property Resources	-\$189,744,995
Total Financing Gap	\$200,878,643

Given the larger number of units in the LIHTC portfolio, but higher capital needs and lower ability to realize capital from refinancing in the HTF-only portfolio, the financing gap was found to be evenly distributed among HTF and LIHTC properties.

The Study includes a detailed methodology and a description of the physical characteristics of the portfolios as appendices.

Preservation Strategies

To meet the needs of low-income Washington households, rents for affordable housing need to follow increases in incomes rather than mirroring overall increases experienced in the real estate market. Financing program requirements impose limits on annual rent increases. At most, rental revenues can increase as AMI limits rise. However, operating expenses are not restricted, and affordable housing properties age just as market properties do. Affordable housing owners are frequently squeezed between the competing objectives of keeping housing affordable for low-income households and keeping it decent, safe and attractive.

Both Commerce and the Commission have limited resources to assist with funding for capital improvements. Washington's challenge is how to make the best use of the variety of tools available to preserve the state's affordable housing. For the most part, both Commerce and the Commission are already employing the strategies described below. These strategies are described here to show the range of options available and how the options are being implemented.

There may be properties, however, for which reinvestment is not feasible or desirable, likely due to a combination of project characteristics and market forces (for example, a substantially over-leveraged property that has high capital needs in a weak market area). In such cases, Commerce and the Commission may choose *not* to invest additional funds, especially given that Washington’s resources could be better used to preserve other units that are in better condition physically, in a better location and do not have as many financial impediments to improved performance. Such properties may be candidates for transfer, sale or disposition by the project sponsor.

Strategies for Commerce’s HTF Portfolio

Commerce has some flexibility in the recapitalization strategies it chooses to employ. However, Commerce’s options are constrained by the fact that the very low-income population living in HTF properties pay rent amounts that do not generate sufficient surplus cash above annual operating expenses to cover long-term capital expenses.

Commerce is considering establishing a portfolio preservation program so that funding of preservation is not in direct competition with funding of new projects. Provided capital funds are available for this purpose, this strategy will help the state achieve both its goals of ensuring the existing portfolio is maintained while creating new units for unmet housing needs.

In addition, specific components of an intentional, proactive preservation strategy could include:

- **Subordination of HTF debt.** Leveraging private capital—using partial public funding to attract private dollars, where possible—is a key part of a preservation strategy. To do this will sometimes require subordination of HTF and other public debt. Subordination is a process by which a creditor is placed in a lower priority for the collection of its debt from its debtor’s assets. Generally, the creditor’s position remains subordinate whether the debt is collected from project cash flow or at the time of sale. Such a strategy will help owners meet loan-to-value requirements of private lenders, enabling existing projects to leverage private capital and therefore reducing the gap financing sought from public funders. Commerce regularly employs the strategy of debt subordination when new funds are being committed for capital improvements; however, this strategy only works for projects that have the financial capacity to support additional private debt payments.
- **Changing terms of HTF debt.** Commerce has the discretion to defer must-pay HTF loan payments. This strategy frees up net operating income to service additional private debt for capital improvement costs, and for building replacement reserve balances. Deferring required HTF loan payments would reduce the demand for new public dollars to fill the financing gap, though it would reduce loan repayment income to Commerce. Employing this strategy would require a public policy decision and a balanced approach, as Commerce depends on loan repayments to fund the operating costs of the HTF and to finance other non-capital program activities.
- **Reinvestment with HTF.** Another option is for the state legislature to commit new dollars to recapitalize existing projects within the HTF portfolio. Several states have established, or are considering establishing, set-asides to fund the preservation of existing projects. Compared to new construction, this is typically a more cost effective approach for maximizing the supply of

affordable housing, since the land is already owned. It also minimizes displacement of low-income residents and disinvestment in communities across Washington.

- **Syndication through bundling smaller properties for LIHTC transactions.** Smaller HTF properties can be “bundled” together so that the project achieves sufficient scale to be financed utilizing either 9% or 4% federal low-income housing tax credits (LIHTCs). See the section below for more information on how 9% and 4% LIHTC projects can be structured.

Strategies for the LIHTC Portfolio

The Commission oversees several sources of funds that may potentially be used in recapitalization projects. In general, LIHTC owners have greater capacity to manage recapitalization activities due to the larger size of their holdings and staff. The challenge the Commission faces is how best to deploy its resources to achieve both preservation and new production goals. However, innovative financing will not solve the preservation problem, since 9% LIHTC resources are limited and 4% LIHTC resources are best utilized in specific types and scopes of projects.

- **Use of 4% LIHTCs with bond financing.** Increasingly, owners are using 4% LIHTCs accessed through the sale of tax-exempt private activity bonds. LIHTC equity through a 4% transaction can cover between 25% and 35% of total project costs (including acquisition) based on what we know about typical previous deals. This represents a significant source of private financing to address capital needs without tapping into limited state and local public resources. Though this financing technique can be complex and costly, 4% LIHTCs are generally more readily available than 9% LIHTCs.

Practically, there are some constraints on effectively using 4% LIHTCs. Generally, investors are seeking equity investment opportunities of at least \$3 million per project. For properties undertaking rehabilitation work costing an average of \$25,000 per unit, this requires at least 120 units to attract investors. For properties undertaking major rehabilitation (e.g., \$65,000 in per-unit costs), a stand-alone property at 75 units may be viable, but will likely require additional public investment that is prohibitive. Bundling multiple properties into a single 4% LIHTC transaction is also a strategy being utilized by owners with multiple properties needing rehabilitation on a similar timeline.

- **New 9% LIHTC allocation.** Competitive 9% LIHTCs are a significant source of funding for preservation projects, typically funding 75% or more of total renovation costs. Although use of the federally limited 9% LIHTC resource on preservation of existing affordable housing reduces LIHTC funds available for new production, the cost of rehabilitation is generally less than new construction. Therefore rehabilitation frequently uses less LIHTCs per unit than new production. Nine percent tax credits are a good resource for projects with high levels of capital needs, when use of 4% LIHTCs would leave a significant funding gap. As discussed in the “Strategies for Commerce’s HTF Portfolio” section, states are establishing, or considering establishing, set-asides for preservation of existing projects. However, some states are adopting policies that target allocation of 9% LIHTC only to preservation projects which cannot preserve existing rent-restricted housing through 4% LIHTC allocations and/or other resources.

In recognition of the competing demands for the scarce 9% tax credit, in 2014 the Commission established a set-aside of the 9% tax credit for preservation and recapitalization projects.

- **Combining 4% and 9% LIHTCs.** Some developers are combining 9% and 4% LIHTCs, particularly on larger properties, allowing owners to target these different LIHTC models toward units that maximize the best of each financing strategy. Use of this financing structure requires dividing properties into separate ownership entities, which increases the complexity and transaction costs for projects. However, through this model, owners have used 9% LIHTCs on units with higher rehabilitation needs and/or lower rents, while using 4% LIHTCs to address lower levels of rehabilitation on a higher number of higher-rent units. This is a strategy that warrants some exploration as a recapitalization option for some properties.

Strategies Involving Local Funders

A sound portfolio recapitalization strategy for both portfolios must take into account the role of local public funders in addressing the portfolios' upcoming capital needs. Local government bodies, such as counties and municipalities, loan money to projects from their allocations of federal dollars and from other funding sources. The HTF and other local public funders often agree to defer their must-pay debt, which increases the borrowing capacity of properties and, consequently, further reduces the properties' financing gaps. A unified and coordinated approach to the preservation of affordable rental housing will continue to be an important part of the solution.

Strategies for Owners

Over half of the properties in the Study universe are owned by entities with large portfolios, having 10 or more properties with funding from Commerce and/or the Commission. Owners with large portfolios are likely to have the strong management and financial capacity required to undertake complex deal structuring activities. Owners with larger portfolios can move reserves among properties to match anticipated capital needs; this strategy could help delay refinancing or requests for gap financing from public funders. Owners with larger portfolios can also bundle properties, utilizing a common refinancing plan. Refinancing multiple properties at one time may reduce soft costs and allow for more favorable types of financing that are generally not feasible for small single-property transactions. Bundling rehabs may create some economies of scale. Bundling may also allow a stronger property to support properties with financial challenges and/or inability to support additional debt.

Future Considerations

There is a \$201 million gap between known financing resources and the five-year Capital Needs Costs of the projects examined in this Study. This gap can be covered only in part by the strategies discussed above; the larger part must be covered by new public resources or by reallocating existing public resources. The gap can be closed over time, but it should be noted that as properties in the portfolio age, other properties will have Capital Needs Costs that cannot be covered by project resources alone. Washington's public funders should continue to explore strategies that will reduce this financing gap for new projects coming on-line, including the following:

Consider the life cycle costs of building elements, not just the upfront costs. Even though this Study did not find any predictive relationship between capital needs and any other factors except the number of years since a project was placed in service, there are building components that do not last as long as others. In assessing the cost of any one building component, it is important to not just consider its upfront cost, but its maintenance cost over the years and its replacement cost once it wears out.

When underwriting new projects, use larger replacement reserve set-aside amounts and (continue to) require that the replacement reserve deposits increase annually to keep up with inflation. Given that this Study found that a very small percentage of projects have adequate replacement reserves (only 8% will be able to cover 50% or more of their estimated capital costs through replacement reserves), it is important to reconsider underwriting and regulatory guidelines relative to annual replacement reserve deposits and increase the amounts that projects set aside for future capital needs. Funding replacement reserves at a level high enough to meet the whole of a project's Capital Needs Costs is typically unrealistic; however, even a marginal increase to replacement reserve set-aside amounts on new projects will improve the overall risk profile and financial health of Washington's affordable housing portfolio.

Balance the needs of projects with high financing gaps with the needs of projects with lower financing gaps to maximize the number of units of affordable housing that can be preserved. Commerce and the Commission will need to consider targeting scarcer public resources, such as 9% LIHTCs, toward projects with higher financing gaps. Given scarce resources, the needs of the projects, particularly high-need projects may need to be spread out over time since they will utilize such significant public dollars. Commerce and the Commission will have to also balance high-need populations and high-need geographic areas. There may also be opportunities to nudge some developments toward longer-term sustainability with smaller per-project investments, given that, for 75% (275 of 365) of the projects with financing gaps, the gap is less than \$600,000, and for almost two-thirds the gap is less than \$300,000.

Recognize and acknowledge that affordable housing needs to be recapitalized periodically and does not have the same degree of access to private capital that market-rate housing enjoys. With restrictions on both rent increases and the sale of properties, affordable housing owners cannot generally use market-rate strategies such as property sales or large rent increases to fund long-term capital needs. Furthermore, the restricted rents on affordable housing mean that less cash flow from operations and from replacement reserves is available to cover the properties' long-term Capital Needs Costs. Restricted rents, particularly for properties serving very low-income residents, may result in gradually declining financial viability, even in well-managed properties. It should be assumed that public dollars will be needed to recapitalize a portion of the state's portfolio every year. Washington will need to set funds aside and reinvest them to preserve the existing housing.

Introduction

According to the National Housing Trust, for every new affordable home developed, two are lost due to deterioration, abandonment or conversion to more expensive housing.³ Affordable housing policymakers and practitioners have found that to maximize the supply of affordable housing, extending the useful life of existing housing through recapitalization/rehabilitation is, generally speaking, more cost-effective than building new housing. After all, repairing or replacing worn-out building systems in an existing structure often costs less than building a similar structure new, and does not require the purchase of expensive land. Maintaining the existing affordable housing supply is a critical piece of an overall strategy to meet the growing housing needs of Washington's residents.

Over the past 30 years, the State of Washington has supported the development of a large inventory of affordable housing, and a sophisticated industry has grown around it. Many affordable housing owners in Washington are at the forefront of the field nationally, and they have developed significant asset management capacity. Despite all of these successes, Washington faces many of the challenges that other states face in the effort to preserve existing affordable housing. One of the most critical challenges is how to maintain the physical condition of affordable housing properties so as to ensure they continue to provide high-quality homes for low-income residents.

Publicly assisted affordable housing properties have unique challenges in paying for necessary capital improvements. Project revenues are restricted due to required rent limits, so owners are typically not able to pay for major repairs from cash flow. Moreover, owners are often unable to take out loans to finance rehabilitation because revenues are insufficient to service the debt. Though most affordable properties are required to make regular deposits into special savings accounts, known as replacement reserves, to save for repairs and replacements, these amounts are typically not adequate to cover the whole of these costs.

Unlike affordable housing, market-rate properties are often improved when the real estate changes hands. When an owner sells a non-restricted property, the purchaser will commonly obtain financing to make needed repairs and upgrades and then increase rents to service the debt. Affordable properties are typically held by the same owner for a lengthy period, so required improvements must be financed in other ways.

The Washington State Department of Commerce (Commerce) and Washington State Housing Finance Commission (the Commission) have a shared interest in the long-term sustainability of the state's inventory of affordable housing. Both entities provide necessary and critical resources for the development and preservation of affordable housing. Commerce awards moneys from the Housing Trust Fund (HTF), a State resource that provides capital financing to projects that provide housing to low-income and special-needs households. The Commission finances affordable housing using a variety of programs including the federal Low Income Housing Tax Credit program, which provides equity to developers, and through the issuance of tax-exempt and taxable bonds. As part of their responsibilities, Commerce and the Commission oversee compliance obligations relating to both the physical condition and the long-term affordability of the properties in their portfolios.

³ "Why Preserve Affordable Housing?" National Housing Trust, http://www.nhtinc.org/why_preserve_affordable_homes.php.

Since 1987, together and separately, Commerce and the Commission have invested HTF and LIHTC resources in 1,656 properties totaling over 78,000 units across the state. As of 2015, over half of these units have been operating for more than a decade, and many of the properties will require some level of rehabilitation in the future in order to maintain their habitability. As with market-rate rental housing, the eventual need for recapitalization is certain. However, because of self-imposed and publicly mandated affordability restrictions affordable housing owners cannot rely on typical market recapitalization strategies of selling properties, instituting rent increases or taking on private debt to support these repairs. To prepare for the increasing needs of these properties, Commerce and the Commission are trying to anticipate what amount of public reinvestment owners will seek. A better understanding of the portfolios' upcoming capital needs and ability to self-finance those needs will assist Commerce and the Commission in prioritizing their future-year resources.

Commerce and the Commission jointly commissioned Housing Development Center (HDC) to conduct the Washington State Affordable Housing Portfolio Study (the WSAHPS or the Study). The goal of the Study is to examine the need for additional capital investments in rental properties funded by the HTF and LIHTC programs. The Study focused on the expected needs of Commerce's and the Commission's multifamily housing portfolios over the next five years. It also estimates the financial capacity of project owners to address those needs. Finally, the Study seeks to estimate resources required of Commerce and the Commission in order to preserve its investments in the stock of affordable housing.

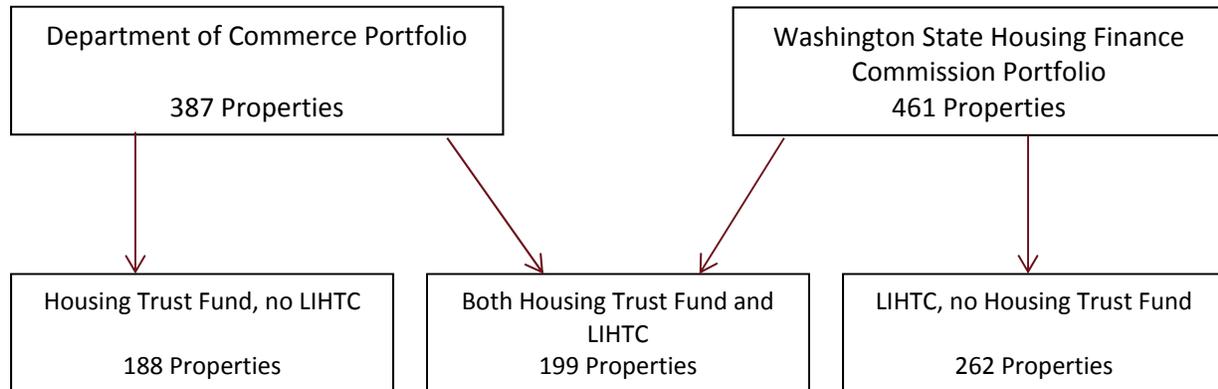
Specifically, the Study measured the properties' current and projected capital needs costs over the next five years and compared these costs with the properties' replacement reserve balances and their ability to raise additional loan proceeds. The difference between the available and needed proceeds is the *financing gap* for the portfolio. The financing gap represents the additional resources that may be needed from Commerce or the Commission in order to preserve their investments in the portfolio. The Study does not address the anticipated need for reinvestment over a term beyond five years, but the methodology applied here can be used to perform periodic updates to this Study's estimates.

Given limited Study resources, Commerce and the Commission elected to focus this Study on those properties most likely to represent the bulk of needed reinvestment over the next five years. The scope of the Study was limited to properties in the HTF and LIHTC portfolios that are 10 or more years old and have 10 or more dwelling units, because it is assumed that this segment of the portfolio will have the greatest capital needs and capital needs costs per property. The Study also excluded emergency shelters, transitional housing and dormitory-style projects such as seasonal farmworker housing. Though important to the state's housing mission, these types of projects are distinct from typical multifamily projects and are less likely to have project resources to support their capital needs costs. This delineation by age, project size and project use yields a Study universe of 649 properties containing approximately 38,000 units.⁴

Within this Study universe, the properties can be compared by agency (Commerce's projects, with and without LIHTC versus the Commission's projects, with and without HTF) and by funding type (HTF only, LIHTC only, or both HTF and LIHTC). The Study found that overall, properties' needs and their abilities to address those needs varied more significantly by funding type (HTF, LIHTC or both) than by agency. Therefore, the Study discusses the findings primarily by funding type, although additional information is

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A data workbook has been prepared to help Commerce and the Commission project capital needs over a longer term.

The Physical Condition of Our Affordable Housing

The Cost to Preserve Our Affordable Housing

HDC estimates that the 649 properties in the Study universe⁵ are facing minimum capital costs and related soft costs of approximately \$391 million for the five-year period ending in 2019. This equates to an average of \$10,330 per unit across the portfolio, which contains nearly 38,000 units. “Capital costs” refers to expenditures for the replacement or rejuvenation of major building systems such as roofs, heating and cooling mechanisms, elevators, etc. “Related soft costs” are the architecture, project management and other expenses involved with the above-described work. HDC’s estimate includes an inflation factor to account for expected cost increases during the five-year period. (These capital and soft costs are collectively referred to as Capital Needs Costs in this Study.)

As shown below, the properties financed by the HTF had the highest per unit capital needs, while LIHTC only projects had the lowest per-unit capital needs, on average:

Capital Needs Costs Per Property and Per Unit by Funding Source(s)

Funding Source	Capital Needs Costs			Properties in Study		Units in Study	
	Total	% of Total	Avg. Per Unit ⁶	Count	% of Study	Count	% of Study
HTF only	\$80,600,533	21%	\$13,921	188	29%	5,790	15%
LIHTC only	\$198,465,276	51%	\$9,226	262	40%	21,512	57%
Both	\$111,557,831	29%	\$10,610	199	31%	10,514	28%
Total	\$390,623,639	100%	\$10,330	649	100%	37,816	100%

- **Department of Commerce Portfolio:** The 387 properties that were financed with HTF dollars (with or without LIHTCs) have about \$192 million in Capital Needs Costs.
- **Washington State Housing Finance Commission Portfolio:** The 461 properties that were financed with LIHTCs (with or without HTF) have about \$310 million in Capital Needs Costs.
- **Overlap of HTF and LIHTC projects:** Since there are 199 properties that were funded with both HTF and LIHTC (representing \$112 million in Capital Needs Costs), adding the numbers in the two bullets above does not provide a portfolio total.⁷

⁵ The Study universe properties in the HTF and LIHTC portfolios that are 10 or more years old with 10 or more units.

⁶ These average per unit numbers are based on the entire Study portfolio of properties including properties with capital needs ranging from none to much higher than average.. The average per unit could understate (or overstate) the amount of Capital Needs Cost for any one particular unit in the Study, There are more detailed calculations provided below that on only those properties in the Study portfolio with projected Capital Needs Costs within the five-year period

⁷ To obtain the capital need number in the matrix above, one would subtract the jointly funded projects from the Commerce and Commission portfolio numbers: (\$192 million plus \$310 million minus \$112 million equals @\$390 million).

- Compared to Commerce’s portfolio, the Commission’s portfolio’s has greater capital needs because it is larger (461 properties compared to 387 properties) and because it contains more units overall and more units per project, on average. Indeed, the Commission’s portfolio has almost twice as many units as Commerce’s portfolio: 32,026 units as compared to 16,304 units. The average number of units per project in the Commission’s portfolio is 69, compared to 42 for Commerce’s portfolio. (These averages include the 199 properties that overlap the two portfolios. Averaging the units in the Commission’s and Commerce’s portfolios only would result in an 82 average unit size per LIHTC-only project in the Commission’s portfolio and a 31 average unit size per HTF-only project in Commerce’s portfolio.)

The \$391 million estimate is for current and anticipated Capital Needs Costs for the 649 properties in the combined HTF and LIHTC portfolios. This estimate was derived from a combination of known costs and extrapolated costs, explained in Appendix B, Methodology. The estimate is conservative because the Study methodology, consistent with internationally recognized American Society for Testing and Materials (ASTM) models focused on major building systems and, unless specifically included by project owners, did not include elective upgrades (e.g., to increase energy efficiency) or the costs of routine interior upgrades that are customarily handled through funding from operations.

In addition, this Study finding does not represent the total Capital Needs Costs of the HTF and LIHTC portfolios. This is because, first, the Study excludes emergency shelters, transitional housing and dormitory-style projects, such as seasonal farmworker housing from the HTF portfolio; and, second, there may be some properties in the HTF or LIHTC portfolio that are less than 10 years old with “premature” capital needs, most typically due to construction defects or very limited rehabilitation completed at acquisition. The per-unit averages should also be considered to be low, since there are a number of properties in each funding category that do not yet have capital needs. If those properties are excluded from the totals, the average Capital Needs Costs per project and per unit increase.

HTF and LIHTC Capital Needs Costs

As shown in the table above, the average per unit cost for HTF projects is higher than the average per unit cost for LIHTC projects. There are several possible reasons for this. HDC ran a multiple regression equation to investigate whether there is any relationship between funding source and capital cost estimates⁸. The model found that properties funded only by HTF (without LIHTCs) had 39% higher total costs per unit when compared to properties with LIHTCs. Further investigation showed that the difference in capital needs costs across funding sources is attributable to the difference in average project size (that is, LIHTC properties have a greater number of units, on average).

The average size of an HTF project is 31 units, compared to 82 units for a LIHTC project. Smaller projects have fewer units over which to spread fixed costs. Smaller projects also have proportionately more building envelope area which results in higher exterior costs per unit. Conversely, LIHTC-funded projects have higher *total* capital needs costs than HTF funded projects primarily because there are more projects and substantially more units funded with LIHTCs within the study group.

⁸ The regression equation is provided in Appendix B: Methodology.

Properties without Anticipated Capital Needs through 2019

HDC found that a subset of the HTF and LIHTC portfolios did not have any capital needs and prepared an estimate that a total of 155 properties (approximately 9,300 units) in the 649-property Study universe will not require capital investments in the next five years.

To calculate this portfolio estimate, HDC started with the Capital Needs Survey responses, which indicated that 74 out of the 310 properties for which HDC received responses are not expected to have capital needs requiring attention in the next five years. This is equal to 24% of the 310 properties.

To estimate the number of properties in the remaining 339 properties in the Study universe that may not have five-year Capital Needs Costs, HDC applied the 24% factor to these properties. Approximately 81 additional properties in this portion of the Study universe are assumed to not have five-year capital needs.

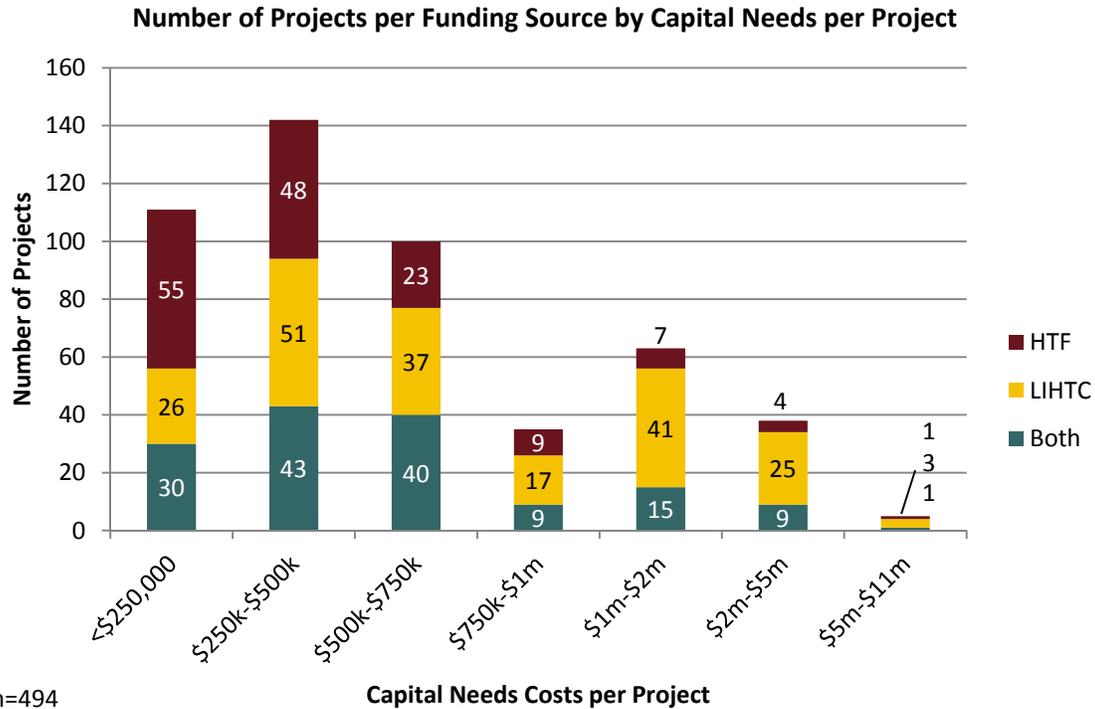
The portions of properties without five-year Capital Needs Costs in the two segments of the portfolio were added together to obtain the 155 property estimate for the entire portfolio.

Study Focus – Properties with Capital Needs

The remainder of the Study findings and the discussion below focus on the portion of the portfolio (76% of the portfolio, representing 494 properties and 28,495 units) that are expected to have capital needs through 2019.

Per-Project and Per-Unit Costs

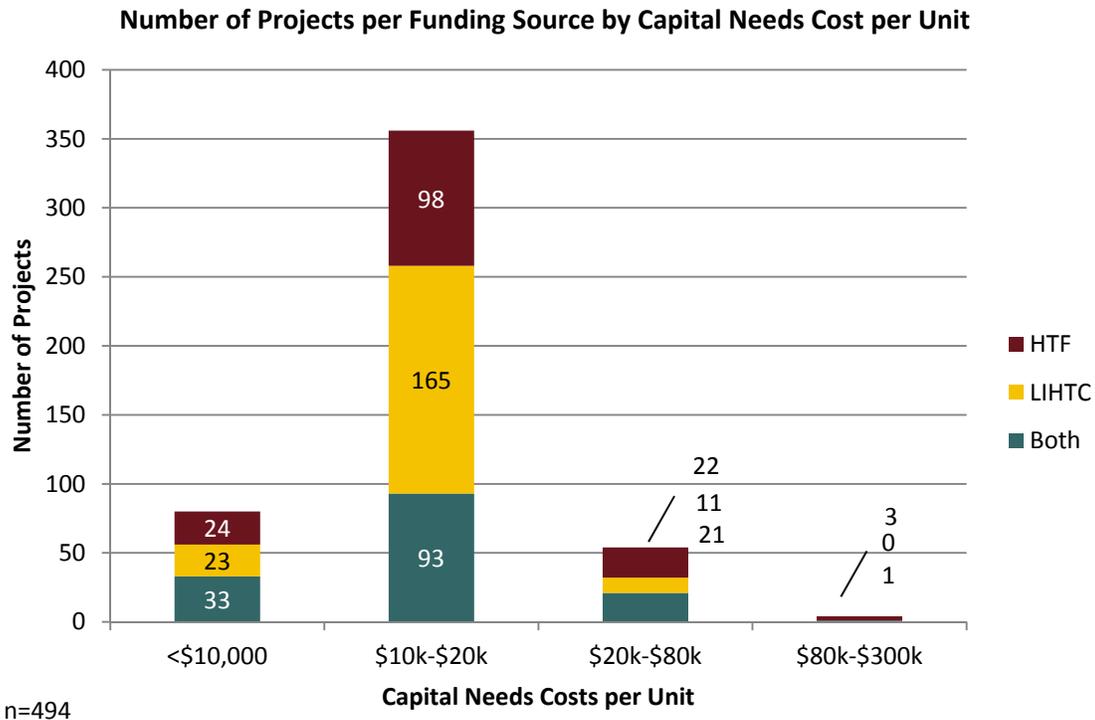
Excluding the properties without capital needs results in an average Capital Needs Costs of \$801,000 per property and \$16,000 per unit. The costs include hard construction costs, construction contingency and soft development costs, and are adjusted for inflation.



The table above shows that over 50% of the projects with capital needs have Capital Needs Costs of less than \$500,000 per project and approximately 70% of the projects with capital needs have Capital Needs Costs of less than \$750,000 per project. Many of the projects with Capital Needs Costs of under half a million dollars are small properties. The average property size of projects with less than \$500,000 in Capital Needs Costs is 27 units, as compared to an average property size of 58 units for all 649 projects.

The average per-unit amounts are lower than what is typically seen in a full rehabilitation because some of the projects do not have capital needs in the next five years that are sufficient to justify a full rehabilitation. Smaller total Capital Needs Costs can frequently be addressed without the complexity and consequent soft costs that come with assembling equity and debt, whereas larger Capital Needs Costs cannot. Some sponsors with limited project costs may also elect to defer capital investments until more comprehensive rehabilitation can be undertaken.

About 80% of projects funded through Commerce are facing Capital Needs Costs of less than \$750,000 per project for the five-year time period. About 65% of projects funded by the Commission have Capital Needs Costs of less than \$750,000, yet LIHTC projects have a broader range of per-project Capital Needs Costs. Thirty-four (34) LIHTC properties (7% of the LIHTC portfolio) have Capital Needs Costs of more than \$2 million in the next five years, while 18 HTF properties (5% of the HTF portfolio) have Capital Needs Costs of more than \$2 million in that same time frame.



Approximately 72% of the portfolio had Capital Needs Costs of between \$10,000 and \$20,000 per unit, and 88% of the portfolio had Capital Needs Costs of up to \$20,000 per unit. A much smaller proportion of the portfolio (11%) had Capital Needs Costs between \$20,000 and \$80,000 per unit, and an even smaller proportion of the portfolio (less than 1%) had Capital Needs Costs between \$80,000 and \$300,000 per unit.

Also, although most HTF projects have smaller Capital Needs Costs *per project* (compared to LIHTC projects), the *per-unit* costs are significantly higher due to distributing the costs over a relatively smaller number of units. There are four HTF projects with per-unit Capital Needs Costs greater than \$80,000. HTF projects have higher per-unit Capital Needs Costs, but, because they have, on average, fewer units than LIHTC projects, the cost per HTF project is lower.

Analysis to Determine Which Factors Affect Costs

HDC ran regression analyses to estimate the relationship between Capital Needs Costs and several factors, including funding source, project size, placed-in-service (PIS) date, location, average cash flow per unit, project type (new construction or acquisition/rehab) and others. A full list of factors and regression techniques used is included in *Appendix B: Methodology*. Generally, a regression analysis is a statistical process for estimating the relationships among variables. It allows researchers to model and analyze several variables, while focusing on the relationship between a dependent variable and one or more independent variables. A regression analysis helps us understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed. A regression analysis shows correlations among variables, but does not define causation.

Based on the regression models, HDC found that the strongest predictor of whether property owners are likely to be able to cover their outstanding and upcoming capital expenses is the *number of years since placed in service*. This is not a surprising finding. As building systems and components age they approach the end of their expected useful lives and need to be replaced, incurring costs. This Study did not find any predictive relationship between capital needs and other factors, such as number of units, owner portfolio size, location and funding source. Number of years since a major capitalization is the most highly correlated factor of those examined.

This finding suggests that the need for recapitalization is standard in publicly assisted affordable housing, just as it is in market-rate housing. As properties age, they will require rehabilitation, regardless of any mitigating circumstances. However, market-rate housing does not face the same challenges as affordable housing. Market-rate housing is able to appraise at a higher value because it is not revenue-restricted; therefore, owners of market-rate housing typically sell or refinance in order to address capital needs. Owners of affordable housing typically do not have these options because of long-term restrictions placed on the properties by funders, which have the dual effect of reducing appraisal values and limiting cash flow available for property improvements.

The multiple regressions also found that for each additional unit of bedroom density⁹, capital costs per unit increase by 34%. Again, it is not surprising that units with more bedrooms will tend to have higher costs. See the Methodology appendix for more description of the regression findings.

⁹ Bedroom density is defined in this Study as the average number of bedrooms per unit in a property.

How Will We Pay for Needed Improvements?

Rent-restricted affordable housing properties provide homes for more than 77,000 households across Washington. These properties represent a significant public investment by local, state and national funders. As with market-rate properties, affordable housing building systems (roofs, siding, windows and heating systems, etc.) need replacement over time. However, affordable housing faces some unique challenges when it comes to paying for these improvements. With deed restrictions limiting rent increases, affordable housing owners cannot generally use market rate strategies such as property sales or large rent increases to fund long-term capital needs (these deed restrictions may even survive the sale of properties). Furthermore, the restricted rents on affordable housing, intended to achieve an important affordability mission, also mean less cash flow from operations to support refinances or to directly pay for capital improvements. For properties targeted to very-low income residents, restricted rents in combination with rising operating costs may result in gradually declining financial viability, even in well-managed properties. Without sufficient routine maintenance and proper capital infusion, it is possible that significant portions of the public sector's initial public investment, especially investments in those properties with the lowest rents serving the poorest households, will be lost.

Although most affordable housing properties set aside reserves to address upcoming capital needs, this Study found that most of the properties in the study universe have insufficient reserves to meet expected capital needs over the next five years. In fact, only four percent of the properties have sufficient funds in their replacement reserves to cover 75% to 100% of projected capital needs. Another 25% of the properties have reserve funds sufficient to cover 25% to 50% of five-year capital needs. The vast majority of the properties will need to rely on other resources other than reserve funds to maintain the viability of the housing units.

In addition to property replacement reserves, if a property has high net operating income (due, for instance, to low existing debt levels) or if a property has a high current interest rate on one or more of its loans, refinancing the primary loan may be an option. HDC found that refinance is an option for about 228 properties—about 35% of the Study universe. However only 189 of these 228 properties can fully cover their capital needs through refinancing. For the remaining 89 properties, proceeds from refinancing would cover only a portion of the capital needs costs. For purposes of this estimate, the Study considered refinance as an option when the net proceeds from the refinance were greater than the Capital Needs Costs less replacement reserves.

The Study found that projects funded with LIHTCs are more likely to be able use this refinancing strategy than are properties financed only with HTF dollars. Many HTF properties serve populations of 30% area median income (AMI) and below. With such low rental revenues, these properties are much less likely to have sufficiently high net operating income to support a refinancing that would cover their full Capital Needs Costs. This is true whether the properties' fitness is assessed from a valuation perspective or a net operating income perspective.

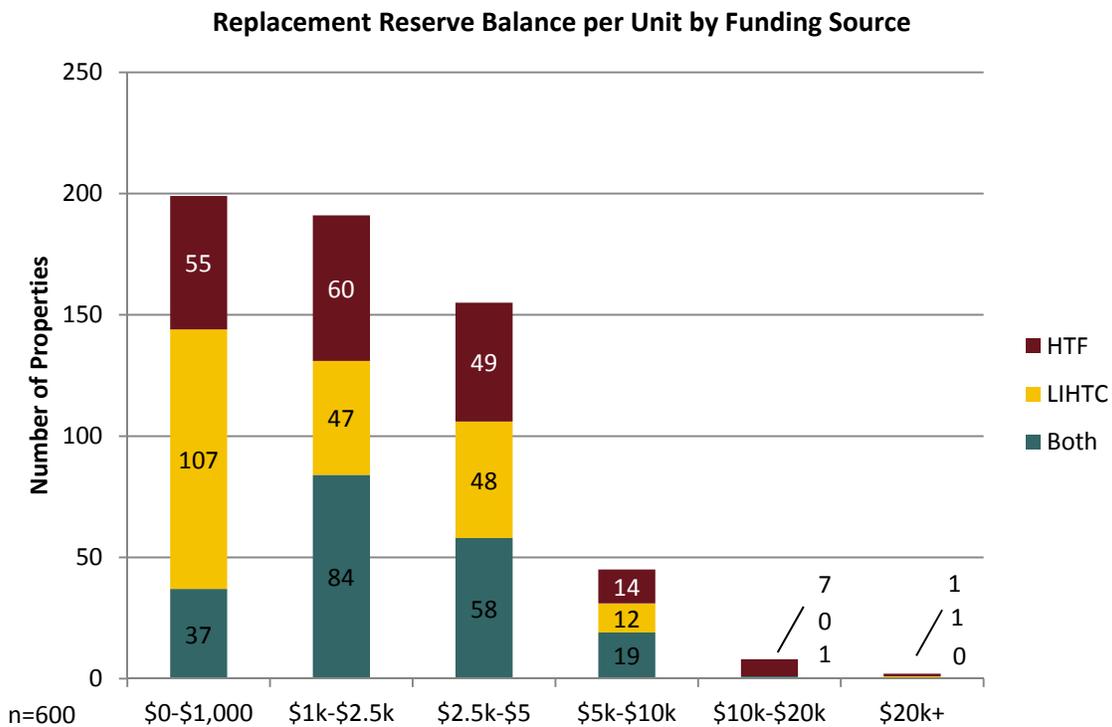
There are several potential sources of funds to pay for needed improvements to a given property. These sources include the property's replacement reserves, surplus cash flow and loan proceeds from refinancing the property. Of course, the circumstances of different properties will vary depending upon the cost of repairs, the balance of replacement reserve accounts, operating cash flow, property valuation based on restricted rents, and credit worthiness of the property owner. We expect that owners will first utilize their own resources before seeking assistance from the state or other public

agencies. Thus, the estimated \$391 million in Capital Needs Costs will not be borne by the public sector alone. The following is a closer look at the sources of funds for capital improvements.

Replacement Reserves

Many properties set aside operating dollars monthly to cover longer-term capital replacement and repair needs in a replacement reserve. Commerce and the Commission assume that owners will turn to this resource first to meet their properties' capital needs. This is the first area that HDC studied to see what funds are available to cover the approximate \$391 million in capital needs.

The per-unit balances vary widely, with a range of \$0 to almost \$80,000 per unit. The average per-unit replacement reserve amount is \$2,458. Forty-five properties have a reserve balance of zero dollars.

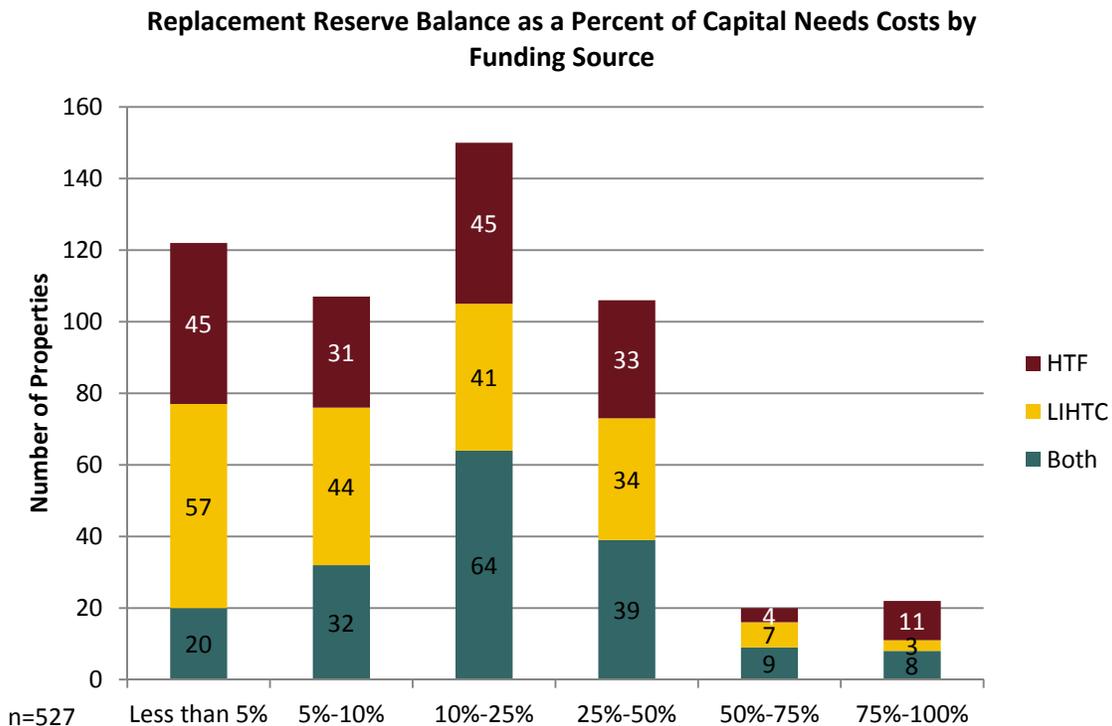


Only a small percentage of properties (4%) have replacement reserves sufficient to pay for 75% to 100% of capital needs. Another 4% can cover between 50% and 75% of estimated Capital Needs Costs with reserves. In summary, only 8% of the properties will be able to cover 50% or more of their estimated Capital Needs Costs with reserves. Forty-nine percent of the properties can cover between 10% and 50% of the Capital Needs Costs with their replacement reserves, and an additional 20% of the properties can only cover between 5% and 10% of the Capital Needs Costs with their replacement reserves. Twenty-three percent of the properties have replacement reserves of less than 5% of their estimated Capital Needs Costs. These breakdowns are shown in the table below.

Percentage of properties with sufficient replacement reserves to pay for 75% – 100% of capital needs	4%
Percentage of properties with sufficient replacement reserves to pay for 50% – 75% of capital needs	4%
Percentage of properties with sufficient replacement reserve to pay for between 10% – 50% of capital needs	49%
Percentage of properties with sufficient replacement reserve to pay for between 5% – 10% of capital needs	20%
Percentage of properties with sufficient replacement reserves to pay for 5% or less of capital needs	23%

Clearly, replacement reserves alone will not be sufficient to pay for the properties’ capital improvements.

To determine reserve balances, HDC started with owners’ responses to the Capital Needs Survey. Replacement reserve balances for 283 properties as of May 2014 were provided by owners. For the remainder of the properties, HDC used the 2013 replacement reserve ending balances from the Web-Based Annual Report System (WBARS), a system used to submit annual project reports to both Commerce and the Commission. (According to the data in WBARS, 45 properties have a zero replacement reserve balance.) There was no data provided by owners or available in WBARS on replacement reserve balances on 49 of the properties. Thus, HDC has replacement reserve balance information for 600 properties in the Study sample.



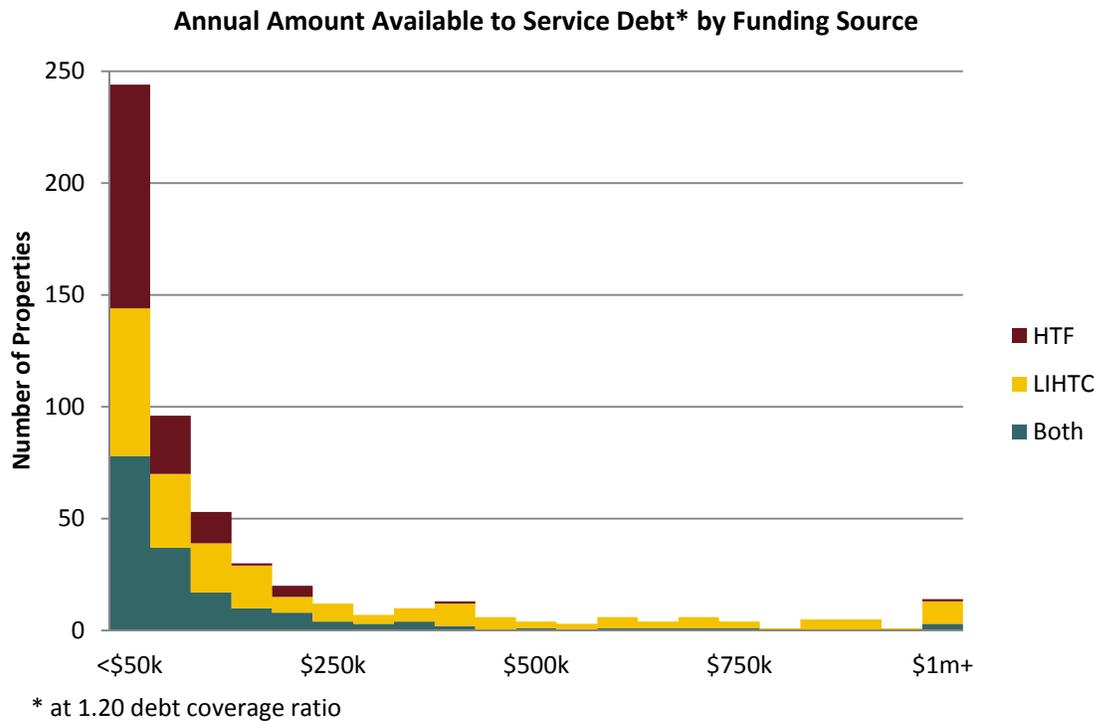
The chart above contains information about 527 properties, which is the number of properties with capital needs and for which HDC has replacement reserve balance data.

Refinancing with Private Debt

By refinancing existing loans and taking advantage of lower interest rates, some property owners may obtain additional funds to help pay Capital Needs Costs. For affordable housing properties, the ability to take on new debt is constrained by net operating income (revenues less operating expenses) and by

loan-to-value requirements since appraisers use net operating income in the income method of valuation. Since both methods of determining how much new debt a property can take on tie back to net operating income, for the purposes of the modeling in this Study, HDC assumed that debt coverage ratios will be the limiting factor in obtaining new debt.

Many of the properties in the Study (44% or 244 out of 557) were shown to have the ability to service less than \$50,000 in debt annually. A further breakdown indicates that 158 of these 244 properties have the ability to service less than \$25,000 in debt annually. The remaining 86 properties have the ability to service between \$25,000 and \$49,999 in debt annually. Properties funded by LIHTCs tend to have more cash available to service debt than properties funded by HTF. Fifty-five properties did not have sufficient net operating income in the last two years to model a refinancing scenario. Twenty-eight of those properties were funded with HTF only, 25 were funded with both HTF and LIHTCs, and two were funded with LIHTCs only.



HDC analyzed opportunities to refinance the existing debt on properties for the purpose of taking out equity to pay for capital needs. To estimate the ability of properties in the Study to realize additional capital through refinancing, HDC used the average net operating income over the last two years, as reported in WBARS, and an initial debt coverage ratio of 1.20 to size potential new loans. This process is detailed in the Methodology appendix.

After determining the amount of debt that the properties could service based on average net operating income, HDC chose a moderately conservative loan product to estimate the ability of properties to realize additional capital through refinancing.

Current conventional multifamily mortgage terms are roughly 6% for a 30-year fixed-rate loan; however, many owners are using shorter-term or variable-rate loan products to refinance for smaller

improvement projects or to improve net cash flow¹⁰. Given the range of loan products available (ranging from 30-year to 10-year loan terms and with higher to lower interest rates dependent upon the loans' terms, HDC chose to model the amount that could be raised through property refinancing using a loan with a 15-year *loan term*, a 30-year *amortization period* and a 5.5% *interest rate*. For the purposes of this analysis, HDC assumed that the properties would refinance the loan balloon due at the end of the 15-year loan term with a loan with comparable terms.

Surplus/Gap Analysis

HDC estimates that the properties in the Study are facing a collective financing gap of approximately \$201 million to address their five-year (2015 – 2019) Capital Needs Costs.

HDC calculated the ability of each property to pay for its Capital Needs Costs. Sources of funds for this calculation are the new potential loan amount and the replacement reserve balance. Uses of funds are the “must-pay” debt balances that must be paid off in refinancing and the capital needs costs. This analysis determined whether refinancing could generate any equity to pay for Capital Needs Costs. The sources and uses of funds chart below depicts the surplus/gap analysis used:

Surplus/Gap Analysis

Sources
New Loan Based on DCR (A)
Replacement Reserves (B)
Uses
Existing Must-Pay Debt (C)
Capital Needs Costs (D)
Net Proceeds (A + B) – (C + D) = Surplus or (Gap)

Findings from this analysis may be found in the following *Financing Gap* section.

Projects' Ability to Refinance

HDC found that refinancing is a potential option for 228 properties, or 35% of the total properties in the Study and 46% of the properties in the Study with capital needs anticipated in the next five years. Refinance is considered an option when the Net Proceeds from the Surplus/Gap Analysis shown above are greater than the capital needs costs less replacement reserves. This finding is an estimate only, as there may be extenuating circumstances making refinancing infeasible that are beyond the scope of this Study.

Of the 228 properties that have the capacity to refinance, proceeds from refinance covers the full Capital Needs Costs for 139 properties. For the remaining 89 properties, proceeds from refinancing cover only a portion of the Capital Needs Costs.

¹⁰ Also, bond financing and FHA-insured loans often generate interest rates below conventional loans, and some owners will likely refinance with tax-exempt bonds in order to access equity through 4% LIHTCs. These additional options indicate that this refinancing analysis is slightly conservative (i.e., more properties may be able refinance with slightly better terms).

HDC modeled the amount that could be raised through properties’ refinancing using a moderately conservative loan with a 15-year loan term, a 30-year amortization period and a 5.5% interest rate. For the purposes of this analysis, HDC assumed that the properties would refinance the loan balloon due at the end of the term at year 15 with a loan with comparable terms.

Projects with low must-pay debt balances and those with high net operating income are the most likely to be able to use refinancing as a strategy for securing private funding for Capital Needs Costs. Projects funded with LIHTCs are more likely to be able to refinance in order to address capital needs.

Funding Source	Properties with Ability to Refinance	Total Properties	Properties with Ability to Refinance as a Percentage of Total Properties
HTF	45	188	24%
LIHTC	121	262	46%
Both	62	199	31%
Total	228	649	35%

It would be reasonable to assume that older projects would have paid down enough principal on must-pay debt that they would be able to take out equity. In fact, the opposite appears to be the case: the older the project, the less likely it is to be able to be refinanced. Within the Study universe, projects that were placed in service 10-14 years ago (the most recent category of projects) are most likely to be able to refinance to raise capital for Capital Needs Costs. Greater age does not seem to be associated with a greater ability to refinance.

Years since Placed in Service for Properties with Ability to Refinance

Years Since Placed in Service (PIS)	HTF		LIHTC		Both		Total	
	<i>Count</i>	<i>% of HTF Projects</i>	<i>Count</i>	<i>% of LIHTC Projects</i>	<i>Count</i>	<i>% of Both Projects</i>	<i>Count</i>	<i>% of All Projects</i>
10-14 years	9	20%	59	49%	39	63%	107	47%
15-19 years	21	47%	52	43%	20	32%	93	41%
20-24 years	10	22%	9	7%	3	5%	22	10%
25+ years	5	11%	1	1%	0	0%	6	2%
Total	45	100%	121	100%	62	100%	228	100%

Number of units does not demonstrate a consistent correlation with the ability to realize new capital through refinancing, indicating other factors likely override the expected advantage of project scale. While larger projects funded with LIHTCs are more likely to realize new capital through refinancing private must-pay debt, the same does not hold true for projects funded with HTF, as shown in the table below. Likely factors such as level of capital needs, bedroom density or targeted rent levels may be overriding the expected impact of project size.

Size of Properties with Ability to Refinance

Number of Units	HTF		LIHTC		Both		Total	
	Count	% of HTF in unit category	Count	% of LIHTC in unit category	Count	% of Both in unit category	Count	% of All in unit category
10 - 29	27	60%	14	12%	18	29%	59	26%
30 - 59	16	36%	36	30%	27	44%	79	35%
60 - 89	1	2%	15	12%	3	5%	19	8%
90 - 119	0	0%	10	8%	5	8%	15	7%
120 +	1	2%	46	38%	9	15%	56	25%
Total	45	100%	121	100%	62	100%	228	100%

Properties with No Gap

HDC estimates that approximately 44% of the 649 properties in the Study universe will be able to pay for their Capital Needs Costs in the next five years through project-generated resources. Almost 24% of the Study universe of properties is expected to have little to no major capital expenses through 2019, while another 20% should be able to cover the Capital Needs Costs through use of reserves and/or refinancing. These properties have property resources (the \$190 million total cited above) sufficient to meet their Capital Needs Costs.

Listed below is the expected number of properties by funding source expected to have no gap and require no additional public funds in the next five years. (Calculations assume a loan with a 15-year term, 30-year amortization period and a 5.5% interest rate, as described above.)

Funding Source	Projects Without Capital Needs Costs		Projects With Capital Needs Costs but No Gap	
	Count	Percent	Count	Percent
HTF only	36	23%	27	21%
LIHTC only	63	41%	74	57%
Both	56	36%	28	22%
Total	155	100%	129	100%

As discussed earlier in this report, projects with LIHTCs represent approximately 71% of the total properties in the Study, while HTF properties with no LIHTCs represent 29%. Therefore, as shown above, a higher percentage of LIHTC properties, as compared to HTF properties, are estimated to have the resources to pay for their Capital Needs Costs over the next five years. About 45% of properties funded with LIHTCs are expected to have the resources to cover their five-year Capital Needs Costs, compared to just over a quarter of properties funded with HTF.

The Role of Public Funders

Commerce, the Commission and HDC chose to model the amount that could be raised through property refinancing using a moderately conservative loan with a 15-year loan term, a 30-year amortization period and a 5.5% interest rate, and assuming a standard 1.20 debt service coverage ratio. For the purposes of this analysis, HDC assumed that the properties would refinance the loan balloons due at the end of 15 years with a loan with comparable terms. Using these loan terms, HDC calculated that a net amount of approximately \$190 million could be raised by applying property reserves and funds from refinancing (net of retiring all existing must-pay debt) to the properties' Capital Needs Cost estimates.

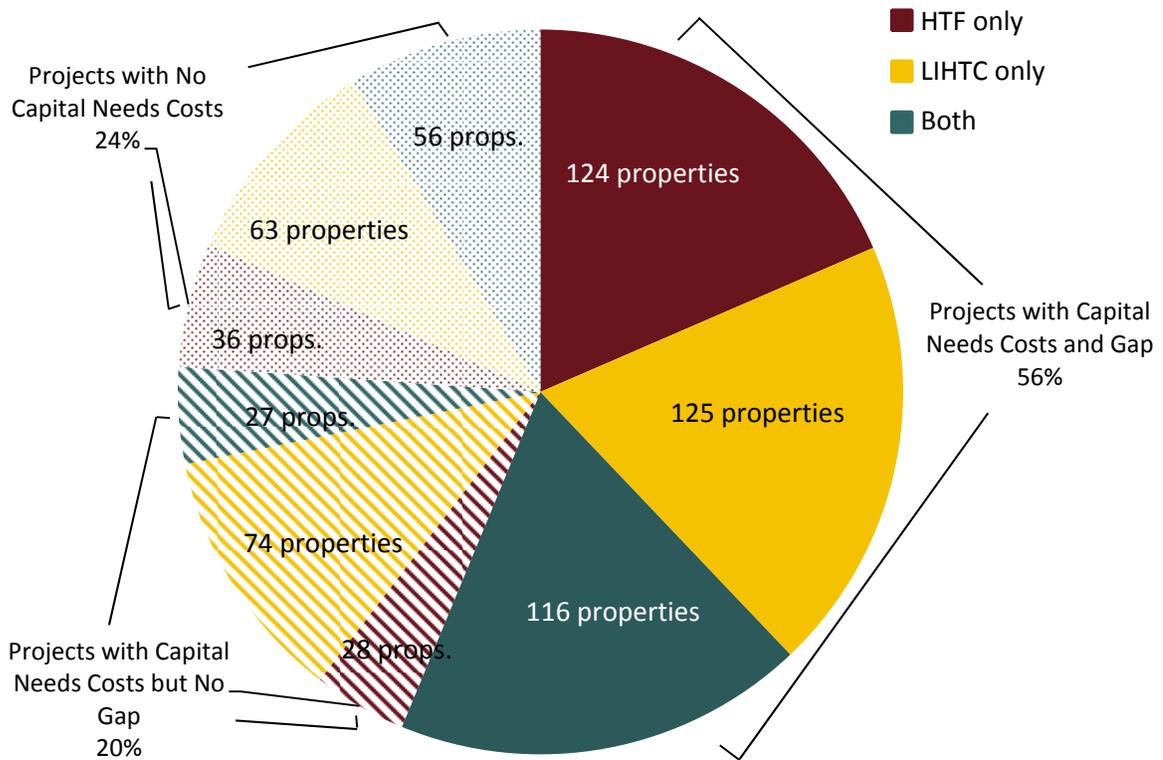
Subtracting the \$190 million in funds that could be provided through property resources from the \$391 million in five-year (2015 – 2019) Capital Needs Costs results in a gap of \$201 million, as shown in the calculation below:

	Financing Gap Assuming a 15- Year Loan
Capital Needs Costs	\$390,623,638
Property Resources	-\$189,744,995
Total Financing Gap	\$200,878,643

Therefore, this Study estimates that the properties in the Study are facing a collective financing gap of approximately \$201 million to address their five-year (2015 – 2019) Capital Costs. This financing gap represents a need for public reinvestments of approximately \$550,000 per project, or approximately \$12,500 per unit¹¹. The average is for those properties in the Study universe that have Capital Needs Costs in the next five years and also have a financing gap after replacement reserves and proceeds from the modeled refinancing scenario are taken into account.

¹¹ If this financing gap were averaged across the full 649 project Study universe, the per project and per unit amounts would be lower.

Properties' Ability to Cover Capital Needs



Funding Source	Study Universe		Properties with No Capital Needs Costs		Properties with Capital Needs Costs but No Gap		Properties with Capital Needs Costs and Gap	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
HTF only	188	29%	36	23%	28	22%	124	34%
LIHTC only	262	40%	63	41%	74	57%	125	34%
Both	199	31%	56	36%	27	21%	116	32%
Total	649	100%	155	100%	129	100%	365	100%

Financing Gap for HTF and LIHTC Projects

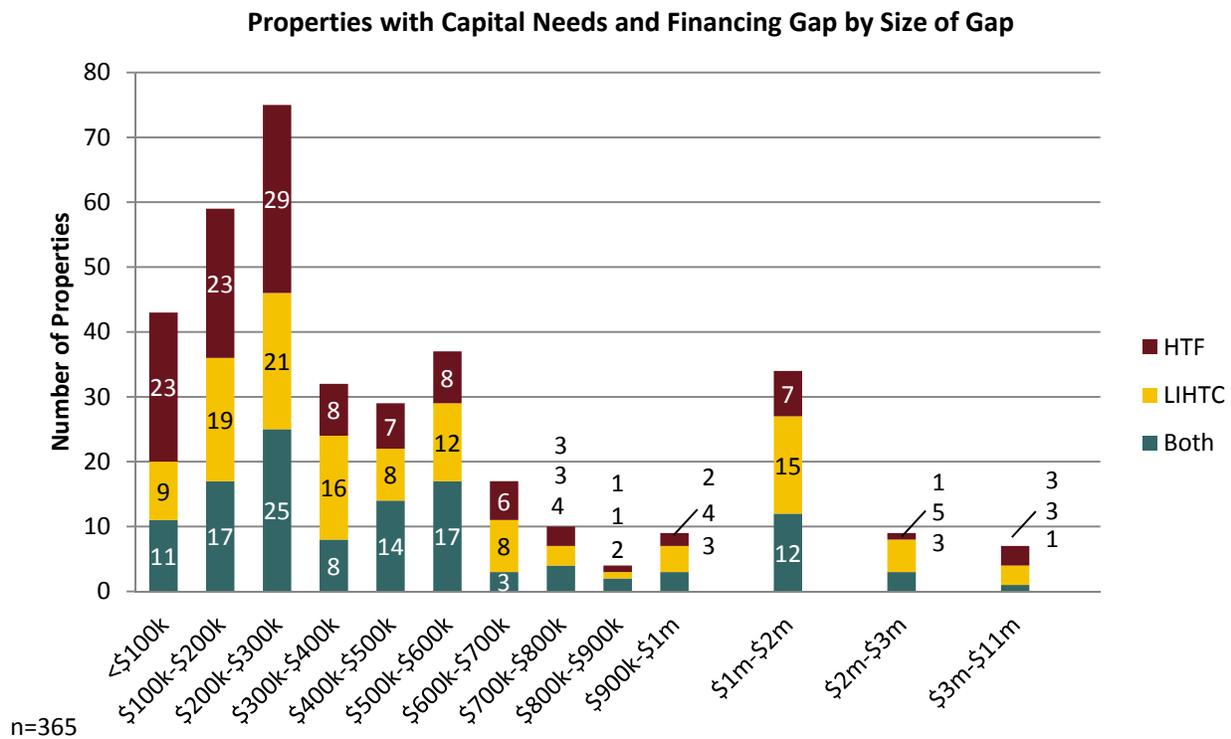
The financing gap was found to be evenly distributed among HTF and LIHTC properties, according to each funding sources' share of properties in the Study universe.

- Department of Commerce Portfolio:** The 387 properties that were financed with HTF (with or without LIHTCs) have a financing gap of approximately \$121 million.

- **Washington State Housing Finance Commission Portfolio:** The 461 properties that were financed with LIHTCs (with or without HTF) have a financing gap of approximately \$145 million.
- **Jointly Funded HTF and LIHTC projects:** The 199 properties in the Study that were financed with both HTF and LIHTC have a financing gap of approximately \$65 million. (Since this is the overlapping portion of Commerce and the Commission’s portfolios, subtracting this \$65 million from the numbers in the two bullets above provides the portfolio total.)

<i>Funding Source (% of Study)</i>		Financing Gap Assuming a 15-Year Loan	
		<i>Gap</i>	<i>% of Total</i>
HTF	29%	\$55,618,747	28%
LIHTC	40%	\$79,712,887	40%
Both	31%	\$65,547,010	33%
Total	100%	\$200,878,643	100%

About 75% of the properties with a gap (275 of the 365 properties with a gap) have a five year (2015 through 2019) financing gap of less than \$600,000; almost two-thirds (177 properties) have a gap less than \$300,000. Of the remaining 90 properties, most of the properties’ gaps are clustered between \$600,000 and \$2 million. There are 50 projects, or 14% of the properties with a financing gap, with a gap of greater than \$1 million. A gap as high as this can only be met by a complete project recapitalization.



The above chart shows the financing gaps for 365 properties. This is the number of properties with Capital Needs Costs in the next five years that also have a financing gap. In other words, of the 494

properties with Capital Needs Costs, 365 have a financing gap after replacement reserves and proceeds from the modeled refinancing scenario are taken into account.

Financing Gap for the HTF Portfolio

Of the 387 properties in the Study universe funded by the HTF (with and without LIHTCs), 240 (62%) are estimated to need gap financing in the next five years. Fifty-five properties (14%) are estimated to be able to cover their anticipated costs, and 92 properties (about 24%) are not expected to have Capital Needs Costs prior to 2019.

The average per-property financing gap for the 240 properties with HTF funding (with and without LIHTCs) that have Capital Needs Costs and a financing gap is \$507,000.

Financing Gap for LIHTC Portfolio

Of the 461 properties in the Study universe financed with LIHTCs (with or without HTF funding), 241 properties (52%) are estimated to need gap financing in the next five years. One hundred nineteen properties (119 or about 26%) of the 461 properties funded with LIHTCs are not anticipated to have Capital Needs Costs through 2019. About 101 (22%) of the properties funded with LIHTCs are expected to be able to cover their Capital Needs Costs.

Properties in the LIHTC portfolio that are more than 10 years old are facing a collective Capital Needs Cost financing gap of approximately \$145 million through 2019. The average per property financing gap is \$593,000. The LIHTC portfolio has a smaller percent of total properties with a financing gap than the HTF portfolio; however, the properties that do have a financing gap tend to have larger gaps, due to larger project size.

Financing Gap for HTF and LIHTC Portfolio

For the 199 properties financed with both HTF and LIHTCs, 116 properties (or 58% of properties in this category) will need gap financing in the next five years. The per-project average financing gap is \$550,000. About 14% of properties with Capital Needs Costs will be able to pay for them with property resources and about 28% of these 199 properties are not anticipated to have capital needs through 2019.

Strategies for Sustainability

To meet the needs of low-income Washington households, rents for affordable housing need to follow increases in incomes rather than mirroring overall increases experienced in the real estate market. Because financing program requirements impose limits on annual rent increases, at most, rental revenues can at most increase as area median income limits rise. However, operating expenses are not restricted and affordable housing properties age just as market properties do. Affordable housing owners are frequently squeezed between the competing objectives of keeping housing affordable for low-income households and keeping it decent, safe and attractive.

HDC estimates that the 649 HTF and LIHTC properties in the Study universe are facing a collective financing gap of approximately \$201 million to address their five-year (2015 – 2019) Capital Needs Costs. The financing gap represents the estimated Capital Needs Costs minus estimated property resources to pay for those costs. The gap is what will likely be sought from public funders such as Commerce and the Commission. This section of the Study is intended to describe, in broad terms, some strategies for a public agency response to the identified gap.

Current Preservation Policies

Both Commerce and the Commission have limited resources to assist with funding for capital improvements. Commerce evaluates requests for funding on a case-by-case basis and uses the tools at its disposal to reinvest in projects that are projected to be operationally, financially and physically sustainable, and to primarily address health and safety improvements. The Commission considers applications for 9% LIHTCs from owners of projects that have credits and are beyond the 15-year LIHTC compliance period. Typically, these properties have major building systems that need to be replaced or refurbished. A new tax credit funding allocation is one of the major ways to recapitalize older, affordable housing projects. The need for credit financing is evaluated based on the property's current market conditions, the community's affordable housing needs, and the sources of funding available.

In structuring the new deal Commerce and the Commission typically maintain the existing income and set-aside requirements for the remaining years of the regulatory agreement or covenant already in place, but will consider modifications if the owner can demonstrate that they cannot meet the existing commitments due to changing market conditions, unforeseen events or other factors that threaten the financial viability of the property. The commitments made as part of the new financing commence when the term of the old requirements expire – assuming that the older requirements are more restrictive than the new requirements.

Nine percent LIHTCs are, by their nature, competitive and limited. It is not possible to award 9% LIHTCs to every property in need of additional funding, nor is every property appropriate for this type of funding. Washington's challenge is how to make the best use of the variety of tools available to preserve the state's affordable housing. For the most part, both Commerce and the Commission are already employing the strategies described below. These strategies are described here to show the range of options available and how the options have been implemented.

There may be properties, however, for which reinvestment is not feasible or desirable, likely due to a combination of project characteristics and market forces (for example, a substantially over-leveraged property that has substantial capital needs in a weak market area). In such cases, Commerce and the

Commission may choose *not* to invest additional funds, especially given that Washington’s resources could be better used to preserve other units that are in better condition physically, in a better location and do not have as many financial impediments to improved performance. Such properties may be candidates for transfer, sale or disposition by the project sponsor.

Strategies for Commerce’s HTF Portfolio

Commerce has some flexibility in the recapitalization strategies it chooses to employ. However, Commerce’s options are constrained by the fact that the very low-income population living in HTF properties pay rent amounts that do not generate sufficient surplus cash above annual operating expenses to cover long-term capital expenses.

Commerce is considering establishing a portfolio preservation program so that funding of preservation is not in direct competition with new projects. Provided capital funds are available for this purpose, this strategy will help the state achieve both its goals of ensuring the existing portfolio is maintained while creating new units for unmet housing needs.

In addition, specific components of an intentional, proactive preservation strategy could include:

- **Subordination of HTF debt.** Leveraging private capital – using partial public funding to attract private dollars – where possible is a key part of a preservation strategy. To do this will sometimes require subordination of HTF and other public debt. Subordination is a process by which a creditor is placed in a lower priority for the collection of its debt from its debtor’s assets, generally both from project cash flow as well as at the time of sale. Such a strategy will help owners meet loan-to-value requirements of private lenders, enabling existing projects to leverage private capital and therefore reducing the gap financing sought from public funders. Commerce regularly employs the strategy of debt subordination when new funds are being committed for capital improvements; however, this strategy only works for projects that have the financial capacity to support additional private debt payments.
- **Changing terms of HTF debt.** Commerce has the discretion to defer must-pay HTF loan payments. This strategy frees up net operating income to service additional private debt for capital improvement costs, and for building replacement reserve balances. Deferring required HTF loan payments would reduce the demand for new public dollars to fill the financing gap, while recognizing it would reduce loan repayment income to Commerce. Employing this strategy will require a public policy decision and a balanced approach, as Commerce depends on loan repayments to fund the operating costs of the HTF and to finance other non-capital program activities.
- **Reinvestment with HTF.** Another option is for the state legislature to commit new dollars to recapitalize existing projects within the HTF portfolio. Several states have established, or are considering establishing set-asides to fund the preservation of existing projects. Compared to new construction, this is typically a more cost effective approach for maximizing the supply of affordable housing since the land is already owned. It also minimizes displacement of low-income residents and disinvestment in communities across Washington.

- **Syndication through Bundling Smaller Properties for LIHTC Transactions.** Smaller HTF properties can be “bundled” together so that the project achieves sufficient scale to be financed utilizing either 9% or 4% federal low-income housing tax credits (LIHTC). See the section below for more information on how 9% or 4% LIHTC projects can be structured.

Strategies for LIHTC Portfolio

The Commission oversees several sources of funds that may potentially be used in recapitalization projects. In general, LIHTC owners have greater capacity to manage recapitalization activities due to the larger size of their holdings and staff. The challenge the Commission faces is how best to deploy its resources to achieve both preservation and new production goals. However, innovation alone will not solve the preservation problem, since 9% LIHTC resources are also limited and 4% LIHTC are best utilized in specific types and scopes of projects.

- **Use of 4% LIHTCs with bond financing.** Increasingly, owners are evaluating and pursuing the use of 4% LIHTCs accessed through the sale of tax-exempt private activity bonds. LIHTC equity through a 4% transaction can cover between 25% and 35% of total project costs (including acquisition). This represents a significant source of private financing to address capital needs without tapping into limited state and local public resources. Though this financing technique can be complex and costly, the 4% LIHTCs are generally more readily available than 9% LIHTCs.

Practically, there are some constraints to effectively utilize 4% LIHTCs. Generally, investors are seeking equity investment opportunities of at least \$3 million per project. For properties undertaking rehabilitation work costing an average of \$25,000 per unit, this requires at least 120 units to attract investors. For properties undertaking major rehabilitation (e.g., \$65,000 per unit), a stand-alone property at 75 units may be viable, but will likely require additional public investment that is prohibitive. Bundling multiple properties into a single LIHTC transaction is also a strategy being utilized by owners with multiple properties needing rehabilitation on a similar timeline.

- **New 9% LIHTC allocation.** Competitive 9% LIHTCs are a significant source of funding for preservation projects, typically funding 75% or more of total renovation costs. Although use of the federally limited 9% LIHTC resource on preservation of existing affordable housing reduces LIHTC funds available for new production; the cost of rehabilitation is generally less than new construction. Therefore, rehabilitation frequently uses less LIHTCs per unit than new production. Nine percent tax credits are a good strategy for projects with high levels of capital needs, when use of 4% LIHTCs would leave a significant funding gap. As discussed in the “Strategies for Commerce’s HTF Portfolio” section, states are establishing or considering establishing, set-asides for preservation of existing projects. However, some states are adopting policies that target allocation of 9% LIHTC only to preservation projects which cannot preserve existing rent restricted housing through 4% LIHTC allocations and/or other resources.

In recognition of the competing demands for the scarce 9% tax credit, in 2014 the Commission established a set-aside of the 9% tax credit for preservation and recapitalization projects.

- **Combining 4% and 9% LIHTCs.** Some developers are combining 9% and 4% LIHTCs, particularly on larger properties, allowing owners to target these different LIHTC models toward units that maximize the best of each financing strategy. Use of this financing structure requires dividing properties into

separate ownership entities, which increases the complexity and transaction costs for projects. However, through this model, owners have used 9% LIHTCs on units with higher rehabilitation needs and/or lower rents, while using 4% LIHTCs to address lower levels of rehabilitation on a higher number of higher rent units. This is a strategy that warrants some exploration as a recapitalization option for some properties.

Strategies Involving Local Funders

A strategy for both portfolios involves a discussion of the role of local public funders in addressing the portfolios' upcoming capital needs. Local government bodies, such as counties and municipalities, loan money to projects from their allocation of federal dollars and from other funding sources. The HTF and other local public funders often agree to defer their must-pay debt, which increases the borrowing capacity of properties and, consequently, further reduces the properties' financing gap. A unified and coordinated approach to the preservation of affordable rental housing will continue to be an important part of the solution.

Strategies for Owners

Over half of the properties in the Study universe are owned by entities with large portfolios, having 10 or more properties with funding from Commerce and/or the Commission. Owners with large portfolios are likely to have a more sophisticated set of strategies at their disposal because of their management and financial capacity to undertake complex deal structuring activities. Owners with larger portfolios can move reserves among properties to match anticipated capital needs; this strategy could help delay refinancing or requests for gap financing from public funders. Owners with larger portfolios can also bundle properties, utilizing a common refinancing plan. Refinancing multiple properties at one time may reduce soft costs and allow for more favorable types of financing that are generally not feasible for small single-property transactions. Bundling rehabs may create some economies of scale. Bundling may also allow a stronger property to support properties with financial challenges and/or inability to support additional debt.

Projects funded with LIHTCs are more likely to be able to utilize these strategies, as LIHTC properties tend to be owned by entities with larger portfolios. Forty-five percent of the properties funded with HTF only (without LIHTCs) are owned by entities that have fewer than five properties that have received funding from Commerce and/or the Commission. In contrast, nearly 60% of properties funded with LIHTCs are owned by entities with 10 or more properties that have received funding from Commerce and/or the Commission. The smaller capacity of HTF project owners restricts the range of strategies to pay for existing and upcoming capital needs.

Future Considerations

Consider the life cycle costs of building elements, not just the upfront costs. Even though this Study did not find any predictive relationship between capital needs and any other factors except the number of years since a project was placed in service, there are building components that have been found to not last as long as others. In assessing the cost of any one building component, it is important to not just consider its upfront cost, but its maintenance cost over the years and its replacement cost once it wears out.

When underwriting new projects, use larger replacement reserve set-aside amounts and (continue to) require that the replacement reserve deposits increase annually to keep up with inflation. Given that this Study found that very a small percentage of projects have adequate replacement reserves (only 8% will be able to cover 50% or more of their estimated capital costs through replacement reserves), it is important to reconsider underwriting and regulatory guidelines relative to annual replacement reserve deposits and increase the amounts that projects set aside for future capital needs. It is not likely that all of a project's Capital Needs Costs can be met through replacement reserves, but the overall risk profile and financial health of Washington's affordable housing portfolio will be improved by setting aside more dollars in replacement reserves.

Balance the needs of projects with high financing gaps with those projects with lower financing gaps to maximize the number of units of affordable housing that can be preserved. Commerce and the Commission will need to consider targeting scarcer public resources, such as 9% LIHTCs, toward projects with higher financing gaps. The solutions for high-need projects may also need to be staggered over time since they will utilize such significant public dollars. Commerce and the Commission will have to balance high need populations and high need geographic areas that have projects with high financing gaps. There may also be opportunities to nudge some developments toward longer-term sustainability with smaller per project investments, given that, for 75% of the projects with financing gaps, the gap is less than \$600,000, with almost two-thirds of those projects' gaps less than \$300,000.

Recognize and acknowledge that affordable housing needs to be recapitalized periodically and does not have the same degree of access to private capital that market rate housing enjoys. With restrictions on both rent increases and the sale of properties, affordable housing owners cannot generally use market rate strategies such as property sales or large rent increases to fund long-term capital needs. Furthermore, the restricted rents on affordable housing means that less cash flow from operations and from replacement reserves is available to cover the properties' long-term Capital Needs Costs. Restricted rents, particularly for properties serving very low-income residents, may result in gradually declining financial viability, even in well-managed properties. It should be assumed that public dollars will be needed to recapitalize a portion of the state's portfolio every year, set funds aside and reinvest them to preserve the existing housing.