Introduction

HUD has developed a spreadsheet tool for use by PHA and HUD staff to assist in projecting HCV leasing, spending and funding over a two year period. The purpose is to facilitate decision making by PHAs and to guide HUD oversight and technical assistance so that PHAs can achieve optimal use of the HCV funds while stabilizing the program. The goal is to make full use of the program while avoiding the typical large cyclical swings of lease up followed by attrition, and to eliminate abrupt cutbacks that might adversely impact participants.

Accomplishing this requires planning across calendar years since spending patterns in one year impact funding in the next, and the ending point of one year must be sustainable as the beginning point in the next year. Often, the goal of achieving a high average leasing for the year can result in high leasing at year end to compensate for lower leasing at the beginning of the year. This can result in the beginning lease point of the next year being too high to enable the program to be leased within that next year’s leasing limits. Or require no leasing, only attrition to get average leasing back down, which starts the cycle all over again with low beginning leasing in year three.

In addition, projections of leasing and spending require consideration of four key interacting variables:

- **Success Rate** – The percentage of vouchers issuances that result in a lease
- **Turnover Rate** – The annual rate of participants leaving the program
- **Issuance to Leasing Time** – The percentage of vouchers leased that are leased within standard time frames, i.e. 30, 60, 90 days etc., or as measured by average months from issuance to lease.
- **Per Unit Cost** – the Monthly HAP expenses divided by the number of leased units

The spreadsheet tool allows the user to factor in all these variables, and to estimate the subsequent year funding resulting from projected patterns of leasing and spending. With the ability to factor in these considerations, the user can test voucher issuance scenarios and the resulting leasing and spending over the two year period. This facilitate more deliberate program management including considerations of trade-offs inherent in this process.
The accuracy of the projections of the spreadsheet is only as good as the accuracy of the variables entered in to the spreadsheet. It is absolutely critical that PHAs carefully track success rate, turnover rate, time from issuance to lease and per unit cost. To the degree this data is volatile and therefore the predictive value less reliable, the user should take great caution and leave larger margin for error. Even when carefully tracked, there are no guarantees that historic data will be born out in the future. Monthly validation of the variables is important.

Subsequent year estimates of funding are simply the application of appropriations (or anticipated appropriations) methodology. Actual funding will be based on actual dollars appropriated which may be more or less than the results of the re-benchmarking methodology applied nationally. A downward proration, for example, might be applied. The spreadsheet provides the user with the option to use whatever proration deemed prudent. This is an important decision point and one virtue of the tool is that multiple proration scenarios can be tested and the user can assess risk, gauging the range of outcomes from the differing funding possibilities. **HUD makes no representation that the estimates derived from the spreadsheet will actually be realized as funding.**

Version 8.8 includes the following changes:

- What was the entry cell for beginning year NRA is replaced with three cells:
  - **PHA-Held NRA** – Beginning Year
  - **HUD-Held Program Reserves** – These are BA funds (restricted to pay HAP expenses) approved but undisbursed to the PHA in the prior year(s).
  - **Combined HAP Reserves**: This is the sum of the NRA and the HUD-Held Program Reserves. These are funds, whether held by the PHA or HUD, which are available to be used to pay HAP expenses.

- Some re-labeling and editing of comment boxes has been done to be consistent with the new use of the concept of the HUD-Held Program Reserve and the Combined HAP Reserve.

- The proration of set aside funds has been removed. The user can enter in Year 2 and 3 what they estimate they would receive.

The last page of this guide is a concise step by step set of instructions for data entry.
Excel Workbook Organization

This is an Excel Workbook made of several related spreadsheets as shown on the tabs displayed above. The main work is done on the “Projection Analysis Spreadsheet” tab. Other tabs are:

- “Cash Management” – An optional tab that assist the PHa to compare actual and projected expenditures to Actual and projected HUD disbursements
- “New ACC Units” – Enter new ACC units awarded in the current and 2nd year to automatically calculate funding spanning two years and special re-benchmarking method for new units.
- “Tracking Actual Success Rate” – An optional tab with a spreadsheet that allows the user to enter actual issuances by month and actual leasing from those issuances by month, and will calculate actual success rate and actual time from issuance to lease.
- “PUC Trend- LY and Current Year” – An optional tab that allows the user to input previous year leasing and HAP data to depict analysis of PUC trends using last year through the current month.
- “Admin Fee” - Displays the admin fee calculations and the listing of Col A and B rates for all PHAs;
- “Re-Benchmarking Estimate Yr 2 and 3” - Displays the calculations involved in coming to the ABA estimates for Years two and three based on CY months spending within UMA limits;
- “Background Leasing” – Displays the background activity incorporating issuances, attrition and leasing from issuances.
- “Background Graph” - Displays all the supporting data used in the graphs and a copy of the graphs,
The spreadsheets in the workbook are protected allowing changes only to the data entry cells which are shaded yellow. Comment flags offer instruction and guidance for key columns or cells. If for some reason the user needs to unprotect the spreadsheet to make an adjustment, this can be done by selecting the “Review” menu choice and clicking on “Unprotect”.

- **Data entry in Yellow Cells:** for HAP and Leased units cell color changes once entered
- **Comment Flags** for key columns – just put cursor over red corner of cell
- **All other cells protected**
The HCV Two Year Forecast: Projection Analysis Tab – Overview

**ACC and Funding Information**

<table>
<thead>
<tr>
<th>Year</th>
<th>Current Year</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
</tbody>
</table>

**Funding Pro-Ration Levels: Y1 and 2**
- FY 1 & 2 (Pro-Rating Pro-2014) 98.0%
- FY 1 & 2 (Pro-Rating Pro-300) 75.0%
- FY 1 & 2 (Pro-Rating Pro-300) 75.0%

**Program Projection Variables**
- Success Rate 68%
- Annual Tenure Rate 11.0%

**Leasing and Spending Outcomes: Current and Forecasting Year Projections**
- 2013
  - UNH % of ACC (Vouchers): 97.0%
  - WAP Exp % of Voucher
    - FY 1 & 2: 95.9%
    - FY 1: 95.9%
- 2014
  - UNH % of ACC (Vouchers): 97.5%
  - WAP Exp % of Voucher
    - FY 1: 103.6%

**Prorated Funding Eligibility Level**
- Average Monthly Funding Eligibility $1,555,000

**User Discretion:** Year 1 and Year 2 Re-Book-Back-Up funding, with only optional eligibility, vary assumptions described in the problem and user adopted variables.

**Unit奥**: $150,000, $150,000, $150,000

**Spending vs. Funding**
- $54,000
- $54,000
- $54,000

**Comments**
The screen print above is a quick look at the first page of the spreadsheet to orient the user to the general locations. There are four key sections across the top which will be spelled out in separate slides:

- ACC and Funding Information;
- Proration and Admin Fee Information;
- Program Projection Variables; and
- Leasing and Spending Outcomes

Section One of Projection Analysis Spreadsheet

Section one – top left of the Projection Analysis spreadsheet, begins with entering the **PHA five digit number**. This will result in the name being populated and applicable administrative fee rates being selected. Entering the **Year** will result in the 2nd and 3rd year column headings being populated here and on all other tabs.

**ACC and funding information** includes data entry for the current year ACC units and funding from Enclosure A (line 19) of the HUD funding renewal letter. Also add any carryover from prior year new allocations. For Years Two and Three – the calculated re-benchmarked ABA and beginning Combined HAP Reserves (NRA + HUD –Held Program Reserves) is displayed.

**Offset of HAP reserve (NRA)** is entered if an offset in the current year is made per the renewal funding letter, Enclosure A line 18.

**New ACC Units** allocated during the current year are entered in the New ACC Units tab and are used in the Projection Analysis tab – allocating the subsidy to the correct years and modifying the re-benchmarking of Year Two and Three ABA using the Allowance for Leasing afforded to new allocations.

**Beginning Year HUD-Held Program Reserve** is BA funding, limited for use to HAP expenses, that was undisbursed in the prior year(s).

**Beginning Combine HAP Reserves** is the sum of the PHA-Held NRA and the HUD-Held Program Reserves available to be spent by the PHA for Hap expenses.

**ABA/ eligibility per ACC Unit Month** is the last item in this section. It is the total ABA divided by UMAs – spreading the ABA across all ACC units per month. If the ABA per ACC Unit Month is less than the actual PUC, the user can see the extent to which the funding will not support all ACC units, without the use of NRA.
The Funding Proration Section has separate entries for: YR 2 and 3 Re-benchmarking, and for administrative fees.

The user-entered re-benchmarking proration is important because it should reflect the user’s best estimate of how fully future appropriations will fund the formula rebenchmarking estimate. This allows the user to exercise judgment about likely funding outcomes, and to contrast the funding levels associated with testing different proration levels. An inflation factor is not used in the funding estimate. This acts as an implicit margin for projection error. The user can incorporate it through use of the proration variable, by prorating up by the desired inflation amount.

This section also includes an Optional NRA Offset Cell to permit the user to model the use of an offset to NRA which uses a select amount of NRA in lieu of new ABA calculated from the re-benchmarking process. Here a percent is entered that is the percent of ABA that will be used to set the maximum allowable NRA, above which, the actual NRA will be used to offset budget authority that would otherwise be funded per the funding formula. This is applied to Year 2 and 3, when entered by the user.

Central top Section of Spreadsheet
• Enter Success Rate
  • Enter % of leased vouchers that reach HAP contract within 30, 60, 90, 120 days of Issuance.
  • Must add to 100%
• Enter Annual Turnover rate – number participants leasing as a percent of all leased units.

This is the input section for critical program variables:
- **Success rate** of issuances becoming units under contract;
- **Annual turnover rate** – The number of participants leaving the program annually as a percent of the units under lease;
- **Time from issuance to HAP effective Date** - This is the percentage of units leased that are leased within 30, 60, 90 and 120 days. These percentages should add to 100%, and there is a cell adding them up that is shaded red until they reach 100% and also a few cells above it converts this information into a different measure of the same factor – the average months from issuance to lease. This information can be informed by use of the Success Rate Tracking tab if used.

The Prorated Funding Eligibility box shows the prorated funding eligibility level including, when there is an Offset, the amount of the offset of excess HAP reserve. This is the amount the PHA was entitled to had there not been excess NRA which was used in lieu of new subsidy. It is the number used to calculate spending as a percent of eligibility.

The Leasing and Spending Outcomes section is the main dashboard – showing the resulting:

- % UMLs/UMA,
- % Spending/All Funds,
- % Spending /ABA,
- Projected Year End Combined HAP Reserves,
- Combined HAP Reserves as a % of ABA as metric for gauging the size of the NRA
- **Potential Terminations** shows the potential participants impacted if a PHA spends beyond their means and funds funding does not support spending

- **Beginning Year Three: Monthly Exp vs. ABA** - This line quickly assesses monthly spending entering into Year Three compared to ABA on a monthly basis, by showing the Year Three estimated ABA divided by 12 minus the Decembe r Year Two Hap. If this is a deficit – it calculates how many months that deficit can be funded from the Year Two ending Combined HAP Reserves. If Dec HAP is less than monthly year three ABA it shows “surplus”.
The expectation is that the user consults this dashboard section at least monthly, assessing the results from adding an additional month’s actual data, re-validated key variables and potential PUC changes, and then experiments with different issuance scenarios and their resulting Year One and Two results until a preferred scenario is adopted, until it is revisited in the next assessment.

Two Year Forecast — current year monthly left half

This is the left hand side of the Year One monthly spreadsheet section which contains mostly input cells:

- **ACC units** automatically default to the ACC number set in the PHA information and Funding section in the upper top left section of the spreadsheet unless additional units are allocated to the PHA, in which case they should be entered into the New ACC Units Tab. The ACC units in the Projection Analysis Tab will be populated in the correct month from that source.

- **Actual Leased** units are entered, the cells turn from yellow to white

- **Actual HAP Spending** is entered, the cells turn from yellow to white.

- **Vouchers Issued or Planned to be Issued** are entered,

- **Other Planned Additions or Deletions** are entered. These would be changes coming from other than issuances. Additions would, for example, be ports absorbed by the PHA, or Project Based Voucher units leased. Reductions in units leased and paid for by the PHA are entered as a negative number and could be: ports absorbed by the receiving PHA that had been billed or any other planned reductions other than attrition.

The remaining columns display:

- **New Leasing from Issued Vouchers** - This is the result of calculations displayed in the “Background Leasing” tab that apply the success rate and time from issuance to lease variables.
- **Estimated Attrition** shows the monthly impact of the Turn Over rate variable applied to the previous month’s units leased.
- **Leased Units: Actual and Projected** shows either the actual entered for the month or the projection for future months, with the projections shaded in blue.

![Two Year Forecast](image)

This is the right half of the current year monthly data section.

- **HAP Expenses Actual or Projected** shows either the actual entered for the month or a projection using the projected leased units multiplied by the previous month’s Per unit Cost.

- **PUC Actual and or Projected** is the actual cost per unit for months with actual data entered or projects based on the last month actual – unless the user chooses to override that by entering a different PUC.

- **Manual PUC Override** allows the user to alter the projection with different Per Unit Cost levels. This can reflect trends being continued forward or planned changes that will impact the PUC up or down. The new amount will be carried forward in the cost estimating until changed further. Otherwise the spreadsheet defaults to projecting based on the most current actual PUC.

- **Cumulative Annual Leased Percentage** displays the year to date actual and projected UMLS divided by the UMAs

- **Cumulated ABA Expended** displays the year to date actual and projected HAP expenditures divided by the Annual Budget Authority
- **Monthly UML % and Monthly ABA Expended %** show the percentages for that month only. This is particularly useful to examine where the PHA is at year end – monthly as opposed to cumulatively, because this represents the starting point in the next year. For example, while a PHA may reach 98% cumulative leasing percentage, they end the year at 105%, a level that will not allow them to end the subsequent year within the UMA limit.

**Leasing Graph**

The graph uses two Y axes, the left one measuring Vouchers Issued (blue) and resulting new leasing (red), and the right Y axis measuring total actual and projected leasing in dark blue with triangles. Ideally, the calibration of issuances over a two year period will allow the user to minimize the “rollercoaster” effect and come to a stable and sustainable level of leasing in Year 2.

**Spending Vs. Funding Graph**

This graph displays actual and projected HAP spending (blue) alongside the monthly ABA (green) and all funds: Monthly ABA + Monthly Combined HAP Reserves (red). For this graph the tab background graph contains the data which can be viewed. Here the Annual Budget Authority and the NRA are divided into monthly amounts to permit the display of monthly spending against resources evenly divided by month.

Lastly, at the bottom of the Projection Analysis Tab is a Comment section where notes can be added.
Other Tabs: Cash Management

<table>
<thead>
<tr>
<th>Projection Analysis</th>
<th>Cash Management</th>
<th>NEW ACC UNITS</th>
<th>PUC trend-LY and current</th>
</tr>
</thead>
</table>

Ready
The instructions on the page are self-explanatory. In the example above, the PHA was informed by HUD in June 2012 that it would disburse funds for July through September as shown above. Entering this into the spreadsheet, the PHA can see that in September, based on projected spending, it will have insufficient funds, as shown in the estimated End of Month Balance column, in this case -$14,112. The PHA could then request HUD to advance additional funds, as described in Notice PIH 2011-67.
This tab shows the calculations that result in the estimated admin fee earnings displayed on the “Projection Analysis” tab. It also contains the admin fee “Column A” and “Column B” rates for every PHA. The “LookUp” function in the Projection and Analysis tab pulls the correct rates for the PHA whose number is entered into the PHA Number cell. The page also contains a link to the HUD website with the Fees.

Enter the new units awarded in the month effective, and the 12 months worth of subsidy awarded. This will be used to calculate the funding that will be distributed to the current year and next year. Late year awards may be effective in the next year and the spreadsheet permits entry for that situation. See the instructions above for additional detail.
Other Tabs: Tracking Actual Success Rate

This is an optional spreadsheet where the user can enter actual vouchers issued for each month and the resulting vouchers leased from that group of issuances in subsequent months. For each issuance group, the spreadsheet will calculate the success rate, the % leased in 30, 60, 90, etc. days, and the average months from issuance to lease. There are more extensive instructions on the spreadsheet itself, as shown on the next page. These measures are presented cumulatively as well as monthly.

Graphs present the success rates by month of issuance origin and then cumulatively, and the time from issuance to lease, as shown to the right.
The period of time runs from five months before the current year to the eighth month of the current year to capture only those months with issuance to leasing time periods for which all issued vouchers would have either been leased or terminated, in other words the process is complete and calculations can be made. In addition, one needs prior year experience to inform early current year choices for the variables, and beyond 8 months in the current year – issuances would not have run their course before the end of the year to be able to use the data. As elsewhere, the user enters data in the yellow – and orange cells: the number issued and then the number leased in the succeeding months. Everything else is calculated.

Other Tabs: PUC Trends: LY and Current Year

The monthly leasing, HAP expenses and PUC are automatically populated for the prior year’s last Quarter, and with actual data entered during the year, from the Projection Analysis Tab. The user may also add data for the first three Quarters of the prior year to be better able to analyze historic trends. Data entry is provided for in the yellow cells. The year column is populated once the initial year is entered in the Projection Analysis Tab.
Other Tabs: Re-benchmarking Est. Yr 2 & 3

This tab shows the underlying information used to calculate the subsequent year funding re-benchmarking, for Year 2 and 3. Two versions are calculated here, the CY version and the FFY version, including the yearend leasing set aside calculation for each.
This tab displays the underlying data and calculations that incorporate the key variables: success rate, and time from issuance to lease from the “Projection Analysis” tab, along with the number of Vouchers issued or planned to be issued. It then calculates the estimate of leased vouchers in succeeding months and returns that number to the “Projection Analysis” tab in the column “New Leasing from Issued Vouchers”.

<table>
<thead>
<tr>
<th>Month</th>
<th># Issued Each Month</th>
<th>Eventual # leased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Feb</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>March</td>
<td>0.0</td>
<td>0.0</td>
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<tr>
<td>April</td>
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<td>May</td>
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<td>0.0</td>
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<tr>
<td>June</td>
<td>20.0</td>
<td>15.4</td>
</tr>
<tr>
<td>July</td>
<td>20.0</td>
<td>15.4</td>
</tr>
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</tbody>
</table>
This tab shows the source of data for the graphs and the graphs that are pulled into the “Projection Analysis” tab.
Key Steps - Initial Data Entry: Projection Analysis Tab

See Comment Flags in the spreadsheet for more detailed cell descriptions.

1. Enter PHA Number into Cell F2. This will result in the PHA name and admin fee rates being populated.

2. Enter Current Year in Cell C6.

3. Enter Units under ACC at January of the CY in Cell C7.

4. Enter in Cell C8 Initial Funding level from the CY funding letter Enclosure A - line19. If the PHA received a new allocation or allocations in the prior year, also add to this amount the amount of carry over funding, i.e. funds awards in the prior year but which are reserved for the remaining part of the 12 months that occurs in the current year. For example if the PHA received 50 new units effective 7/1/11 with 12 months of subsidy of $360,000, the PHA would have 6 months of the funds reserved for payment in 2012.

5. If the PHA had an NRA Offset in the current year, enter it in Cell C9. This amount is identified in line 18 of enclosure A to the funding letter from HUD.

6. If funded for Set Aside funding in the current year, enter in Cell 10.

7. Enter Net Restricted Assets (NRA) as of 12/31 of the prior year in Cell C14.

8. Enter HUD –Held Program Reserves (Undisbursed HUD BA from the prior year(s)) in Cell C15.

9. Enter in Program Variables in Cells K5, K7-K11, and M5.

10. Enter best estimate of the next year’s funding proration in Cell H5. Leaving it blank defaults to 100%.

11. Enter the Admin Fee Earnings Proration Percentage in Cell H6.

12. Optional - enter in NRA offset percentage in Cell H9 if it is desired to see potential impact of an NRA offset in the next year (Year 2).

13. For any new ACC Units awarded in the year, enter data in the New ACC Unit Tab: the number of units in Column D in the month effective and the 12 months of subsidy awarded in Column E.

14. Enter in actual units leased and HAP expenses for appropriate months in cells D21-E32 and E35-E46.

15. Enter in vouchers issued or planned to be issued - or issuance scenarios to be considered in Cells F21 -32 and Cells F35-46 for the next year.

16. To maximize the analytic usefulness of the PUC Trend tab, enter the units leased and HAP expenditures for the prior year - month by month: Cells C1-C14 and D1-D14.

17. To enter changes in leasing, up or down, other than from issuances or attrition, enter in Column G. This could be additions through absorbing portable vouchers, or leasing Project Based Vouchers. Reductions could come from ports absorbed by another PHA, or the payment through another source of funds.

18. To project future PUC levels different than the default use of the most recent month PUC, use the Manual PUC Override Column H to enter the desired level going forward effective with the month entered.

19. Test variables: success rate, etc., issuance scenarios, to determine key outcomes and to frame decisions.