The RA Obligation Tool (“Tool”) was developed to address a two-fold need:

- create an efficient and automated time-saving obligation process to speed funds to the borrower; and
- use as near real-time data as possible to project the cost of a 12-month RA Agreement.

The Tool was implemented with the FY 2016 RA appropriation in October, 2015. Although tested during the development mode, the best evaluation of Tool performance will come over the months in FY 2016, as the Tool estimates are matched against the actual RA usage of multifamily properties in the Rural Housing portfolio.
How the Tool Calculates the RA Agreement Cost

The Tool uses data electronically provided by the borrower on the amount of RA that was requested from RD over the prior 12 months.

- Every month, the borrower submits electronic data on current tenant characteristics, including tenant contributions to rent, and the number of active RA units.

The Tool then “weights” each of the immediately preceding 12 months to ensure that the most recent data is given greater consideration, as it is more likely that tomorrow’s RA need is more similar to yesterday’s need than last year’s need.

The factors used in the calculation are the amount of RA requested by the borrower, and the number of active RA units.
The Tool then identifies any rent increases that were implemented during the prior 12 months and those that are planned in the upcoming 12 months.

In order to ensure that the impact of these prior and future rent increases are fully accounted for in out-year forecasting, increases are apportioned based on where in the 12-month cycle they did, or are expected, to fall.

The table below shows an example of actual RA usage at Meadowland Apartments, and how the RA Obligation Tool will figure the cost for the next RA Agreement.
First, the Tool weights the recent usage.

### RA OBLIGATION TOOL ESTIMATION CALCULATION

**Meadowlands Apartments**

**ACTUAL RA PAYMENTS**

<table>
<thead>
<tr>
<th>Month</th>
<th>RA</th>
<th>Weight</th>
<th>Value</th>
<th>RA Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/1/2014</td>
<td>$6,826</td>
<td>*1</td>
<td>$6,826</td>
<td>22</td>
</tr>
<tr>
<td>11/1/2014</td>
<td>$6,823</td>
<td>*2</td>
<td>$13,646</td>
<td>22</td>
</tr>
<tr>
<td>12/1/2014</td>
<td>$6,461</td>
<td>*3</td>
<td>$19,383</td>
<td>21</td>
</tr>
<tr>
<td>1/1/2015</td>
<td>$6,965</td>
<td>*4</td>
<td>$27,860</td>
<td>22</td>
</tr>
<tr>
<td>2/1/2015</td>
<td>$6,749</td>
<td>*5</td>
<td>$33,745</td>
<td>21</td>
</tr>
<tr>
<td>3/1/2015</td>
<td>$7,084</td>
<td>*6</td>
<td>$42,504</td>
<td>22</td>
</tr>
<tr>
<td>4/1/2015</td>
<td>$7,102</td>
<td>*7</td>
<td>$49,714</td>
<td>22</td>
</tr>
<tr>
<td>5/1/2015</td>
<td>$7,098</td>
<td>*8</td>
<td>$56,784</td>
<td>22</td>
</tr>
<tr>
<td>6/1/2015</td>
<td>$7,166</td>
<td>*9</td>
<td>$64,494</td>
<td>22</td>
</tr>
<tr>
<td>7/1/2015</td>
<td>$7,185</td>
<td>*10</td>
<td>$71,850</td>
<td>22</td>
</tr>
<tr>
<td>8/1/2015</td>
<td>$7,453</td>
<td>*11</td>
<td>$81,983</td>
<td>23</td>
</tr>
<tr>
<td>9/1/2015</td>
<td>$7,527</td>
<td>*12</td>
<td>$90,324</td>
<td>23</td>
</tr>
</tbody>
</table>

| Sum       | $559,113|        | 264     |
• Using the above information the Tool will calculate the projected annual usage based on the last number of RA units used.

\[
\text{Historical Weighted Average per month} \\
\frac{559,113}{78} = \$7,168.12
\]

\[
\text{Historical Total Annual Amount} \\
7,168.12 \times 12 = \$86,017.44
\]

\[
\text{Historical Average Amount per unit per month} \\
\frac{86,017.44}{264} = \$325.82
\]

\[
\text{Projected Annual Usage for next 12 month period (using 23 allotted units)} \\
325.82 \times 23 \times 12 = \$89,926
\]

• The Tool then identifies prior and planned rent increases and adjusts them to ensure they are fully considered in out-year projections.

\[
\text{Adjustment for Future Rent Increase ($54 per month starting in January 2016)} \\
\text{Rent New - Rent Old = $532 - $492 = $40} \\
\text{Util New - Util Old = $86 - $72 = $14} \\
\text{Total Contribution to next 12 months} \\
\frac{9}{12}(54 \times 23 \times 12) = \$11,178
\]

\[
\text{Adjustment for Past Rent Increase ($14 per month started in January 2015)} \\
\text{Rent New - Rent Old = $492 - $475 = $17} \\
\text{Util New - Util Old = $72 - $80 = $8} \\
\text{Total Contribution to next 12 months} \\
\frac{3}{12}(9 \times 23 \times 12) = \$621
\]

• Finally, the Tool figures the cost for the next 12 months from the date of the calculation.

\[
\text{Estimated Total Annual Usage for next 12 months} \\
89,926 + 11,178 + 621 = \$101,725 \text{ with allotted 23 units}
\]
The Tool has several built-in functions that provide flexibility to forecasting.

These include selecting an inflation factor; determining if renewals should occur prior to, or in the month of, funds depletion; and the ability to forecast based on the “one renewal in 12 months” limitation.

To configure the RA need for out-years beyond 12 months, the Tool relies on today’s RA need, projected over the upcoming 12 months, and then applies an inflation factor.

The RA Obligation Tool provides daily updates on fiscal year need projections for both short- and long-range planning.