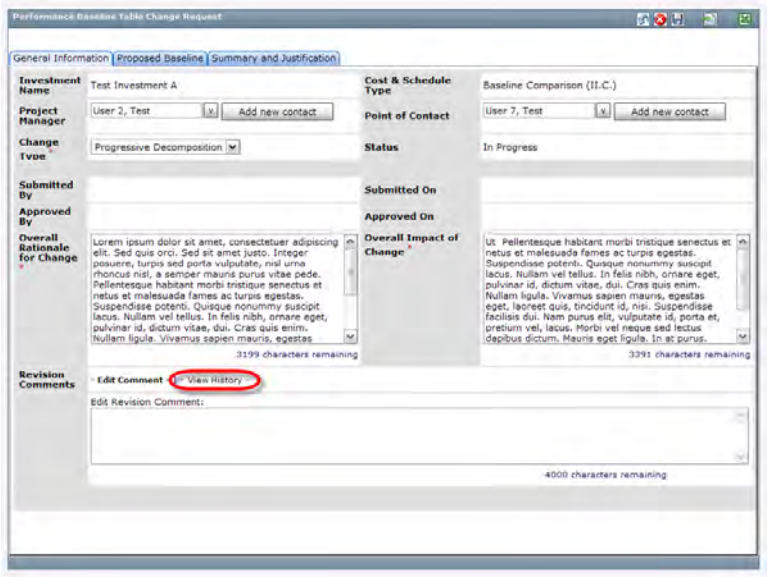
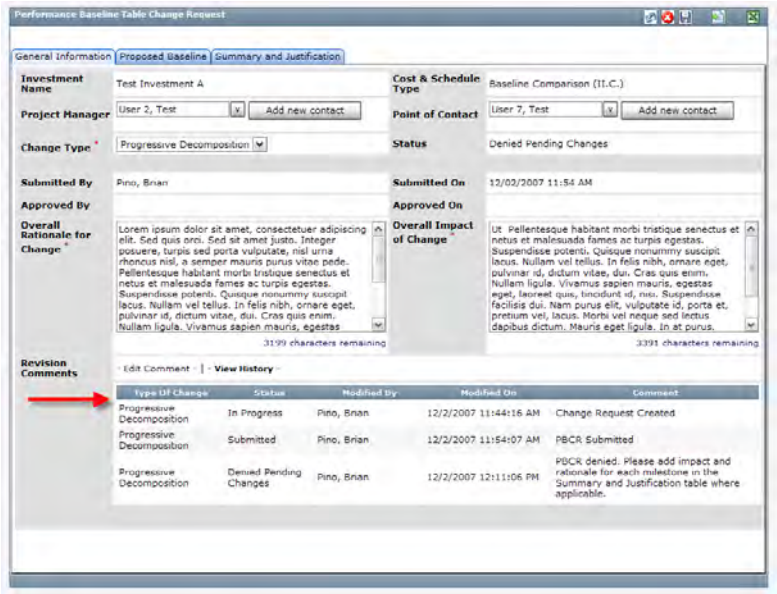


2. The PBCR history will seen at the bottom of the PBCR form



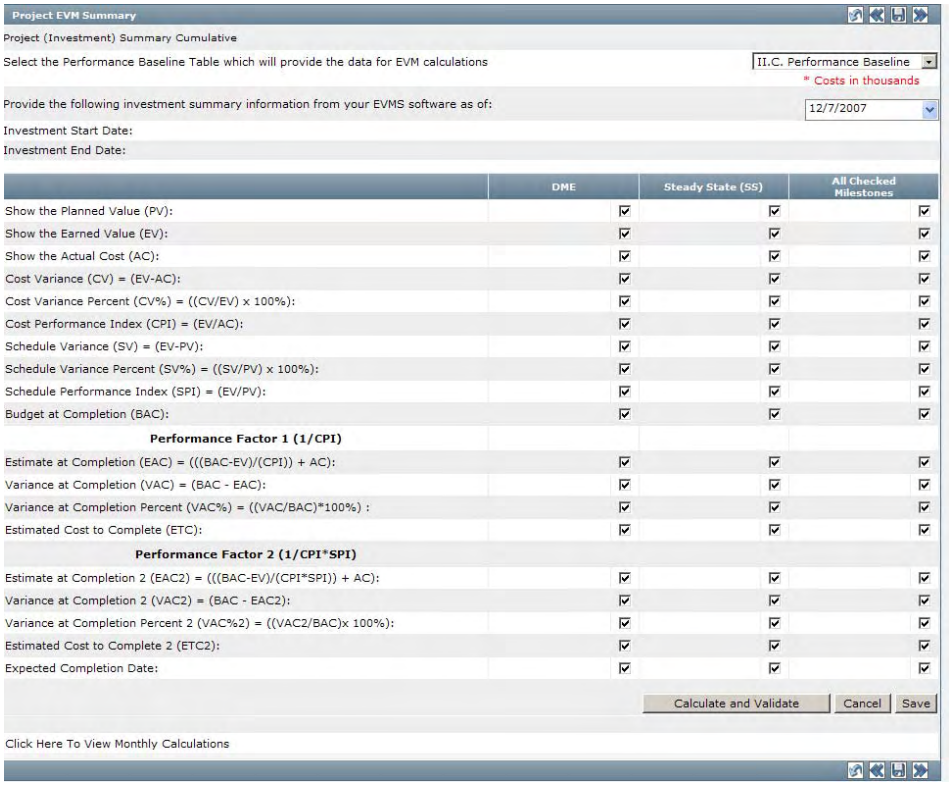
4.19.9 Earned Value Management (EVM) Reporting

eCPIC provides users with the capability to run Earned Value metrics on investments within the system. The Project Summary control provides functionality which includes the validation of milestone data used for the calculations, saving the state of the calculations as being either auto-calculated, and a free text entry mode which enables the ability to calculate EVM based off of user entered PV (Planned Value), EV (Earned Value), and AC (Actual Cost). The ability to breakout these calculations into Steady State and DME is also provided in eCPIC.

4.19.9.1 Project (Investment) Summary Cumulative Control

eCPIC includes advanced functionality for the BY2008 and BY2009 Project (Investment) Summary Cumulative control. The control is used to calculate/capture EVMS data. The data source for the calculations is variable and the calculations are based upon the milestones in the selected data source table that are checked 'IN EVMS' or the free text entry option which requires user entered values for PV, EV, and AC.

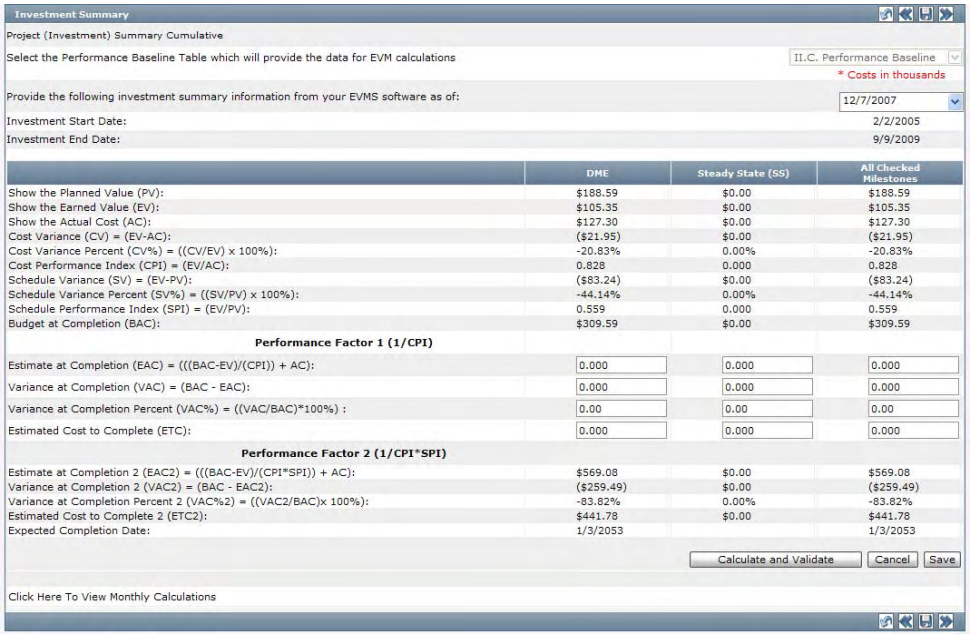
The project summary control is not found in the BY08 or BY09 templates by default, and must therefore be added to the process workflow by the System Administrator. The full field name for the Project Summary control is "Project (Investment) Summary Cumulative", the XML Tag is "omb:projectSummaryCumulative" and the alias is "Project Summary - ALL". This field can be added through the Manage Workflow section of the Admin Module. For more information on how to add a field to a workflow please see the Administrator Guide.



When the Project Summary section is accessed for the very first time by a user before data has been entered and assuming the data has not been imported into the investment from a revision, a list of blank fields each with a checkbox to its right, will appear, with the exception of the "As of Date' which is defaulted to the system date, and the data source dropdown list labeled 'Select the Performance Baseline Table which will provide the data for EVM calculations'.

Based upon the configuration settings established by the administrator, the Project Summary control may look different than in this document. Administrators have the

ability to set the calculation data source, the project start and end dates (Free Text Entry mode only), and the calculation override check boxes as they see fit on an investment by investment basis, and then restrict users from altering this setting. Therefore, when users navigate to the control they may see that the data source dropdown list is disabled, that the individual calculation check boxes are missing, or in Free Text Entry mode that the project start and end dates are not editable. For instance, in the example below, the admin has restricted the user access to change the data source and alter which calculations are manually entered. The admin has chosen to allow the user the ability to manually enter all values under the header 'Performance Factor 1 (1/CPI)', the remaining calculations will be calculated based upon milestones in the Performance Baseline table found in Section II.C. If you have questions about these settings, please contact your system administrator.



Investment Summary

Project (Investment) Summary Cumulative

Select the Performance Baseline Table which will provide the data for EVM calculations: II.C. Performance Baseline

* Costs in thousands

Provide the following investment summary information from your EVMS software as of: 12/7/2007

Investment Start Date: 2/2/2005

Investment End Date: 9/9/2009

	DME	Steady State (SS)	All Checked Milestones
Show the Planned Value (PV):	$188.59	$0.00	$188.59
Show the Earned Value (EV):	$105.35	$0.00	$105.35
Show the Actual Cost (AC):	$127.30	$0.00	$127.30
Cost Variance (CV) = (EV-AC):	($21.95)	$0.00	($21.95)
Cost Variance Percent (CV%) = ((CV/EV) x 100%):	-20.83%	0.00%	-20.83%
Cost Performance Index (CPI) = (EV/AC):	0.828	0.000	0.828
Schedule Variance (SV) = (EV-PV):	($83.24)	$0.00	($83.24)
Schedule Variance Percent (SV%) = ((SV/PV) x 100%):	-44.14%	0.00%	-44.14%
Schedule Performance Index (SPI) = (EV/PV):	0.559	0.000	0.559
Budget at Completion (BAC):	$309.59	$0.00	$309.59
Performance Factor 1 (1/CPI)			
Estimate at Completion (EAC) = (((BAC-EV)/(CPI)) + AC):	0.000	0.000	0.000
Variance at Completion (VAC) = (BAC - EAC):	0.000	0.000	0.000
Variance at Completion Percent (VAC%) = ((VAC/BAC)*100%) :	0.00	0.00	0.00
Estimated Cost to Complete (ETC):	0.000	0.000	0.000
Performance Factor 2 (1/CPI*SPI)			
Estimate at Completion 2 (EAC2) = (((BAC-EV)/(CPI*SPI)) + AC):	$569.08	$0.00	$569.08
Variance at Completion 2 (VAC2) = (BAC - EAC2):	($259.49)	$0.00	($259.49)
Variance at Completion Percent 2 (VAC%2) = ((VAC2/BAC)x 100%):	-83.82%	0.00%	-83.82%
Estimated Cost to Complete 2 (ETC2):	$441.78	$0.00	$441.78
Expected Completion Date:	1/3/2053		1/3/2053

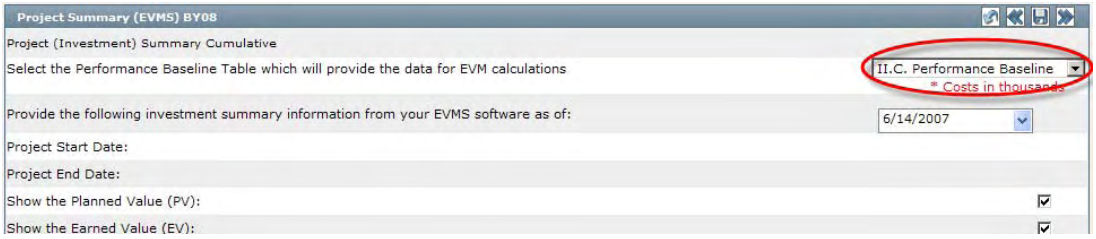
Calculate and Validate | Cancel | Save

Click Here To View Monthly Calculations

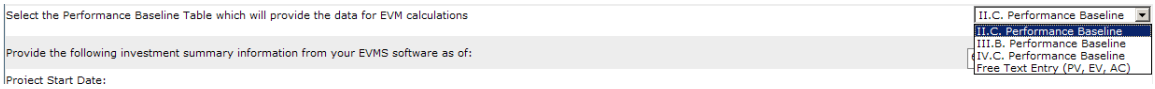
The data source dropdown provides users the ability to select which performance baseline table (Section II.C., Section III.B., or Section IV.C) they wish to use to provide milestone data for calculating PV, EV, AC, BAC, and Expected Completion Date. Additionally, users have the ability to enter values for PV, EV, AC, BAC, and Expected Completion Date manually. This data can be calculated using a third party EVM tool and supplied to eCPIC. This subset of values will supply the application with the minimal set of required data from which the remaining EVMS calculations can be calculated.

To change the Project Summary Data Source:

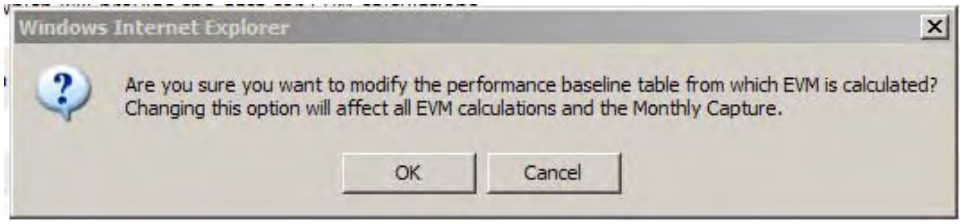
1. Click the data source dropdown



2. Select the desired data source option



3. Click **OK** in the confirmation box



Further enhancements to the Project (Investment) Summary Cumulative control build upon the ability for users to override any calculation and input their own values. In the BY2008 template and beyond, this overridden status will be saved so that it is the status of manual entered or performance baseline table calculated data can be reviewed.

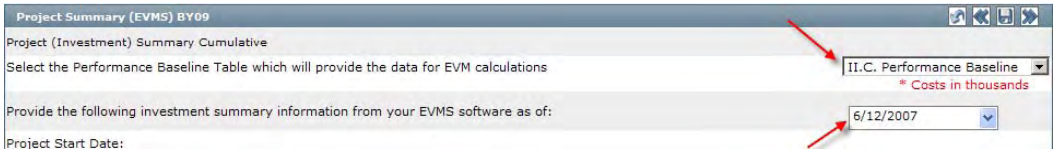
For any field in this table, users can opt to manually enter the values versus having the application generate them. To do so:

1. **Uncheck** the box that corresponds to the value users will manually enter. When any box is unchecked a text box will appear to allow the user to manually enter the value. The system will not calculate this value when the **Calculate and Validate** button is clicked.

2. Click the **Save** button to save changes to the database before leaving the table. If users do not want to save the changes, click the **Cancel** button.

To Calculate the Values based upon Performance Baseline table milestone data:

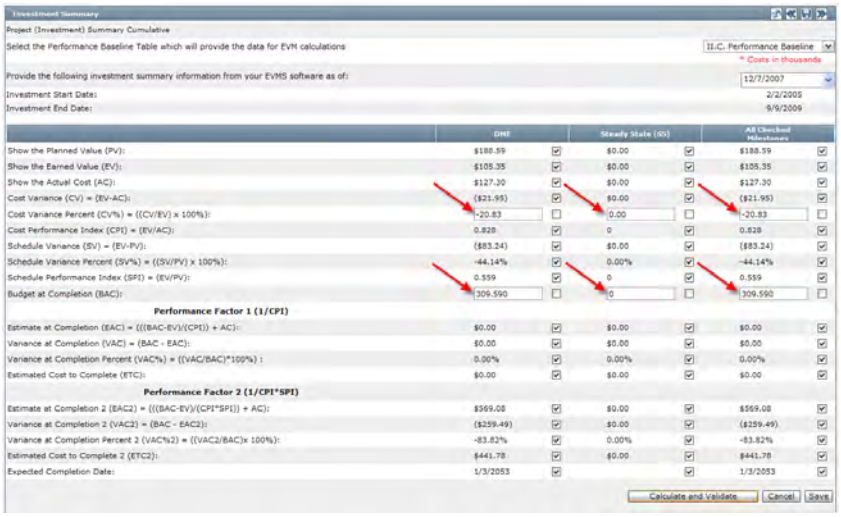
1. Select a Performance Baseline table from the dropdown list.



2. Enter the **As Of Date** (the date chooser located next to ‘Provide the following investment summary information from your EVMS software as of``).

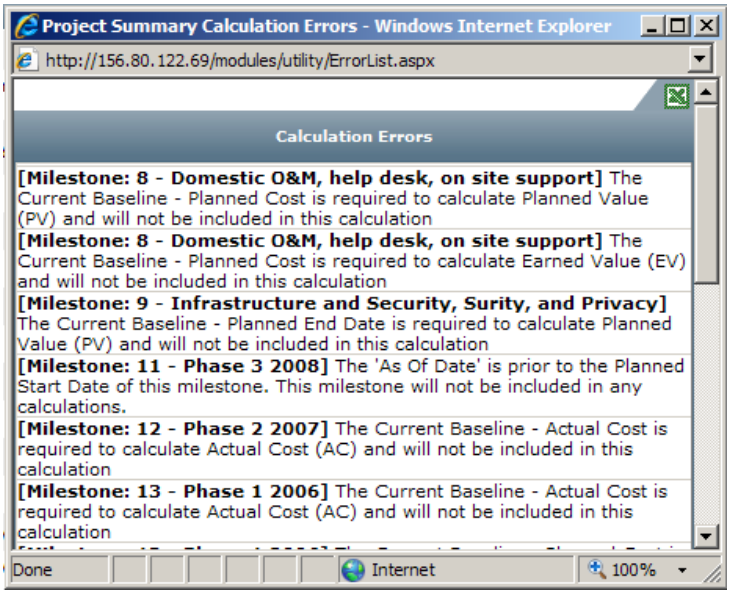
3. Uncheck any values that should you wish to manually input. All checkboxes will be checked by default.

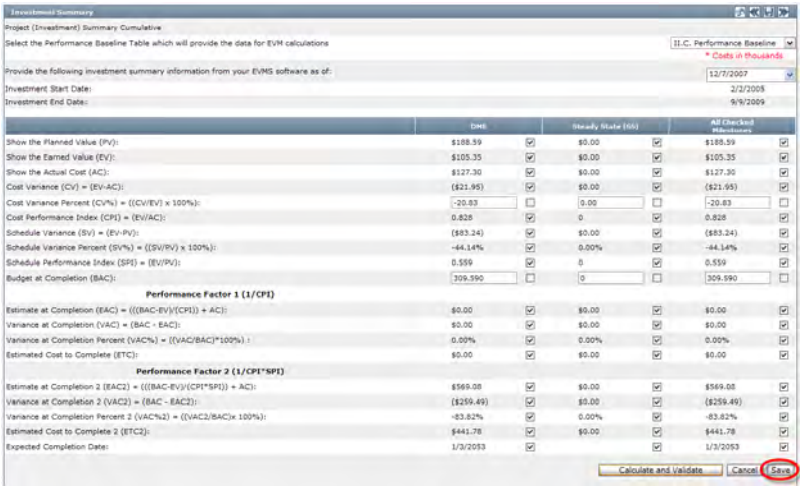
a. If any calculations are unchecked, enter the value for these calculations, as many of the calculations are dependent upon one another and missing data will adversely affect the results of the overall calculation.



4. Click the **Calculate and Validate** button to calculate all the fields from the milestones in the selected table marked for 'IN EVMS'.

When a performance baseline table is selected as the data source, calculations will be based upon the milestone data found in the specified table. During calculation, the milestone data supplied will be validated for accuracy and completeness. When complete, any validation issues that are found will be displayed in a pop-up window so that the user may go to the performance baseline table and make the necessary adjustments to their data.

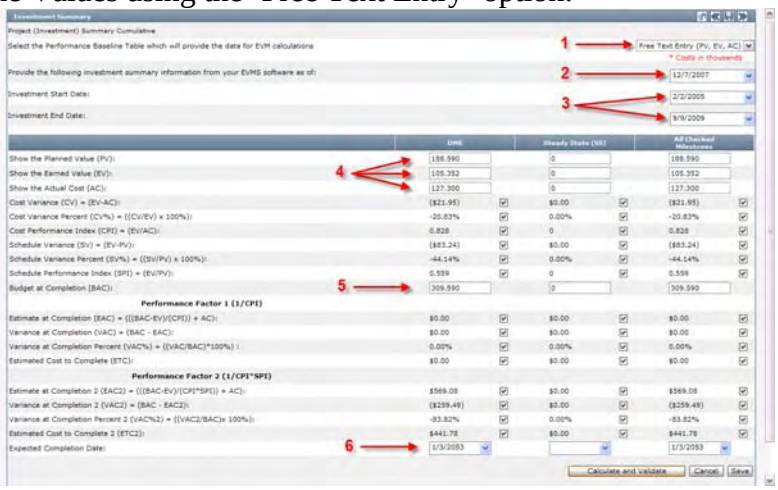




5. Click **Save** to accept the calculations.

Note: Data will NOT be saved by using the standard Save icon or Next and Back arrows (,). Users must use the Save button located under the list of fields.

To Calculate the Values using the 'Free Text Entry' option:



1. Select **Free Text Entry (PV, EV, AC)** from the data source dropdown list
2. Enter the **As Of Date** (the date chooser located next to 'Provide the following investment summary information from your EVMS software as of').
3. Enter **the Project Start Date** and **Project End Date** using the date choosers provided
4. Enter the values for **PV, EV**, and **AC**
5. Enter the value for **BAC**
6. Enter the **Expected Completion Date** using the date chooser

7. Click the **Calculate and Validate** button to calculate the remaining fields

*** For an example of the EVMS Calculations and how they are calculated, please see the EVMS Calculations document located on the eCPIC Resource Center (ERC) at www.eCPIC.gov.*

4.19.9.2 Earned Value Monthly Capture

eCPIC provides the capability to capture and store monthly EVM calculations. This functionality will not only allow for users to submit and view monthly Earned Value data for each investment, but will also allow them to see projected values for the lifespan of the project.

The Monthly Capture Table captures submitted EVMS calculations and projections for all three EVMS calculation types. Each type, DME, SS and All Milestones are stored in separate Monthly Capture tables, accessible through a set of tabs above the Monthly Capture Table as shown below. Clicking on each tab will display the appropriate Monthly Capture Table.

DME | SS | [All] Rebaseline | Cost Curve | Variance Chart | Toggle Excel Import

Date	Baseline PV	PV (BCWS)	EV (BCWP)	BAC	AC (ACWP)	CV %	SV %	Comment	Table Used	User Overridden Calculations		
June 1997	3370.100	350000.000	550000.000	550000.000	9000000.000	-1536.36	57.14		III.B. Performance Baseline		Edit	Delete
July 1997	6852.530	350000.000	550000.000	550000.000	9000000.000	-1536.36	57.14		III.B. Performance Baseline		Edit	Delete
August 1997	10334.960	350000.000	550000.000	550000.000	9000000.000	-1536.36	57.14		III.B. Performance Baseline		Edit	Delete
September 1997	13705.060	13705.060						Projected Values			Edit	Delete
October 1997	17187.490	17187.490						Projected Values			Edit	Delete

4.19.9.2.1 EVM Monthly Calculation Fields

The following data fields will be collected and displayed within the monthly EVM table:

- **Calculation Date:** The calculation date will automatically be set to the last day of the month for which users are submitting data.
- **Baseline PV:** The baseline planned value will be generated for the project projected lifespan the first time monthly calculations are submitted for that project. For subsequent monthly submissions, these values will not change and will provide a baseline record of the project planned values for each month of the project's lifecycle. This will allow users to track changes to planned data in project milestones in the Approved Baseline and Actuals table. *Only System Administrators have the capability to rebaseline the project calculations and update the projected baseline planned values.*
- **PV (BCWS):** The planned value will be generated for the project projected lifespan the first time monthly calculations are submitted for that project. For subsequent monthly submissions, these values will be projected against the milestones in the Approved Baseline and Actuals table and may change (depending on if planned data has been modified in the Approved Baseline and

Actuals table. *Upon rebaseline of project, these projected values will overwrite the projected values of the Baseline PV, which are described above. Upon rebaseline, actual values for months that have already been submitted will not be copied into the Baseline PV column.*

- **EV (BCWP):** Earned value is submitted directly from the Project Summary (EVMS) data grid.
- **BAC:** Budget at Completion is submitted directly from the Project Summary (EVMS) data grid.
- **AC (ACWP):** Actual Cost is submitted directly from the Project Summary (EVMS) data grid.
- **Cost Variance %:** Cost Variance Percentage is submitted directly from the Project Summary (EVMS) data grid.
- **Schedule Variance %:** Schedule Variance Percentage is submitted directly from the Project Summary (EVMS) data grid.
- **Comment:** Allows user to submit a comment about the monthly submission. The comment textbox is located just below the date drop-down list for submitting monthly calculations.
- **Table Used:** Performance Baseline table used to calculate Earned Value

4.19.9.2.2 Capture and View Monthly Calculations

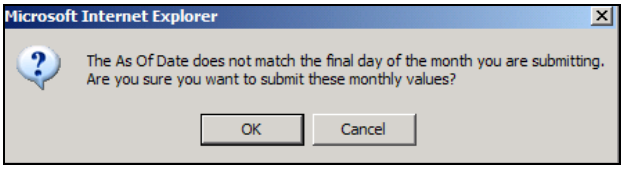
To capture monthly calculations:

1. Click on the **View Monthly Calculations** link.

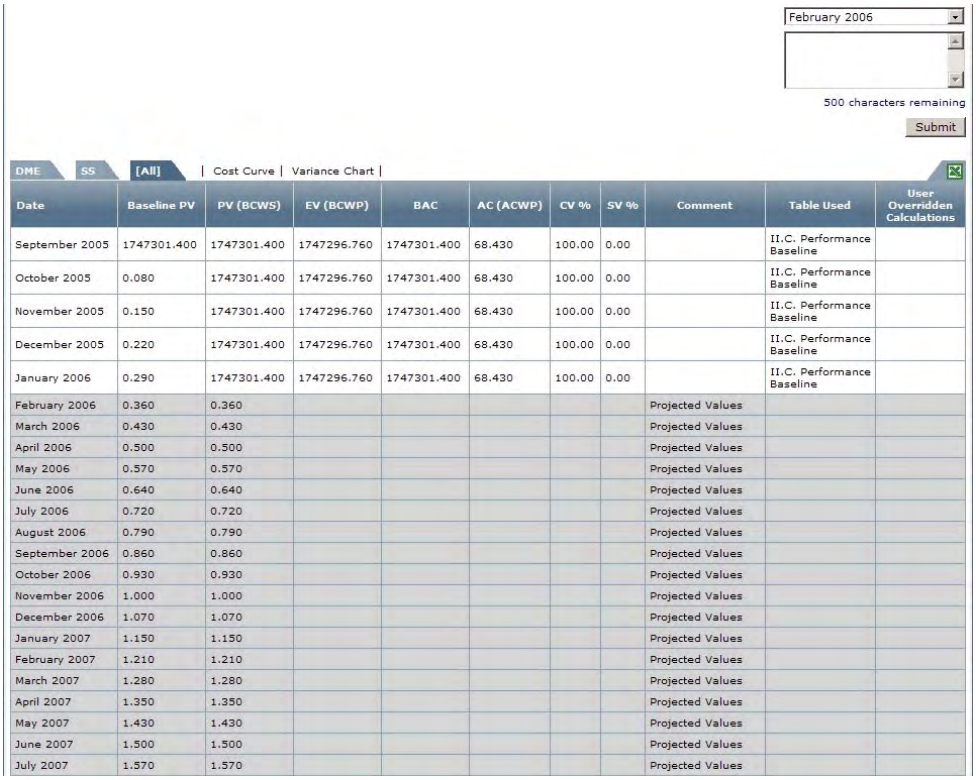
A list of monthly dates from the earliest start date (Actual or Planned) to the latest end date (Actual or Planned) will be listed.

2. Click on the month that needs to be captured.
3. Check the EVM data to make sure the calculations are correct for the month being submitted.
4. If preferred, users can enter a comment about the monthly capture.

5. Click on **Submit**.
6. If the 'As of date' does not match the last day of the month users are submitting data for, a warning will be displayed. If the two days do match, users will also be prompted to confirm the submission but without this warning message.



7. Select **OK** if to proceed with the data submission.



February 2006

500 characters remaining

Submit

DME | SS | [All] | Cost Curve | Variance Chart |

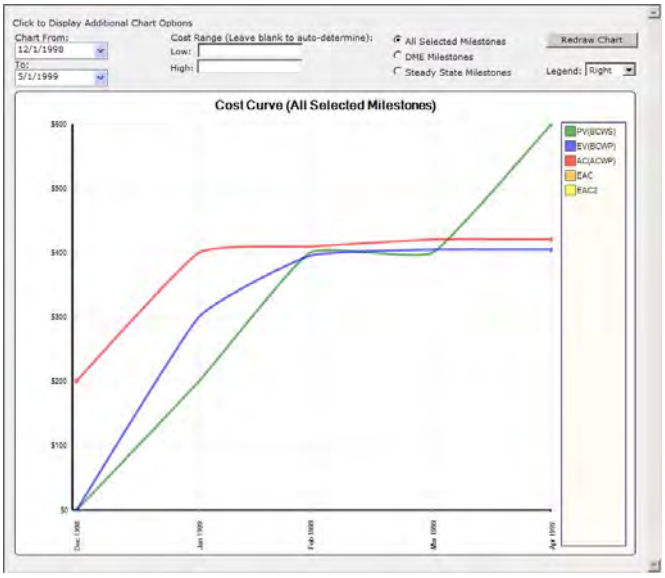
Date	Baseline PV	PV (BCWS)	EV (BCWP)	BAC	AC (ACWP)	CV %	SV %	Comment	Table Used	User Overridden Calculations
September 2005	1747301.400	1747301.400	1747296.760	1747301.400	68.430	100.00	0.00		II.C. Performance Baseline	
October 2005	0.080	1747301.400	1747296.760	1747301.400	68.430	100.00	0.00		II.C. Performance Baseline	
November 2005	0.150	1747301.400	1747296.760	1747301.400	68.430	100.00	0.00		II.C. Performance Baseline	
December 2005	0.220	1747301.400	1747296.760	1747301.400	68.430	100.00	0.00		II.C. Performance Baseline	
January 2006	0.290	1747301.400	1747296.760	1747301.400	68.430	100.00	0.00		II.C. Performance Baseline	
February 2006	0.360	0.360						Projected Values		
March 2006	0.430	0.430						Projected Values		
April 2006	0.500	0.500						Projected Values		
May 2006	0.570	0.570						Projected Values		
June 2006	0.640	0.640						Projected Values		
July 2006	0.720	0.720						Projected Values		
August 2006	0.790	0.790						Projected Values		
September 2006	0.860	0.860						Projected Values		
October 2006	0.930	0.930						Projected Values		
November 2006	1.000	1.000						Projected Values		
December 2006	1.070	1.070						Projected Values		
January 2007	1.150	1.150						Projected Values		
February 2007	1.210	1.210						Projected Values		
March 2007	1.280	1.280						Projected Values		
April 2007	1.350	1.350						Projected Values		
May 2007	1.430	1.430						Projected Values		
June 2007	1.500	1.500						Projected Values		
July 2007	1.570	1.570						Projected Values		

As shown above, the monthly values that have been submitted by a user will be shown in white (un-shaded.) Any monthly values that are projected and have not been submitted by a user will be shaded in gray.

Note: The ability to edit or delete a monthly capture is only available to System Administrators.

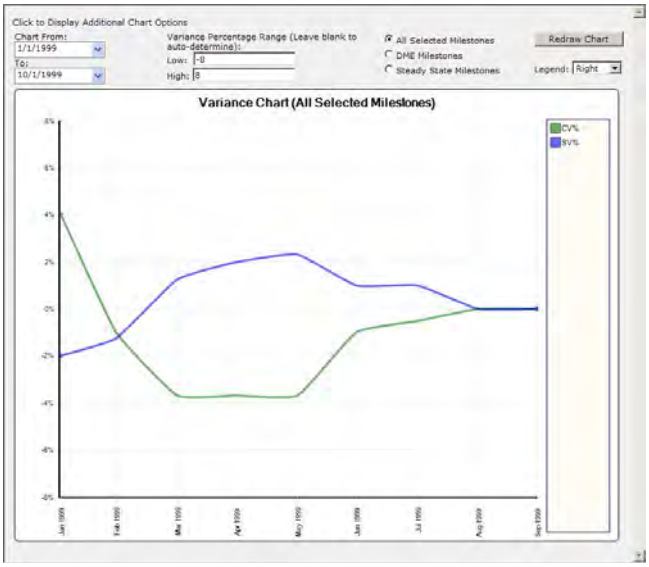
4.19.9.2.3 Generate Cost Curve

The Cost Curve Graph has been updated to graph either DME milestones, SS Milestones, or All Milestones. When a user clicks on the Cost Curve link above the Monthly Capture Table, the cost curve will be drawn using data from the currently selected Monthly Capture Table. This allows users to generate a cost curve based on DME EVMS data, SS EVMS Data, or all EVMS data for an investment.



The Cost Curve Interface allows users to flexibly select several options when generating a cost curve. Once the Cost Curve has been generated, the user can select the "Click to Display Additional Chart Options." This will allow the user to set the Start and End Dates for the chart, the range of costs to display on the Y-axis, whether to graph DME, SS, or All milestones and where to display the chart legend. The user can set the options then click "Redraw Chart" to display the updated cost curve chart based upon their selected preferences.

4.19.9.2.4 Variance Chart



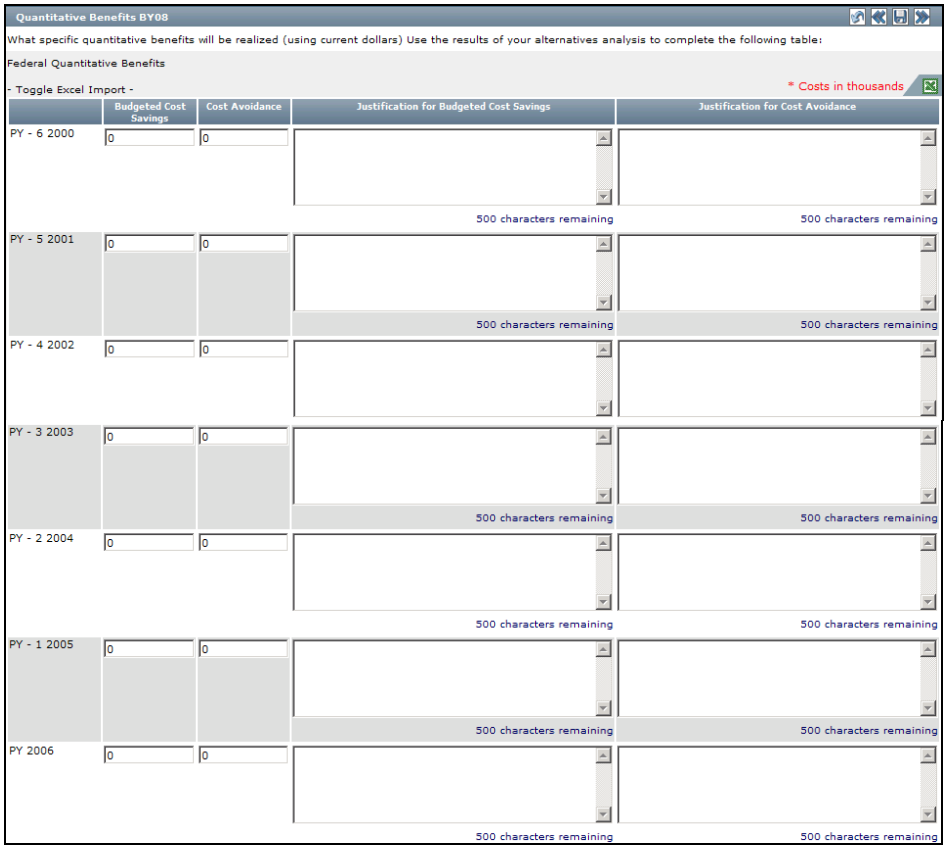
The Variance Chart, like the Cost Curve Chart, is a time based chart which displays cost and schedule variance data captured within the eCPIC Monthly Capture Table. The Variance Chart displays time, in months on the X axis and charts Schedule and Cost Variance as Percentages as separate lines on the Y-Axis. The Variance Chart also can

chart Variances based on DME Milestones, SS Milestones, or All Milestones and contains the same Additional Options section as the Cost Curve.

4.19.10 Federal Quantitative Benefits Table

The **Federal Quantitative Benefits** table is located in the *IV.A: Multi-Agency Collaboration Oversight* section of the Exhibit 300 process.

When the **Federal Quantitative Benefits** datagrid is entered for the very first time by a user, before data has been entered and assuming the data has not been imported into the investment from a revision, only the table headings will be visible.



4.19.10.1 Add Federal Quantitative Benefits

To Add Federal Quantitative Benefits:

1. From within the Federal Quantitative Benefits datagrid, enter all necessary information.

2. Click on the **Update Datagrid Values** button to add the row to the datagrid.

Note: If you enter an item for Budgeted Cost Savings or Cost Avoidance that is not a valid number (either includes text or is a negative number), it will be replaced by a 0 for the calculations. Any number entry will be rounded to three decimal places.

All data in the table can be exported to Excel by clicking on the  icon. The Federal Quantitative Benefits data is also included when the investment is exported to XML and Word.

4.19.10.2 Edit Federal Quantitative Benefits

To Edit Federal Quantitative Benefits:

1. From within the Federal Quantitative Benefits table, navigate to the value that needs editing and simply replace the existing data.

2. Click on the **Update Datagrid Values** button.

Note: If you enter an item for Budgeted Cost Savings or Cost Avoidance that is not a valid number (either includes text or is a negative number), it will be replaced by a 0 for the calculations. Any number entry will be rounded to three decimal places.

4.19.10.3 Delete Federal Quantitative Benefits

To Delete Federal Quantitative Benefits:

1. From within the Federal Quantitative Benefits, navigate to the value that will be deleted and simply delete the existing data.

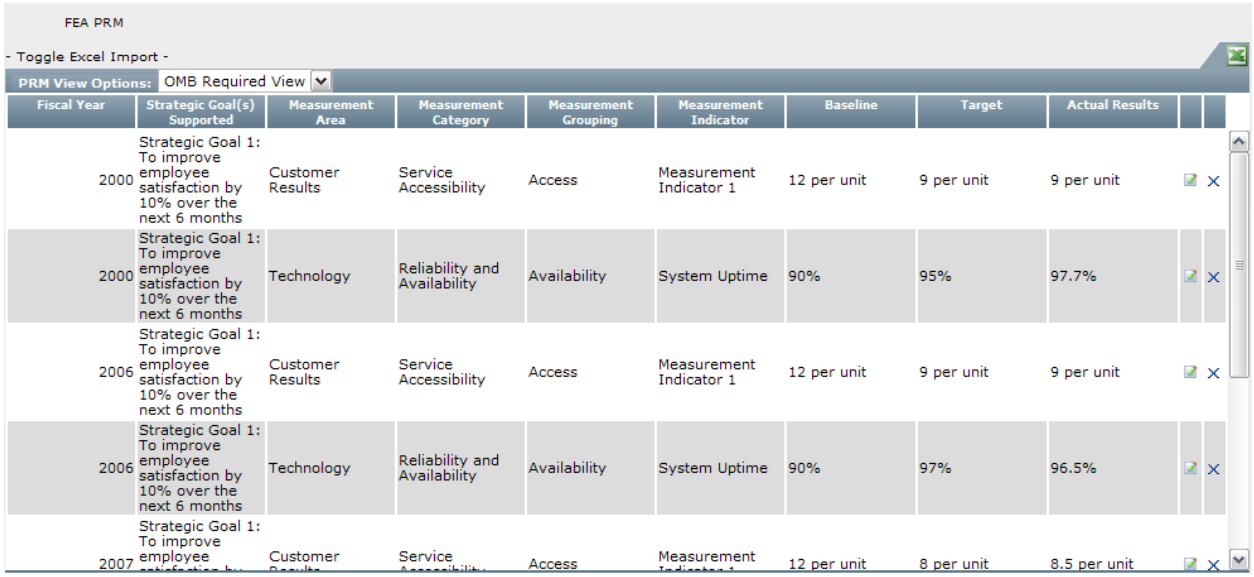
2. Click on the **Update Datagrid Values** button.

4.19.11 Performance Reference Model

eCPIC allows manipulation of the Federal Enterprise Architecture Performance Reference Model (FEA PRM) table user interface (UI). In this way, agency project managers gain a more intuitive view into the performance metrics of their investments. This functionality alleviates the following shortcomings of the OMB designed FEA PRM table: 1) Difficulty in determining the line of sight among the indicators and how the targets compare from year to year; 2) difficulty in determining trends for an indicator and across indicators; 3) difficulty in generating graphs in MS Excel using the existing data

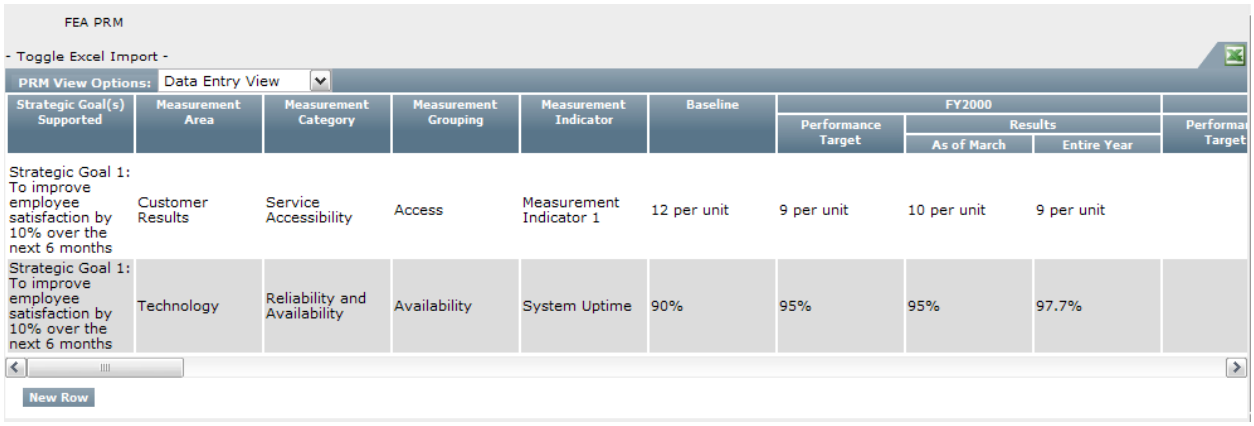
format; 4) additional work for evaluators who have to scroll back and forth to see how much results change from year to year.
Within the Investments module, users will have the option of three views of the FEA PRM table:

- **OMB Required View:** This is the view displays the data in the format described by OMB in the A-11 Exhibit 300 guidance.



Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Target	Actual Results
2000	Strategic Goal 1: To improve employee satisfaction by 10% over the next 6 months	Customer Results	Service Accessibility	Access	Measurement Indicator 1	12 per unit	9 per unit	9 per unit
2000	Strategic Goal 1: To improve employee satisfaction by 10% over the next 6 months	Technology	Reliability and Availability	Availability	System Uptime	90%	95%	97.7%
2006	Strategic Goal 1: To improve employee satisfaction by 10% over the next 6 months	Customer Results	Service Accessibility	Access	Measurement Indicator 1	12 per unit	9 per unit	9 per unit
2006	Strategic Goal 1: To improve employee satisfaction by 10% over the next 6 months	Technology	Reliability and Availability	Availability	System Uptime	90%	97%	96.5%
2007	Strategic Goal 1: To improve employee	Customer	Service	Access	Measurement	12 per unit	8 per unit	8.5 per unit

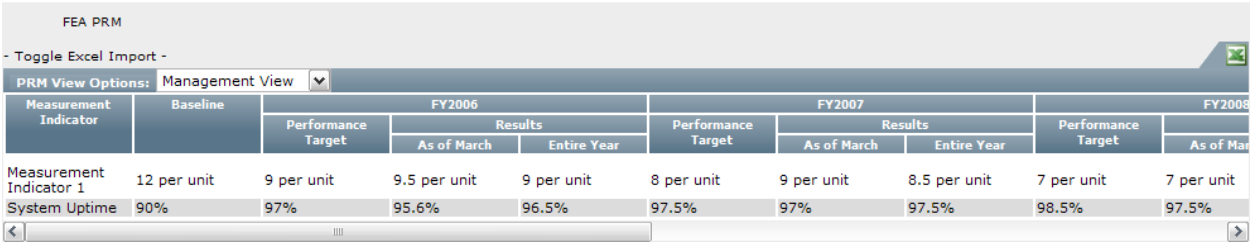
- **Data Entry View:** This view shows the traditional OMB required fields, sorted by measurement indicator. For each measurement indicator, the Data Entry View will also show the Strategic Goal(s) Supported, Measurement Area, Measurement Category, Measurement Group, and Baseline columns. This view groups the target and results for each indicator together by year so that project managers have better line-of-sight into the progress of that indicator. This view also displays any custom result columns that have been added by an administrator.



Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	FY2000			
						Performance Target	Results		Performa Target
							As of March	Entire Year	
Strategic Goal 1: To improve employee satisfaction by 10% over the next 6 months	Customer Results	Service Accessibility	Access	Measurement Indicator 1	12 per unit	9 per unit	10 per unit	9 per unit	
Strategic Goal 1: To improve employee satisfaction by 10% over the next 6 months	Technology	Reliability and Availability	Availability	System Uptime	90%	95%	95%	97.7%	

- **Management View:** The Management View is similar to the Data Entry View in that the targets and results for each indicator are grouped together by year,

however it displays a more targeted view of the data. Where the Data Entry view displays the complete data, including indicator mapping, strategic goal supported and data for all years, the management view displays only the indicator, its baseline and performance targets for a subset of years. This view allows for faster comparison with the most relevant data.


FEA PRM

- Toggle Excel Import -

PRM View Options: Management View

Measurement Indicator	Baseline	FY2006			FY2007			FY2008	
		Performance Target	Results		Performance Target	Results		Performance Target	
			As of March	Entire Year		As of March	Entire Year		As of Mar
Measurement Indicator 1	12 per unit	9 per unit	9.5 per unit	9 per unit	8 per unit	9 per unit	8.5 per unit	7 per unit	7 per unit
System Uptime	90%	97%	95.6%	96.5%	97.5%	97%	97.5%	98.5%	97.5%

4.19.11.1 Viewing the PRM Table in the Investments Module

Project managers access the enhanced PRM table views in the traditional PRM table location of the Investments Module. To access the PRM table:

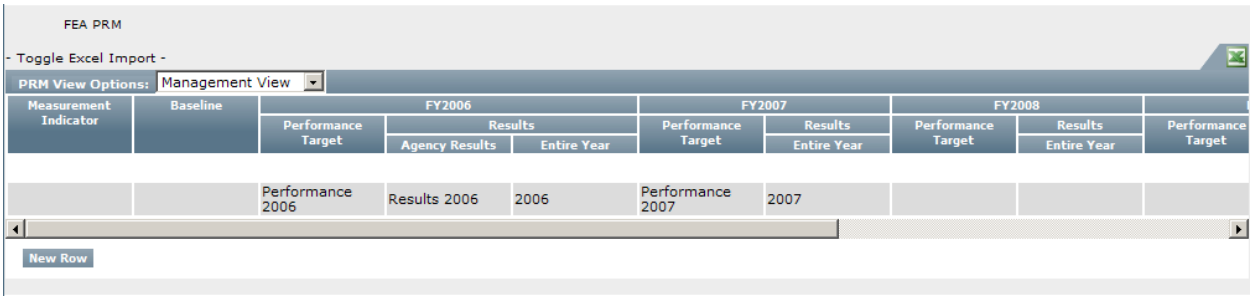
1. From within the Investments Module, Select an Investment and navigate to **Section I.D: Performance Information**

2. Click on the **PRM View Options** listbox to select one of the three available PRM table views. The three table views are:

4.19.11.2 Recording Data into Agency Defined Results Columns

If an administrator has added a custom result column to the PRM table, users can update that field from either the Data Entry View or the Management View. To update PRM table information for a custom result column:

1. From either the Data Entry View or Management View of the PRM table, click on the ( ) **Edit Row** icon of a Performance Measurement Indicator


FEA PRM

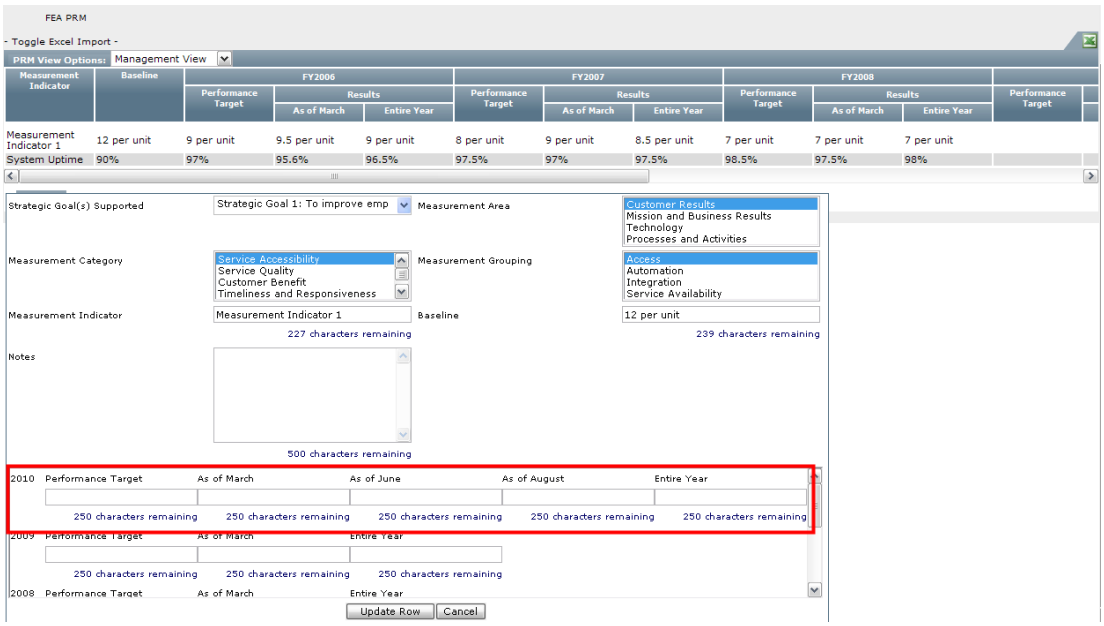
- Toggle Excel Import -

PRM View Options: Management View

Measurement Indicator	Baseline	FY2006			FY2007		FY2008		
		Performance Target	Results		Performance Target	Results	Performance Target	Results	Performance Target
			Agency Results	Entire Year		Entire Year		Entire Year	
		Performance 2006	Results 2006	2006	Performance 2007	2007			

New Row

2. In that data entry window that appears, scroll to find the appropriate year and enter the results in the field provided



3. Click the **Update Row** button to save the data into the table

4.20 Other Data Tables and Fields in eCPIC

eCPIC also includes other datagrids that are not part of the OMB structure. However, these datagrids are important to the life of the investment and have been incorporated so that agencies have the flexibility needed to manage each of their investments.

4.20.1 FEA Primary Mapping Field

The FEA Primary Mapping field is located in the sub-section of section I.F: Enterprise Architecture (EA) section within the Exhibit 300 process. This table is used to determine if the investments primary mapping will map to the SRM or the BRM within the Exhibit 53.

When the FEA Primary Mapping field is accessed for the very first time by a user, before data has been entered and assuming the data has not been imported into the investment from a revision, only the table headings will be visible.