Reclamation Manual
Directives and Standards

Graphing Format and Content Requirements

1. **Purpose of this Appendix.** The purpose of this Appendix is to provide standardized graphic presentation requirements for the Statement of Project Construction Cost and Repayment (SPCCR). The objective is to make the SPCCRs more user-friendly and to provide a visual representation of the overall project status. Management believes these charts are a useful information source during consultations with water users. Project managers are encouraged to familiarize their beneficiaries with the graphs.

2. **Graphing Format Requirements.** This Appendix provides standardized requirements for graphic presentations. All graphs are to be developed and maintained using Excel spreadsheets. While only two of the graphs presented in this Appendix are required for every SPCCR, the regions are encouraged to use the other graphic presentations. The following standards apply to all graphs included in an SPCCR.

    A. The visual representation will be demonstrated as pie charts.

    B. The pie charts for each project are based on that project's SPCCR summary statement and supporting schedules, as developed and revised each fiscal year in each region.

    C. The pie charts for each project are worksheets within that project's SPCCR spreadsheet application. The most efficient design for creating pie charts is to set up the graphic worksheet so the pie chart data is automatically updated as the preparer updates SPCCR information each year.

    D. The pie charts must be posted to each region's Intranet on a yearly basis for easy reference.

    E. Each of the sliced sections in the pie charts will have a corresponding dollar amount (in units of $1,000) and a percentage amount.

    F. The **Total Cost Allocation chart** and the **Total Project Repayment chart** are the two charts that are required for every SPCCR.

        (1) These two required charts provide both an overview of the total allocation of project costs among all project purposes and total repayment responsibilities.

        (2) The Total Cost Allocation chart must display every reimbursable and all material nonreimbursable project purposes separately. Smaller nonreimbursable project purposes may be combined to improve the visual effectiveness of the chart. The combined total cost of the project purposes displayed in the graph must equal the total cost of that project.

Reclamation Manual
Directives and Standards

(3)   The Total Project Repayment chart must include all repayment sources for reimbursable costs, various sources of crediting, and the project amount allocated to nonreimbursable purposes. Footnote any excess repayment over costs and explain the cause. Other credits and nonreimbursable totals will be included in one of the supporting schedules, not on the summary statement.

G.   **Mandatory Color Formats.** In order to provide quick and easy visual reference for the largest components of cost and repayment, maintain uniform color representation for Irrigation, Municipal and Industrial (M&I) water, and Commercial Power purposes. All other purpose color presentations are optional. **All charts must use the mandatory standardized colors identified below by purpose for both costs and repayment data. Shades of the mandatory colors can be used.**

(1)   Irrigation – Green with a Dot Pattern

(2)   M&I Water – Blue with Diagonal Lines

(3)   Commercial Power – Orange with a Plaid Pattern

(4)   Flood Control – Yellow with gradient shading

(5)   Fish & Wildlife (F&WL) and Recreation – Pink with horizontal lines

(a)   F&WL is combined with Recreation on the graph because project reviews have found the work charged to these two project purposes is frequently combined under just one purpose or crosses between the two purposes.

(b)   If a region needs to separate F&WL and Recreation, due to different authorizing legal authorities, use the following colors:

(i)   Recreation - Pink with dark horizontal lines

(ii)   F&WL - Purple with narrow horizontal lines

3.   **Optional Graphic Displays**. Additional detailed charts can be created from SPCCR data.

A.   **Repayment Details by Project Purpose.** These charts provide detailed repayment information for each reimbursable purpose by beneficiary. These displays help water users visually identify and compare the percentage of a specific project purpose they are contractually bound to repay with the total amount of repayment assigned to that specific purpose.

(1) **Total Irrigation Repayment Chart.** The graph illustration of the total repayment breakdown for irrigation is usually presented first. It shows the relative repayment responsibilities from all sources.

(a) Irrigation repayment can be further detailed by two additional charts that show current repayment status and current contractual status. These two graphs are necessary to differentiate the total balance owed on the irrigation portion of the project and the balance owed on the specific contractual obligation.

(b) The Current Irrigation Repayment Chart shows the current status of repayment from all sources, i.e., irrigator repayment, other credits, any legislative deferrals, and anticipated power assistance, if any.

(c) The Irrigation Repayment Contract Status Chart provides specific information on the status of the irrigators' contractual obligation.

(2) **Total M&I Repayment Chart or Total Power Repayment Chart.** Arrange reimbursable project purpose repayment charts for M&I water and power similarly to the irrigation repayment section described above. A pie chart illustrating each entity's repayment is beneficial when there are two or more repayment entities for a reimbursable purpose.

(3) **Total Nonreimbursable Allocation Chart.** A pie chart identifying each of the nonreimbursable project purposes and their allocations can be very effective when there are numerous project purposes included in the SPCCR.

(4) **Total SOD Repayment by Project Purpose.** A pie chart identifying SOD repayment by project purpose would be beneficial for responding to inquires.

4. **Pie Chart Development Instructions.** The development instructions included in this Appendix are based on the cost allocation totals and repayment totals from the summary statement and supporting schedule worksheets. A data table is placed in the graph's worksheet that links the totals back to the summary statement and supporting schedule worksheets- examples follow.

Reclamation Manual
Directives and Standards

TOTAL PROJECT CONSTRUCTION COST ALLOCATION CHART		
Amount	**Purpose**	**($'s in thousands)**
$175,000,000	Irrigation	$175,000
89,000,000	Municipal and Industrial	89,000
285,000,000	Commercial Power	285,000
128,000,000	Fish & Wildlife and Recreation[1]	128,000
60,000,000	Flood Control	60,000
100,000,000	Safety of Dams	100,000
837,000,000	Total	837,000
[1] Refer to Paragraph 2.G.(5)(a) for an explanation of why these two project types are combined on this table.		

TOTAL PROJECT REPAYMENT CHART		
Amount	**Source**	**($'s in thousands)**
$ 49,000,000	Irrigators' Repayment	$ 49,000
80,000,000	M&I Users' Repayment	80,000
170,000,000	Power Users' Repayment	170,000
283,000,000	Nonreimbursable	283,000
200,000,000	Basin Fund (Power Revenues)	200,000
55,000,000	Other Credits	55,000
837,000,000	Total	837,000

A. **Setting up Labels and Data**.

   (1) Enter the title of the pie chart, e.g., Total Project Construction Cost Allocation or Total Project Repayment as shown above.

   (2) Enter dollars rounded to the nearest thousand and in $1,000 units, i.e., $1,786,756.89 becomes $1,787. To display the amounts in thousands, either move the decimal 3 places to the left or divide the amount by $1,000.

   (3) Irrigation, commercial power, and M&I must be displayed separately. Substantially immaterial nonreimbursable or reimbursable allocations may be grouped for graphic presentation when individual presentation would cause the chart to be ineffective.

B. **Formatting Cells.**

   (1) **Amounts.** Select the columns with dollar values and format the cells as follows**:**

      (a) Select **currency.**

Reclamation Manual
Directives and Standards

(b)   Select **zero (0)** decimal places**.**

(2)   **Summation.** Once all the labels and data are entered, the last row must include a total for each column of values.

C.   **Identifying Project Name.** Before a pie chart is created, be sure the project title is at the top of the spreadsheet.

   (1)   **Project Name.** Display the project name in capitals and bold/underline.

   (2)   **Sub-title.** A sub-title in parentheses that reads "(Based on SPCCRs for FY XXXX)" is required under the project title.

   (3)   **Placement.** The project name and sub-title for the spreadsheet must appear at the top of each page.

D.   **Displaying Total Amounts.** The total amount must be displayed directly above the pie chart as a highlighted line. Refer to the pie charts displayed after Paragraph 5.

E.   **Creating Pie Charts in Excel.**

   (1)   **Chart Wizard.** Select **Insert** from the standard tool bar. Expand the drop-down menu box and select **Chart.** The Chart Wizard box will appear. There are four steps to the process.

      (a)   **Step 1 - Chart Type.** Select the **Standard Type** tab. Then select **pie** from the **Chart Type** display on the left.

      (b)   **Chart Visual Display.** Once **pie** is selected, the right side of the **Standard Type tab,** which is the **Chart sub-type** display, will change and six different pie charts examples will appear in two rows with three examples in each. Select the second example in the second row, the **fifth choice**, which will produce an exploded pie with a 3-D visual effect. Select **Next** to move to the second step**.**

   (2)   **Step 2 - Data Source**. The Chart Wizard - Chart Source Data box will appear. There are two tabs in this box. Select the **Data Range** tab.

      (a)   **Data Range.** Click in the **Data range** box at the center of the **Data Range** tab and then highlight the data and label cells in the second and third columns to be included in the chart. Refer to the tables above. Select all cells in those two columns, except for the total row.

Reclamation Manual
Directives and Standards

        (i)   **Data.** The data must include the project purposes/repayment sources and total costs/repayment source amounts located in the second and third columns in the table above. Amounts must be in $1,000 units.

        (ii)   **Total Amount.** Do not include the **Total Amount** row. The **Total Amount** data will be shown outside of the chart as described in Paragraph 4.D above.

        (iii) **Series In.** Below the **Data range** box is a field titled **Series in:** with two choices, **Columns** and **Rows**. Select **Columns**. Select **Next** to move to the third step**.**

   (3)   **Step 3 - Chart Options.** The Chart Wizard - Chart Options box will appear. This box has three tabs: Titles, Legend, and Data Labels.

      (a)   **Titles Tab.** Select the **Titles** tab**.** Type the appropriate chart title. The required chart labels are Total Project Construction Cost Allocation or Total Project Repayment. The titles used for any optional charts are not standardized but must be adequate to identify the data accurately.

      (b)   **Legend Tab.** Select the **Legend** tab. There is a **Show legend** line and a square box in the upper left corner of this tab. Check the box to display the pie chart's legend. Below the **Show legend** line are the **Placement** options**.** This determines where the legend will appear in relation to the chart. Choose a placement option.

      (c)   **Data Labels Tab.** Select the **Data Labels** tab**.** This tab is used to add specific data information for each slice of the pie chart.

         Select **value** and **percentage** for the two required charts. The data labels for optional charts are not standardized. The **Separator** box provides display options that may be used to keep the value and percentage from looking like one number. Select the dropdown arrow and choose the option that provides the best visual display. Select **Next** to move to the fourth and final step**.**

   (4)   **Step 4 - Chart Location.**

      (a)   The Chart Wizard - Chart Location box gives you two options, place the chart as a new sheet, or as an object in the current sheet. Choose an option and then select **Finish**.

  F.   **Refining the Pie Chart.** At this point, the pie chart will show up in a worksheet. Adjust the size and placement of pie chart to the following standards:

(320) 09/28/2007   Effective Immediately   Page E6
NEW RELEASE
(Minor revisions approved 08/20/2009)

Reclamation Manual
Directives and Standards

(1) **Font Size.** The titles, data labels and legend must be at least a 12-point font.

(2) **Format Data Labels.** It may be necessary to change the format of the data labels to increase the number of decimal places for the percentages. To format data labels, do the following:

    (a) Right click directly on the **data labels** in the chart. Select **Format Data Labels**. There are four tabs available: Number, Patterns, Font, and Alignment. Select the **Number** tab. Then select **Percentage** and in the **Decimal places** box select **2.**

(3) **Format Colors and Patterns.** The standardized colors and patterns established in Paragraph 2.G must be used for irrigation, M&I water, and power pie slices. The colors of a pie piece can be changed by selecting and right clicking on the individual pie piece. Select **Format Data Point.** There are three tabs: **Pattern, Data Labels,** and **Options.** Select the **Pattern** tab and choose the appropriate standardized color for the irrigation, M&I water, and power pie slices and the desired shade. Do the same for the nonstandard project purposes, making sure not to use one of the standardized colors**.** Below the color choices on this same tab is a rectangle labeled **Fill Effects.** Click on this rectangle and select the appropriate pattern for the standardized pie slices. The use of a pattern is encouraged to ensure each pie slice can be clearly identified if reproduced in black and white.

5. **Pie Chart Examples.** Examples of the two required pie charts, based upon the tables found in Paragraph 4, are displayed on the following pages.
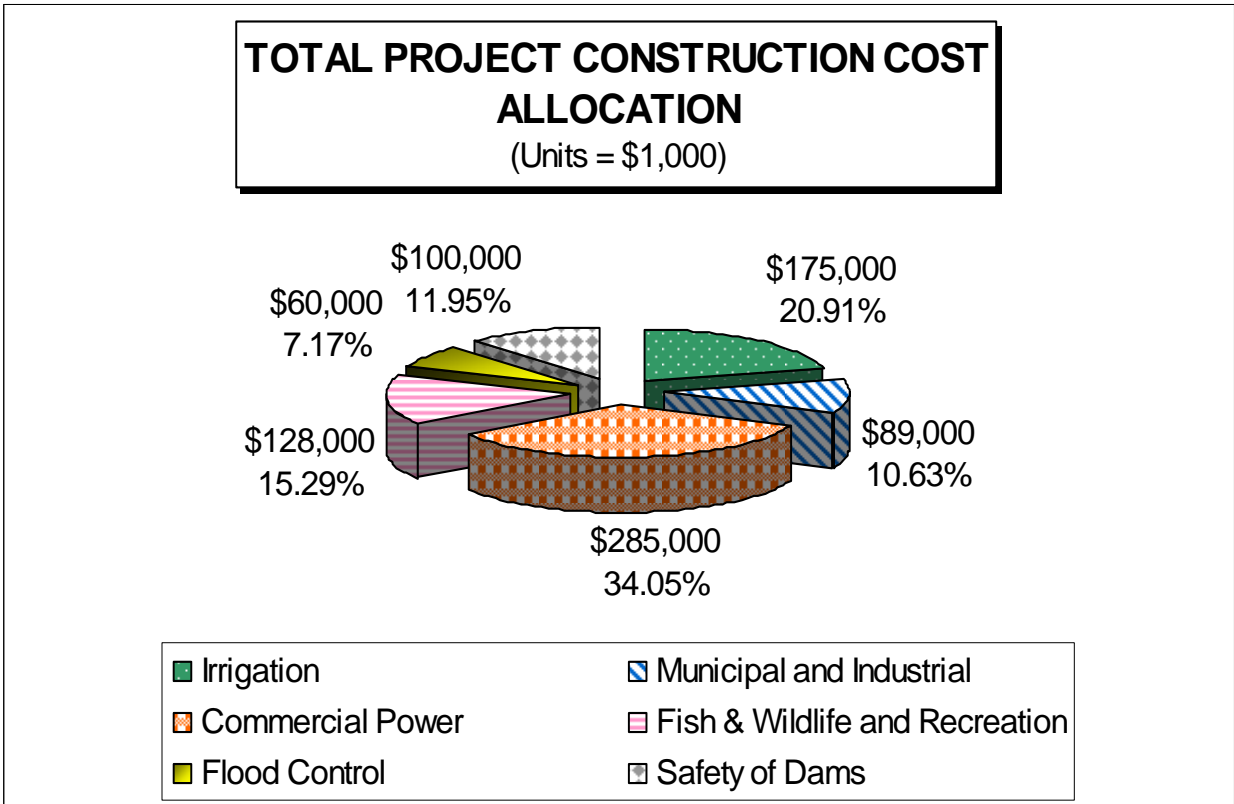
(320) 09/28/2007   Effective Immediately   Page E7
NEW RELEASE
(Minor revisions approved 08/20/2009)

Reclamation Manual
Directives and Standards

RECLAMATION PROJECT NAME

(Based on SPCCRs for FY XXXX)

TOTAL PROJECT CONSTRUCTION COST ALLOCATION = $837,000

TOTAL PROJECT CONSTRUCTION COST ALLOCATION
(Units = $1,000)

$100,000
11.95%

$60,000
7.17%

$175,000
20.91%

$128,000
15.29%

$89,000
10.63%

$285,000
34.05%

- Irrigation
- Municipal and Industrial
- Commercial Power
- Fish & Wildlife and Recreation
- Flood Control
- Safety of Dams

Reclamation Manual
Directives and Standards

RECLAMATION PROJECT NAME

(Based on SPCCRs for FY XXXX)

TOTAL PROJECT REPAYMENT = $837,000

TOTAL PROJECT REPAYMENT
(Units = $1,000)

$55,000
6.57%

$49,000
5.85%

$80,000
9.56%

$200,000
23.89%

$170,000
20.31%

$283,000
33.81%

■ Irrigators' Repayment   ◨ M&I Users Repayment
■ Power Users Repayment   ■ Nonreimbursable
□ Basin Fund (Power Revenues) ■ Other Credits