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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. Use Excel spreadsheets to develop and maintain all graphs. The Bureau of Reclamation requires only two of the graphs presented in this Appendix for every SPCCR but encourages the regions to use the other graphic presentations. The following standards apply to all graphs included in a SPCCR.

    A. Demonstrate the visual representation as pie charts.

    B. The project's SPCCR summary statement and supporting schedules, as developed and revised each fiscal year (FY) in each region, is the basis of the pie charts for the project.

    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 automatically updates as the preparer updates SPCCR information each year.

    D. The region will include the pie charts when posting the SPCCRs to the regional Intranet.

    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 required for every SPCCR.

        (1) These two charts provide 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. The region may combine smaller nonreimbursable project purposes 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.

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(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. Include other credits and nonreimbursable totals in one of the supporting schedules, not on the summary statement.

G. **Mandatory Color Formats.** 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. The regions may use shades of the mandatory colors.**

   (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. Combine F&WL with recreation on the graph because project reviews found the work charged to these two project purposes is frequently combined under just one purpose or crosses between the two purposes. If a region needs to separate F&WL and recreation, due to different authorizing legal authorities, use the following colors.

      (a) Recreation - pink with dark horizontal lines.

      (b) F&WL - purple with narrow horizontal lines.

3. **Optional Graphic Displays-Repayment Details by Project Purpose.** The region may create additional detailed charts from SPCCR data. 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.

A. **Total Irrigation Repayment Chart.** This chart presents the graph illustrating the total repayment breakdown for irrigation first. It shows the relative repayment responsibilities from all sources.

   (1) The region may further detail irrigation repayment by two additional charts that show current repayment status and current contractual status. These two graphs

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are necessary to differentiate the total balance owed on the irrigation portion of the project and the balance owed on the specific contractual obligation.

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

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

B. **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.

C. **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.

D. **Total Safety of Dams (SOD) Repayment by Project Purpose.** A pie chart identifying SOD repayment by project purpose is beneficial for responding to inquiries.

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

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) for an explanation of why these two project types are combined on this table.		

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TOTAL PROJECT REPAYMENT CHART		
Amount	**Source**	**($'s in thousands)**
$ 49,000,000	Irrigators' Repayment	$ 49,000
80,000,000	Municipal &Industrial 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 three places to the left or divide the amount by $1,000.

   (3)   Display irrigation, commercial power, and M&I separately. The region may group substantially immaterial nonreimbursable or reimbursable allocations for graphic presentation when individual presentation causes 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.

      (b)   Select zero (0) decimal places.

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

C. **Identifying Project Name.** Before creating a pie chart, 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.** Include a sub-title in parentheses that reads, "(Based on SPCCRs for FY XXXX)" under the project title.

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

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D. **Displaying Total Amounts.** Display the total amount 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) **Step 1 - Insert Pie Chart.**

      (a) Select data cells in the two columns labeled "Purpose" and "$'s in thousands" (exclude any "Total" cells).

      (b) Insert > Pie Chart > Exploded Pie in 3D.

   (2) **Step 2 – Format Pie Chart Title and Legend.**

      (a) Right click in the Pie Chart > Select Data > Legend Entries (click 'Edit') > Click data cell containing the title "Total Project Construction Cost Allocation."

      (b) Right click on Title > Format Chart Title > Border Color > Solid Line > Change color to black.

      (c) Left click to type in the Title > Type "Units = $1,000" and format font size.

      (d) Right click on Legend > Format Legend > Legend Options > Bottom.

      (e) Right click on Legend > Format Legend > Border Color > Solid Line > Change color to black.

   (3) **Step 3 – Add Data Labels.**

      (a) Right click on a slice of the Pie Chart > Add Data Labels.

      (b) Right click on a data label > Format Data Labels > Label Options > Add "Percentage."

      (c) Right click on a data label > Number > Category > Percentage (keep two decimal places).

   (4) **Step 4 – Rotate Pie Chart.** Right click on a slice of Pie Chart > 3D Rotation > Use X/Y/Z/Perspective to rotate.

F. **Select Color and Pattern for Pie Chart Slices.** Left double click on a slice of the Pie Chart > Format data point > Fill > Pattern Fill or Gradient Fill as required in Paragraph 2.G.(1-5).

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5. **Pie Chart Examples.** The following pages display examples of the two required pie charts, based upon the tables found in Paragraph 4.
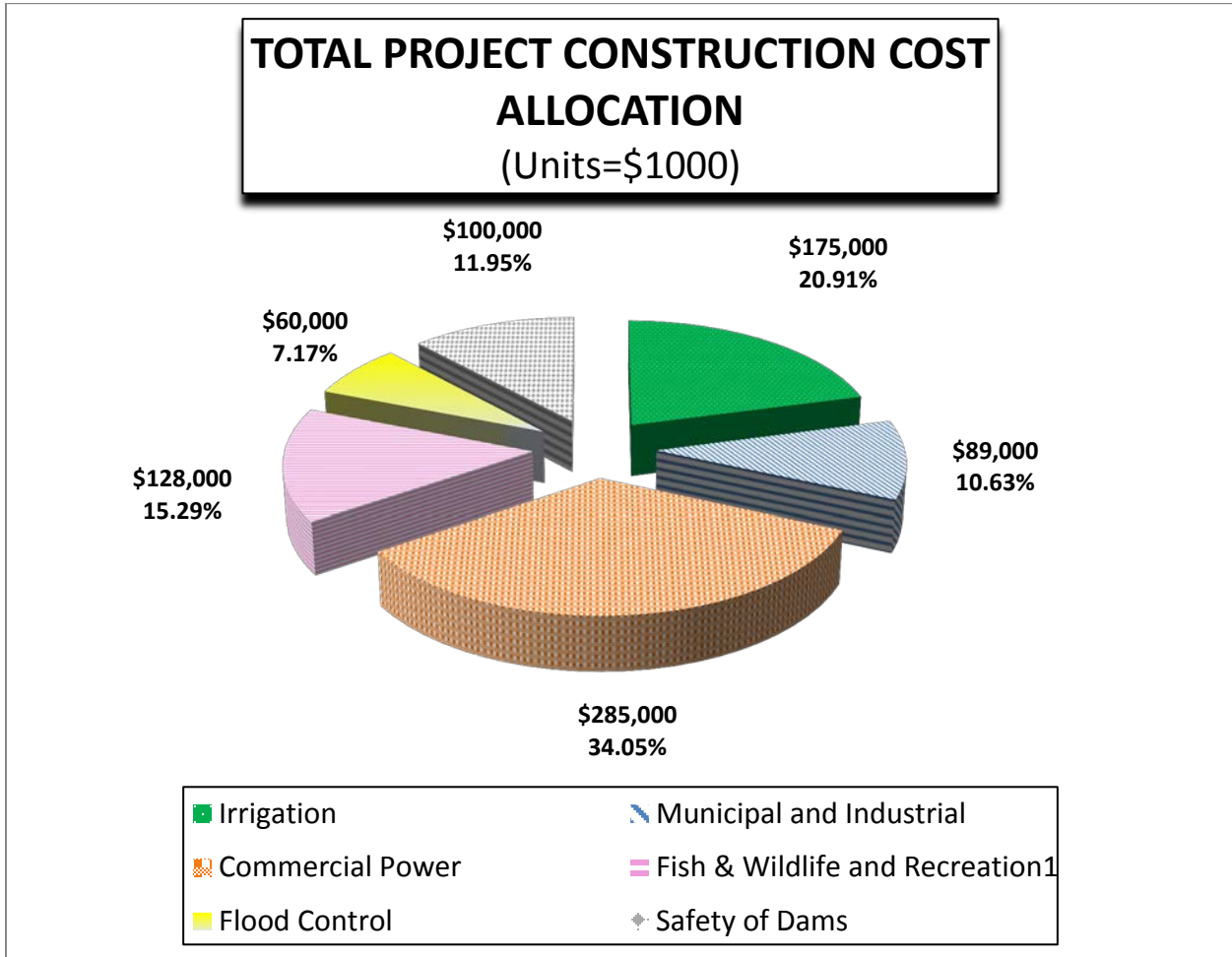
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RECLAMATION PROJECT NAME
(Based on SPCCRs for FY XXXX)

TOTAL PROJECT CONSTRUCTION COST ALLOCATION = $837,000

TOTAL PROJECT CONSTRUCTION COST ALLOCATION
(Units=$1000)

$100,000
11.95%

$175,000
20.91%

$60,000
7.17%

$89,000
10.63%

$128,000
15.29%

$285,000
34.05%

- Irrigation
- Municipal and Industrial
- Commercial Power
- Fish & Wildlife and Recreation1
- Flood Control
- Safety of Dams

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RECLAMATION PROJECT NAME
(Based on SPCCRs for FY XXXX)

TOTAL PROJECT REPAYMENT = $837,000

TOTAL PROJECT REPAYMENT
(Units = $1000)

$55,000
6.57%

$49,000
5.85%

$80,000
9.56%

$200,000
23.90%

$170,000
20.31%

$283,000
33.81%

🟩 Irrigators' Repayment
🔺 Municipal &Industrial Users' Repayment
🟧 Power Users' Repayment
🟥 Nonreimbursable
🟨 Basin Fund (Power Revenues)
🟦 Other Credits