



# Alternative Justifiable Expenditure (AJE) Analysis for State Revolving Fund (SRF) Projects

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## Attachments

[Attachment 1 – AJE Guidance Example 1 DWSRF](#)

[Attachment 2 – AJE Guidance Example 2 CWSRF](#)

## I. Introduction

Some projects proposed for Clean Water State Revolving Fund (CWSRF) or Drinking Water State Revolving Fund (DWSRF) financing include work that may be over and above what is necessary to complete the needed improvements eligible for an individual financing program, such as the full-width repaving of streets or replacement of both sewer and water main. The AJE methodology is used for such a multi-purpose project where there is a physical overlap between SRF eligible and ineligible project components. The AJE methodology is an accounting technique that computes the eligibility percentage of a multi-purpose project by assigning work items to specific cost categories depending on their purpose.

## II. Contents of an AJE Analysis

The AJE analysis begins with two steps. The first step involves the tabulation of the estimated quantity and unit price of each line item in the bid proposal of the **Multi-Purpose Project** and the assignment of the quantities of each item to one or more of the following cost categories:

**A. Specific Purpose Pollution Control (CWSRF) or Specific Purpose Water (DWSRF) Costs - an item whose cost can be attributed entirely to CWSRF eligible pollution control scope or DWSRF eligible water improvements.**

Examples include:

- Water main (DWSRF) and sanitary sewer (CWSRF).
- Necessary drinking water appurtenances such as service leads, corporation stops, hydrants, taps, valves, crosses, tees, reducers, sleeves, bends, curb stops and boxes, offsets, etc. (DWSRF) and necessary clean water appurtenances (CWSRF) such as the public portion of sewer leads, manholes, etc.
- Restoration and/or replacement of existing underground utilities and surface features in **direct conflict** with eligible drinking water or clean water improvements.

**B. Joint Costs - an item whose cost is shared between the eligible SRF scope and other improvements and, therefore, cannot be attributed exclusively to either benefit.**

Examples include:

- Bituminous Road Surfacing and/or Concrete Pavement
- Curb and Gutter Replacement

- Sand Sub-base
- Aggregate Base
- Surface Restoration (lawns, driveways, etc.)
- Mobilization
- Traffic Control
- Detour Signing
- Dust Control (Palliative)
- Sedimentation Control
- Pavement Markings

**C. Specific Purpose Other Costs** - an item whose cost can be attributed entirely to a benefit *other than* the SRF eligible improvements.

Examples include:

- Ineligible water main extensions and related.
- Storm sewers and related drainage improvements if not related to an approved water quality issue (CWSRF).
- Sanitary sewers and related wastewater improvements not providing a water quality benefit approved by EGLE.
- Other improvements not necessary to construct the SRF eligible project such as new sidewalk, curb and gutter, driveways, traffic signals/signs, paving of dirt roads, and landscaping upgrades. An exception would be, if an eligible SRF project disturbs an area that is currently not in compliance with the American Disabilities Act (ADA), then providing new handicapped accessible sidewalk ramps and warning pads to achieve ADA compliance in that project area would be SRF eligible. This would not be the case if the ADA improvements are outside the zone of influence of the eligible SRF project.

**Please note that the subtotaled costs of the three assigned cost categories must be equal to the total construction cost of the Multi-Purpose Project.**

The second step involves taking the **sum of the Specific Purpose column cost and dividing it by the sum of the combined Specific Purpose and Specific Other column costs added together**. This computation then results in the overall eligibility percentage to be applied to the contract amount. Percentages should be calculated to two digits beyond the decimal point. See sample AJEs in the attached appendices.

### III. Preparation of an AJE Analysis

A draft AJE analysis based on estimated construction costs will be developed and submitted to your EGLE SRF project manager in accordance with the negotiated project milestone schedule. It may be helpful for the applicant to request a meeting with your SRF project manager to discuss the AJE process prior to beginning development of the draft AJE. Submittal of the draft AJE analysis will usually coincide with the submittal of final plans and specifications, typically soon after the engineer has completed final estimated quantities for the bid proposal in the contract documents.

**If the Multi-Purpose Project is divided into more than one construction contract, a separate AJE analysis will need to be prepared and submitted for each contract.**

#### A. Draft AJE

The draft AJE analysis will be completed on a spreadsheet, similar to Example 1 and 2 in the attached appendices. A preliminary eligibility percentage will be calculated based on the engineer's estimate of line-item costs.

The draft AJE will be reviewed by your EGLE SRF project manager. Your EGLE SRF project manager will provide you with comments on the draft AJE, in accordance with the negotiated milestone schedule, and you may be required to modify the draft AJE based on those comments. If necessary, a second draft of the AJE may be submitted for review and comment prior to the preparation of a final version.

Consultants preparing an AJE analysis should provide separate spreadsheets to the SRF project manager for each corresponding plan sheet that will identify the quantities of each item as they are sorted into the three category columns of the AJE. These individual plan sheets will help to establish where the quantities for each Multi-Purpose Project bid item are categorized within the overall contract being reviewed. It is not necessary, however, to notate the AJE quantities on the actual drawings themselves on the draft or final bid plans.

#### B. Final (As-bid) AJE

After bids have been opened and the successful bidder(s) identified, the AJE percentage(s) will be recalculated based on as-bid quantities and unit prices. Modifications may also be required based on approved addenda to the plans and specifications, or because of errors discovered by you or your EGLE SRF project manager. The final AJE analysis and spreadsheet(s) must be submitted no later than the SRF Application Part III quarterly milestone schedule due date, or, if other arrangements are made, in accordance with the negotiated milestone schedule. If more than one construction contract is subject to an AJE

analysis, the eligible amounts for each separate contract will be combined to generate the total approved SRF loan amount(s). If engineering invoices cannot be separated by contract, a blended AJE eligibility percentage will be calculated by dividing the total eligible SRF construction cost by the total as bid construction cost. The resulting eligibility percentage will be applied to the total costs in those line items to calculate the overall eligible amount for loan participation. Otherwise, the AJE percentage specific to a given contract will be applied as appropriate to the corresponding engineering invoices associated with that contract.

### **C. Eligibility Reminder**

For DWSRF loan projects, water mains that are larger in diameter than the pipe size required to convey peak 20-year demands (as documented in a Project Planning Document and/or Reliability Study), or that are designed “primarily for growth” or “primarily for fire protection,” are not DWSRF eligible. If constructed, any such water mains are 100 percent DWSRF ineligible. Thus, there will never be a DWSRF project in which a water main is “partially eligible” (i.e., a Joint Cost item in an AJE analysis). Water mains will always be 100 percent or zero percent eligible depending on whether they are needed to solve a documented drinking water quality problem or to maintain compliance with the Safe Drinking Water Act. The same logic applies for water treatment plants and other drinking water facilities and appurtenances.

Similarly, for CWSRF projects, sanitary sewers, manholes, and storm sewers are not always SRF eligible. They are **not** eligible if there is **not** a documented need for a structural integrity repair, a documented need for cost-effective infiltration and inflow removal, or another documented water quality benefit. It is either 100 or zero percent eligible (possibly some of both in the same contract); however, there should be no instances of sanitary or storm sewer related structures being a Joint Cost in the AJE.

### **D. Common Errors in the AJE Analysis**

One common error made in preparing an AJE analysis is assigning a given item of the Multi-Purpose Project to the wrong cost category. For example, an item that belongs in the Specific Purpose Cost category may be assigned to Specific Purpose Other Cost category, or vice versa, or a Joint Cost item may be assigned to either Specific Purpose Cost or Specific Purpose Other Cost. These errors can impact the accuracy of the eligibility percentage of a contract and should be corrected as necessary.

Errors in basic arithmetic can also result in an incorrect AJE calculation. An example is a case in which the total costs in the three AJE subcategories do not equal the Multi-Purpose Project cost.

Another error occurs if the line items in the draft AJE do not exactly match the line items and quantities on the bid form in the final plans and specifications (including any approved addenda). Likewise, the final as-bid unit prices should match those presented in the final AJE.

Another common mistake is to assign a single bid item to the Joint Cost category that includes some quantity of work that should be categorized under the Specific Purpose Cost and/or Specific Purpose Other Cost category. Just because a portion of the quantities of the line item are a joint cost, does not mean all quantities associated with that line item should be categorized as joint costs.

## IV. Application of the AJE Percentage

### A. Determining the Eligible Loan Amount

The final (as-bid) AJE percentage will be applied to line-item costs contained in the EGLE Order of Approval as follows:

1. Items typically **prorated** by the AJE percentage:
  - Design Engineering Fees
  - Construction Engineering Fees
  - Construction Costs
2. Items typically **not prorated** by the AJE percentage:
  - Project Planning Costs
  - Municipal Revenue Systems/Water or Sewer Ordinance Development Costs
  - Bid Advertisement Cost
  - Bond Advertisement/Referendum Expenses
  - Capitalized Interest Payments
3. Items that **may be prorated** by the AJE percentage:
  - Administrative Expenses
  - Legal Fees
  - Bond Counsel/Financial Consultant Fees
  - Relocation Expenses
  - Land-related Expenses
  - Small Purchase Construction Costs
  - Applicant Staff Construction Costs
  - Equipment Purchases
  - Miscellaneous Expenses

Generally, services that encompass the full range of a Multi-Purpose Project will be prorated. Services that are confined to the SRF project only and can be separately tracked and invoiced from ineligible costs, will normally not be prorated.

Questions about whether the AJE percentage applies to a specific line item may be directed to your EGLE SRF project manager.

## **B. AJE/Eligibility Procedures Following Loan Award**

Since loan reimbursements can only be approved for SRF eligible project costs, the AJE percentage must be applied to the appropriate line-item invoices, before calculating the amount to be requested for reimbursement in a project disbursement request. For reimbursement purposes, the applicant should clearly show the calculations being made to invoices to generate eligible line-item cost amounts in any given disbursement request to assist with EGLE review.

When contract change orders are submitted to EGLE for review during construction, the EGLE SRF project manager will identify the percentage of the change order that is eligible for loan participation.

As-built quantity adjustments (both increases and decreases) to original bid items submitted with change orders will normally be prorated by the AJE percentage associated with that contract. An exception is the case where additional quantities are added to an existing bid line item(s) to add new scope to a project. Otherwise, new work items added by change order, that were not part of the approved AJE calculation, will be evaluated on their own merits, meaning they could be 100 percent eligible, zero percent eligible, or prorated by the AJE percentage if it is a joint cost that can't be separated for eligibility.

## **C. Project Completion**

A new AJE incorporating as-built quantities will **not** be required at the completion of the project. However, a construction eligibility ratio will be developed by dividing the final SRF allowable construction contract amount by the final construction contract amount. Your EGLE SRF project manager will review all final project cost documentation and ensure that the construction eligibility ratio is applied to all appropriate line items for a determination of the final loan amount prior to making the final disbursement on the loan.

## V. Typical Multi-Purpose Projects Requiring an AJE Analysis

There are many potential examples of a Multi-Purpose Project that an applicant may propose to construct that would require an AJE. One example is when the applicant wants to extend road restoration improvements over and above what is necessary to construct an SRF eligible project. An applicant may want to provide full width pavement restoration on a street in which water main is being replaced. Replacing the existing water main may only necessitate impacting a portion of the road but not the full pavement width. Some applicants propose full width road restoration to provide a uniform surface following construction. This additional road restoration outside of the SRF impact area represent improvements that are not SRF eligible. If these road surface quantities are unable to be split between SRF eligible and ineligible quantities an AJE would be required.

### A. Sample AJEs

Two sample AJEs are attached to this guidance, one for the DWSRF and one for CWSRF. Please note that line items in these AJEs are examples and the categories assigned could change depending on your specific project.

### B. Special Cases: Combined CWSRF/DWSRF Projects

Sometimes a project will include overlapping DWSRF and CWSRF eligible components, and the applicant will choose to apply to both loan programs to finance the project. There are some special considerations for a dual SRF project of this type. For example, two AJEs would be required, one for the DWSRF project and one for the CWSRF project. The specific CWSRF eligible components, i.e., sewer pipes, are considered Specific Purpose Other costs in the DWSRF AJE. Likewise, the specific DWSRF eligible components i.e., water mains are considered Specific Purpose Other costs in the CWSRF AJE.

Items such as road removal and resurfacing, may physically overlap and represent joint costs in both the CWSRF and DWSRF AJE calculations. The combined CWSRF and DWSRF AJE eligibility percentages should not exceed 100 percent. It is likely that such combined projects may have some bid quantities that will be categorized in both AJEs in the Specific Purpose Other Costs category. As a result, the two percentages calculated from the combined AJEs would be less than 100 percent eligibility.

## VI. Road Restoration Eligibility

When an SRF project requiring an AJE impacts the roadway, the eligible road restoration area includes the trench width plus one foot of overlap on each side of the trench. If the applicant would like, this eligible road restoration area could be rounded up to the nearest quarter of road width for SRF eligibility based on the following scenarios:

- If the eligible road restoration area is less than a quarter of the width of the road, up to 25 percent of the road width restoration would be eligible for SRF financing.
- If the eligible road restoration area is greater than 25 percent up to 50 percent of the width of the road, up to 50 percent of the road width restoration would be eligible for SRF financing.
- If the eligible road restoration area is greater than 50 percent up to 75 percent of the width of the road, up to 75 percent of the road width restoration would be eligible for SRF financing.
- If the eligible street restoration area is greater than 75 percent of the width of the road, up to the 100 percent road width restoration would be eligible for SRF financing.

The eligible road restoration area would be categorized as Specific Purpose Costs in the AJE. In cases with combined CWSRF/DWSRF projects the eligible road area may either be categorized as Specific Purpose Costs or Joint Costs in the AJE depending on the location of each individual trench and if they overlap. The ineligible street restoration width would be categorized as Specific Purpose Other Cost in the AJE if an applicant proposes to replace that section of road. The eligible road restoration quantities may vary throughout the project area and should be shown on a separate spreadsheet for each corresponding plan sheet as referenced above in [Section III.A](#).

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