The following information Supplements certain sections of RUS Bulletin 1780-2, Preliminary Engineering Report (PER). All documents referenced are available at the Iowa Rural Development website: <http://www.rd.usda.gov/programs-services/water-waste-disposal-loan-grant-program/ia>

**SECTION 2.d .** Tabulation of users by monthly usage categories will be documented by using IA Guide A-4, Water/Sewer Project Information. While the applicant will provide much of the information for this document, it is essential that the engineer consider the number of residential, non-residential, and bulk users, and expected water/sewer flows, when developing alternatives for the proposed facility. Therefore, this document should be prepared jointly between the applicant and engineer to ensure the information is consistent. IA Guide A-4 will be included in the PER.

Attachment A may be used to document annual O&M and short lived asset reserve costs.

**SECTION 5.a**. Attachment B (an embedded Excel spreadsheet) may be used to calculate the life cycle cost analysis.

**SECTION 6.e.** Include costs associated with American Iron and Steel requirements in accordance with RUS Bulletin 1780-35.

Itemize the proposed engineering fees into the following: Basic Services, RPR fees (show the hourly rate and estimated hours), and list each additional service separately. Attachment C may be used to document the proposed fees. For more information on the engineer’s responsibilities, refer to the EJCDC, Standard Form of Agreement, and applicable RD attachments.

**ADDITIONAL INFORMATION**

For additional information and guidance in preparing the preliminary engineering report, design, and construction please refer to the Iowa RD web site for the following:

* RUS Bulletin 1780-2.
* RUS Instruction 1780 Subpart C- Planning, Designing, Bidding, Contracting, Construction and Inspections.
* RUS Bulletin 1780-35
* Open and Free Competition.

If you have any questions during the preparation of the Preliminary Engineer Report, please call the Rural Development State Engineer at 641-932-3031.

**Attachment A**

**Sample Annual O&M and Short-Lived Asset costs**

**PER Section 4.h. Cost Estimates.**

Alternative evaluation of Annual O&M and Short-Lived Asset Costs.

Example of information requested in the Preliminary Engineering Report. Only the costs to operate and maintain the alternative considered are shown in this section. All technically feasible alternatives will require an itemized O&M cost estimate. This cost estimate will be used in the life cycle cost analysis.

The O&M costs must clearly describe the items or task, show the year the event occurs, and the expense (cost to repair/replace) the item in today’s dollars.

The following example is for a gravity sewer collection system and one lift station. Costs that apply to the general operations of the entire facility should not be shown here; such as operating the treatment system, city billing, insurance, or office supplies. This example is used in the Sample Life Cycle Cost Calculation spreadsheet available on the Iowa RD website.

|  |  |  |
| --- | --- | --- |
| Description | Recurrence (yrs) | Expense (in todays $) |
| Pump station electricity/telephone | Annual | $1,200 |
| Pump station inspection/cleaning | Annual | $100 |
| Operator duties specific to this alternative | Annual | $200 |
| Total annual cost |  | $1,500 |
| Short lived asset costs in the first 20 years |  |  |
| Minor pump station repairs | 3yrs | $100 |
| Replace lift station pumps | 10 yrs | $8,000 |
| Repair/replace lift station controls | 15 yrs | $500 |
| Repair manholes | 8yrs | $400 |
| Check & clean manholes | 20yrs | $3,000 |
| Clean/flush sewers lines (some portion of lines) | 5yrs | $1,000 |

**PER Section 6.f.ii and iv. Annual Operating Budget**

The O&M and short lived asset costs for the enter facility as improved needs to be provide for the recommend alternative. On existing systems the last 3 years actual O&M costs need to be provided in the PER. The additional costs of the improvements will be added to the proposed future budget.

The following sample is for a gravity sewer collection, 1 lift station, and a controlled discharge lagoon.

The costs and items shown are for demonstration purpose only and not for actual costs or items.

|  |  |  |
| --- | --- | --- |
| Description | Recurrence (yrs) | Expense (in todays $) |
| Pump station electricity/telephone | Annual | $1,200 |
| Pump station inspection/cleaning | Annual | $100 |
| Operator | Annual | $8,000 |
| Billing/accounting | Annual | $800 |
| Office supplies | Annual | $100 |
| Insurance/permits | Annual | $500 |
| Lagoon Water testing/sampling | Annual | $700 |
| Mowing lagoon and lift station | Annual | $600 |
| Weed control | Annual | $100 |
| Total annual cost |  | $12,100 |
| Short lived asset costs in the first 20 years |  |  |
| Minor pump station repairs  | 3yrs | $100 |
| Replace lift station pumps | 10 yrs | $8,000 |
| Repair/replace lift station controls | 15 yrs | $500 |
| Repair manholes | 8yrs | $400 |
| Check & clean manholes | 20yrs | $3,000 |
| Clean/flush sewers lines (some portion of lines) | 5yrs | $1,000 |



# Attachment C

# PER Proposed Engineering Fees for the Recommended Alternative

Alternative # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Lump Sum amount of Basic Services (A1.02 thru A1.06) **$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 Reimbursable expenses **$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 Resident Project Representative Services (RPR-2) **$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

The class of employee for this project is \_\_\_\_\_\_\_\_\_\_\_\_\_

The hourly rate is $\_\_\_\_\_\_\_\_\_\_

The number of RPR hours is estimated to be \_\_\_ hours

RPR Reimbursable Expenses **$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Compensation for Additional Services (A2.01 and A2.02)

 List all proposed services (services include reimbursable costs)

* + - 1. *(Task) $*
			2. *(Task) $*
			3. *(Task) $*
			4. *(Task) $*
			5. *(Task) $*
			6. *(Task) $*

Total Additional Services **$ \_\_\_\_\_\_\_\_\_\_**

#  TOTAL FEES $ \_\_\_