

**DWSRF Guidance Document Number 9
Engineering Allowance for DWSRF Projects**

- I. All professional services contracts require DEC review and approval prior to reimbursement as eligible loan costs. Applicants are strongly encouraged to consider proposals from more than one consultant prior to consultant selection, which should not be based primarily on cost. The DWGPD offers water systems assistance with developing RFPs for engineering services. The following practice is followed in evaluating and approving consultant fees for DWSRF projects. Unless otherwise noted, this guidance document focuses specifically on engineering services since they are the predominant type of professional services provided and paid for through the DWSRF (other typical professional services covered by the DWSRF include archeological and hydrogeological services).
 - A. Consultants/applicants are requested to include a detailed level-of-effort summary with each engineering services agreement submitted for review.
 - B. Planning and Final Design Engineering Services Agreements are reviewed by the DWGPD. The engineering fees are compared to the curve allowance (see the revised fee allowance tables below). In cases where the fees are less than the allowance, the level-of-effort review will be minimal unless a more detailed review is requested by the loan applicant. Please note that level-of-efforts should clearly identify reimbursable expenses, sub-contracted services, and project overhead and profit. When the curve is exceeded, a justification from the engineer (e.g. identification of non-standard tasks not limited by the allowance or a rationalization why a specific task should be considered non-standard) and a more detailed review by DWGPD staff will be required. If the DWGPD is satisfied with the necessity of all tasks and the amount of effort involved, the fee will be approved. If, however, the DWGPD is not satisfied with the services to be provided and/or the effort involved, the applicant will be so advised. The DWGPD will consult with the applicant on the services and effort to be provided. In cases where an impasse is reached, the DWGPD will make a determination, establish an engineering allowance, and deem fees above the allowance as ineligible for state and federal funding. Disallowed engineering fees will need to be funded locally or from another funding source. The DWGPD will consult with FED staff as appropriate during review and negotiations.
 - (1) The DWSRF Program Specialist or Project Development Specialist manages the review of professional service agreements for the DWGPD.
 - (2) Applicants are advised to submit *draft* professional service agreements to the DWSRF Program Specialist or Project Development Specialist. Applicants are also (at the time of the submittal) advised of the following:
 - (a) Consultants must have a minimum of \$250,000 of professional liability insurance (PLI) coverage per occurrence.
 - (b) Regardless of the amount of PLI coverage, agreements that limit the dollar amount of consultant liability will not be approved. For example, an agreement that includes language that limits liability to the amount of coverage would not be acceptable.
 - (c) Agreements must include a governing laws provision noting that the laws of the

State of Vermont govern the agreement.

(d) Agreements should include a time schedule for providing consultant services.

(e) Mediation clauses cannot limit the parties to one particular method of dispute resolution.

- (3) FED and DWGPD staff receiving such agreements send the agreements to the DWSRF Program Specialist or Project Development Specialist to initiate review.
- (4) The DWSRF Program Specialist or Project Development Specialist provides a copy of the draft agreement to the appropriate DWGPD Engineer for review of scope and level of effort.
- (5) The DWGPD Engineer provides comments and recommendations on the draft agreement to the DWSRF Program Specialist or Project Development Specialist in an appropriate format (i.e. e-mail, notes on the agreement, memo etc.). The DWGPD Engineer is expected to contact the applicant or consultant to clarify questions concerning scope or level of effort prior to submitting comments and recommendations to the DWSRF Program Specialist or Project Development Specialist.
- (6) The DWSRF Program Specialist or Project Development Specialist consults as necessary with DWGPD and FED staff and completes the review.
- (7) The DWSRF Project Development Specialist completes and signs agreement approval letters. Copies of letters are sent to FED. Tracking information is entered in the appropriate planning or construction loan spreadsheet. The letters advise the applicant to send a copy of the executed agreement to the DWSRF Program Specialist or Project Development Specialist and generally include the following statement:

"The scope of services, level of effort and estimated costs of the proposed engineering agreement have been reviewed and are acceptable for reimbursement from DWSRF (name of project) funds. Allowable expenses and payment procedures will be in accordance with the Department of Environmental Conservation policies and procedures; payments will not be made until the loan agreement is approved and signed by all parties.

We do not conduct a detailed review of the terms and conditions of engineering agreements, however, based on our review, we have the following comments:

(Include comments on terms, conditions, and eligible costs)

A copy of the executed agreement must be submitted to _____ at this office prior to requests for reimbursements."

- (8) Once the executed engineering services agreement is submitted to the DWGPD, the DWSRF Program Specialist or Project Development Specialist sends the loan approval packet (potentially including, but not limited to, a loan approval memo, loan approval letter, loan application review and approval form, executed engineering services agreement, loan application, project cost summary, and bond authorization documents) to FED for final loan approval and processing.
- C. FED provides comments and sends out approval letters for construction engineering service agreements and will coordinate as necessary with DWGPD staff. Please note that all redesign work during the construction phase (e.g., archeological services) is routed back to the DWGPD for review and approval.
 - D. At the time of "project closeout" by the Department, fee allowances will be used as a limit of eligible cost for audit purposes. The Department performs a final audit at the completion of

each project. The audit process determines whether the invoices for each separate engineering service are within the approved amounts for each billing category. Invoice amounts greater than the approved values will be determined ineligible for DWSRF monies. It is important that engineering services invoices use the FED approved invoice format and use the scope items contained in the approved documents.

II. Engineering Fee Allowance Background

- A. An engineering fee allowance applicable to water supply and wastewater projects funded by DEC grant and loan programs was originally established in 1987 and has been revised twice since that time, in 1994 and 2001 to adjust for inflation. Two alternative fee formulas are used and their applicability for a given project is a function of the project's construction cost. One formula is applied to *small* projects while the other is used for *large* projects. The designation of small or large, as noted above, is dependent upon the cost of construction. Until the fee allowance change in 1994, the dividing point between small and large was \$500,000. In 1994, when the allowance was first revised upward, the dividing point also increased, and was reestablished at \$605,000. Again in 2001, the allowance was revised upwards and the dividing point was reestablished at \$713,300. The breakpoint between small and large projects represents the point of intersection of the two fee formulas; as the fixed fee portion of the allowance increases, so too must the small project threshold.
- B. Previous Fee Allowances (where C represents construction cost)

Year	Small Projects	Large Projects	Solving for C
1987	$\$15,000 + 0.20 * C$	$0.23 * C$	\$500,000
1994	$\$18,165 + 0.20 * C$	$0.23 * C$	\$605,500
2001	$\$21,400 + 0.20 * C$	$0.23 * C$	\$713,300

III. Revised Fee Allowance

This revision addresses concerns about the appropriateness of the previous allowances to address engineering cost for very small projects and very large projects, and is based on more recent data from Vermont and Connecticut. The engineering allowance is based on the "C" value where "C" represents the higher of a pre-bid construction contract cost estimate (without contingency) or the actual contract bid amount plus equipment and small purchases. This amount is not adjusted by contract change orders unless there is a significant change in the approved project scope. This fee allowance applies to all engineering fees except those identified as non-standard tasks described below. The new upper limit for small projects (or lower limit for large projects) is now set at \$780,000. The tables below summarize the fee allowances for small and large projects. Following the two fee allowance tables are two lists: the first is a list of services referred to as *Special Tasks or Studies* or *Non-Standard Tasks* that are typically not limited by the fee allowance, and the second is a list of *Standard Tasks* that are typically subject to the fee allowance.

- (1) Fee Allowance for Small Projects: Projects < \$780,000

Engineering Step	Fixed Fee Allowance	Variable Fee Allowance	Total Fee Allowance
Preliminary	\$975	$\$0.0345 \cdot C$	$\$975 + \$0.0345 \cdot C$
Final Design	\$1,950	$\$0.0690 \cdot C$	$\$1,950 + \$0.0690 \cdot C$
Construction	\$3,575	$\$0.1265 \cdot C$	$\$3,575 + \$0.1265 \cdot C$
Total	\$6,500	$\$0.2300 \cdot C$	$\$6,500 + \$0.2300 \cdot C$

(2) Fee Allowance for Large Projects: Projects $>$ or $=$ \$780,000

Engineering Step	Fee Allowance
Preliminary	$0.15(0.6788 \cdot C^{0.9206})$
Final Design	$0.30(0.6788 \cdot C^{0.9206})$
Construction	$0.55(0.6788 \cdot C^{0.9206})$
Total	$(0.6788 \cdot C^{0.9206})$

Note: When warranted, the Department may combine fee allowances for individual engineering steps and apply the combined allowance to the aggregate engineering fee.

(3) Special Tasks/Studies (Non-Standard Tasks) not Subject to the Fee Allowance

Technical services that fall within this designation are non-routine and of a highly specialized nature. The work is most frequently encountered as part of preliminary engineering and in particular is associated with problem identification and development of project alternatives. Examples of the most common of these services are listed below. It should be noted that the list is not all inclusive; there may be some relatively obscure services not identified below that should be included or new services could emerge that will be so designated. When a task not included below comes up for consideration and is deemed by the Department to be a service that should be exempt from the fee allowance under most circumstances, it will be added to the list, which will be updated from time-to-time.

- (i) Archaeological Studies
- (ii) Source Exploration and Development Tasks
 - 1. Hydrogeologic Evaluations
 - 2. Pump Tests
 - 3. Water Quality Tests
 - 4. Source Protection Plans (when eligible)
- (iii) Water System Contamination Investigations
- (iv) Water Distribution System Leakage Surveys
- (v) Sewer I/I Studies
 - 1. Sewer TV Work
 - 2. I/I Flow Measurement
 - 3. Smoke Detection Surveys
- (vi) Hydrogeologic Reports for Indirect Discharge Systems and Hazardous Materials
- (vii) Pilot Testing - Water Supply or Wastewater Projects
- (viii) Evaluating New Technologies
- (ix) Value Engineering
- (x) Materials Testing for Quality Control during Construction

- (xi) Asbestos and Lead Surveys
- (xii) Property Surveys to Establish Legal Boundaries
- (xiii) Bond Vote Assistance for Re-votes Following a Failed Vote

Note: The department reserves the right to designate a service that might ordinarily be regarded as a special task to be a standard task under certain circumstances and vice versa for the purposes of this guidance.

(4) Standard Tasks subject to the Fee Allowance

The following is a list of technical services that typically are regarded as standard services and are subject to the fee allowance. As with the listing of non-standard services, the following is not necessarily an all inclusive listing of applicable services.

- (i) Data Review and Collection
- (ii) Soil Borings
- (iii) Topographic Surveys
- (iv) Aerial Photography
- (v) Preliminary Engineering Report Preparation
- (vi) Preparation of Basis for Final Design
- (vii) Development Project Meetings
- (viii) Construction Cost Estimates
- (ix) Plan and Specification Preparation
- (x) Bid Assistance
- (xi) Construction Contract Management
- (xii) Resident Project Representation
- (xiii) O&M Manual (but exempt from construction proration)
- (xiv) Record Drawings (but exempt from construction proration)
- (xv) Review of Material Testing Results (when required)
- (xvi) 11th Month Inspection (when required)
- (xvii) Quarterly Performance Evaluation/Reports (when required)
- (xviii) Permit Application Submittals
- (xix) Initial Bond Vote Assistance

(5) Proration of Engineering Fees:

- (a) Engineering fee proration is determined using the following terms:
 - (i) Total C/SP Cost—The sum of all construction and/or small purchase costs
 - (ii) Eligible C/SP Cost—The sum of all construction and/or small purchase costs which are eligible for State Revolving Fund Loans or State Grants
 - (iii) Proration—Eligible C/SP Cost divided by Total C/SP Cost expressed as a percentage
- (b) Engineering fees are reimbursed at:
 - (i) 100 percent when the proration is greater than 90 percent
 - (ii) The proration percentage when the proration is less than 90 percent
- (c) Exceptions which are funded and reimbursed at 100 percent regardless of proration value:
 - (i) Preliminary Engineering Services
 - (ii) Record Drawings
 - (iii) Operation & Maintenance Manuals
 - (iv) Disadvantage Business Enterprise related work

Honorable Peter Shumlin, Governor Deb Markowitz, ANR Secretary David Mears, DEC Commissioner

This guidance and related environmental information are available electronically via the internet. For information visit us through the Vermont Homepage at <http://www.vermont.gov> or visit VT WSD directly at <http://www.drinkingwater.vt.gov>

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