

TEXAS WATER DEVELOPMENT BOARD
Colonia Wastewater Treatment Assistance Program
And
Economically Distressed Areas Program

**PROGRAM GUIDANCE
MANUAL**

CWTAP/EDAP (Wastewater) Loan Program

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GENERAL INFORMATION

TWDB's Mission

Texas Water Development Board's mission is to provide leadership, technical services, and financial assistance to support planning, conservation, and responsible development of water for Texas.

Purpose of Program

The Colonia Wastewater Treatment Assistance Program (CWTAP) provides grants for construction of wastewater collection and treatment systems, and water supply and distribution systems. This CWTAP funding supplements the Economically Distressed Areas Program (EDAP) funding which provides low interest loans and grants to economically distressed areas (a.k.a. Colonias) for the purpose of providing adequate water and sewer services.

Purpose of Manual

The purpose of this Program Guidance Manual is to provide the basic information, forms, and guidance that an Applicant needs in order to complete an application for financial assistance and implement a successful wastewater/sewer or water service project. The information in this manual covers the application, design, bidding, construction and audit phases and provides general guidance to the Applicant and his consultants in meeting the TWDB's CWTAP Program rules found in 31 TAC Chapter 363 Financial Assistance Programs. The manual also addresses compliance with federal standards related to administration, procurement and the environment which apply since CWTAP funds are made available directly from federal grants. If the project does not include CWTAP funding then obtain a different Program Guidance Manual: WRD-705 for wastewater/sewer projects or WRD-706 for water projects, as applicable. **This manual assumes that a facility planning project was successfully completed, resulting in the Environmental Protection Agency issuing a finding of no significant impact and a favorable statement of finding, and the TWDB approving the facility plan. It also assumes that the loan, if any, will be closed at the beginning of the construction phase.**

The TWDB will assign each project an identification number, which will be used in the processing and tracking of project information. Applicants and their consultants can promote prompt TWDB processing by including appropriate project identification on all correspondence and deliveries. In the subject line of all correspondence, please indicate your project name, TWDB project number, and any assigned TWDB loan identification or grant identification number.

We hope that this manual will help all participants gain a better understanding of the roles and responsibilities of the TWDB, the Applicant, and consultants and thus increase the efficiency of our coordinated efforts.

CWTAP and EDAP - Program Overview

Financial Assistance from CWTAP is used in conjunction with the Economically Distressed Areas Program (EDAP) to provide grants and low interest loans to eligible Applicants for the construction, acquisition, or improvement of wastewater treatment and sewer systems. Beginning in February 2002, the CWTAP was able to fund water supply projects. The EDAP funding may also be used for the purpose of providing adequate water supply to residents in economically distressed areas.

The **Economically Distressed Areas Program** was established by the 71st Texas Legislature to provide financial assistance to bring water and wastewater services to economically distressed areas where present water facilities are inadequate to meet the minimal needs of residents. The program includes measures intended to prevent future substandard development.

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The EDAP account is used to fund construction, acquisition, or improvements to water supply and wastewater collection or treatment works, including all necessary engineering work. Funds can be awarded in the form of a grant, a loan or a combination grant/loan.

The program will not fund ongoing operation and maintenance expenses. The Applicant will be responsible for arrangements for operations and maintenance of the system.

Program financing is only available to areas of the state meeting the definition of an “economically distressed area”. An economically distressed area is defined by Texas Water Code, §17.921, as an area where:

1. the water supply or wastewater systems are inadequate to meet minimal state standards,
2. the financial resources are inadequate to provide services to meet those needs, and
3. The area was clearly established on June 1, 1989, whereby at least one home existed and was occupied at that time. Boundaries are determined by methods described for a platted subdivision, an unplatted residential area or a roadside home.

The **Colonia Wastewater Treatment Assistance Program** (CWTAP) was established by the Environmental Protection Agency (EPA) and is administered by the Texas Water Development Board (TWDB). CWTAP grant funds are usually provided in addition to EDAP and other sources of funding.

The TWDB has an Operating Agreement with the United States Environmental Protection Agency (EPA) and is charged with administering the CWTA Program. Specific conditions of the Operating Agreement are noted in the following pages of this manual.

Key Elements of the Colonia Wastewater Treatment Assistance Program

The CWTAP Program:

- ◆ finances purchase, construction of, and improvements to wastewater treatment and sewer facilities, and water supply facilities;
- ◆ available to political subdivisions and non-profit water supply corporations for areas that are economically distressed and have inadequate water or sewer service.
- ◆ includes federal grants for economically distressed communities within 100 kilometers of the Mexican Border;
- ◆ requires compliance with federal requirements applicable to project administration, environmental protection, procurement, and utilization of small, minority and women's business enterprise; and
- ◆ requires Applicants to enter into a Grant Agreement Contract with the TWDB.

Project Management Overview

Project management increases the likelihood of successfully completing work efforts on time, remaining within the budget, processing fewer claims, and meeting the performance criteria.

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The key to good project management is the designation of a project manager to represent the Applicant by taking charge of all project-related activities, managing all elements and leading a team of specialists.

Successfully managing a project requires the balancing of essential elements:

- ◆ Scope - Define, perform, and manage changes in scope.
- ◆ Quality - Plan, control, improve, and chart quality.
- ◆ Cost - Estimate, budget, and control cost.
- ◆ Procurement - Plan and administer procurement.
- ◆ Time - Plan, estimate, define, and control time schedule.
- ◆ Risk - Identify, assess, develop solutions, and control risk.
- ◆ Human Resources - Define roles and responsibilities, organize, and build the management team.
- ◆ Communications - Create and maintain an environment for open communications.

The project manager leads a team of specialists who provide the administrative, technical, financial and legal support for management of the project. Team members typically include: Applicant, Project Manager, Consulting Engineer, Construction Manager, Administrative Support, Technical Advisor, Resident Engineer, Inspector, Financial Advisor, Bond Counsel and Legal Advisor.

TWDB / Organization and Key Personnel

Regional Project Team

Regional Project Manager

Contact:

Project Reviewer

Contact:

Administrative Technician

Contact:

Financial Analyst

Contact:

GENERAL INFORMATION

Environmental Reviewer

Contact:

Attorney

Contact:

Administration & Special Reporting

Contact:

Small, Minority and Women's Business Enterprise

Contact:

Audit & Funds Management

Contact:

Inspection & Field Support Services

Contact:

Contact:

APPLICATION PHASE

Preparing the Application for Financial Assistance

An application for design/construction phase funding must be based on the project described in a completed facility plan and environmental finding developed in accordance with TWDB rules 31 TAC 355.73. The facility plan provides most of the engineering and environmental information components of an application. The remaining application components include fiscal information, legal documents, assurances, eligibility documentation, and procurement documentation.

Procurement of Professional Services and Construction

Professionals are usually hired to help with application development and implementation of the project. The Applicant must comply with requirements in the procurement for “professional services”. Professional services such as: Financial Advisors, and Consulting Engineers must be procured by the Applicant in accordance with Title 10 Chapter 2254 of the Texas Government Code (Professional Services Procurement Act). If CWTAP funding will be used on any portion of the project, the procurement of all consultant services associated with the project will be accomplished in accordance with federal requirements (40 CFR 31.36). Also, opportunity to participate must be given to small, minority, and women business enterprises. **Contact TWDB for additional assistance** and for a copy of *Guidance on Procurement of Professional and other Services*, CWT-005.

Specific procurement requirements for services, consultants, construction equipment, and supplies must be met in order to qualify as eligible cost for loan assistance. Early attention to procurement requirements prior to preparing the grant/loan application - especially the small, minority, and women business enterprise requirements - is necessary to maximize funding.

If the Applicant has already made procurements prior to applying for TWDB funding without having followed the state and federal procedures, financing the costs of these prior procurements may have to be by some other means.

Application Components

A complete application includes:

1. Financial Information about the Applicant and the project, including:
 - ◆ general information (names, addresses, project identification/budget/schedule);
 - ◆ fiscal information (description of debt, ability to repay, user charge rates, etc);
 - ◆ legal information (ordinances/resolutions, contracts; and
 - ◆ program eligibility documentation (Model Subdivision Rule adoption/enforcement, On-Site Sewage Facility agent designation, Texas Review and Comment System, and CCN/ authority)
2. Engineering information consisting of a Facility Plan on the project, and the applicant's plans for capital improvements over the next 5 years;
3. Environmental clearance from Environmental Protection Agency;

APPLICATION PHASE

4. Water Conservation Plan, if required;
5. Documentation of Small, Minority, and Women Business Enterprise utilization and goals (affirmative action plan);
6. Assurance forms related to federal funding.

Financial Assistance Application Information

The financial assistance information consists of an original and ten (10) copies of the general, fiscal, and legal information. (See **TWDB Guidance** *Financial Assistance Application Procedures and Requirements*, WRD-006F, for specific details.)

Engineering Information

The Engineering Information consists of a Facility Plan containing the information specified in TWDB rules 31 TAC 355.73, and a Capitol Improvements Plan which identifies projects and costs the Applicant plans to pursue over the next 5 years. The TWDB may fund the facility planning as a separate grant, or the Applicant may utilize other funding sources. If TWDB funding for facility planning has not been obtained then contact the TWDB Regional Project Manager for guidance on facility planning.

Environmental Information

Environmental information is developed during preparation of the facility plan under TWDB rules 31 TAC 355.73, similar to the engineering information discussed in the previous section. Preparation of this documentation is normally accomplished as a separate grant project with the TWDB. For CWTAP eligible work the environmental information must meet the 31 TAC 375.35 standards, except that the provisions relating to pre-design funding in §375.35(c) shall not apply. Water and wastewater project elements that are not CWTAP eligible should also be addressed by the information prepared under the 375.35 rules.

An environmental clearance must be issued by the Environmental Protection Agency (EPA) before the TWDB can make a CWTAP funding commitment. The clearance is normally provided in the form of a Statement-of-Findings. The clearance is normally based upon the Applicant's Environmental Information Document (EID) that meets the requirements in TWDB rules 31 TAC 375.35, and a Finding of No Significant Impact that is issued by the EPA. TWDB staff acts as the Applicant's liaison with the EPA in getting the environmental clearance. The EPA may require preparation of an Environmental Impact Statement prior to issuing environmental clearance. Similar to the facility planning costs, the TWDB may fund environmental studies as a separate grant, or the Applicant may utilize other funding sources.

Water Conservation Plan.

Two copies of a Water Conservation Plan (WCP) are to be submitted. The development of a Water Conservation Plan is normally accomplished during the facility planning. An approved plan must be adopted by the Applicant and approved by TWDB before any funds can be released. If TWDB funding for facility planning has not been obtained then contact the TWDB Regional Project Manager for guidance on water conservation plans.

NOTE: Recipients are required to report annually on the implementation and status of the required water conservation program for a minimum of three years after the date of loan closing.

APPLICATION PHASE

Utilizing Small, Minority & Women-Owned Businesses.

In the procurement process for all prime contracts for services, equipment, supplies and construction, the Applicant is required to demonstrate a "good faith effort" towards affording opportunity for Small Business Enterprises, Minority Business Enterprise, Women Business Enterprise, and Small Business in a Rural Area. Applicants typically enter into prime contracts for services such as, but not limited to: Financial Advisors, Bond Counselors, Consulting Engineers, and Construction Contractors. Applicants may also enter into prime contracts for cultural resource investigations, testing, surveying, and inspection firms as well as for direct purchases of equipment or supplies. The Applicant should procure in accordance with TWDB's *Guidance for Utilization of Small, Minority & Women-Owned Businesses in Procurement*, SRF-052v3. The Applicant must submit prior to or with the application documentation of "good faith efforts" including completed forms: *Applicant Affirmative Steps Certification and Goals*, WRD-215; *Affirmative Steps Solicitation Report*, WRD-216; *Prime Contractor Affirmative Steps Certification and Goals*, WRD-217; *Loan Grant Participation Summary*, SRF-373; and *SMWBE Self Certification*, WRD-218 (if applicable) for the project and initial procurement of professional services.

Federal Assurance Forms

- ◆ **Nondiscrimination Certification.** The TWDB's CWTAP Program is financed by an EPA capitalization grant. EPA has mandated that Applicants for CWTAP funds complete and submit form EPA 4700-4, *Pre-award Compliance Review Report*, (ED-112), to the TWDB. This information enables EPA to determine whether Applicants and prospective recipients are developing projects, programs, and activities on a nondiscriminatory basis as required by specific statutes. (See **TWDB Forms**).
- ◆ **Assurances of Construction Programs.** EPA form 424D, *Assurances-Construction Programs*, WRD-206 are met through the normal process of applying for CWTAP assistance and carrying out the project, EPA requires the Applicant to sign this statement of "Assurances" to indicate awareness of and agreement to comply with the Federal requirements of the program. (See **TWDB Forms**).
- ◆ **Debarment Certification.** The Applicant must submit a *Certification Regarding Debarment, Suspension, and other Responsibility Requirements*, EPA 5700-49, (SRF-404, or CWT-106). This certification will also be required of the contractor in the construction phase. (See **TWDB Forms**).
- ◆ **Designated Management Agency (DMA) Status.** Loan recipients must be a designated management agency with the authority to construct and operate wastewater treatment systems in their area. This is required under the state Water Quality Management Plan under Section 604(b) of the Clean Water Act, which is administered by the Texas Commission on Environmental Quality (TCEQ), formerly the Texas Natural Resource Conservation Commission. (See *DMA Sample Resolution*, WRD-210, in **TWDB Guidance** for details and an example resolution.)
- ◆ **Assurance of Operation and Maintenance of Treatment Works.** Applicants must complete this assurance as a part of their application. See *Assurance of Operation and Maintenance of Treatment Works*, CWT-107, in **TWDB Forms**.
- ◆ **Certification Regarding Lobbying**, WRD-213 (See **TWDB Forms**). Applicants must complete this assurance form as a part of their application.
- ◆ **Certification of Procurement System**, CTW-102 (See **TWDB Forms**) Applicants must complete this assurance form as a part of their application.

APPLICATION PHASE

Additional information

The TWDB's executive administrator may require additional information in the application for financial assistance in order to properly determine project eligibility and risks.

TRACS - Texas Review and Comment System

The CWTAP program is subject to TRACS, and the rule under title 1 TAC part 5. The applicant should submit a Notice of Intent (NOI) to the Council of Governments (COG) having jurisdiction of the applicant's project area 45 days prior to submitting the application to the TWDB (5.233(b)). The Notice of intent should be one page and include the following (if a facility plan was provided for the COG's review then this does not apply):

- how the project addresses identified need;
- the target population and geographic area;
- scope of services and expected results;
- coordination efforts, including organizations or key individuals involved in developing the project; and
- identification of support from related projects and governmental agencies.

The Applicant should provide a copy of the financial application to the Council of Governments, only if they request one. The COG should provide a response to the NOI and application. If issues are raised, the Applicant must accommodate their requests to the extent that is appropriate.

Timing for Submittal of Application

The loan application should be submitted to the TWDB for review at least six weeks prior to the date the TWDB's board members will meet to decide on an Applicant's commitment, whichever is earlier. The Board usually meets every third Wednesday of the month. The meeting schedule is available on the TWDB Web site at <http://www.twdb.state.tx.us>.

TWDB Processing of Application

The TWDB staff performs a review of the application documents. They will also perform the financial, managerial and technical (FMT) assessment capabilities of the applicant. If appropriate the TWDB staff will identify FMT training that the Applicant's staff will need to take. This type of training should be coordinated with the TWDB. The deadline to complete required training will be determined by the TWDB and it may affect the commitment date or the release of funds date.

CWTAP/EDAP Design/Construction financial applications are considered by the TWDB's governing Board for funding through a two step process. The first step requires review of the application by the Board's Finance Committee. The application should be submitted to the TWDB for review on the first day of the month prior to the month that the Applicant desires the Finance Committee to consider the application. The Finance Committee normally meets every third Tuesday or Wednesday of the month. The second step requires consideration of the application by the TWDB's full Board. Once the Finance Committee approves forwarding the application to the full board, and a Finding of No Significant Impact has been issued by EPA, it is scheduled to go before the full Board's next regular meeting to be considered for commitment for funding. The Board's regular meetings are normally held every third Wednesday of the month.

Post Commitment

If the Board approves a financial assistance commitment, the TWDB will send a letter to the Applicant confirming commitment of funds for the project, including the amount of assistance and conditions of the commitment. A grant contract is normally developed between the Applicant and TWDB at this time.

APPLICATION PHASE

Also required is an attorney's opinion letter regarding the legal validity and enforceability of the debt, if any, incurred by the political subdivision and evidenced by its bond and the related security instruments. This item must be submitted after a loan commitment is made. **See TWDB Guidance; *Financial Assistance Application Procedures and Requirements*, WRD-006F, and TWDB Forms** for samples of these documents. They may need to be modified for individual projects.

APPLICATION PHASE

NOTES:

DESIGN PHASE

The design phase consists of procuring a consulting engineer, if not already accomplished, preparation of the plans, specifications, and final engineering design report (FEDR); acquisition of the land and easements; and issuance of permits.

Prerequisites to release of funds for the payment of design costs are specific to each project and are found in the *Grant Agreement* between the TWDB and the Applicant. The *Grant Agreement* spells out obligations of TWDB and applicant, all conditions, budget, and schedule. The Budget stipulates amounts eligible for release on Outlay Reports. The schedule states expiration date. The *Grant Agreement* should be reviewed for conditions set by the Board resolution, and for details on the frequency and amount of payments. See *Sample Grant Agreement Contract*, WRD-268 in **TWDB Forms**. The Applicant must provide the following:

- ◆ documentation that the procurement procedure used in hiring the consultants complies with applicable statutory requirements and that such procurement procedure is consistent with the procedure set out in §2254.001, *et seq.*, TEX. GOV. CODE ANN. (Vernon 2000) and 40 CFR Part 31, as appropriate;
- ◆ designation from the Texas Commission on Environmental Quality (formerly the Texas Natural Resource Conservation Commission) as an authorized agent for the implementation and enforcement of commission rules under and as required by Chapter 366 of the Texas Health and Safety Code, if applicable;
- ◆ evidence that the Applicant has requisite authority to provide services in the areas outside the Applicant's jurisdiction which are to be served by the Project;
- ◆ evidence satisfactory to the TWDB that the Applicant has adopted and effectively enforces the authority granted to the Applicant pursuant to Texas Water Code Ann., §17.934(a)(2) to require and insure that all property owners capable of receiving service from the Project are actually connected to the wastewater collection system and water distribution system if applicable, within a reasonable period of time not to exceed ninety (90) days from the date of the completion of the water or sewer services project;
- ◆ a description of force account work planned if any design work is to be done by the Applicant. (See **TWDB Guidance**, *Force Account Checklist* SRF-250;)
- ◆ depending on the project, obtaining applicable permits may be required before design funds are released; and
- ◆ other documentation required by the *Commitment Resolution* or the *Grant Agreement*.

After the above information is complete, the TWDB will arrange the release of funds with the Applicant.

Release of Grant Funds

Normally, grant funds are released during the design phase, and the loan funds are utilized in the initial construction phase, with a resumption of grant funding after the loan funds are fully utilized. These grant funds are released as advances and are initiated by the submittal of a TWDB Outlay Report: *Outlay Report and Request for Advance*, CWT-120. (See **TWDB Forms**). Outlay reports must be accompanied by documentation supporting all project expenditures, other uses of bond proceeds, and related investment earnings derived from

DESIGN PHASE

TWDB funds. The Applicant will need to establish a separate bank account in which to deposit grant funds received from the TWDB.

An Outlay Report must be prepared and submitted monthly after the first one is submitted even if no expenditures were made since the previous submittal.

Guidance on completing the *Outlay Report and Request for Advance*, CWT-120 includes the following:

- ◆ Regulations require that the Applicant furnish the TWDB with both its Federal Tax ID number and bank wire-transfer instruction before any request for funds can be paid. To avoid delays in processing, the Applicant should send this information to its TWDB contact as soon as possible.
- ◆ Appropriate documentation for the Outlay Report generally consists of invoices, though receipts, or copies of canceled checks may sometimes be used. The Applicant must provide documentation for each eligible cost actually paid with funds provided by the TWDB.
- ◆ Where an invoice includes work that is funded by TWDB and other entities, the invoice shall have information showing how much of the invoice applies to the TWDB program. A handwritten figure on the invoice of the percentage and amount attributed to CWTAP/EDAP is usually sufficient, though the Applicant may be required to furnish further documentation later if state or Federal auditors request it.
- ◆ To speed up processing of the Outlay Report please attach a spreadsheet or schedule (either handwritten or created by computer) showing how all the invoices in a single budget category (such as engineering) add up to the total of that category claimed on the Outlay Report.
- ◆ Important note: Within each budget category (engineering, construction, etc.) the TWDB can only reimburse the Applicant up to the TWDB-approved amount of that category. Expenditures in that category, which exceed that amount, cannot be reimbursed. If the Applicant wishes to cover higher-than-expected expenses in one category by moving funds from one category to another, the Applicant must contact the TWDB Review Engineer or Project Reviewer to request a budget amendment prior to the submission of such costs.

Reporting

The Applicant will submit a monthly progress report on project activities and a written request for advance of grant funds, on the forms provided by the EA. The report must identify for such month the estimated cash expenditure of the Applicant for anticipated eligible expenses for the Project, identifying project expense category with reimbursable expense or anticipated expense activity for such month. The progress report is to accompany the *Outlay Report and Request for Advance*, CWT-120. Please refer to the actual *Grant Agreement Contract* for project specific details on reporting. It is imperative that TWDB receive a monthly outlay report of the Applicant's expenditures so we can apply for reimbursement of these funds from EPA.

DESIGN PHASE

The applicant will also need to report to TWDB on any conditions that may hinder completion of the project in accordance with the terms of the Grant Agreement Contract. This may include:

- ◆ permitting issues,
- ◆ archeological discoveries,
- ◆ endangered species encounters,
- ◆ changes in utilization of minority and women's businesses,
- ◆ contract, design or construction disputes, and
- ◆ budget changes, shortfalls and overruns.
- ◆ Scope of work

Equipment and Capital Expenditures

The TWDB establishes budgets by its commitment resolution and *Grant Agreement* contract with Applicants. All equipment and capital expenditure cost requests should be reviewed and approved by the Board prior to purchase. *Guidelines for Determining Eligible Equipment and Capital Expenditures* has been developed to assist grant/loan recipients and their consultants in determining allowable equipment and capital expenditure costs for the EDAP and CWTAP programs, (See **TWDB Guidance Documents** for ED-020).

Permits

The Applicant or consulting engineer should apply early for all permits required for the project, usually near the end of the facility planning phase. If the Applicant or consulting engineer anticipate, or are advised, that permits may be required for the project, actions should be taken to secure such permits as soon as practicable prior to completion of plans and specifications and advertising for construction bids.

Permits typically include the following:

- ◆ Railroad crossing permits. Both overhead and underground permits usually take a long time to secure.
- ◆ Highway crossings and right-of-way permits. If these are to be obtained by the contractor then the contract documents should address this.
- ◆ Corp of Engineers, Wetlands, and Section 404 permits. These permits may take a long time to obtain.
- ◆ Drainage/Flood permits.
- ◆ Removal or disturbance of sand, shell, gravel or marl from stream beds Sand, Shell and Gravel Permits. (Texas Parks and Wildlife Department 31 TAC 69.101 - 69.121)
- ◆ Permits and reviews required by local building and utility departments.

DESIGN PHASE

Release of Grant Funds

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An Outlay Report must be prepared and submitted monthly after the first one is submitted even if no expenditures were made since the previous submittal.

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- ◆ Appropriate documentation for the Outlay Report generally consists of invoices, though receipts, or copies of canceled checks may sometimes be used. The Applicant must provide documentation for each eligible cost actually paid with funds provided by the TWDB.
- ◆ Where an invoice includes work that is funded by TWDB and other entities, the invoice shall have information showing how much of the invoice applies to the TWDB program. A handwritten figure on the invoice of the percentage and amount attributed to CWTAP/EDAP is usually sufficient, though the Applicant may be required to furnish further documentation later if state or federal auditors request it.
- ◆ To speed up processing of the Outlay Report please attach a spreadsheet or schedule (either handwritten or created by computer) showing how all the invoices in a single budget category (such as engineering) add up to the total of that category claimed on the Outlay Report.
- ◆ Important note: Within each budget category (engineering, construction, etc.) the TWDB can only reimburse the Applicant up to the TWDB-approved amount of that category. Expenditures in a category, which exceed the stated amount, cannot be reimbursed. If the Applicant wishes to cover higher-than-expected expenses in one category by moving funds from one category to another, the Applicant must contact the TWDB Review Engineer or Project Reviewer to request a budget amendment prior to the submission of such costs. The request will be reviewed in order to determine if it is an eligible expense.
- ◆ Electric Permits. If required, make sure a new or upgraded power supply to the facility is provided in time to avoid delaying the contractor.
- ◆ Amended Certificate of Convenience and Necessity, if applicable (Normally required with the application).
- ◆ Waste Discharge Permit. If a wastewater discharge permit is required, the Consulting Engineer should submit an application to the Texas Commission on Environmental Quality (TCEQ). Contact the Permit Applications Unit in Watershed Management at 512-289-1000. This permit should be obtained before

DESIGN PHASE

- ◆ plans and specifications are submitted for review by the TWDB. A copy of the final permit should be sent to the TWDB project reviewer.

Land Acquisition, Buffer Zones, Right of Ways, and Easements

Land and easements acquisition needs should be addressed early in the planning phase. Each site or land acquisition must meet all requirements of the *Uniform Relocation and Real Property Acquisition Policies Act of 1970*, PL 912-646 in order to be potentially eligible for CWTAP funding. The Applicant should submit to the TWDB project reviewer appropriate appraisals / appraisal reviews, proposed offers, executed contracts, deed recordation, site/survey boundary maps, etc. necessary to clear the acquisitions for loan funding. Subsequently, the Applicant should submit a *Site Certificate*, ED-101 (See TWDB Forms), or evidence of authority to acquire the site before advertising for bids.

Acquisition of Land

Land acquisition should be completed in advance of design or as soon as possible to avoid redesign of the project. Before committing to purchase land, the Applicant should perform an initial site assessment to verify that hazardous waste contamination of the site has not occurred. As a minimum, document existing and prior uses of the site and conduct a survey for unusual soil discoloration, vegetation anomalies, and odors from the property and adjacent properties. Conduct a more detailed assessment if the initial assessment indicates potential for hazardous material contamination.

Buffer Zones

TCEQ regulations require buffer zones around all new wastewater treatment plants and any new units of a renovated wastewater treatment plant. All buffer zone areas must be purchased, or a variance from the buffer zone requirement should be requested from the TCEQ with the permit application. Generally, either a deed-recorded restrictive easement or a plan for noise and odor abatement is required if a variance is requested from the buffer zone requirement. The deed-recorded easement or the plan for noise and odor abatement will be required before funds are released for construction. This issue should be addressed in the Facility Plan. Further details may be requested by the TWDB project reviewer during the review of plans and specifications in the design phase.

Right of Ways

Right of ways are often required for the installation of new water and wastewater lines.

Easements

Easements are often required to allow for the long-term placement of, operation and maintenance of, and access to water and wastewater components and to carry out short-term or temporary construction activities. Acquisition of the easements should begin as soon as possible after their need and location are identified.

Design Phase Submittals

The Applicant or consulting engineer should submit the following items to the TWDB project reviewer:

- ◆ The final wastewater discharge permit, if applicable (1 copy);
- ◆ The Site map showing buffer zones, if applicable (1 copy);
- ◆ The Purchase or lease agreements for land required for the project (1 copy)

DESIGN PHASE

- ◆ A complete set of Plans and Specifications (3 copies for initial review, 4 copies of final version for approval). (See Plans and Specifications later in this chapter for more information);
- ◆ The Geotechnical Report, if available (2 copies);
- ◆ Final Engineering Design Report [See Final Engineering Design Report later in this chapter for more information);
- ◆ A *Site Certificate*, ED-101 (See **TWDB Forms**) signed by the Applicant's representative. (1 copy);
- ◆ Corp of Engineers, Wetlands, and Section 404 permits. These permits may take a long time to obtain; and
- ◆ Removal or disturbance of sand, shell, gravel or marl from stream beds Sand, Shell and Gravel Permits.

Design Criteria

TCEQ design criteria should be followed in the design of all work affecting water quality standards in the state. The TWDB has been delegated the responsibility of performing the design criteria review previously performed by TCEQ for wastewater plants and collection systems. A requirement of this review is for the Applicant's Consulting Engineer to prepare and submit a *Final Engineering Design Report*, WRD-024, (See **TWDB Guidance**) and plans and specifications for review.

TCEQ rules include:

- ◆ 30 TAC Chapter 309 Rules, Domestic Effluent Wastewater Limitation and Plant Siting;
- ◆ 30 TAC Chapter 312 Sludge Use, Disposal and Transportation; and
- ◆ 30 TAC Chapter 317 Rules, Design Criteria

Final Engineering Design Report (FEDR)

This report contains the design calculations and other information necessary to evaluate compliance with TCEQ's Chapter 317, Design Criteria for Sewerage Systems. It is not necessary to repeat information that was previously presented in the Facility Plan and has not changed since then. The additional design information must be bound and have the seal of a professional engineer who is licensed to practice in the state of Texas. For additional guidance and examples of items required in the FEDR, a *Final Engineering Design Report Checklist*, WRD- 024, is provided. (See **TWDB Guidance**).

NOTE: All engineering reports, plans and specifications will be compared to the Facility Plan (FP). Major changes, revisions, and amendments should be immediately brought to TWDB's attention. Amendments to the EFR may require revisions to the Environmental Information Document.

Plans and Specifications

The Applicant should submit three (3) copies of the plans and specifications for initial review. Ultimately four (4) copies of the final plans and specifications will be needed for the TWDB approval. The bound plans and

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specifications must be signed and sealed by a professional engineer registered in Texas. All engineering reports and plans & specifications will be compared to the FEDR. The Applicant should immediately bring to the

attention of the TWDB Project reviewer all major changes, revisions and amendments to the FEDR reflected in the plans and specifications. These amendments to the FEDR may require revisions to the Environmental Information Document (EID). Significant changes to the scope that occur after a loan commitment is made may require Board approval.

In addition to compliance with the Design Criteria for Sewerage Systems, the plans and specifications will be checked for completeness, consistency, biddability, and constructibility, and provisions for environmental concerns.

Plans and Specifications must include the following:

- ◆ *EDAP/CWTAP Special Contract Conditions*, ED-004C TWDB (See **TWDB Forms**). This document is distributed to all Applicants and Consulting Engineers to assist the Applicant with complying with certain statutes and regulations which specifically relate to construction contracts receiving TWDB's loan programs (i.e. Emergency discovery conditions for archeological sites and endangered species). These conditions along with any necessary supersede provisions, should be incorporated into the other general and special conditions that are normally in the construction contract documents.
- ◆ *EPA Supplemental Conditions 1996, 1997 & 1998*, WRD-256b. These are federal conditions which apply and are used in addition to the State *Supplemental Contract Conditions*.
- ◆ *Contractor's Act of Assurance*, ED-103 (See **TWDB Forms**)
- ◆ *Contractor's Resolution on Authorized Representative*, ED-104 (See **TWDB Forms**)
- ◆ *Certification Regarding Debarment Suspension and Other Related Matters*, SRF-404 (See **TWDB Forms**)
- ◆ Current Prevailing Wage Rates
- ◆ Small, Minority, & Women Business Enterprise Requirements (SRF-052v3) which are also included within the *Supplemental Contract Conditions*, ED-004C (See Bidding Phase, and TWDB Forms). This includes *Affirmative Steps Solicitation Report*, WRD-216; *Prime Contractor Affirmative Steps Certification and Goals*, WRD-217; *Loan Grant Participation Summary*, SRF-373; and *SMWBE Self Certification*, WRD-218.
- ◆ TWDB-provided language for the Invitation to Bid (See Bidding Phase).
- ◆ Any special conditions resulting from the environmental assessment process.

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Competitive bidding is a widely used method of obtaining and selecting contractors for construction projects. Typically, the use of competitive bidding is mandated by law or regulation. This mandate recognizes that competitive bidding provides value to the taxpayers and fairness in the placement of major sums of taxpayer-funded work.

Legal Requirements

The Applicant and consulting engineer must comply with Vernon's Local Government Code on Competitive Bidding Requirements, Chapter 252, Subchapter B, or other applicable statutes. We recommend that you consult your legal counsel if you have any uncertainty regarding specific bidding laws.

Invitation to Bid

The Invitation to Bid (or Instructions to Bidders) is typically a short document summarizing key information about the project. Its purpose is to attract bidders, announce the bidding schedule for the project, and give sufficient information for prospective bidders to determine whether they should obtain copies of the bidding documents.

On projects receiving TWDB financial assistance the following statements or equivalents must be included in the contract documents under the appropriate sections:

- ◆ This contract is contingent upon release of funds from the Texas Water Development Board.
- ◆ Any contract or contracts awarded under this Invitation for Bids are expected to be funded in part by a loan from the Texas Water Development Board. Neither the State of Texas nor any of its departments, agencies, or employees are or will be a party to this Invitation for Bids or any resulting contract.
- ◆ Equal Opportunity in Employment - All qualified Applicants will receive consideration for employment without regard to race, color, religion, sex, age, handicap or national origin. Bidders on this work will be required to comply with the President's Executive Order No. 11246, as amended by Executive Order 11375, and as supplemented in Department of Labor regulations 41 CFR Part 60.
- ◆ This contract is subject to the EPA established Minority Business Enterprise (MBE) / Women's Business Enterprise (WBE) "fair share" goals. TWDB document Guidance for Utilization of Small, Minority and Women Owned Businesses, SRF-52v3 describes the requirements of this program
MBE: CONSTRUCTION 10.3%; SUPPLIES 5%; SERVICES 11.5%; EQUIPMENT 5%.
WBE: CONSTRUCTION 5.9%; SUPPLIES 7.6%; SERVICES 14.5%; EQUIPMENT 7.6%.

Advertising

Authorization from TWDB project reviewer should be obtained prior to advertising bids. Before advertising, the Applicant or engineering consultant should have obtained the following:

- ◆ The TWDB approval of plans and specifications
- ◆ The Waste discharge permit from the TCEQ, if applicable

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- ◆ The acquisition of all needed project sites certified to TWDB on Site Certificate; ED-101 (see TWDB Forms)
- ◆ A resident inspection proposal clearance from TWDB including contract, inspector's name, relevant inspection experience, and organizational reporting structure. For more specific details refer to *Guidelines for Inspector Qualifications*, ED-005 (See **TWDB Guidance**)
- ◆ All other permits and authorizations required by federal, state and local agencies

The Applicant must give special consideration to the notice requirements of state law on competitive bidding. The following are two important provisions of that law.

- ◆ The notice should be published once a week for two consecutive weeks in a newspaper published in the municipality.
- ◆ The date of the first publication should be before the 14th day before the date set to open the bids; however, we recommend a longer advertising period of 30 days to allow contractors sufficient time to assemble their bid.

Addenda

Addenda are written or graphic documents intended to clarify, revise, add to, or delete from the original documents. It is important that the bidding documents require bidders to acknowledge receipt of all addenda with their bids. The acknowledgment ensures that all bidders are bidding on the same effort.

Four copies of the addenda should be submitted to TWDB concurrent with issuance to bidders. The TWDB project reviewer will review and approve addenda prior to authorization to award.

To ensure that all bidders are bidding on the same effort, addenda should be issued in an expeditious manner to all document holders of record. If addenda cannot be issued to bidders four days in advance of bid opening, a brief postponement of the bid opening may be justified.

Pre-bid Conference

Pre-bid conferences are useful to familiarize prospective bidders with the site and scope of the work.

TWDB's field office staff should be notified concurrent with bidders of the time, date and place of the pre-bid conference. Procedures to follow at the pre-bid conference should be established ahead of time.

It is advisable that no oral statements be made at the conference that cannot be appropriately reduced to written form in subsequent addenda.

Special provisions, such as the contractor's SMWBE requirements, should be covered in detail. Bidders should be made aware that even if the SMWBE goal is achieved, documentation is required showing that a good faith effort was made. Contact the TWDB SMWBE coordinator for more information on documentation requirements. The SMWBE coordinator is available to attend Pre-bid Conferences.

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Bid Opening

Procedures to follow at the bid opening should be established ahead of time and be coordinated with the Instructions to Bidders. The TWDB project reviewer should be notified concurrent with bidders of the time, date and place of the bid opening.

Bid and Bidder Evaluation

After the bids have been opened and tabulated, the Applicant and Consulting Engineer should evaluate the bids and bidders to make certain decisions with respect to award of the contract to the low, responsive, responsible bidder.

Bidder evaluation is generally based on responsibility. Responsibility criteria typically consists of the following:

- ◆ Financial resources
- ◆ Experience, organization and equipment
- ◆ Ability to comply with required performance schedule, taking into account all existing commitments
- ◆ Satisfactory record of performance, integrity, judgement and skills

Bid evaluation is generally based on responsiveness. Responsiveness is the conformity with all material conditions of the invitation. The underlying purpose for the insistence on responsive bids is that all bidders should stand on an equal footing, so that the integrity of the competitive bidding system may be maintained.

Bidding Documents

The Applicant should submit the following information and documents as soon as possible after bid opening and before execution of the construction contract to the TWDB project reviewer. See **TWDB Guidance for Checklist on Bid Documents and Executed Contract Documents**, ED-250.

- ◆ Tabulation of bids
- ◆ Proposal of the lowest responsive responsible bidder with proof of Bid Bond or other Bid Security
- ◆ Certified copy of advertisement for bids
- ◆ Consulting engineer's recommendation to Applicant for award
- ◆ Explanation for any rejected bids or otherwise disqualified bidders
- ◆ SMWBE documentation Affirmative Steps Solicitation Report, WRD 215, completed by the Applicant describing its procurement efforts, *Prime Contractor Affirmative Steps Certification and Goals*, WRD-217, provided by the contractor. If the contractor will subcontract work, also include *Affirmative Steps Solicitation Report*, WRD-216, and *Loan/Grant Participation Summary*, SRF-373, (See **TWDB Forms**) certified by the Applicant.

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- ◆ *Certification Regarding Debarment, Suspension and Other Responsibility Matters*, (EPA 5700-49), SRF-404 (See **TWDB Forms**)
- ◆ TWDB form *Site Certificate*, ED-101, or evidence of authority to acquire the site, if not previously submitted. (See **TWDB Forms**)
- ◆ *Bidder's EEO/NSF Certification*, WRD-255, as evidence of providing equal employment opportunity and non-segregated facilities.
- ◆ A resident inspection proposal including contract, inspector's name, relevant inspection experience, and organizational reporting structure, if not previously submitted

Contingent Award and Execution of Construction Contract

After receiving and reviewing the information identified as bid document submittals, the TWDB project reviewer will authorize the Applicant (by phone) to contingently award the construction contract. The Applicant and consulting engineer will execute the contract in cooperation with the construction contractor. The Applicant will submit the following information and documents to the TWDB project reviewer as soon as possible after contract award and prior to TWDB sending the Applicant a letter concurring in the award of the contract and authorizing the issuance of the Notice to Proceed. See **TWDB Guidance** for *Checklist on Bid Documents and Executed Contract Documents*, ED-250.

Submit one copy of fully executed and bound construction contract documents. The submitted documents should include:

- ◆ Specifications as approved by TWDB with executed bid proposal
- ◆ Executed Bid, Payment, Performance, and other Bonds with Power of Attorney
- ◆ Contingently executed Contract Agreement;
- ◆ Proof of Insurance Certificate;
- ◆ Executed *Contractor's Act of Assurance*, ED-103 (See **TWDB Forms**);
- ◆ Executed *Contractor's Resolution on Authorized Representative*, ED-104 (See **TWDB Forms**);
- ◆ Executed Certification Regarding Debarment, Suspension and Other Responsibility Matters, (EPA 5700-49), SRF-404 (See **TWDB Forms**); and
- ◆ SMWBE Documentation: Applicant's Loan/Grant Participation Summary, SRF-373 if any change has occurred from what was submitted with the bid documents.

Submit a Sufficiency of Funds Statement (a letter) describing the revised/current budget and all sources and uses of funds.

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Preparing for Loan Closing:

During the bidding phase the Applicant should also be preparing for the loan closing that will occur during the construction phase. This may include:

- ◆ coordinating budgets with the Applicant's Bond Counsel, Financial Advisor and Consulting Engineer
- ◆ drafting/reviewing final bond resolutions and ordinances
- ◆ scheduling and issuing public notices on approval actions by the Applicant's governing body.

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It is in the best interest of the Applicant to ensure that all prerequisites are in place prior to initiating construction and that construction is performed in accordance with the approved contract documents. The goals are to avoid disputes over program eligibility or contractor payments and to get the facility that the Applicant paid to have designed and constructed.

Sequence of Grant and Loan Funds Release

The TWDB loan is closed and funds are normally released first to cover initial construction phase expenses. After the loan funds are expended, the TWDB will resume making grant payments for the remainder of the project expenses. For projects with multiple construction contracts and a significant loan amount the TWDB may require establishment of an escrow bank account in which to deposit the loan proceeds. If an escrow account is established, then the funds will be released as each applicable construction contract is awarded.

Reporting

Throughout the construction phase, the Applicant will continue to provide monthly progress and outlay reporting described in the Design Phase - Report section of this guidance manual.

Prior to initiation of construction, it is essential to receive TWDB clearance of bid documents and bound contingently executed construction contract documents, resident inspection proposal, sufficiency of funds letter, water rights certification, permits (if applicable), site certificate, and any other necessary items. If during construction additional procurements or subcontracting occurs, the contractor and/or Applicant, as applicable, must prepare an updated *Affirmative Steps Solicitation Report*, WRD 216, and *SMWBE Loan/Grant Participation Summary* SRF-373 (See **TWDB Forms**).

The Applicant is required to comply with the Single Audit Act requirements, which requires an annual audit be performed and provided to TWDB within 9 months of the end of the Applicants fiscal year. Failure to provide the documentation may result in stoppage of loan and grant funding.

Pre-construction Conference

A pre-construction conference should be conducted for each significant construction contract. TWDB field office staff should be invited and notified of the time, date, and place.

Notice to Proceed

After approval of contingently executed contract documents, TWDB will authorize the issuance of a Notice to Proceed. The TWDB field representative and project reviewer should receive a copy of the notice.

Loan Closing

Normally, the loan is closed during the construction phase. However, loan closing may occur during the design phase. The requirements for closing are not affected by what phase the project is in. After loan commitment, the Applicant, or its representatives must submit the following prerequisites for closing and release of funds to the TWDB's Regional Project Manager before the loan can be closed and funds released:

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Loan Closing Prerequisites:

- ◆ Provide an estimated closing date; 45 days prior to adoption of the bond ordinance/resolution by the Applicant governing body,
- ◆ The Applicant, bond counsel or legal counsel, as the case maybe, must submit to the TWDB for approval:
 - A draft of the Bond Counsel's opinion stating that the unqualified opinion of the attorney is that the financial assistance will be to construct a facility for furnishing wastewater as defined in Sec. 142 of the Internal Revenue Code of 1986 (the Code) and otherwise satisfies the requirements of the Code
 - A draft of the No-Arbitrage Certificate relating to this debt
 - An updated No-litigation Certificate (see applicable language in Application Affidavit, WRD-201 in **TWDB Forms**.)
 - A draft of the proposed bond ordinance or resolution that includes the Covenants Regarding Tax-Exemption (See TWDB Forms)
 - A draft of the escrow agreement (if utilizing the Pre-design Funding Option).
- ◆ Provide evidence of an approved Water Conservation Plan and an adopted ordinance or resolution
NOTE: The WCP is required prior to release of Grant funds, if any. Recipients are required to report annually on the implementation and status of the required water conservation program for a minimum of three years after date of loan closing.
- ◆ Provide any remaining (not previously submitted) engineering contracts.
- ◆ Provide any contracts by which the Applicant purchases, sells, or otherwise obtains or provides water or sewage services. Prior to executing new contracts, the Applicant should submit such contracts in draft form to the TWDB for approval.
- ◆ Provide a Sufficiency of Funds Statement. The Sufficiency of Funds Statement is a letter requesting loan closing, release of funds for bond issuance costs, and planning phase funds. It also states whether the Applicant has sufficient funds to construct the project. A current budget of costs and sources of funds should also be attached.
- ◆ Provide evidence of compliance with all loan closing requirements set forth in the Board's commitment resolution.
- ◆ Prior to the release of funds budgeted for sewer or water connection hookups, if any, the Applicant shall submit documentation demonstrating that the Applicant has submitted timely applications to other available funding agencies and entities and has been unable to obtain funding for the connections from a source other than the BOARD.

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After the TWDB Regional Project Manager has approved the preceding information, the Applicant's governing body must adopt the bond ordinance or resolution, and forward a certified copy to the TWDB and the Attorney General's Office.

Submittals at Loan Closing:

- ◆ Unqualified approving opinion of the Attorney General of Texas;
- ◆ Certification from the Comptroller of Public Accounts that such debt has been registered in that office;
- ◆ Final versions of the Legal and Fiscal Documents listed under Closing-Prerequisites, and
- ◆ A completed form *CWTAP Outlay Report and Request for Advance*, CWT-120. (See **TWDB Forms**, and guidance on Completion of CWTAP Outlay Report in this section.) Outlay reports must be accompanied by documentation. The Applicant should continue to submit to the TWDB form CWT-120 Outlay Report, each month. Outlay reports must be accompanied by documentation supporting all project expenditures, other uses of bond proceeds, and related investment earnings derived from the sale of bonds to TWDB supporting all project expenditures, other uses of bond proceeds, and related investment earnings derived from the sale of bonds to TWDB.

When all of the required forms have been submitted and approved the TWDB's audit and funds management staff will schedule the loan closing date and notify the Applicant or designated representative, typically the financial advisor.

Release of Loan Funds for Construction

The following items must be submitted to and approved by the TWDB project reviewer prior to authorization for the release of funds from escrow:

- ◆ Contingently Executed Construction Contract
- ◆ An executed engineering contract for construction phase services including Minority and Women Owned Business Enterprise documentation, if not previously provided
- ◆ A description of force account work planned if any design work is to be done by the Applicant. (See **TWDB Guidance**, *Force Account Checklist* SRF-250.)
- ◆ A proposed budget for the construction phase work if it differs from the project budget submitted previously for the loan commitment and a Sufficiency of Funds Statement

After the preceding information is complete, the project reviewer will issue a memo to the TWDB's Audit & Funds Management office authorizing the release of funds for design. The TWDB's Audit & Funds Management office and the Applicant's financial advisor arrange the actual release of funds.

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Release of Grant Funds

After the loan funds are expended the Applicant will resume requesting the remaining grant funds. These grant funds are released as advances and are initiated by the submittal of a TWDB Outlay Report: *Outlay Report and Request for Advance*, CWT-120. (See **TWDB Forms**). Outlay reports must be accompanied by documentation supporting all project expenditures, other uses of bond proceeds, and related investment earnings derived from the sale of bonds to TWDB.

TWDB Access, Inspection, and Reports

Access to the project and any records related to it should be provided to TWDB personnel. The Applicant's bond resolution/ordinance or loan agreement is contingent on constructing the facility in accordance with the contract documents approved by the TWDB.

Inspections by the TWDB will usually be made monthly on a scheduled basis. Additional inspections may occur on an unscheduled basis. The primary purpose of our inspections is to keep the TWDB informed of the construction phase activities and progress of each contract.

Reports by TWDB staff will be made available to the Applicant and the Consulting Engineer. The report and inspections are not intended to relieve the Applicant of the responsibility to provide adequate on-site inspection and engineering review to determine acceptability of the work and compliance with the contract documents.

Applicant Inspection

The Applicant should provide adequate inspection of the project under the supervision of a professional engineer licensed to practice in the state of Texas and require the engineer's assurance that the work is being performed in a satisfactory manner in accordance with the plans and specifications.

- ◆ Provide adequate inspection of construction work by qualified inspectors. (See **TWDB Guidance**) for *Guidelines for Inspector Qualifications*, ED-005.
- ◆ Give consideration to the number and nature of contracts which will be active at the same time when planning the inspection schedule
- ◆ Require a thorough daily log of activities. You should receive copies of the daily log to review construction progress and problems and to protect your interests should disputes arise. (See **TWDB Guidance**) *Inspector's Daily Report*, WRD-019.
- ◆ Verify that construction contractor is complying with requirement to employ local labor from the project area. (See **TWDB Forms: EDAP/CWTAP Special Contract Conditions**, ED-004C, Section 15., EMPLOYMENT OF LOCAL LABOR.)
- ◆ Make sure that all required testing is conducted, observed, and documented. Be familiar with the testing and payment provisions in the specifications. If possible, it is a good idea to withhold payment for all or a portion of a pay item until all testing has been completed and is acceptable. Testing is a protection of the Applicant's investment, and the cost is relatively small. Do not hesitate to test any item you question.

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- ◆ Require the contractor to submit a schedule and update it as necessary. To avoid claims, accept, but don't approve, construction schedules, especially if they indicate completion prior to the approved contract completion date.
- ◆ Verify pay requests and invoices before making payment to the contractor.
- ◆ Verify contractor compliance with OSHA regulations for excavation safety. In addition, state law requires that the contract documents include safety provisions with excavation protection in accordance with OSHA standards as a pay item. As with any bid item, performance of work in accordance with the contract documents should be verified before payment. Reference OSHA Safety and Health Standards (29 CFR 1926/1910).

Contractor Claims

Awareness, documentation & communication will aid in prevention & resolution of contractor claims. Grant and loan money may be disallowed for increased costs due to claims.

Common causes of claims

- ◆ Defects in the contract documents
- ◆ Differing site conditions
- ◆ Inadequate construction inspection or direction from multiple sources
- ◆ Failure to promptly and fairly address contractor claims, grievances, requests for time extensions, or other problems
- ◆ Warranty problems

Tips on prevention of contractor claims

- ◆ Conduct or attend monthly meetings with the contractor and consulting engineer; and discuss any unresolved disputes, and document the discussions.
- ◆ Discuss the project with your consultant and review daily logs or monthly summaries of progress.
- ◆ Maintain fully documented records of all aspects of work, including pay requests, requests for change orders, disputes, inspector logs, test results and correspondence from the contractor and consulting engineer.
- ◆ Provide a timely response to contractor requests for direction, clarification and changes in work.
- ◆ Review specifications for arbitration requirements and be aware of what rights each party has in disputes.

- ◆ Review how the warranty is addressed in the specifications.

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- ◆ If warranty provisions are not clear in the specifications, discuss them at the pre-construction conference and clarify them in writing at the beginning of the job. Agree whether to have a warranty start date for individual pieces of equipment for phased startup, or one warranty start date for the entire job.
- ◆ Put acceptance of the project or of each segment of the project in writing and address the warranty in that document.

Retainage

Generally a minimum of 5% retainage is required by law on all state-loan-funded projects.

- ◆ The amount, deposit and investment requirements for retainage are unique to each construction project. If there is any uncertainty regarding specific situations, the Applicant's legal counsel should be consulted.
- ◆ Retainage must not be released or reduced below 5% without the consent of the TWDB. A Certificate of Approval will be issued by TWDB after each contract is finalized and close out materials have been provided to the TWDB project reviewer. This Certificate of Approval authorizes the Applicant to release the retainage to the contractor.

Change Orders

The construction contract is between the Applicant and the Contractor, and any change orders signed by these two parties become part of that contract, regardless of TWDB funding eligibility or participation. However, the TWDB needs to review and approve all change orders to determine funding eligibility.

TWDB Review of Change Orders

The TWDB reviews and approves change orders for the following:

- ◆ eligibility of funding;
- ◆ compliance with design criteria, and water hygiene rules;
- ◆ environmental impact and possible need for amendment of original environmental finding;;
- ◆ whether there is a change of scope of the project which requires action by the TWDB;
- ◆ whether a variance from Chapter 317, Design Criteria Rules requires action by TCEQ;
- ◆ conditions that may warrant a change order;
- ◆ changes in project scope;
- ◆ changes in contract costs or amounts;
- ◆ errors and omissions in the contract documents;

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- ◆ changes instituted by regulatory agencies;
- ◆ changes in design; and
- ◆ factors affecting time of completion.

Recommendations for handling and expediting change orders

- ◆ Determine if a change is necessary.
- ◆ Document the reason for the change.
- ◆ Respond promptly to the contractor's requests for changes, or initiate your changes as soon as possible to avoid claims for delays.
- ◆ Obtain independent estimates of the cost of the change (plus or minus) at least from the contractor and the consulting engineer and negotiate a fair price. Keep records of the estimates and negotiations.
- ◆ Address time adjustments (or lack thereof) for each item of work.
- ◆ Inform TWDB field inspectors of potential changes.
- ◆ Call the TWDB project reviewer at any stage to obtain a preliminary determination of eligibility and availability of funds. However, final determination cannot be made until the signed change order and documentation have been received by the TWDB.
- ◆ Submit the change order (3 copies) with all supporting data to the TWDB's project reviewer for a TWDB eligibility determination, as soon as it has been enacted.

Change Order Submittals

Change orders submitted for review should address the following:

- ◆ Scope of change with identified adjustments to plans and specifications;
- ◆ Justification for the change;
- ◆ Effect the change has on cost of the project, and cost and pricing documentation; and
- ◆ Effect the change has on the time schedule.

Project Records

It is in the Applicant's interest to keep an organized system of documentation for the project. See **TWDB Guidance: Project Files & Construction Records**, WRD-017. See **TWDB Forms: Construction Fund Project Ledger Form**, WRD-230, *Property Log Form*, WRD-227, and *Property Card Form*, WRD-228.

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Operations

The CWTAP requires that the Applicant assure economical and effective operation and maintenance (including replacement) of the treatment works.

The following are staffing guidelines for your project:

- ◆ Hire and train operating personnel. The people who will run the facility should be available during the later stages of construction and start-up, and if possible, they should have some input into the Operation and Maintenance Manual. (O&M manual)
- ◆ Hire and train personnel for new facilities during the construction phase.
- ◆ Suggest that operating personnel should visit the project during construction. Caution them to give no direction to the Contractor. However, their comments and suggestions should be forwarded to the Consulting Engineer for consideration.
- ◆ Provide training prior to acceptance of the facility should include review of the O&M manual and, if possible, on-site training by supplier's representatives during start-up.
- ◆ Staffing should be in accordance with the Operation and Maintenance manual.

Operation & Maintenance (O&M) Manuals

Preparation of an O&M manual is an eligible use of CWTAP/EDAP funds. TWDB staff will make an on-site cursory review of the Applicant's copy of the O&M Manual. We suggest that the final O&M manual should be submitted to the Applicant before construction is 85% complete so that the manual will be available during start-up. See **TWDB Guidance**, for *O&M Manual Recommendations*, ED-006.

TWDB Closeout Submittals

The following information and documents should be submitted to the TWDB project reviewer prior to TWDB issuance of a Certificate of Approval and authorization of release of final retainage on each construction contract:

- ◆ A copy of the contractor's final payment estimate and three (3) copies of any outstanding change orders not approved by TWDB to date;
- ◆ An affidavit by the contractor that all bills have been paid;
- ◆ A copy of the Notice of Completion, including the start date of the one year warranty period;
- ◆ The consulting engineer's certification to the Applicant that the project has been completed and that the work was constructed in accordance with the plans and specifications;
- ◆ The acceptance of the work under this contract by the Applicant in the form of a written resolution or other formal action; and

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- ◆ The notification of the status of as-built record drawings for the Applicant.

Project Performance

A one-year project performance period will commence upon initiation of operation of the facility. This period is established to evaluate the facility and resolve problems. The period generally begins when the last operable equipment is accepted into service. (See **TWDB Forms** for *Notification of Initiation of Operation and Project Performance Period*, CWT- 121b). The Performance Period is related only to the operability of the facility, not to the completion or acceptance of contract work.

At the end of one year of operation, the Applicant must certify that the facility is capable of performing in accordance with the design specifications and permit limitations. (See **TWDB Forms** for *Certification of Project Performance*, CWT-121a). If major problems arise and project performance cannot be certified, a corrective action proposal will be required showing what work is needed to correct the deficiencies. TWDB

Representatives will make quarterly visits to the facility during the one-year project performance period to assist the Applicant in reviewing performance, operations and maintenance.

Post-Construction

The TWDB has an interest in the continuing performance of the facility for the life of the loan.

- ◆ TWDB representatives may make a visit to the facility during the one-year warranty period to review performance, operations, and maintenance of the facilities
- ◆ If requested by the Applicant, TWDB will conduct First Year Operations Assistance visits to assist the Applicant in evaluating the facility.
- ◆ TWDB audit staff will monitor the Applicant's operations for the life of the loan to ensure compliance with the bond indenture.
- ◆ TWDB will monitor the implementation of the Applicant's water conservation plan. The water conservation plan required by the board commitment should remain in effect until all financial obligations to the TWDB have been satisfied. Recipients of financial assistance of greater than \$500,000 are required to report annually on the implementation and status of the required water conservation program for a minimum of three years after the date of loan closing.
- ◆ TWDB staff will monitor compliance with any special environmental mitigative measures, as appropriate.

AUDIT PHASE

The TWDB audit staff is responsible for monitoring the Applicant's financial stability and compliance from the first receipt of funds until final bond interest payment. The Audit staff is available to come to the Applicant's location to assist in financial compliance matters. (See **TWDB Guidance for Finance-Related Legal and Contractual Requirements**, WRD-018.)

Major Goal

The audit staffs goal is to provide the TWDB with reasonable assurances that all grant and loan recipients use their assistance funds in accordance with applicable laws, regulations, and contractual provisions.

Final Accounting

After the Applicant incurs all of its eligible costs, a final accounting is to be performed in accordance with the grant contract and bond indentures to determine whether the funds provided by TWDB, including interest earnings are equal to the eligible project costs.

Loan Monitoring

The audit staff monitors loan activities, including annual financial stability reviews of every entity in the TWDB's portfolio. In addition, the audit staff makes monthly or quarterly stability reviews of selected borrowers and provides on-site assistance and monitoring visits.

Project Monitoring

Project monitoring activities include financial compliance reviews, final accounting examinations, and the review and resolution of federal single audits.