APPENDIX G
TWDB CWSRF Tier III GUIDANCE

Table of Contents

TEXAS WATER DEVELOPMENT BOARD

DWSRF and CWSRF Tier 3

Financial Assistance Application Procedures and Requirements (WRD-006g)

A complete application consists of: (1) general information; (2) fiscal information (3) legal information (4) engineering facility planning information; (5) environmental information; (6) a water conservation and emergency water demand management plan (if required); (7) Small, Minority, and Women Owned Business utilization documentation; and (8) assurance forms. Assistance on any of these items, and guidelines for items four through six are available on request (call 512/463-783, or go to http://www.twdb.state.tx.us/publications/forms_manuals/PGM forms_main.htm) All applications should be sent to the following address:

Texas Water Development Board
P.O. Box 13231
Development Fund Manager
1700 N. Congress Avenue
Austin, Texas 78711-3231 (78701 for courier deliveries)

The CWSRF and DWSRF Tier 3 programs were created under Chapter 15, Subchapter J, Texas Water Code and are implemented through 31 TAC Chapter 375 (CWSRF), and Chapter 371 (DWSRF). An applicant must submit an original and ten copies of an application containing the following information (except as otherwise indicated) to the Texas Water Development Board. Two (2) additional unbound double-sided copies (no staples or permanent binding) will be requested following staff review and comment.

I. GENERAL INFORMATION

1. Name of applicant(s), names and titles of principal officers, and citation of law under which created for each participating political subdivision.
2. Name, title, address, phone and fax numbers, and e-mail address (if available) of official representative(s);
3. Name, address, phone and fax numbers, e-mail address (if available) and contact person of:
   (a.) project engineer;
   (b.) bond counsel (if applicable);
   (c.) legal counsel [if other than bond counsel];
   (d.) financial advisor (if applicable); and
   (e.) any other consultant representing the applicant before the Board.
4. Brief comprehensive description of the project
5. Engineer's most current itemized project cost estimate (include all costs, specifically construction, engineering services, legal and fiscal costs, and funding sources for total project costs in a Sources and Uses Statement format).
6. Amount of financial assistance requested.
7. Authority under which debt is proposed to be issued and proposed plan for repayment, including authority to make proposed pledge of revenues.
8. Provide a statement as to the status of any recently closed or currently outstanding with Texas Natural Resource Conservation Commission or Texas Commission on Environmental Quality deficiency notices, violations or enforcement actions relating to the applicants existing systems.

II. FISCAL INFORMATION

Documentation and information from which the Board may determine whether the revenue available to the political subdivision from all sources will be sufficient to meet all the financial obligations assumed by the political subdivision over the anticipated life of the proposed loan, including:

1. Full legal name and a description of the security for the proposed debt issue(s).
2. Disclosure of all issues that may affect the applicant's ability to issue or repay debt.
3. Total outstanding debt, segregated by type (promissory note, G.O. or revenue bonds) with a consolidated schedule for each, showing total annual repayment requirements.
4. Circumstances surrounding prior default(s) on any debt.
5. Schedule of current water and sewer rates (including any surcharges) and rates proposed to finance the project; present average monthly residential water and wastewater usage, and corresponding average residential monthly bill.
6. Five-year comparative system operating statement, including audited prior years and an unaudited year-to-date statement reflecting the financial status for period no older than latest 6 months, with number of customers for each year.
7. A proforma detailing projected gross revenues from all sources, operating and maintenance expenditures, net revenues available for debt service showing coverage of current and proposed debt paid from revenues and a clear statement of the revenue pledge being offered.
8. List of top ten customers of the water and/or wastewater system.
9. One copy of an annual audit including management letter for latest preceding fiscal year prepared by a C.P.A. or firm of accountants, and if year-end is older than 6 months provide interim financial information no older than 6 months.
10. Maximum tax rate permitted by law per $100 of property value and direct and overlapping tax rate table (if applicable). A proforma indicating the tax rate necessary to repay current and proposed debt paid from taxes. List the assumed collection rate and tax base used to prepare the schedule.
11. Current top ten taxpayers showing percentage of ownership to total assessed valuation; also, state if any are in bankruptcy and explain anticipated prospective impacts.
12. Statement regarding intent to use any credit enhancement (i.e., surety bonds), the authority for its use, and name of company to provide such enhancement.
13. Preceding five-year historical data regarding assessed valuation taxes including net ad valorem taxes levied and corresponding tax rate (detailing debt service and general purposes), and tax collection rate (if applicable).
14. Current outstanding bond ratings.
15. Statement regarding intent to provide bond insurance for the loan and to finance with loan proceeds (if applicable).

III. LEGAL INFORMATION

1. One certified original and three copies of a resolution/ordinance requesting financial assistance from the Board, authorizing the submission of the application and designating the official representative(s) for submitting the application, executing any necessary documents and appearing before the Board. (see: *Application Filing and Authorized Representative Resolution*, WRD-201a, *and Certificate of Secretary*, WRD-201b.)
2. One certified original and three copies of an affidavit executed by the official representative verifying that the facts contained in the application are true and correct to the best of the representative's knowledge and belief and that the application was approved by the political subdivision in an open meeting. (See: Application Affidavit form WRD-201)
3. One certified original and three copies of a certificate of compliance executed by the official representative which warrants compliance by the participating political subdivision with all representations in the application, all federal, state and local laws, as applicable, and all rules and published policies of the Board. (See: Application Affidavit form WRD-201)
4. One certified original and three copies, executed by the Applicant's Designated Representative, of a statement of pending claims or litigation against the applicant that might affect the ability of the applicant to

issue debt or that would affect the Board's ability to receive repayment or to recover its investment. (See: Application Affidavit form WRD-201)

5. Three copies of the following documents:
   (a.) executed copies of any option, sales, or lease agreement(s) necessary for the project;
   (b.) any executed or proposed service contracts for water supply or sewer service indicating adequate supply or capacity for the life of the proposed loan; and
   (c.) any executed or proposed contracts between the applicant and any other entity which will generate revenues pledged to the repayment of the proposed debt.
6. Three copies of all executed contracts for consultant services included in the total project cost.
7. For a proposed revenue issue secured by a subordinate lien, or to be issued on parity, two copies of the resolution/ordinance issuing the prior lien or parity debt.
8. Status of Certificate of Convenience and Necessity or documentation of Applicant's authority to provide service to the designated project area.
9. For Water Supply Corporations:
   (a.) Articles of Incorporation;
   (b.) By-laws, and any amendments; and
   (c.) Certificate of Good Standing from the Texas Secretary of State.

IV. Engineering Information:

For conventional funding, 3 copies of an engineering Feasibility report prepared in accordance with *Guidelines For the Preparation of SRF/WQEL Engineering Feasibility Report*, ED-002 for CWSRF, or *Guidance on Preparing Engineering Feasibility Report for Water Supply Projects*, WRD-004 for DWSRF.

For projects qualifying under the Pre-design Funding Option (PDF) a preliminary engineering feasibility report which will include at minimum:

1. A description and purpose of the project;
2. Area maps or drawings as necessary to fully locate the project area(s);
3. A proposed project schedule;
4. Estimated project costs and budget including sources of funds;
5. Current and future populations and projected flows; and
6. Alternatives considered.

V. Environmental Information:

Provide two copies of an Environmental Information Document (EID), unless the proposed project qualifies for a categorical exclusion (for projects involving only minor rehabilitation or functional replacement of existing equipment), or qualifies for predesign funding. An EID must be prepared containing the information described in *Instructions for Preparing an Environmental Information Document,* DW-001 **(See TWDB Guidance)** and submitted to the TWDB's Environmental Reviewer. Note: When approval of the PDF Option is sought from the Board, the applicant must provide with the application a discussion of any known permitting, social, or environmental issues that may affect the evaluation of project alternatives or implementation of the proposed project.

VI. Water Conservation Plan:

Two copies of a Water Conservation Plan are to be submitted if the loan is for more than $500,000. **See TWDB Guidance:** *Water Conservation Plan Guidance Checklist,* WRD-022, and Water Conservaton Utility Profile (WRD-264) for specific content requirements. However, if the applicant will utilize the project financed by the board to furnish water services to another entity that in turn will furnish the water services to the ultimate consumer, the requirements for the water conservation plan may be met either through contractual agreements between the applicant and the other entity providing for establishment of a water conservation plan. The provision requiring a WCP shall be included in the contract at the earliest of the original execution, renewal or substantial amendment of that contract, or by other appropriate measures. If required, a draft plan may be submitted with the application, but an approved plan must be adopted by the applicant and approved by TWDB before any funds can be released.

VII. Small, Minority, and Women Owned Business Requirements.

The applicant must submit prior to or with the application one copy of documentation of "good faith efforts" and completed forms for the project and initial procurement of professional services.

- *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.

VIII. Federal Assurance Forms:

- **Nondiscrimination Certification**. Include the EPA form 4700-4: *Preaward Compliance Review Report.* ED-112;
- **Assurances of Construction Programs.** Include the EPA form 424D: *Assurances-Construction Programs*, WRD-206; and
- **Debarment Certification.** The Applicant must submit an EPA form 5700-49: *Certification Regarding Debarment, Suspension, and other Responsibility Requirements*, SRF-404.

IX. The Executive Administrator may require additional information pursuant to §375.38 and §371.32.

Our Internet address is: www.twdb.state.tx.us

Water Conservation Plan Guidance Checklist (WRD-022)

This guidance checklist applies to all Texas Water Development Board (TWDB) Financial Assistance Programs specified in its rules under Texas Administrative Code 31, Chapters 355, 363, 371, 375, 382, and 384. **The TWDB will accept Water Conservation Plans determined by the Texas Commission on Environmental Quality (TCEQ) to satisfy the requirements of 30 TAC Chapter 288.**

Note: Inquire with Conservation Division if this requirement has been met.

Basically, *the water conservation plan* is a strategy or combination of strategies for reducing the consumption of water, reducing the loss or waste of water, improving or maintaining the efficiency in the use of water, or increasing recycling and reuse of water. It contains best management practices measures to try to meet the targets and goals identified in the plan. *The Drought Contingency (Emergency Demand Management) Plan* is a strategy or combination of strategies for responding to temporary and potentially recurring water supply shortages and other supply emergencies.

THE WATER CONSERVATION PLAN REQUIREMENTS:

A. _____ An evaluation of the Applicant's water and wastewater system and customer use characteristics to identify water conservation opportunities and potential targets and goals. Completion of the ***Water Conservation Utility Profile,*** **WRD-264,** as part of the evaluation is required. Attach it to the Plan.

B._____ Beginning May 1, 2005, your plan should include 5-year and 10 –year targets & goals. Target and goals should be specific and quantified for municipal use **expressed in gallons per capita per day (gpcd) as well as goals for water loss programs (unaccounted-for water).** Consider state and regional targets and goals, local climate, demographics, and the utility profile. Consider the anticipated savings that can be achieved by utilizing the appropriate Best Management Practices and other conservation techniques.

C. _____ A schedule for implementing the plan to achieve the applicant's targets and goals.

D. _____ A method for tracking the implementation and effectiveness of the plan. The method should track annual water use and provide information sufficient to evaluate the implementation conservation measures. The plan should measure progress annually, and, at a minimum, evaluate the progress towards meeting the targets and goals every five years

E. _____ A master meter to measure and account for the amount of water diverted from the source of supply.

F. _____ A program of universal metering of both customer and public uses of water, for meter testing, repair and for periodic replacement.

G. _____ Measures to determine and control unaccounted-for uses of water. (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections, abandoned services, etc.)

H. _____ A continuous program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system in order to control unaccounted-for uses of water.

I. _____ A program of continuing education and information regarding water conservation. This should include providing water conservation information directly to each residential, industrial and commercial customer annually, and providing water conservation literature to new customers when they apply for service.

J. _____ A water rate structure which is not "promotional," i.e., a rate structure which is cost-based and which does not encourage the excessive use of water.

K. ____ A means of implementation and enforcement which shall be evidenced by adoption of the plan:

1. a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the applicant and
2. a description of the authority by which the applicant will implement and enforce the conservation plan.

L. _____ If the Applicant will utilize the project financed by the TWDB to furnish water or wastewater services to another supplying entity that in turn will furnish the water or wastewater services to the ultimate consumer, the requirements for the water conservation plan also pertain to these supplier entities. These requirements may be met either through contractual agreements between the parties providing for establishment of a water conservation plan, which shall be included in the contract at the earliest of the original execution, renewal or substantial amendment of that contract, or by other appropriate measures.

M. _____ Documentation that the regional water planning group for the service area of the applicant have been notified of the applicant's water conservation plan.

Note: The water conservation plan may also include other conservation method or technique that the applicant deems appropriate.

N. The Drought Contingency Plan shall include:

(Inquire with Conservation Division if an entity has a drought contingency plan on file with the TCEQ)

1. _____ **Trigger conditions**. Describe information to be monitored. For example, reservoir levels, daily water demand, water production or distribution system limitations. Supply source contamination and system outage or equipment failure should be considered too. Determine specific quantified targets of water use reduction.

2. _____ **Demand management measures**. Refers to actions that will be implemented by the utility during each stage of the plan when predetermined triggering criteria are met. **Drought plans must include quantified and specific targets for water use reductions to be achieved during periods of water shortage and drought.** Supply management measures typically can be taken by the utility to better manage available water supply, as well as the use of backup or alternative water sources. The demand management measures should curtail nonessential water uses, for example, outdoor water use.

3. _____ **Initiation and termination procedures**. The drought plan must include specific procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public.

4. _____ **Variances and enforcement.** The plans should specify procedures for considering (approving and denying) variances to the plan. Equally as important is the inclusion of provisions for enforcement of any mandatory water use restrictions, including specification of penalties for violations of such restrictions.

5. _____ **Measures to inform and educate the public**. Involving the public in the preparation of the drought contingency plan provides an important means for educating the public about the need for the plan and its content.

0. _____ **Adopt the plan.** No plan is complete without formal adoption by the governing body of the entity. For a municipal water system, adoption would be by the city council as an ordinance, or a resolution by an entity's board of directors.

P. ____ Reporting Requirement: Identify who will be responsible for preparing the annual report. Loan/Grant Recipients must maintain an approved water conservation program in effect until all financial obligations to the state have been discharged and shall **report annually** to the executive administrator of the TWDB on the implementation and status of required water conservation programs **for at least three years** after the date of loan/grant closing. If the executive administrator determines that the water conservation program is not in compliance with the approved water conservation plan, the political subdivisions shall continue to supply annual reports beyond the three years until the executive administrator determines that deficiencies in the plan have been resolved. The content and format for the annual reporting is included in the form: ***Water Conservation Program Annual Report,*** **WRD-265**.

Assistance. For information and assistance contact:

Adolph L. Stickelbault (adolph.stickelbault@twdb.state.tx.us)
Texas Water Development Board
PO Box 13231
Austin, Texas 78711-3231
512-936-2391

http://www.twdb.state.tx.us/assistance/conservation/Municipal/Plans/CPlans.asp

Guidelines for the Preparation of SRF/WQEL Engineering Feasibility Report (ED-002)

These guidelines are developed consistent with **31 TAC 363.13** and **363.222** of the Texas Water Development Board's *(TWDB)* Rules and apply to all wastewater related projects seeking financial assistance from the Board. Applicable Texas Commission on Environmental Quality, (TCEQ) formerly the Texas Natural Resource Conservation Commission Rules pertaining to wastewater collection, treatment, and disposal include the following.

TCEQ Rules:

- 30 TAC Chapter 284 - Private Sewage Facilities
- 30 TAC Chapter 285 - On-Site Wastewater Treatment
- 30 TAC Chapter 309 - Subchapter A- Domestic Wastewater Effluent Limitation and Plant Siting
  Subchapter B - Location Standards
  Subchapter C - Land Disposal of Sewage Effluent
  Subchapter D - Criteria for Classification of Solid Waste Disposal Facilities and Practices
- 30 TAC Chapter 310, Subchapter A - Use of Reclaimed Water
- TAC Chapter 312 - Sludge Use, Disposal and Transportation
- 30 TAC Chapter 313, Subchapter A - Edwards Aquifer in Medina, Bexar, Comal, Kinney, Uvalde, Hays, Travis and Williamson Counties
- 30 TAC Chapter 317 - Design Criteria for Sewerage Systems
- 30 TAC Chapter 332 - Composting

To obtain information on ordering these or any other Rules, you may either contact the appropriate agency directly, or contact:

Texas Water Development Board
P. O. Box 13231, Capitol Station
Austin, Texas 78711-3231

Use of the attached format will assist applicants to address all relevant issues concerning the planning of all projects in the planning period. The outline for the Engineering Feasibility Report is based on the preliminary engineering report rules of the Texas Commission on Environmental Quality *(TCEQ)* **(30 TAC 317.1(b),** in addition to rules of the Texas Water Development Board *(TWDB)* **(31 TAC 363.13 and 363.222).** However, TWDB approval does not negate the need for permits which are required by the TCEQ, or any other agencies.

The Engineering Feasibility Report should form the conceptual basis for the collection, treatment, and/or disposal system proposed. This document shall bear the signed and dated seal of the registered professional engineer responsible for the design.

For all projects, a draft Engineering Feasibility Report proposing processes, methods or procedures is encouraged to be submitted as early in the planning stage as practical. Early coordination of the essential planning information, design data, population projections, and any other requirements among the design engineer, TWDB, and TCEQ is desirable to eliminate delays in planning and to avoid the possibility of having to revise the final plans and specifications.

Please submit four (4) copies of the Engineering Feasibility Report.

I. General Description

A. Identify entities to be served and current and future population **(31 TAC 363.13).**

1. List the project's sponsoring political subdivision, address, telephone number and legal owner.

2. List the consulting engineer's name, address, and telephone number.

3. Identify the program(s) from which financial assistance is sought.

4. Provide a map designating the geographic limits of the planning area.

5. Provide a complete statement explaining the wastewater problems and needs within the planning area, including the following:

a. the domestic population of the area to be served (present through 20-year projection) and the design population of the project. We recommend that you plan for the 20-year needs and build for at least the 10-year needs or greater.

b. a discussion of any operational problems, at the wastewater treatment plant or within the sewer system,

C. a discussion of any applicable EPA or TCEQ enforcement actions,

6. Provide a brief description of the project with maps showing the area to be served, general location of proposed improvements, water and wastewater treatment plant sites, existing and proposed streets, parks, drainage ditches, creeks, streams, and water mains. The drainage area should be clearly defined by contour map at intervals of not more than ten *(10)* feet. The maps and plans shall be reproduced on paper not larger than 24 inches by 36 inches in size; however, where variations are necessary, all sheets shall be uniform in size. The project description should also include an explanation of any proposed phasing of construction.

7. Provide the following water related information:

a. sources, ownership, and adequacy of water supply for the planning period, and

b. Status of the Water Conservation and Drought Contingency plan (required for projects $500,000 and over).

II. Engineering

A. Provide a description of the alternatives considered and reasons for the selection of the project proposed. In addition, provide sufficient information to evaluate the engineering feasibility **(31 TAC 363.13)**.

1. The selection of a system must be fully described and the reasons for the selection clearly outlined. The selection process should include evaluation of appropriate technologies and full consideration of their costs for the specific project and the environmental compatibility of the project *(see Guidelines for Preparation of Environmental Assessments, Section II,* ED-001*, or Instructions for preparing an Environmental Information Document* SRF-099*)*. Examples of alternatives to be considered could be those involving innovative and non-conventional methods of treatment such as rock reed, root zone, ponding, irrigation and other technologies. Also, the alternatives could be those involving the reduction of infiltration and inflow *(I /I)*, modifying existing operation and maintenance *(O & M)* practices, phasing of the project, on-site systems, cluster systems, or various collection system routing alternatives. TWDB has information available for reference to some innovative technologies. If alternatives for reusing effluent have been evaluated in compliance with TCEQ rules, include a description of the alternatives considered.

2. A suggested method of outlining alternative project costs is the Present Worth Method. Present worth is the sum which, if invested now at a given interest rate, would provide exactly the funds required to pay all present and future costs. Total project cost, used to compare alternatives, is the sum of the initial capital cost, plus the present worth of operation, maintenance, and repair (OM&R) costs, minus the present worth of the salvage value at the end of the 20-year planning period.

B. Proposed collection system. The following information shall be provided in the preliminary engineering report if applicable to the project:

1. present area served and future areas to be served,

2. terrain data in sufficient detail to establish general topographical features of present and future areas to be served,

3. lift stations existing and/or proposed,

4. effect of proposed system expansion on existing system capacity, and

5. amount of infiltration/inflow existing and anticipated, and how it is to be addressed in the collection system design.

C. On-site Systems
For on-site systems, demonstrate compliance with On-Site Wastewater Treatment Standards **(30 TAC 285).**

D. Proposed treatment plant. The following information is required in a preliminary engineering report.

1. Quantity and quality of existing sewage influent and changes in the characteristics anticipated in the future. If adequate records are not available, analyses shall be made for the existing conditions and such information included in the report.

2. Provide the names of industries contributing any significant wastes, types of industry (standard industry codes), volume of wastes, characteristics and strength of wastes, population equivalent, and other pertinent information. It should be emphasized that if significant amounts of wastes other than normal domestic sewage are to be treated at the wastewater treatment plant, sufficient data on such wastes must be presented to allow an evaluation of the effect on the treatment process. This would include but not be limited to heavy metals and toxic materials such as polychlorinated biphenyls, organic chemicals, and pesticides.

3. Design flow rates (wet weather maximum 30-day average flow and 2-hour peak flow). Design flow is defined as the wet weather maximum 30-day average flow. Peak flow is defined as the maximum flow sustained for a 2-hour period to be encountered under any operational conditions, including times of high rainfall (generally the 2-year, 24-hour storm is assumed) and prolonged periods of wet weather. Peak flow factors generally range from 3:1 to 5:1 although other peaking factors may be warranted.

If the wet weather maximum 30-day average flow rate exceeds 125 gpcd, or bypasses and/or overflows occur, consideration should be given to examining the collection system for areas where infiltration/inflow can be controlled.

It is important to verify the accuracy of flow and rainfall records used to make flow determinations. If the flow measuring device appears to be inaccurate or contributing flows exceed the above referenced amount, further guidance from the TWDB staff should be requested before proceeding.

Therefore, when determining design and peak flow rates, consideration should be given to parameters such as:

a. domestic base flow,

b. industrial flow,

c. infiltration based on flow data from a 7-14 day average dry weather high groundwater period,

d. inflow based on flow data resulting from a 2-year 24-hour storm for the area,

e. infiltration and inflow reduction not exceeding 50 percent resulting from proposed line repairs, and

f. proposed flow reduction measures projected from the existing or proposed water conservation plan.

4. Type of treatment plant proposed and effluent quality expected. The information should include basis of design, flow, organic loading, infiltration allowance, and treatment efficiencies.

a. Describe the existing permit and parameters, and

b. Discuss the proposed permit status and parameters.

5. Type of units proposed and their capacities, considering the Design Criteria for Sewerage Systems **(30 TAC 317)**. The information should include detention times, surface loadings, weir loadings, flow diagram, and other pertinent information regarding the design of the plant, including sludge processing units required for the selected ultimate sludge disposal.

6. Treatment plant site information and the siting analysis. The location of the plant, the area included in the plant site, dedicated buffer zone, and a description of the surrounding area including a map or a sketch of the area. Particular reference should be made as to the plant's proximity to present and future housing developments, industrial sites, prevailing winds, highways and/or public thoroughfares, water plants, water supply wells, parks, schools, recreational areas, and shopping centers. If the effluent is to be discharged to the waters of the State, the immediate receiving stream, canal, major water course, etc., shall be designated. The siting analysis shall include:

a. Flood hazard analysis. Provide the one hundred year flood plain elevation. Proposed treatment units which are to be located within the one hundred year flood plain will require protective measures satisfactory to the TCEQ*(such as levees or elevation of the treatment units).*

b. Buffer zone analysis. Demonstrate that the location of each proposed treatment unit is consistent with the buffer zone criteria specified in **30 TAC Chapter 309** of this title *(relating to Treatment Plant Siting).*

c. The preliminary engineering report should include the technical information described in **30 TAC 317.10** *(relating to Appendix B - Land Application of Sewage Effluent)* for all overland flow projects.

E. Sludge management. The preliminary engineering report shall include a discussion of the method of sludge disposal to be utilized. The report shall assess the following factors:

1. estimated quantity of sludge that must be handled which includes future sludge loads based on flow projections,

2. quality and sludge treatment requirements for ultimate disposal,

3. sludge storage requirements for each alternative considering normal operating requirements and contingencies,

4. transportation of sludge,

5. land use and land availability,

6. reliability of the various alternatives, contingencies and mitigation plans to ensure reliable capacity and operational flexibility,

7. other applicable information conforming with **30 TAC 317.14; 30 TAC 309, Subchapter D; 30 TAC 312;** and **30 TAC 330** such as pathogen reduction level, proximity to airports, and groundwater contamination potential, and

8. status of any permits or authorization required for ultimate disposal of sludge.

F. Control of bypassing. Units or equipment which are needed to provide standby capability, provide flexibility of operation, or prevent discharges of partially treated or untreated wastewater during construction are eligible for TWDB funding. Provide a description of such units or equipment and include the costs in the cost estimate.

III. Cost of the Project (31 TAC 363.13)

1. Provide the total cost for each project or project phase in the following format:

COST OF PROPOSED PROJECT AND SOURCES OF FUNDS

	TWDB Funds	**Other Funds**	**Total Funds**
Construction Cost			
STP	$	$	$
I/I Rehabilitation			
Major Sewer Rehabilitation			
Interceptors			
Collection System			
Subtotal Construction Cost	$	$	$
Basic Engineering Fees			
Eng'r. Feasibility Report	$	$	$
Design Phase Eng'r.			
Construction Phase Eng'r.			
Subtotal Basic Fees	$	$	$
Special Engineering Fees			
Environmental Assessment	$	$	$

Inspection			
Surveying			
Testing			
Geotechnical			
O & M Manual			
Water Conservation Plan			
Other (SSES, Permits, etc.); describe			
Subtotal Special Fees	$	$	$
Financial Advisor	$	$	$
Bond Counsel	$	$	$
Bond Insurance	$	$	$
Easements (Ineligible)	$	$	$
Land (Ineligible)*	$	$	$
Other (Admin., Bond Issuance Costs, etc.;) describe	$	$	$
Recommend Contingency (20% of construction)	$	$	$
Total Project Cost**	$_____	$_____	$_____

* Land is not eligible for SRF funds unless it is an integral part of the treatment process.

** Round up to the nearest $5,000 by adjusting contingency.

2. Provide a project schedule outlining projected target dates including, but not limited to, the following:

a. submit application for a Board loan commitment,

b. submit plans and specifications for TCEQ and TWDB approval,

c. advertise for bids on contract(s),

d. open bids and contingently execute contract(s), and

e. include time, as necessary, for unforeseen delays to obtain easements for land, buffer zones, or right-of-way easements.

3. Provide an estimate of the total cost of the project per connection, including debt retirement and operation and maintenance costs. Include a comparison of existing costs per connection to the projected cost per connection.

IV. Environmental Assessment

If the Environmental Assessment is to be included within the Engineering Feasibility Report, provide the information required in the *Guidelines for the Preparation of Environmental Assessments (ED-1).*

References:

Rules as listed on page 1 of this outline

Guidelines for the Preparation of Environmental Assessments (ED-1)

Informational sheets outlining various innovative technologies

DMA Resolution Example (WRD-210)

RESOLUTION

WHEREAS, the _____(City/District)

has the authority to design, construct, operate, and maintain wastewater collection and treatment facilities; to raise revenues and assess appropriate charges to assure that each participating party pays its appropriate share of sewerage system costs; to accept or refuse to accept any wastes from any participating party; to accept and utilize grants or other funds from any source for wastewater management purposes; and, to carry out appropriate portions of an areawide water quality management plan;

NOW, THEREFORE BE IT RESOLVED by the ___(City Council / Governing Body)

of the _____(City / District)_____;

That the _____(City / District)_____seeks designation as a management agency for wastewater collection and treatment within its ___(city limits / district boundaries / _____facilities planning area)_____, in accordance with the requirements of Section 208 of the Federal Water Pollution Control Act, as amended.

_____ _____

Date (Mayor / Authorized Agent)

_____

(Councilman / Board Member)

ATTEST:

_____

(Secretary)

(*Attach a 8 1/2" x 11" map of the planning area or city limits for which designation is requested.)*

EQUIVALENCY PROGRAM INSTRUCTIONS FOR PREPARATION OF

Environmental Information Document (SRF-099)

(EID)

INSTRUCTIONS FOR PREPARING AN ENVIRONMENTAL INFORMATION DOCUMENT FOR THE STATE REVOLVING FUND PROGRAM

The Environmental Information Document (EID) is required for most projects by §375.214 of the Texas Water Development Board's Rules governing the Clean Water State Revolving Fund program in response to Section 511(c)(1) of the Federal Water Pollution Control Act, as amended. The EID may be entered into hearings and court actions; therefore, it must be properly prepared.

Please develop the EID as a separate, self-contained document, describing the project in sufficient detail so that reference to the SRF engineering plan or other documents, except for detailed design data, will not be necessary. Furthermore, please follow the attached format as closely as possible to facilitate its review.

Enter a response for each topic; if a topic doesn't apply then briefly explain why. Don't belabor any point but discuss each item in sufficient detail so that the environmental impacts may be properly assessed. Discuss additional topics or add other sections if necessary, since the format covers only the minimum topics that must be considered. If references are included in the document, provide a bibliography. Good maps can often reduce the amount of description.

Keep in mind that the main purposes of the environmental review process are to insure consideration of environmental factors and to encourage public participation in the planning and decision making process. If questions arise, solicit comments from the involved Federal, State and local agencies or interested groups and include a summary of their comments and responses in the EID.

An inadequate EID will delay application processing. The most commonly seen inadequacies are failure to identify adverse impacts that will result from the proposed project, disagreement with information presented in the SRF engineering plan, lack of coordination with the appropriate agencies and failure to adequately advertise the public hearing or to provide the required information during the hearing. Significant amendments to the SRF engineering plan must be accompanied by amendments to the EID.

Questions regarding the preparation of the EID should be directed to:

Texas Water Development Board
P.O. Box 13231, Capitol Station
Austin, Texas 78711-3231
512/463-7953

TABLE OF CONTENTS

5. Economic impacts
6. Conformance or conflict with land use planning
7. Impacts of development on environmentally sensitive areas

Section VI. ADVERSE IMPACTS WHICH CANNOT BE AVOIDED SHOULD THE PROJECT BE IMPLEMENTED

Section VII. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Section VIII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES TO THE PROPOSED PROJECT

Section IX. PUBLIC PARTICIPATION AND COORDINATION

A. Discussion
B. Public Hearing
   1. Advertisement
   2. Hearing notice
   3. Public availability of EID
   4. Hearing format
   5. Hearing record
C. Coordination of Review
   1. Circulation of EID
   2. Notice of the Public Hearing and Availability
   3. Documentation

Attachment A: REVIEW AGENCIES AND ADDRESSES

Attachment B: FLOODPLAIN POLICY

Outline for SRF Environmental Information Document

Section I. DESCRIPTION OF THE PROBLEM

A. Provide a concise and complete description of the purpose and need for the proposed project. This description should clearly identify the existing and/or anticipated water and/or sewerage system and/or treatment problems.

1. Give the average and peak capacities of the existing facility(ies), the design year and design population(s).

2. Describe the current treatment requirements and treatment process(es) now in use.

3. Discuss and document all existing and anticipated violations of Federal and State standards associated with the sewerage system.

B. Provide a map of the current facilities planning area consistent with the current water supply service area and/or the Certificate of Convenience and Necessity (CCN) boundaries of the water supplier.

Section II. ENVIRONMENTAL SETTING

A. Describe the existing environment (without the proposed project).

1. **Geological elements**

Briefly describe the topography and geology of the facilities planning area (water service area and/or CCN jurisdictional area) with attention to any formations that have an influence on ground or surface water supplies. When land application systems are proposed or septic tanks are being replaced, provide descriptions of the soil series and a map of their location. Identify prime agricultural land in the service area which might be impacted by new development accommodated by the proposed project. Discuss the geology, topography, and soil of the facilities entire planning area giving special attention to existing or proposed treatment facilities sites.

2. **Hydrological elements**

Identify the receiving stream and the applicable stream segment for the River Basin. Discuss all applicable wasteload allocations and/or limitations imposed by the Water Quality Management Plan, including current proposed state effluent limitations. Describe any water rights, interbasin transfers or related issues that may affect the project. Provide a description of any area aquifers, including shallow or perched water tables. Descriptive is should be given when the planning area is on or near an aquifer recharge zone or when land application site systems are proposed.

3. **Floodplains and Wetlands**

Identify, **by map**, all 100-year floodplains or wetlands in the service area. Describe these features in sufficient detail, including their natural values (see the Floodplain Policy attachment), to allow the U.S. Army Corps of Engineers to determine if a Section 404/Section 10 permit will be required. Federal Emergency Management Agency (FEMA) floodplain maps should be used in defining the floodplain boundaries; as a starting point, U.S. Fish and Wildlife Service Wetland Inventory maps should be used to define wetlands. If jurisdictional wetlands will be affected by the project to the extent that permits beyond the "nationwide" level will be required, then more detailed maps delineating the wetlands and their relationship to the project should be prepared. [Clean Water Act, as amended; Executive Order

11988, Floodplain Management; Executive Order 11990, Protection of Wetlands; Coastal Barrier Resources Act; Coastal Zone Management Act]

4. Coastal zones

If applicable, identify, by map, all coastal areas within or near the service area. Discuss the nature of the service area and land use controls related to coastal zone management and the loan applicant's participation in all coastal zone management plans. [Coastal Barrier Resources Act; Coastal Zone Management Act; Floodplain Management, Executive Order 11988]

5. **Climatic elements**

Briefly describe the temperature, precipitation, and prevailing wind characteristics of the area with particular attention given any unusual circumstances or conditions. Discuss existing air quality of the general service area in terms of the National Ambient Air Quality Standards. [Clean air Act, as amended].

6. **Biological elements**

Describe the major plant and animal communities of the general service area employing commonly used terminology (e.g., Western Cross Timbers/Coastal Prairie). List any threatened or endangered species that are known or may occur in the area. [Endangered Species Act, as amended]

a. Identify, **by map**, any habitats of threatened or endangered species in the planning area and provide a description(s) of the habitat. [Endangered Species Act, as amended]

b. Identify, **by map**, any state or national parks, forests, wildlife refuges, wild or scenic rivers, natural areas, or similar preserves in the planning area.

7. **Cultural resources**

Consult with the archeological staff of the Board to insure that historic and prehistoric resources are identified in the area or will be identified through a reconnaissance. [Archeological and Historic Preservation Act of 1974; National Historic Preservation Act of 1966; Texas Antiquities Code]

8. **Economic conditions**

Briefly describe the economic and social aspects of the community, particularly as they apply to the need for the proposed project, and the relationship at project locations to different socio-economic groups. Give the median annual household income for the community and provide population projections that are consistent with the applicable State Water Quality Management Plan.

9. **Land use**

Completely describe any land use planning or control (zoning, master plans, industrial parks, etc.) that may interact with the proposed project, its alternatives, and development accommodated or encouraged by the project. [Executive Order 12898, Environmental Justice; Farmland Protection Policy Act]

10. **Site Assessment**.

An initial site assessment should be performed to assess the potential for hazardous materials contamination on any property being acquired or constructed upon as a part of the project. 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 more detailed assessment if the initial assessment indicates potential for hazardous material contamination.

11. **Other programs and projects**
Describe any other programs, and/or projects, such as highway or water supply construction, that may affect the proposed project or its alternatives.

B. Briefly summarize the future environment without a project in terms of the above environmental settings

Section III. ALTERNATIVES TO THE PROPOSED ACTION

A. This section must contain a systematic development of alternative solutions to the water quality problems. Emphasis should be placed on projects that will involve new site selection, interceptor routes, or construction in environmentally sensitive areas. The alternatives must be screened with respect to physical and legal constraints, regulatory requirements, cost-effectiveness, and significant primary and secondary environmental impacts over the design life of the project. The alternatives should be consistent with those in the SRF engineering plan and should include:

1. Alternative wastewater management techniques, including no action, treatment and discharge, land application, on-site or individual systems, and wastewater or solids reuse.

2. Flow and waste reduction measures, including infiltration and inflow reduction and the implementation of a water conservation plan.

3. Alternative locations, capacities, and construction staging of the facilities.

4. Alternative methods of sludge or other project waste disposal, including process options, disposal options and disposal locations.

B. The reasons for rejecting or accepting alternatives must be presented with their significant environmental impacts. Greater cost must not be the sole consideration for rejection of an alternative. If project alternatives involve impacts to environmentally sensitive areas, care should be taken that adequate consideration is given to those which would not involve the areas.

C. If any part of the project is being planned in a l00-year floodplain or wetlands, then the following procedures must be followed. [Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetlands; Coastal Barrier Resources Act; Coastal Zone Management Act]

1. **Direct Impacts**

Consider and discuss alternatives that would avoid construction in the floodplain or wetlands. Demonstrate, by analyzing environmental, cost and technological factors that there is no practicable alternative to such construction. Note that practicable does not mean cost-effective or convenient. If no alternatives are practicable, then:

a. Prior to completion of the planning documents, design and/or modify the proposed project to minimize potential harm to the floodplain or wetlands and develop measures to mitigate any adverse impacts.

b. Prepare and circulate a Floodplain and/or Wetland Management Notice containing an explanation of why the action is to be located in the floodplain or wetland, a maximum of three

pages in length, including a location map, to the appropriate district offices of the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the Texas Natural Resource Conservation Commission, the Texas Water Development Board, the Federal Emergency Management Agency, and the municipal or county offices responsible for implementing the National Flood Insurance Program. See Attachment A, Section III for a list and addresses of agencies that must receive the notice. This notice shall include:

i. The reasons why the project element(s) is to be located in a floodplain or wetland;

ii. A statement indicating how the project will conform to the applicable federal, state, or local floodplain and wetland protection standards;

iii. A list of alternatives considered;

iv. A map showing the relationship between the project components, the wetlands, the floodway and floodplain, including the maximum flood elevation and the elevation to which the facilities will be protected. The latter should be based on FEMA information.

2. **Indirect Impacts**

If floodplains are to be affected demonstrate, consistent with the attached Floodplain Management Policy, that indirect adverse environmental impacts to the floodplain will not result from the proposed project. Perform a similar evaluation for any wetlands.

3. **Mitigation**

Describe any mitigative measures that have been identified to lessen or offset any impacts.

Section IV. PROJECT DESCRIPTION

A. Describe the proposed project as follows:

1. Identify the treatment process(es) proposed and indicate the capacity of the facilities--design average annual and peak, design year(s).

2. State the expected effluent quality in terms of BOD_5, TSS, Nitrogen-Ammonia, Phosphorous, fecal coliform and any other limitations.

   a. Will dechlorination or an alternate form of disinfection be required? If the latter, describe.

   b. Will biomonitoring be required by the permit?

3. List separately all project elements to be constructed, all elements to be financed by the SRF and all elements to be funded by other sources.

4. If existing treatment facilities are present then:

   a. Outline future plans for the plant(s),

   b. State which units will be retained,

   c. State if the existing site will be retained.

5. Describe any special (non-treatment) units that will be employed at the facility (air quality management and noise abatement).

6. Specify the amount of land required for the facilities.

7. Describe the method(s) of sludge or other waste disposal and show, by map, the location of the sludge disposal site(s). Give the permit status of the disposal site(s) and relate how adequate capacity will be available for the design life of the project.

B. Describe any proposed linework. List separately the lines to be financed by the SRF and those to be funded by other sources in terms of their lengths, diameters, and functions. Demonstrate that the receiving facilities have or will have as a result of this project.

C. Provide a map or maps showing the location of all proposed project elements in relation to existing homes and businesses and the service area boundaries.

D. Give the total estimated project cost, the amount to be financed through the SRF and the amount from other funds, including any local financing of private (service lines) connections. If entities other than the loan recipient are participating in the funding of the proposed project, identify them and give their estimated share of the project cost.

Section V. ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT

A. **Primary Impacts**

Describe those impacts, adverse and beneficial, which can be attributed directly to the proposed project. These would normally be related to construction and operation of the facilities and land use changes at the treatment plant site.

1. **Short Term Impacts**

a. Describe alterations to land forms, streams and natural drainage patterns. [Clean Water Act, as amended]

b. Describe the extent to which area watercourses will be affected by siltation and sedimentation. Specify the erosion and sediment runoff control measures to be employed. [Clean Water Act, as amended]

c. Discuss the affects of any dredging, tunneling and trenching in area watercourses and the mitigative measures to be taken. [Clean Water Act, as amended]

d. Describe precautions to be taken to avoid injury to cover vegetation.

e. If clearing will involve the use of herbicides, defoliants, cutting or burning, identify and describe the precautions to be taken to protect the area's environment and demonstrate compliance with local, state and federal regulations. [Clean Air Act, as amended]

f. Specify the final disposal method for soil and vegetative spoil. If a landfill or another permitted form of disposal is to be used, indicate compliance with applicable local, state and federal laws.

g. If land is to be acquired:

i. Specify the amount of land required and the number of people, if any, that will be relocated. Demonstrate that the current landowner(s) is aware of the proposed project and describe any expected controversy related to acquisition.

ii. Describe the method of land acquisition.

iii. Discuss the project's effect on adjacent land values.

h. If facilities are to be abandoned, describe what will be done with the existing structures and to what use the land will be put (e.g. razing an abandoned facility and converting it to use as a park).

i. Indicate how permit requirements will be met should the need for bypassing arise during construction.

j. If construction in, across, or near a waterway is proposed, consult with the Corps of Engineers concerning the need for a Section 404 or Section 10 permit. Describe any permit requirements or mitigative measures required by the Corps. [Clean Water Act, as amended]

k. Specify the measures to control dust during construction.

l. Identify the effects of noise during construction and specify the precautions to be taken to protect area residents and wildlife from it.

m. Identify any areas to be affected by blasting. Specifically describe precautions to protect area residents and wildlife during blasting.

n. Specify the measures to be taken to minimize vehicular and pedestrian traffic disruption and describe the safety provisions required to protect the public from construction hazards.

o. Discuss the effects of night work, if any, on the area environment.

2. **Long Term Impacts**

a. Specify the type (nature and current use) of the land that will be affected by the project. Describe any beneficial uses (current or future) that will be eliminated by the project. [Executive Order 12898, Environmental Justice; Farmland Protection Policy Act]

b. Indicate the degree to which proposed structures will interfere with or obstruct scenic views. Describe any architectural or landscaping measures to mitigate these impacts. [Executive Order 12898. Environmental Justice]

c. Show the prevailing wind patterns (a wind rose) in relation to the treatment facilities site and the surrounding environment.

i. Identify the possible odor sources and discuss their potential effects on the surrounding area, with emphasis on any residential, commercial or public use areas.

ii. If incineration is to be used, specify the measures to be taken to comply with air quality standards.

d. If land application of effluent or sludge is proposed, describe its potential effects on groundwater and surface water quality and quantity. Particular emphasis must be placed on the potential for contamination of shallow or localized groundwater resources.

e. Describe any beneficial or adverse effects of the project on aquatic life, including the effects of chlorine residuals.

f. Discuss the project's effects on any related municipal and industrial groundwater and surface water supplies, irrigation, water rights, water conservation, recreation or other uses. [Safe Drinking Water Act; Clean Water Act, as amended}]

g. If the project will result in the diversion of flows between basins, describe the effects on both basins.

h. Describe the project's effect on historical, cultural and archeological resources. Explain any coordination with the State Historic Preservation Officer or any other federal, state or local preservation organization. Describe any proposed mitigative measures. [Archeological and Historic Preservation Act of 1974; National Historic Preservation Act of 1966; Texas Antiquities Code]

i. Discuss the project's effect on any recreational areas or natural preserves, now and in the future. Determine and, as appropriate, develop methods of incorporating open space and recreational goals into the project.

j. Identify the potential noise levels from the project in terms of decibels, time of occurrence, duration and types. Identify any potential sensitive receptors and specify the measures to be taken to eliminate noise. [Executive Order 12898, Environmental Justice]

k. Assess the potential impacts of the project and project facilities on the different soci-economic groups of the affected area, and assess how the project and other environmental management facilities in the affected area will comply with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations with respect to the project facilities. Consult with Environmental Protection Agency - Region 6 for Calculation of Environmental Justice Index for the project. See Attachment A, Section IV for address.

l. Specify the precautions to be taken to control access to the facilities.

m. Describe any potential insect nuisances and the method of control. If pesticides are to be used show compliance with state, local and federal regulations.

n. Discuss the project's potential effects on floodplains and flood levels and describe measures to be taken to protect the project from flooding. Does the community participate in the National Flood Insurance Program?

o. Discuss the project's effect on air quality. [Clean Air Act, as amended, State Implementation Plan]

p. Discuss the project's expected energy consumption during operation and chemicals used in the treatment process. Describe any measures taken to reduce this consumption.

q. If applicable, discuss the effects on coastal zones. [Coastal Barrier Resources Act; Coastal Zone Management Act; Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetlands]

B. **Secondary Impacts**

Those impacts, beneficial and adverse, that may result from indirect or induced changes caused by the proposed project throughout the planning period must be discussed. Special attention should be given when there are significant increases in treatment capacity and/or when interceptors are to serve sparsely populated areas.

1. The impacts of future development accommodated by the project on land use must be assessed. Describe any changes in the rate, density or type of development including residential, commercial, industrial, recreational and open space that may result. [Executive Order 12898, Environmental Justice; Farmland Protection Policy Act; Coastal Barriers Resources Act; Coastal Zone Management Act; Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetlands]

2. Relate population and land use changes to effects on air quality. [Clean air Act, as amended, State Implementation Plan]

3. Relate population and land use changes to effects on water quality and availability (surface and groundwater). [Safe Drinking Water Act; Clean Water Act, as amended]

4. Discuss the effect of the projected growth on public services, such as water supply, future wastewater treatment needs, solid waste disposal facilities, etc. [Safe Drinking Water Act; Clean Water Act, as amended]

5. Discuss the economic impacts of the project by providing the estimated average monthly bill to a typical residential customer based upon the combined annual cost of debt retirement, operation and maintenance and any tap, connection fees and/or private service lateral costs including user charges, taxes, surcharges or other fees. This cost shall be based on existing, not future, connections. Compare this with any current bills and fees.

6. Describe how anticipated land use and economics related to the project conform or conflict with existing land use planning and the type of growth desired by area residents. [Executive Order 12898, Environmental Justice; Farmland Protection Policy Act]

7. Develop, in detail, any impacts of induced or growth related development on environmentally sensitive areas that will or may result from the project.

   a. Demonstrate, by contrasting the projected land use patterns with the floodplain and wetland maps, that the proposed project will not induce development within these environmentally sensitive areas. If such is unavoidable, show that such development will conform with local National Flood Insurance Program ordinances and the Texas Water Development Board's Floodplain Management Policy (attached).

   b. Repeat the above process, as applicable, for each of the following:

      i. Threatened or endangered species,
      ii. Critical habitats,
      iii. Any other environmentally sensitive areas.

Section VI. ADVERSE IMPACTS WHICH CANNOT BE AVOIDED SHOULD THE PROJECT BE IMPLEMENTED

All adverse impacts developed in Section V above should be discussed further in this section. Descriptions of the steps to be taken to mitigate or eliminate any significant adverse impacts should be provided. Such measures include structural changes (facility design, location, etc.) and nonstructural changes (zoning, staging facilities, etc).

Any impacts which cannot be reduced to acceptable levels, their implications and the reasons why the project is being implemented must be described in detail.

Section VII. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Describe the extent to which the proposed project may involve tradeoffs between short term environmental gains at the expense of long term gains or vice versa. Special attention must be given to effects which narrow the range of future uses of land or water resources or pose long term risks to health or safety.

Section VIII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES TO THE PROPOSED PROJECT

Describe those resources such as land resources, water resources, materials and recreation and open space potential that will be irretrievably committed or whose options will be irreversibly constrained as a result of the project.

Section IX. PUBLIC PARTICIPATION AND COORDINATION

A. **Discussion**

This section should contain a discussion and proposed resolution objections, complaints or problems which have been voiced against the proposed action.

B. **Public Hearing**

As a minimum, the applicant must hold a public hearing before adopting the SRF engineering plan. A mid-course public meeting (held after the alternatives are defined but before one is selected) is encouraged. Applicants, particularly those with potentially controversial or high cost projects, are encouraged to increase public participation through additional public meetings, advertisement, mailouts, and related measures.

1. The applicant must notify the public of the hearing by advertisement in a newspaper of general circulation within the project area at least thirty (30) days prior to the date of the hearing. The thirty day period may count either the day of the advertisement or the day of the hearing, but not both. A written notice of the hearing must be sent to the appropriate local and state agencies, Council of Governments, and all parties that have expressed an interest in the project as soon as the hearing is scheduled.

2. The hearing notice must include:

    a. The date, time and place of the hearing;

    b. A brief description of the proposed project, including the location of any new treatment facilities and/or water sources;

    c. The cost of the project, including the estimated monthly bill to a typical residential customer, any connection fee and any tax, surcharge or other fees.

    d. Give at least one convenient local source of the Environmental Information Document for the proposed project (library, city hall, etc.).

    e. The following statement:
    "One of the purposes of this hearing is to discuss the potential environmental impacts of the project and alternatives to it."

3. A copy of the EID shall be displayed at one or more convenient local site(s) at least l5 days before the hearing and shall be available at the hearing.

4. The hearing shall generally conform to the following format:

    a. Call to order,

    b. Statement of the purpose of the hearing which will include the following:
    "One of the purposes of this hearing is to discuss the potential impacts of the project and alternatives to it."

    c. The considerations to be taken into account under law and regulations; a brief description of the proposed project; its costs, including the estimated monthly bill to a typical residential household as above, any connection fee and an estimate of the private (service line) costs;

    d. A question and answer period;

    e. A list of witnesses;

    f. Testimony.

5. The hearing record, which will be made part of the Environmental Information Document, t consist of:

    a. A copy of the hearing notices (affidavit of publication).

    b. A sample letter of notification and list of all recipients,

    c. A statement, signed by the applicant, stating that hearing was held in conformance with the Public Hearing Notice.

    d. A list of witnesses including the complete text of their statements and any written testimony.

    e. A verbatim transcript, not just a summary or minutes, of the hearing.

C. **Coordination of Review**

1. The Environmental Information Document must be sent by the applicant for review and comment to agencies listed in Attachment A, Section I. The EID should also be submitted for comment to any other agencies or groups with a particular interest in the proposed project. The review time may be simultaneous with the thirty (30) days or more prior to the public hearing and should be so stated in the transmittal letter.

2. A Notice of the Public Hearing and Availability of the Environmental Information Document should be sent to any state, federal or local agency, government, organization or individual that has an interest in the proposed project. If an EID is requested, it should be transmitted as in C.1. Above.

3. Copies of the transmittal letter, the comments of the reviewing agencies and responses to them must be included in the EID. See Attachment A, Section II for a list and addresses of agencies.

Attachment A

REVIEW AGENCIES AND ADDRESSES

Section I. The following addresses should be used to select the appropriate offices to receive the Environmental Information Document. The Environmental Information Document should be sent by **documented (i.e. certified) mail.** If a response has not been received within 60 days, a documented telephone call may be used to ascertain the agency response.

U. S. ARMY CORPS OF ENGINEERS

District Offices

Regulatory Branch
CEWSWF-OD-R
U. S. Army Engineer District
P. O. Box 17300
Fort Worth, Texas 76102-0300
817/334-2300

Regulatory Branch
CEWST-OD-R
U. S. Army Engineer District
P. O. Box 61
Tulsa, Oklahoma 74102-0061
918/669-7401

El Paso Regulatory Office
CESWA-CO-R-EP
U. S. Army Engineer District
P. O. Box 6096
Galveston, Texas 77550
915/568-1359

Regulatory Branch
CESWG-CO-RE
U. S. Army Engineer District
P. O. Box 1229
Fort Bliss, Texas 79906-0096
409/766-3938

U.S. FISH AND WILDLIFE SERVICE

Field Offices

Field Supervisor
U. S. Fish and Wildlife Service
Ecological Services
C/O Corpus Christi State University
6300 Ocean Drive,
Corpus Christi, Texas 78412
512/888-3340

Field Supervisor
U. S. Fish and Wildlife Service
Ecological Services
711 Stadium Drive East Campus Box 338
Suite 252
Arlington, Texas 76011
817/277-1357

Field Supervisor
Service U.S. Fish and Wildlife Service
Ecological Services
10711 Burnet Road, Suite 200
Austin, Texas 78758
512/490-0057

Field Supervisor U.S. Fish and Wildlife
Ecological Services
17629 El Camino Real
Suite 211
Hartland Bank Building
Houston, Texas 77058
713/286-9292

STATE HISTORIC PRESERVATION OFFICER

State Historic Preservation Officer
Texas Historical Commission
P.O. Box 12276, Capitol Station
Austin, Texas 78711

FEDERAL EMERGENCY MANAGEMENT AGENCY

Insurance and Mitigative Division
Region VI
Federal Center
Denton, Texas 76201

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Chief Engineer
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711

TEXAS PARKS AND WILDLIFE DEPARTMENT

Wildlife Habitat Assessment Program, Wildlife Division
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744

NATURAL RESOURCES CONSERVATION SERVICE

Assistant State Conservationist
Water Resources
Natural Resources Conservation Service
101 South Main
Temple, Texas 76501-7682

U.S. FOREST SERVICE

Regional Environmental Coordinator
U.S. Forest Service
1720 Peachtree Road N.W.
Atlanta, Georgia 30309

U.S. NATIONAL PARK SERVICE

Wild & Scenic River Coordinator
Wilderness Act Coordinator
Big Bend National Park
P.O. Box 129
Big Bend National Park, Texas 79834

COUNCIL OF GOVERNMENTS

(Local office- address listed in Texas State Directory)

NATIONAL MARINE FISHERIES SERVICE*

Environmental Assessment Branch

National Marine Fisheries Service
4700 Avenue U
Galveston, Texas 77550

*Projects in coastal areas.

INTERNATIONAL BOUNDARY AND WATER COMMISSION*

International Boundary and Water Commission
The Commons, Building C, Suite 310
4171 North Mesa Street
El Paso, Texas 79902 (915/534-6700)

*Projects on lands within the floodplain or adjacent to the channel of the Rio Grande River.

Section II. The following agencies should receive the Notice of Public Hearing and Availability of the Environmental Information Document:

Texas Representative
Bureau of Reclamation
P.O. Box 1946
Austin, Texas 78767 (512/482-5641)

Environmental Officer
Department of Housing
525 Griffin, Room 106
Dallas, Texas 75202

Director, Central Region
U.S. Geological Survey
Building 25
Federal Center
Denver, Colorado 8022

Bureau of Land Management
P.O. Box 1449
Santa Fe, New Mexico 87501

Section III. The following agencies should receive the Floodplain and/or Wetland Management Notice:

U. S. ARMY CORPS OF ENGINEERS

District Offices

Regulatory Branch
CEWSWF-OD-R
U. S. Army Engineer District
P. O. Box 17300
Fort Worth, Texas 76102-0300
817/334-2300

Regulatory Branch
CEWST-OD-R
U. S. Army Engineer District
P. O. Box 61
Tulsa, Oklahoma 74102-0061
918/669-7401

El Paso Regulatory Office
CESWA-CO-R-EP
U. S. Army Engineer District
P. O. Box 6096
Galveston, Texas 77550
915/568-1359

Regulatory Branch
CESWG-CO-RE
U. S. Army Engineer District

Fort Bliss, Texas 79906-0096
409/766-3938

U.S. FISH AND WILDLIFE SERVICE

Field Offices

U.S. Fish and Wildlife Service
Ecological Services
C/O Corpus Christi State University
6300 Ocean Drive,
Corpus Christi, Texas 78412
512/888-3340

U. S. Fish and Wildlife Service
Ecological Services
711 Stadium Drive East Campus Box 338
Suite 252
Arlington, Texas 76011
817/277-1357

Field Supervisor
Service U.S. Fish and Wildlife Service
Ecological Services
10711 Burnet Road, Suite 200
Austin, Texas 78758
512/490-0057

Field Supervisor U.S. Fish and Wildlife
Ecological Services
17629 El Camino Real
Suite 211
Hartland Bank Building
Houston, Texas 77058
713/286-9292

FEDERAL EMERGENCY MANAGEMENT AGENCY

Insurance and Mitigative Division
Region VI
Federal Center
Denton, Texas 76201

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Office of Water Resource Management
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711

NATIONAL FLOOD INSURANCE PROGRAM

(local office responsible for implementation of program)

Section IV. The following agency should be contacted early during the planning process for information and calculation of an Environmental Justice Index for a project:

Office of Environmental Justice and Tribal Affairs
EPA Region 6 (6RA-DJ)
1445 Ross Avenue
Dallas, Texas 75202-2733
Telephone (214) 665-7257

Appendix B
FLOODPLAIN REQUIREMENTS OF THE SRF

From the Texas Water Development Board State Revolving Loan Fund Permanent Rules, Effective April 20, 1989.

'375.214(d)

Application of other laws and authorities. In addition to the requirements of state law and rules, the Act, and the *NEPA*, the board must, as required by the initial guidance for the state water pollution control revolving fund and the capitalization grant agreement, insure that each project proposed to receive *SRF* financial assistance complies with the following federal laws and authorities respecting the human environment: the *Archeological and Historic Preservation Act of 1974, PL 93-191; the Historic Sites Act;* the *Clean Air Act, 42 U.S.C. 7506(c)*; the *Coastal Barrier Resources Act, 16 U.S.C. 3501 et seq*., the *Coastal Zone Management Act of 1972, PL 92-583, as amended*; the *Endangered Species Act, 16 U.S.C. 1531 et seq*.; *Executive Order 11953, Protection and Enhancement of the Cultural Environment*; *Executive Order 11988, Floodplain Management; the Flood Disaster Protection Act of 1973, PL 93-234; Executive Order 11990, Protection of Wetlands*; the *Farmland Protection Policy Act, 7 U.S.C. 4201 et seq.*; the *Fish and Wildlife Coordination Act, PL 85-624, as amended;* the *National Historic Preservation Act of 1966, PL 89-665, as amended*; the *Safe Drinking Water Act, section 1424(e), PL 92-523, as amended*; and the *Wild and Scenic Rivers Act, PL 90-542, as amended*. Because particular federal and/or state agencies are charged with the enforcement of or permitting under many of these laws and authorities, the executive administrator will provide guidance to applicants to the fund regarding consultation requirements and will encourage proper coordination of project planning with the appropriate agencies. Because of their complexity and critical importance to the board's administration of the fund, the board has adopted the following sections to effect proper compliance with the requirements of the *Flood Disaster Protection Act of 1973, the Coastal Barrier Resources Act, and Executive Order 11988.*

(1) The board may not provide financial assistance from the SRF for any project element that is proposed to be constructed in a floodplain when the applicant's community is sanctioned by the Federal Emergency Management Agency *(FEMA)* in its administration of the National Flood Insurance Program, pursuant to the requirements of the *Flood Disaster Protection Act of 1973, PL 93-234.*

(2) The board may not provide financial assistance from the fund to any entity proposing construction in or extension or expansion of sewerage service into any area within the Coastal Barrier Resources System other than those permitted by the Coastal Barrier Resources Act, 16 U.S.C. 3501 et seq.

(3 Pursuant to the requirements of Executive Order 11988, the board must avoid direct and indirect support of development in floodplains wherever here is a practicable alternative. Therefore, both to preserve the significant natural functions and values of floodplains and to protect human health and safety:

(A) The board may provide financial assistance from the fund for the transportation or treatment of wastewater generated in a floodplain only when the proposed project will provide service to:

(i) areas of existing development in a floodplain;

(ii) facilities such as marinas which, by their nature, must be located in floodplains;

(iii) areas of projected growth if an EID demonstrates that the proposed development will be consistent with FEMA's floodplain management criteria for flood prone areas (40 CFR 60.3) and will have no significant impacts on natural functions and values of floodplains;

(iv) areas of projected growth if an EIS demonstrates that there is no practicable alternative to such growth, that such growth will be consistent with the floodplain management criteria cited in (iii), above, and that the benefits of such growth outweigh its costs to

the natural functions and values of the effected floodplains or risks to human health and safety.

(B) When regional systems are proposed, the board will require the regional authority and the member entities to demonstrate compliance with these rules.

(C) For the purposes of this section, the following definitions will apply:

(I) "Areas of existing development" means all or part of the project planning area which, at the time of the board's issuance of its environmental determination, is:

(i) occupied by existing structures or facilities;

(ii) substantially surrounded by existing structures and facilities and which serves no significant independent natural floodplain function; or

(iii) characterized by substantial investment in public infrastructure (e.g., roads and utilities are available to individual users) but which is only partially occupied by structures or facilities.

(II) "Floodplain" or "100-year floodplain" means those lowland, relatively flat areas usually adjoining inland or coastal waters that have a one percent or greater chance of flooding in any given year. In determining these areas, the applicant will use Flood Insurance Rate Maps or Flood Hazard Boundary Maps approved by FEMA. Where these maps are unavailable, the applicant should produce its own map(s) delineating the 100-year floodplain and showing 100-year flood elevations. Such maps should be prepared in accordance with FEMA's Guidelines and Specifications for Study Contractors.

(III) "Natural functions and values of the floodplain" include:
(I) maintenance of water quality;
(II) transport, storage, and absorption of floodwaters;
(III) groundwater recharge;
(IV) flow of debris;
(V) wildlife habitat;
(VI) cultural and historical resource repository;
(VII) agricultural resources; and
(VIII) aesthetic resources.

(D) The board will, as appropriate and consistent with the requirements of these rules and Executive Order 11988, require assurances or include conditions to the provision of SRF financial assistance to insure compliance with these rules.

Note '375.2 Definitions
Planning area--The existing and proposed wastewater service area consistent with the appropriate water quality management plan.

SMWBE
STATE REVOLVING FUND
PROGRAM GUIDANCE DOCUMENT

FOR THE UTILIZATION OF SMALL, MINORITY & WOMEN-OWNED BUSINESSES IN PROCUREMENT

TABLE OF CONTENTS

I. GENERAL INFORMATION

A. **Background** - The Texas Water Development Board (TWDB) receives grants from the Environmental Protection Agency (EPA) to provide low-interest loans to eligible political subdivisions. As a direct result of the United States Supreme Court's decision in *Adarand Constructors, Inc. v. Pena 115 S. Ct. 2097 (1995)*, the EPA established new policies governing Small, Minority and Women-Owned Business Enterprises (SMWBE). These new policies are included in the Grants and Operating Agreements between the EPA and TWDB, and apply to all recipients of financial assistance.

B. **EPA Policy** - EPA's policy (policy) requires recipients of its financial assistance to establish *Fair Share Goals* (goals) for awarding contracts and procuring goods and services from SMWBE's in the construction, supplies, equipment, and services procurement categories. The policy is meant to ensure that SMWBE's have the opportunity to participate in the procurement process, for all phases of the project. It is important to note that although the policy includes *small* (SBE) and *rural area* (SBRA) business enterprises, EPA is only statutorily required to collect data and enforce fair share goal objectives for Minority and Women-Owned business enterprises. TWDB will continue to collect information on SBE and SBRA participation, but those contract awards will not count towards the MBE and WBE goals.

C. **Applicability** - EPA's policy applies to all procurements made after May 8, 1998, for the Texas Water Development Board (TWDB) Drinking Water State Revolving Fund program (DWSRF), Tier III Clean Water State Revolving Fund program (CWSRF) and Colonia Wastewater Treatment Assistance Program (CWTAP). TWDB programs <u>not</u> affected by this policy are: Water Quality Enhancement (WQE), Water Supply Account (WSA), State Participation, Agricultural Loans and Grants, Tier II Clean Water State Revolving Fund program (CWSRF) and Economically Distressed Areas Program (EDAP).

D. **Guidance Document** - The intent of the SMWBE guidance document is to assist *applicants* and *contractors* comply with EPA's policy regarding SMWBE's. It is based, in part, on publications, training manuals and other guidance documents developed by EPA to implement their policies published in 40 CFR Parts 30, 31, and 35. The guide also ensures consistency with the Supreme Court's decision in *Adarand Constructors, Inc. v. Pena 115 S. Ct. 2097 (1995)*.

E. **Benefits** - The Affirmative Steps Outreach Program is designed to benefit both recipients of EPA funds and the business community. Applicants can receive lower interest rates on loans in comparison to those available on the open-market, as well as having access to a greater pool of potential contractors to bid on their projects. This increased competition could have the affect of lowering overall project costs, thus, lessening the repayment burden on the Applicant.

F. **TWDB Role** - The TWDB strives to provide all the necessary technical assistance needed to both applicants and prime contractors throughout all phases of the project. This can include reviewing draft newspaper advertisements, Request for Qualifications (RFQ), and Information for Bids (IFB) to ensure SMWBE components are included; and scheduling pre-application, project management, pre-bid and pre-construction conferences upon request.

G. Flowchart of SMWBE Document Review

(Note: CWTAP funding does not have IUP, but must comply with EPA's Fair Share Policy)

APPLICANT
Ranked on the
Intended Use Plan (IUP)
by the TWDB

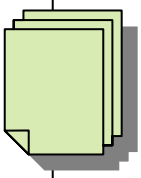
APPLICANT
Receives Letter of Invitation
to Submit
Loan Application

APPLICANT
Decides to Continue with
The Application Process

APPLICANT
Schedules Pre-Application
Meeting with TWDB Staff

APPLICANT
May Procure Financial Advisor,
Bond Counsel, & Consultant
Engineer in accordance with
EPA's Good Faith Effort Policy
(See TWDB Guidance SRF-052)

APPLICANT
Submits Financial Assistance
Application to TWDB

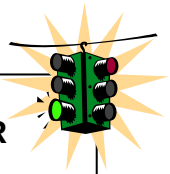


SMWBE COORDINATOR
1. Reviews WRD-215, and 216,217,218,SRF-373 *(where applicable)*
2. Enters Data into SMWBE Tracking System
3. Determines Acceptability

Deficiencies

SMWBE COORDINATOR
3. E-Mails Review Engineer Deficiencies Checklist & any Corrected Forms
4. Contacts Applicant (as necessary)

No Deficiencies



SMWBE COORDINATOR
1. Reviews Corrected Forms & Other Documentation
2. Contacts Applicant With Any Final Deficiencies to Correct

SMWBE COORDINATOR
1. E-Mails Review Engineer with **final approval**
2. Forwards SMWBE Packet to Records Management

II. DEFINITIONS

For the purpose of this guide, the following definitions shall apply:

- **Applicant** - Eligible political subdivision or privately-owned water system applying for financial assistance from the TWDB.
- **Construction** - Any contract or agreement to provide the building, erection, alteration, remodeling, improvement or extension of a TWDB-funded project.
- **Equipment** - Tangible, nonexpendable personal property having a useful life of more than one year, and an acquisition cost of $5,000 or more per unit.
- **Grantee** - Direct recipients of EPA funds through cooperative grant.
- **Minority Business Enterprise** (MBE) - A business concern which, 1) is certified as socially and economically disadvantaged by the Small Business Administration (SBA), or; 2) is certified as a minority business enterprise by a State or Federal agency, or; 3) is independent and at least 51 percent-owned and controlled by minority group member(s), or; 4) is a Historically Black College or University (HBCU's).

  (Minority individuals include Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans, or other groups whose members have been determined to be disadvantaged by the Small Business Act or by the Secretary of Commerce under Executive Order 11625, §5.)
- **Prime Contractors** - A business concern that enters into written agreements directly with the Applicant for construction, supplies, equipment and services.
- **Recipients** - Eligible political subdivisions or privately-owned water systems, who receive financial assistance from the TWDB, and/or prime contractors procured by political subdivisions or privately-owned water systems receiving financial assistance from the TWDB.
- **Services** - A contractor's time and effort (incl. consultants), which do not involve the delivery of a specific end-item, other than documents (i.e. reports, design drawings, specifications, etc.).
- **Small Business Enterprise** (SBE) - A small business concern, including any affiliate that is independently owned and operated, but not dominant in the field in which they operate. Must also be officially qualified as an SBE by the Small Business Administration (SBA), which uses a numerical definition called "Size Standard" that is almost always stated in either number of employees or average annual receipts. (See Table 1)
- **Small Business in a Rural Area** (SBRA) - A small business concern that is located and conducts its principal operations in a rural area/non-metropolitan county (as defined by the SBA).
- **Subcontractors** - A business concern that enters into written agreements directly with the Prime Contractor for construction, supplies, equipment and services.
- **Supplies** - All tangible personal property other than equipment.
- **Women Business Enterprise** (WBE) - A business concern which, 1) is certified as economically and socially disadvantaged by the SBA, and; (2) (a) is at least 51 percent owned by one or more women, or in the case of a publicly-owned businesses, at least 51 percent of the stock is owned by one or more women, and; (b) whose daily business operations are managed and directed by one or more of the women owners.

III. FAIR SHARE POLICY

A. **Fair Share Policy** - It is EPA's policy that recipients of EPA financial assistance through grants, cooperative agreements and loans put forth a good faith effort to identify, solicit and if possible, award a fair share of contracts/procurements to small, minority and women-owned businesses. This policy applies to all contracts/procurements for construction, supplies, equipment and services. In accordance with these guidelines, the TWDB has established and presently administers the SMWBE program, to promote SMWBE participation for all applicable program projects.

B. **Fair Share Goals** - The goals shown below were developed using data from the 1997 United States Economic Census, which determined the availability of small, minority and women-owned businesses throughout the State. The goals are applied to individual project contracts and procurements, which then determines the *maximum potential* procurement opportunities (in dollars) that are available to be awarded to MBE's and WBE's in each of the applicable procurement categories. It is important to note that the goals are not *achievement standards* or *quotas*, nor is achieving the goals mandatory. However, applicants and prime contractors (including minority and women-owned businesses) are required to adequately demonstrate that a good faith effort was made to achieve the goals using EPA's six affirmative steps. The fair share goals are negotiated by individual states, and are then presented to EPA for approval.

The current EPA-approved fair share goals for the State of Texas are as follows:

Procurement Category	MBE Goal Percentage (%)	WBE Goal Percentage (%)
Construction	**34%**	**8%**
Supplies	**18%**	**29%**
Equipment	**13%**	**13%**
Services	**22%**	**26%**

IV. GOOD FAITH EFFORT

A. **General** - To ensure compliance with the EPA's Good Faith Effort Policy and Affirmative Steps Outreach Program, the TWDB recommends that all applicants review their own procurement policies and procedures to see if/how SMWBE's are addressed. For applicants that may have *outdated* or *unwritten* procurement procedures, the six affirmative steps outlined below, provide an excellent starting point for updating and/or developing written procurement procedures to address SMWBE's.

B. **Six Affirmative Steps**

(1) *Include* qualified SMWBE's on solicitation lists;

(2) *Solicit* potential SMWBE's, whenever they are potential sources;

(3) *Reduce* contract size/quantities, when economically feasible, to permit maximum participation of SBE's SMWBE's;

(4) *Establish* delivery schedules to encourage participation by SMWBE's;

(5) *Use* the services and assistance of the SBA, the Minority Business Development Agency, the U.S. Department of Commerce, as appropriate;

(6) *Require* Prime Contractor's to follow steps 1-5 when awarding subcontracts or sub-agreements.

C. **Professional Service/Other Contracts** - As part of the *application* phase, applicants typically enter into prime contracts for professional services such as Financial Advisor, Bond Counsel, and Consultant Engineer. In addition to following the Six Affirmative Steps, the Applicant must also procure professional services in accordance with *Title 10, Chapter 2254 of the Texas Government Code (Professional Services Procurement Act)* and *Title 40 Code of Federal Regulations, Part 31 (Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments).*

D. **Contractor Selection** - Recipients are responsible for establishing their own criteria for awarding contracts and for reviewing RFQ's, IFB's, and other bid documents to determine their validity and acceptability. Although the TWDB does not oversee this aspect of the process, it does recommend that adequate documentation be maintained to show the openness of the selection process and the method used to select the proposal/bid to ensure compliance with EPA's policy.

E. **Documentation**

- Financial Application Phase - As part of the financial application package, *applicants* must submit documentation certifying an understanding of EPA's good faith effort policy, including the fair share goals and six affirmative steps. This information is documented on TWDB form **WRD-215,** APPLICANT AFFIRMATIVE STEPS CERTIFICATION and GOALS.

  Note: It is not uncommon for applicants to procure the services of *Financial Advisor, Bond Counsel*, and *Consultant Engineer* during the financial application phase. However, they must have been procured in accordance with EPA's good faith effort policy to be funded with federal loan proceeds.

- Subsequent Project Phases - Once the TWDB approves the loan commitment, applicants may proceed with the planning, design, and construction phases of the project, as directed by the TWDB review/project engineer. For each new procurement or contract award, the applicant (in the procurements of prime contractors) and the prime contractors (in the procurement of subcontractors) must demonstrate their understanding and adherence to EPA's good faith effort policy for all project costs to be funded with federal loan proceeds.

Texas Water Development Board
Small, Minority, Women-Owned Business Enterprise Program
Tips for Achieving a Good Faith Effort in Procurement

To assist entities **identify, include,** and **utilize** qualified Small, Minority, and Women-Owned Business Enterprises (SMWBE), applicants and prime contractors are encouraged to refer to the following list of resources made available on a local, statewide, and national level.

Resources for identifying SMWBE's:

♦ **Texas Building and Procurement Commission's (TBPC) Centralized Master Bidders List (CMBL) & Historically Underutilized Business (HUB) Search** - The CMBL & HUB Search is a statewide database managed by the TBPC. This database contains contact information on all vendors registered to do business with the State, including TBPC-certified HUB vendors. The CMBL & HUB search is an online system available to the public free of charge.
http://www.tbpc.state.tx.us/cmbl/cmblhub.html

♦ **Texas Department of Transportation - Disadvantaged Business Enterprise Directory**
http://www.dot.state.tx.us/business/tucpinfo.htm

♦ **The City of Houston - Minority, Women-Owned, and Disadvantaged Business Directory**
http://houston.mwdbe.com/FrontEnd/VendorSearchPublic.asp?TN=Houston_Diversity

♦ **The City of Austin - Minority Vendor List**
http://www.ci.austin.tx.us/purchase/pu_vendor_intro.htm

♦ **Small Business Administration's-Dynamic Small Business Search** - SBA-DSBA is an Internet-based system that allows applicants and prime contractors to search for small, minority and women-owned businesses in their area.
http://dsbs.sba.gov/dsbs/dsp_dsbs.cfm

♦ **Other Minority & Women Business Organizations that you can contact directly to obtain a list of qualified vendors for your procurement opportunity:**

American Indian Chamber of Commerce of Texas	**Texas Association of Historically Underutilized Businesses**
Website: www.aicct.com **Contact:** Diana Woodward **Email:** dwoodward@aicct.com **Phone:** 817-429-2323 **Fax:** 817-451-3575	Website: www.texashubs.org **Contact:** Roy Mata **Email:** rmata@tgsaustin.com, info@texashubs.org **Phone:** 512-220-4293 **Fax:** 512-288-9121
Central & South Texas Minority Business Council	**Women's Business Council – Southwest**
Website: www.cstmbc.org **Contact:** Name: Jennifer Mort **Email:** jennifer@sdtmbc.com, eva@cstmbc.com **Phone:** 210-525-7925,512-386-8766	Website: www.wbcsouthwest.org **Contact:** Emilia Menthe, Erica Williams **Email:** ementhe@wbcsouthwest.org, ewilliams@wbcsouthwest.org **Phone:** 817-299-0566
Dallas/Fort Worth Minority Business Development Council	**Women Contractors Association**
Website: www.dfwmbdc.com **Contact:** Andrew Nash **Email:** business@dfwmbc.com **Phone:** 214-630-0747 **Fax:** 214-637-2241	Website: http://www.womencontractors.org/ **Contact:** Josena Arquieta **Email:** jarquieta@womencontractors.org **Phone:** 713-807-9977 **Fax:** 713-807-9917

Options for announcing your solicitation:

♦ **Direct Communication -** Contacting potential bidders by direct communication can include but are not limited to correspondence by letter, facsimile, telephone, or email. Applicants and prime contractors are required to provide copies of outreach letters, mailing lists, telephone, fax, and email tracking logs.

♦ **Small Business Administration's (SBA) Sub-Net** - *Sub-Net* is an Internet-based system that allows applicants and prime contractors to post their procurement opportunities online. Access to the database is free to government agencies and contractors, and is an excellent resource for soliciting SMWBE's for your project.

The Sub-Net database can be accessed at: http://web.sba.gov/subnet

♦ **Newspaper Advertisements** - The posting of applicable project procurement opportunities should be done in accordance with the notice requirements of state law on competitive bidding, where applicable. There are specific laws governing each type of entity. For example, two important provisions of state law governing **municipalities** require:

1. The notice should be published once a week for two consecutive weeks in a newspaper published in the municipality. If no newspaper is published in the municipality, the notice must be posted at the city hall for 14 days before the date set to publicly open the bids and read them aloud;

2. The date of the first publication should be BEFORE the 14th day of the date set to publicly open the bids.

***** Please consult your legal counsel for specific laws governing your entity. *****

Pertinent language that needs to appear within the text of the solicitation includes:

A. This contract is contingent upon release of funds from the Texas Water Development Board (TWDB).

B. Any contract or contracts awarded under this Invitation for Bid (IFB) or Request for Qualifications (RFQ) are expected to be funded in part by a loan from the TWDB. Neither the State of Texas nor any of its departments, agencies, or employees are or will be a party to this IFB, RFQ, or any resulting contract.

C. This contract is subject to the Environmental Protection Agency's (EPA) "fair share policy", which includes EPA-approved "fair share goals" for Minority Business Enterprise (MBE) & Women Business Enterprise (WBE) firms in the Construction, Supplies, Equipment, and Services procurement categories. EPA's policy requires that applicants and prime contractors make a good faith effort to award a fair share of contracts, subcontracts, and procurements to SMWBE's. Although EPA's policy does not mandate that the fair share goals be achieved, it does require applicants and prime contractors to demonstrate us of the six affirmative steps. The current fair share goals for the State of Texas are as follows:

CATEGORY	MBE	WBE
CONSTRUCTION	34.0%	8.0%
SUPPLIES	18.0%	29.0%
EQUIPMENT	13.0%	13.0%
SERVICES	22.0%	26.0%

D. 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. Small, minority, and women-owned business enterprises are encouraged to respond.

A complete version of TWDB document, "SMWBE State Revolving Fund Program Guidance Document for the Utilization of Small, Minority, and Women-Owned Business Enterprises in Procurement" is available online at: http://www.twdb.state.tx.us/publications/forms_manuals/SRF052.rtf

V. AFFIRMATIVE STEPS OUTREACH PROGRAM

A. Affirmative Step **One**: Include qualified SMWBE's on solicitation lists

See *"Tips for Achieving a Good Faith Effort in Procurement"* on previous page.

B. Affirmative Step **Two**: Solicit potential SMWBE's, whenever they are potential sources

- **DIRECT COMMUNICATION -** Use of *direct communication* as a means to solicit potential contractors can include contact by certified letter, facsimile, e-mail and by telephone. Direct communication implies that a contractor solicitation list has been established; this list must be provided as backup documentation to the WRD-216 form when submitted.
- **INDIRECT COMMUNICATION** - Use of indirect communication as a means to solicit potential contractors can include advertising in one or more local, regional or statewide newspapers, trade association publications, minority media outlets, Internet or other website listings, and/or by notifying women and minority business organizations and chambers of commerce of these procurement opportunities. Newspaper advertisements must run in accordance with applicable purchasing guidelines and must include a statement encouraging the participation of minorities, women and small businesses submitting an RFQ and/or bid.

C. Affirmative Step **Three**: Reduce contract size/quantities, when economically feasible, to permit maximum participation of SBE's SMWBE's

Reducing contract size increases the opportunity for SMWBE participation by dividing the work into smaller increments that may be more favorable to smaller businesses. An optimum time to consider reducing contract size is during the *project design phase*. Methods for reducing contract size could include, but are not limited to: reviewing the project for opportunities to stage work; dividing multiple-site work; dividing work by task; limiting "brand name requirements"; and soliciting multiple bid items.

D. Affirmative Step **Four**: Establish Delivery Schedules to Encourage Participation

Delivery schedules can sometimes determine whether a firm will be able to participate in the procurement process. Short delivery schedules often favor larger firms that have more staff and more available resources to complete big projects in a short period of time. Advanced planning and adequate project management can allow for reasonable delivery schedules, lengthening response time to receive bids and/or proposals, and can even increase competition, which can lead to reduced cost to the applicant.

E. Affirmative Step **Five**: Use the services and assistance of the SBA, the Minority Business Development Agency, and the U.S. Department of Commerce, as appropriate

The SBA and the Department of Commerce (DOC) Minority Business Development Agency (MBDA) both manage outreach programs to assist SMWBE's business increase their procurement opportunities. The SBA assists small businesses in the development of business plans, financing, and education; applicants are encouraged to educate contractors on the services available to them through these government organizations. See Affirmative Step One for web links to those agencies.

F. Affirmative Step **Six**: Require all Prime contractors to follow steps 1-5 when awarding subcontracts/sub-agreements

Prime Contractors are required to follow steps 1-5 when awarding subcontracts/sub-agreements. They are also required to include the applicable "fair share objectives" in all project bid documents when soliciting for subcontracting opportunities. Including this information in the bid document/RFP ensures the potential bidder's awareness of the requirement and notification to comply. Any contract or subcontract awarded without regard to the "fair share objectives" can be considered ineligible for loan funding by the TWDB.

VI. Authority

A. Federal Laws, Executive Orders and Federal Regulations

1. Public Law 95-507 - The Amendments to the Small Business Act.
   a.) Establishes the Office of Small and Disadvantaged Business Utilization in every Agency having procurement powers.
   b.) Establishes the 8(a) program.
   c.) Establishes Preferential Procurement Goals for participation by small businesses, small disadvantaged firms, 8(a) and small women- owned concerns in Federal contracting programs. The goals are forwarded to the Small Business Administration on an annual fiscal year basis for approval or negotiation.

2. Public Law 100-533 - Women's Business Ownership Act of 1988. Increases the advocacy Role of Federal Agencies to further promote and advance WBE utilization in Federal contracting and subcontracting activities.

3. Public Law 100-590 - Small Business Administration Reauthorization and Amendment Act of 1988. Enacted on November 3, 1988. It requires Federal agencies with substantial procurement or grant-making authority to establish rural area business enterprise development plans. The Administrator of the Small Business Administration has identified EPA as a Federal agency having substantial procurement and grant-making authority. EPA has established a Rural Area Business Enterprise Development (RABED) Plan covering both financial assistance and direct procurement.

4. Public Law 101-507 - EPA Appropriation of Act of 1991. The 1991 Appropriations Act signed into law on November 5, 1990. "The Administrator of the Environmental Protection Agency shall, to the fullest extent possible, ensure that at least 8 per centum of Federal funding for prime and subcontracts awarded in support of authorized programs, including grants, loans and contracts for wastewater treatment and leaking underground storage tanks grants, be made available to business concerns or other organizations owned or controlled by socially and economically disadvantaged individuals (within the meaning of Section 8(a)(5) and (6) of the Small Business Act (15 U.S.C. 637(a)(5) and (6)), including historically black colleges and universities. For purpose of this section, economically and socially disadvantaged individuals shall be deemed to include women..."

5. Public Law 102-389 - The 1993 Appropriations Act. Enacted on October 6, 1992 changes the language in the Administrative Provisions of PL. 101-507 by adding the word 'hereafter' to the first sentence of the provision which states, "The Administrator of the Environmental Protection Agency shall, hereafter..." The addition of the word "hereafter" makes the language permanent.

6. OMB Circular A-102. Standards to be used by Federal agencies in establishing procedures for the procurement of supplies, services and construction with Federal assistance funds.

7. Executive Order 11625. Issued on October 13, 1971. The Order clarified the authority of the Secretary of Commerce to implement policy and to assist minority business enterprises. One of the factors was, "...to coordinate the participation of Federal departments and agencies in an increased minority enterprise effort." As a result of this, the Order required the Secretary of Commerce to, "...Promote the mobilization of activities and resources of State and local governments, businesses and trade associations, universities, foundations, professional organizations and volunteer groups toward the growth of minority business enterprises, and facilitate the coordination efforts of these groups with those of Federal departments and agencies." The Order further requires that

the Secretary, with the participation of other Federal departments and agencies, as appropriate, to develop comprehensive plans and specific program goals; establish regular program monitoring and reporting systems; and evaluate the impact of Federal support in achieving the objectives established by this Order. The Order requires the head of each Federal department or agency to furnish information and reports in a manner prescribed by the Secretary of Commerce. It further stipulates that within the constraints of law and appropriations, Federal departments and agencies shall foster and promote minority business enterprise.

8. Executive Order 12138. Issued on May 18, 1979. The Order directed all Federal agencies to: (1) facilitate, preserve and strengthen women's business enterprise and to ensure full participation by women in the free enterprise system; (2) take affirmative action in support of women's business enterprises; and (3) extend Federal financial assistance to any program or activity...each department or agency empowered to, shall issue regulations requiring the recipient of such assistance to take appropriate affirmative action in support of women's business enterprise and to prohibit actions or policies which discriminate against women's business enterprise. Pursuant to Executive Order 12138, the regulation implemented by the agencies shall prescribe sanctions for noncompliance. Sanctions by EPA were set forth in 40 CFR Part 30, Subpart I. In the case of assistance awards to recipients other than State and local governments they are still set forth there. In the case of assistance awards to State and local governments they are set forth in 40 CFR Part 31.43.

9. Executive Order 12432 - Minority Business Development. Issued July 14, 1983. The Order directed all Federal agencies to: (1) develop an MBE plan on an annual basis; (2) establish MBE objectives; (3) identify methods for encouraging prime contractors and grantees to utilize MBEs; (4) build upon programs administered by the Small Business Administration and Minority Business Development Agency; (5) furnish an annual report regarding the accomplishments of their MBE programs; and (6) establish programs to deliver management and technical assistance to MBEs.

10. 40 CFR Part 30. EPA implements its small business, minority business and women-owned business programs for institutions of higher education, hospitals, and other non-profit organizations in 40 CFR Part 30.44(b).

11. 40 CFR Part 31.EPA implements its small business, minority business and women-owned business programs for States, local governments and Indian Tribes through its "Uniform Administrative Requirements for Grants and Cooperative Agreements to State and local Governments", 40 CFR Part 31, in 40 CFR 31.36(b) Procurement standards and Sec. 31.36 (e) Contracting with small and minority firms, women's business enterprise and labor surplus area firms ensuring use of six affirmative steps.

12. 40 CFR Part 35, Subpart K. Under the State Revolving Fund Program requirements for the participation of minority and women-owned businesses apply to assistance in an amount equaling the grant. To attain compliance with MBE/WBE requirements, the Regional Administrator or designee will negotiate an annual "fair share" objective with the State for MBE/WBE participation on these SRF-funded activities. A fair share objective should be based on the amount of the capitalization grant award or other State established goals. See 40 CFR 35.3145(d). Ref: www.epa.gov/authority.htm

B. State Laws

1. Texas Water Code - Chapter 15, Subchapter J. SUBCHAPTER J. FINANCIAL ASSISTANCE FOR WATER POLLUTION CONTROL establishes the state water pollution control revolving fund to be administered by the board under this subchapter and rules adopted by the board
2. PROFESSIONAL SERVICES PROCUREMENT ACT (CHAPTER 2254. SUBCHAPTER A.)

Added by Acts 1993, 73rd Leg., Chi. 268, Sec. 1, eff. Sept. 1, 1993.

Sec. 2254.002. Definitions.

In this subchapter:

(1) "Governmental entity" means:

(A) a state agency or department;

(B) a district, authority, county, municipality, or other political subdivision of the state; or

(C) a publicly owned utility.

(2) "Professional services" means services:

(A) within the scope of the practice, as defined by state law, of:

(i) accounting;

(ii) architecture;

(iii) land surveying;

(iv) medicine;

(v) optometry;

(vi) professional engineering; or

(vii) real estate appraising; or

(B) provided in connection with the professional employment or practice of a person who is licensed as:

(i) a certified public accountant;

(ii) an architect;

(iii) a land surveyor;

(iv) a physician, including a surgeon;

(v) an optometrist;

(vi) a professional engineer; or

(vii) a state certified or state licensed real estate appraiser.

Added by Acts 1993, 73rd Leg., ch. 268, Sec. 1, eff. Sept. 1, 1993. Amended by Acts 1997, 75th Leg., ch. 244, Sec. 1, eff. Sept. 1, 1997.

Sec. 2254.003. Selection of Provider; Fees.

(a) A governmental entity may not select a provider of professional services or a group or association of providers or award a contract for the services on the basis of competitive bids submitted for the contract or for the services, but shall make the selection and award:

(1) on the basis of demonstrated competence and qualifications to perform the services; and

(2) for a fair and reasonable price.

(b) The professional fees under the contract:

(1) must be consistent with and not higher than the recommended practices and fees published by the applicable professional associations; and

(2) may not exceed any maximum provided by law.

Added by Acts 1993, 73rd Leg., ch. 268, Sec. 1, eff. Sept. 1,1993.

Sec. 2254.004. Contract for Professional Services of Architect, Engineer, or Surveyor.

(a) In procuring architectural, engineering, or land surveying services, a governmental entity shall:

(1) first select the most highly qualified provider of those services on the basis of demonstrated competence and qualifications; and

(2) then attempt to negotiate with that provider a contract at a fair &

reasonable price.

(b) If a satisfactory contract cannot be negotiated with the most highly qualified provider of architectural, engineering, or land surveying services, the entity shall:

(1) formally end negotiations with that provider;

(2) select the next most highly qualified provider; and

(3) attempt to negotiate a contract with that provider at a fair & reasonable price.

(c) The entity shall continue the process described in Subsection (b) to select and negotiate with providers until a contract is entered into.

Added by Acts 1993, 73rd Leg., ch. 268, Sec. 1, eff. Sept. 1, 1993. Amended by Acts 1997, 75th Leg., ch. 119, Sec. 1, eff. Sept. 1, 1997.

Sec. 2254.005. Void Contract. A contract entered into or an arrangement made in violation of this subchapter is void as against public policy.

Added by Acts 1993, 73rd Leg., ch. 268, Sec. 1, eff. Sept. 1, 1993.

3. Local Government Code

A. CHAPTER 252. PURCHASING AND CONTRACTING AUTHORITY OF MUNICIPALITIES
B. CHAPTER 2051. GOVERNMENT DOCUMENTS, PUBLICATIONS, AND NOTICES
C. CHAPTER 2251. PAYMENT FOR GOODS AND SERVICES
D. CHAPTER 262. PURCHASING AND CONTRACTING AUTHORITY OF COUNTIES

C. TWDB Rules

1. Chapter 363, Financial Assistance Programs
2. Chapter 371, Drinking Water State Revolving Fund
3. Chapter 375, State Water Pollution Control Fund

1. Chapter 363, Financial Assistance Programs
2. Chapter 371, Drinking Water State Revolving Fund
3. Chapter 375, State Water Pollution Control Fund

TEXAS WATER DEVELOPMENT BOARD

SMALL, MINORITY, and WOMEN-OWNED BUSINESSES

REPORTING FORMS - SEE TWDB FORMS APPENDIX F

1. WRD-215 APPLICANT AFFIRMATIVE STEPS CERTIFICATION and GOALS

2. WRD-216 AFFIRMATIVE STEPS SOLICITATION REPORT

3. WRD-217 PRIME CONTRACTOR AFFIRMATIVE STEPS CERTIFICATION and GOALS

4. WRD-218 SMWBE SELF-CERTIFICATION

5. SRF-373 LOAN/GRANT PARTICIPATION SUMMARY

NOTE: Applicant/Entity may either complete these forms or submit information in a self-designed manner as long as the information requested on the form is submitted and all documents are signed by the Applicant/Entity's Authorized Representative. Contact SMWBE Coordinator for additional information

Final Engineering Design Report Checklist (WRD-024)

General

The Design Criteria for Sewerage Systems, Chapter 317, section 317.1(c) requires that a final engineering design report be submitted with the plans and specifications. This report should describe the plant in detail and provide calculations or descriptions for all items covered by the design criteria. The design criteria and Texas Commission on Environmental Quality, TCEQ (formerly the Texas Natural Resource Conservation Commission or TNRCC) discharge permit should be consulted for further details on what type of information is needed. Information presented previously in the preliminary engineering report or responses to comment letters can be copied and included in the final engineering report if it covers the same items mentioned below. The report should be bound and sealed by a professional engineer registered in Texas.

Wastewater Treatment Plants

The following items should be included in the Final Engineering Design Report. Contact the TWDB project reviewer for more information on unconventional designs. More detailed checklists of items reviewed by the TWDB engineers can be provided if requested (see list of publications in "Additional Resources" section)

A. General Information.

____ 1. Copy of new permit or draft permit and status.

____ 2. Flows, capacities, and loading rates for the plant: average, maximum 30-day average, and peak flows.

____ 3. Siting of the plant: provide a scale drawing showing the buffer zone boundaries as required by section 309.13 .

____ 4. Hydraulic profile through the plant, including sludge processing, and flow diagram.

____ 5. Safety features included such as stairways, railing, lighting, insulation mats, and walkway mats.

____ 6. Any other information as required by 30 TAC 317.1

B. Lift Stations

(including external and internal plant wastewater and return pumping).

____ 1. Description of pump types, capacities, lift station structure, force main type and diameter.

____ 2. Describe the operating characteristics of the stations at minimum, maximum, and design flows (both present and future);

____ 3. Explain safety considerations, such as ventilation, entrances, working areas, and prevention of explosions

____ 4. Discuss means of preventing overflow of raw sewage, emergency power provisions of section 317.3 of the design criteria, including ventilation and alarms.

Note: Emergency power provisions should be addressed. Records of outages from the utilities providing power should be obtained and presented, along with a discussion of what alternatives are being considered for back-up during emergencies.

____ 5. Provide pump and system curves showing the operating point of all pumps in the lift station. Provide pump curves from the manufacturer and include information on pump efficiency at the operating point.

____ 6. Discuss provisions of section 3l7.2(d)(2-4) on requirements for force mains, such as:

- ____ a. Force main velocities
- ____ b. Provision of air relief valves and cleanouts
- ____ c. Pipe pressure rating
- ____ d. Leakage testing

____ 7. Any other information as required by 30 TAC 317.3

C. Preliminary Treatment

____ Describe preliminary treatment units and how they meet the requirements of section 317. 4(b) for bar screens, grit removal, fine screens, and disposal of screenings and grit.

D. Sludge Disposal

A sludge mass balance and sludge flow diagram is not required but is very useful in demonstrating that sludge generation and treatment has been adequately accounted for.

____ 1. Calculate anticipated sludge generation.

____ 2. Description of sludge handling and disposal, including storage of sludge while awaiting transport, and location of final sludge disposal site.

E. Closure of Existing Plant **(if applicable)**

____ Discuss the closure of the existing plant, including removal and disposal of sludge.

F. Mechanical Conventional Aeration Plant:

____ 1. **Aeration Unit** -Complete description and calculations showing how the aeration units, blowers, compressors, and piping will meet the provisions of section 3l7.4(g) with regards to:

- ____ a. Number of basins
- ____ b. Basin design and freeboard requirements
- ____ c. Organic loading
- ____ d. Detention time
- ____ e. Mixing requirements
- ____ f. Return sludge flow
- ____ g. Ability of system to remove ammonia nitrogen, if applicable
- ____ h. Oxygen requirements and capabilities of aeration equipment

Note: If there is any deviation from the transfer efficiencies allowed in the regulations for aeration devices, manufacturer's test data should be presented showing the actual efficiency of the aerators.

____ 2. **Clarifiers**. Explain how clarifier design will meet the requirements of section 317. 4(d) of the design criteria with regards to:

____ a. Surface loading
____ b. Solids loading
____ c. Detention time
____ d. Weir loading
____ e. Inlet velocity
____ f. Scum removal

____ 3. **Aerobic Digesters**. Description of the aerobic digester operation, as outlined in section 3l7.5(b), including:

____ a. Solids loading
____ b. Aeration provided
____ c. Sludge thickening capabilities
____ d. Sludge retention time

Note: 503 regulations should also be addressed if the digesters will meet the requirements for sludge processing under these rules.

____ 4. **Chlorination.** Description of chlorination equipment provided, including items required in section 317.6(b) of the design criteria such as:

____ a. Number of units and capacity
____ b. Type of control
____ c. Safety equipment provided
____ d. Housing design, including heating

G. Non-mechanical Pond System:

____ 1. **Lagoons.** Complete description and calculations showing how the proposed system will meet the size requirements and other provisions of:

____ a. The final discharge permit.
____ b. The requirements of section 317.4(j), Wastewater Stabilization Ponds, and 317.4(k), Facultative Lagoons.

Note: The discharge permit takes precedence over the rules if there is a conflict).

____ c. Some important items on Lagoons to include in the report:

____ (1) BOD Loading (lb./day)
____ (2) Volumetric loading (lb. BOD/l000 cu. ft.)
____ (3) Detention time
____ (4) How requirements for pond liner materials and embankment walls will be met.

____ 2. **Irrigation System.**

____ a. Provide maps showing all properties to be used in the irrigation scheme.
____ b. Provide final water balance calculations and application rates for the system and describe how it will meet provisions of:

____ (1) The final discharge permit.
____ (2) Section 309.20 of Subchapter C (Land Disposal of Sewage Effluent) .

____ c. Describe and provide calculations for the sizing of irrigation equipment provided, such as pumps, piping, and nozzles, and demonstrate that the equipment is capable of providing the application rates specified in the permit.
____ d. Describe and provide calculations for sizing of tail water return structures, if required.

Wastewater Collection Systems

The following items should be included in the Final Engineering Design Report. Contact the TWDB project reviewer for more information on unconventional designs.

A. Pump Station Renovations

____ Describe proposed improvements to the lift stations.

____ Provide the information and calculations described in "Lift Stations" above, where applicable.

B. Sewer Line and Appurtenances

____ 1. Provide calculations showing that the proposed sewer lines will be able to take the design peak flow.

____ 2. Show that the sewer line and manholes meet the requirements of section 317.2 (Sewage Collection Systems).

____ 3. minimum and maximum grades proposed for each size and type of pipe;

____ 4. capability of existing trunk and interceptor sewers and lift stations to handle the peak flow under anticipated conditions and capability of existing treatment facilities to receive and adequately treat the anticipated peak flows;

____ 5. type of pipe proposed and its anticipated performance under the conditions imposed by the particular wastewater quality and loading conditions;

____ 6.the manhole spacing proposed;

____ 7. areas not served by the present proposed project, and the projected means of providing service to these areas, including special provisions incorporated in the present plans for future expansion;

____ 8. amount of infiltration/inflow existing and anticipated, its hydraulic effect on the proposed and existing system, and an abatement plan if applicable, including a:

____ a. description of infiltration allowances and test procedures in the specifications governing design of new sanitary sewer lines; and

____ b. description of control program to reduce infiltration/inflow occurring in the existing sewer system;

____ 9. soil conditions, such as quicksand, that will not support collection system development, and measures to be taken to overcome the anticipated difficulties.

Cost Estimates

____ If the design has changed significantly from the Engineering Feasibility Report, a revised cost estimate should be submitted to TWDB project reviewer.

Guidelines for Inspector Qualifications (ED-005)

GENERAL:

The qualifications and organization of the inspection team provided by the owner or consultant are vital to the success of the construction project.

Competent and adequate inspection is in the best interest of the owner to ensure that construction is in accordance with the contract documents as well as to avoid disputes over payments to the contractor. Good documentation and communication will also aid in prevention and resolution of contractor claims.

TIME:

The amount of time and number of inspectors required on a project depends on the scope of work, number of contracts and the pace of construction. Consideration should be given to the number and nature of contracts that will be active at the same time. An inspector should observe all significant construction events.

QUALIFICATIONS:

As a minimum, inspectors should possess experience and knowledge comparable to the size, scope and complexity of the project they will be assigned to inspect. In general, inspectors should also have a thorough understanding of soils, concrete, survey, pipe laying, testing, mechanical and electrical. For relatively large or complex projects (e.g. treatment plants greater than $5-$10 million) it may be beneficial to have a resident engineer assigned to the project.

RESPONSIBILITIES:

The inspector, resident engineer or resident project representative's duties, responsibilities and limitations should be included in the contract documents.

TWDB GUIDANCE:

The Board's Inspection and Field Support Section staff will be glad to discuss the inspection effort required or the inspector's qualifications for each contract.

Inspector's Daily Report (WRD-019)

The Inspector's report should include the items mentioned below for each contract associated with the project. Many of the items can be included in a checklist or fill-in-the-blank type form. The primary purpose of the log is to have an accurate, detailed daily report of the day's activities. If more than one inspector is on site, each should make and sign an entry concerning their observations.

Each day's entry should include:

1) Conditions - Weather: temperature, moisture, site conditions, etc.

2) Personnel - Number of inspectors, number of workers, type of trades, list of subcontractors and number of hours worked by inspectors and workers.

3) Equipment - Number and type.

5) Activities - General description and location of work accomplished each day of the week.

6) Quantities - Length and size of the pipe laid, amount and type of embedment and select backfill material used, concrete, etc.

7) Materials - a list of all materials received for that day and whether checked and acceptable and where stored.

8) Difficulties - Any problems encountered due to unusual or differing site conditions, equipment or techniques. Notations may be used in case of change order for time extension.

9) Deficiencies - List of all deficiencies including construction, safety, labor, etc. for that day and if possible the resolution or proposed resolution to these problems. If resolution is not made immediately, it should be included on a future daily report when it is made with reference to the day it was encountered.

10) Disputes - Between contractor, engineer, owner, etc. and outcome of same.

11) Contractor's Comments - As to whether they agree with the engineer or inspector's comments.

12) Instructions - Record of any verbal instruction from the engineer to the inspector or inspector to the contractor.

13) Visitors - List of all visitors to job site.

14) Dated and signed - Diary should also contain the number of days used in the contract.

The daily reports should be checked, as a minimum, at each TWDB scheduled inspection. When checked during unscheduled inspections, it can be a useful tool to keep current of the construction progress and problems. If these reports appear insufficient, the inspector will be informed of what further information is needed.

Project Files and Construction Records (WRD-017)

1. Index
2. General Correspondence
3. Loan Assistance Documents and Assurances
4. TWDB Approved Plans & Specifications
5. Engineering contracts (design, construction management, project certification)
6. Project Certification (workplan, schedule, monthly report, capability report)
7. Discharge Permit & Self - Reporting Data
8. Land, Right-of-Way, Easements, Permits
9. Planning Documents (Engineering reports, I/I, EA, EID)
10 Sewer Use Ordinance, User Charge Ordinance
11. Plan of Operation
12. Operation & Maintenance Manual
13. Property Management System (inventory of capital equipment over $200)
14. Force Account Records (time sheets, direct purchases invoices, equipment use logs)
15. TWDB Outlay Reports
16. Fiscal Records & Account Ledgers
17. Engineering & Test Lab Invoices (itemized)
18. TWDB Inspection Reports

A separate set of the files below should be kept on each contract, e.g. 20-a, 20-b, etc.

19. Shop Drawings, Parts Manuals, Equipment Brochures
20. Daily Inspection Reports & Inspector Logs
21. Construction Schedules & Related Correspondence
22. Monthly Construction Estimate & Material Invoices
23. Certified Payrolls, Labor Interviews (including subcontracts)
24. Contract Files (contract, bonds, work order, current certificate of insurance)
25. Change Orders (request for changes with cost & pricing analysis, approval & eligibility by TWDB, executed change orders)
26. Concrete Test Results (batch design, compressive strength)
27. Soil Test Results (curves & densities)
28. Collection System Test Results (I/E, defection, pressure)
29. Miscellaneous Test Results (paint, equipment and other)
30. Equipment & Material Certifications
31. As-Built Drawings
32. Start-Up Activities, Operator Training
33. Certificates of Completion/Acceptance
34. Warranty Information

O&M Manual Recommendations (ED-006)

The Operation and Maintenance (O&M) Manual for Wastewater Treatment Facilities should, as a minimum, include the following:

1. A table of contents showing the page number for each section.

2. A descriptive guide to using the manual, indicating the type of information to be found in each section.

3. A brief description of the treatment process and a discussion of the capacity of the facility, including the flow and loading assumptions used as a basis for the sizing of the plant.

4. Regulatory requirements including permits and stream standards and requirements for reporting effluent quality information, non-compliant events, spills, etc.

5. Recommended staffing and staff responsibilities including plant supervisor and other management staff.

6. Description, operation and control of each unit of the facility (include offsite lift stations, if appropriate):

    a. Description, function, flow routing and design capacity for each unit.
    b. Listing of major components and mechanical equipment.
    c. Process control:

        1. Normal operating procedures and parameters including such things as valve positions, sludge depths, etc.
        2. Discussion of laboratory and field tests and expected operational ranges.
        3. Discussion of common operating problems and solutions.
        4. Alternate operational modes.

    d. Hazards and safety concerns.
    e. Recommended maintenance of mechanical equipment including lubrication schedules, recommended lubricants, etc.

7. Sludge management program:

    a. Permit requirements and other limitations.
    b. Method of disposal.
    c. Method of tracking.

8. Recommended recordkeeping procedures for plant operating parameters, compliance reporting, sludge tracking and maintenance.

9. General safety information, procedures and accident reporting

10. Emergency operating procedures for such things as power loss, flood, freeze, etc.

11. Recommended maintenance program and schedule for any equipment or parts of the facility not covered in section 6 above, including painting, ground upkeep, tractors, mowers, portable pumps, etc.

12. Laboratory procedures and/or sample handling.

13. Collection system maintenance procedures.

14. Appendices:

    a. Schematic and flow diagram for the facility.
    b. List of process chemicals and their source.
    c. List of utilities and contacts.
    d. List of equipment suppliers.
    e. List of sources of service and parts.
    f. Protective coatings list for equipment and structures subject to corrosion.
    g. Recommended spare parts inventory.
    h. Warranties and bonds.
    i. Sample forms for operating parameters, compliance reporting equipment maintenance, etc.
    j. Map of the collection system including location and size of lines, manholes and lift stations, if available.

Finance - Related Legal and Contractual Requirements Applicable to Loan Indebtedness (WRD-018)

With the Texas Water Development Board

This document presents the primary finance-related legal and contractual requirements associated with the financing of a project through a loan contract or the sale of bonds to the Texas Water Development Board (TWDB). This document does not necessarily include all applicable finance-related legal or contractual requirements. **For further assistance in this regard, please contact the Contract Administration Division Staff (512) 463-8415.**

I. PRIMARY CONTRACTUAL AND LEGAL AUTHORITIES

A. Contract - The contractual loan agreement between the TWDB and political subdivision is the bond indenture or loan agreement. This ordinance, resolution or order is the transcript of legal proceedings authorizing the bond issuance. The TWDB provides to the political subdivision a written summary of selected provisions of this document.

B. Laws and Regulations - All loan programs of the TWDB are subject to the following laws and regulations:

1. Chapters 15, 16 & 17 of Texas Water Code
2. U.S. Treasury Federal Arbitrage Regulations (for tax exempt debt)
3 Chapter 363 of TWDB Rules - Financial Assistance Programs

In addition, State Revolving Fund (SRF) program loans are subject to:

1. EPA SRF Regulations 40 CFR 35 Subpart K
2. Chapter 375 of TWDB Rules – Clean Water State Revolving Fund

The State Uniform Grant & Contract Management Standards Act of 1981 and its related regulations do not apply to financial loan assistance provided by the TWDB.

II. USE OF LOAN PROCEEDS

A. Construction Fund - The loan proceeds should be deposited to a construction fund established with the political subdivision's official depository bank and be secured and collateralized in accordance with State law.

B. Investment Earnings - All investment earnings on loan proceeds accrue to the construction fund. Investments of tax exempt loan proceeds should be in accordance with applicable Federal arbitrage rebate and yield restriction regulations. Generally, the yield restriction on the investment of loan proceeds is the interest rate on the political subdivision's debt and/or the TWDB's source bonds.

C. Project Budgeting - The political subdivision is responsible for managing its construction and project budget and ensuring that there are sufficient funds to complete the project. TWDB approval is not required for budget revisions that have no affect on the total amount of TWDB assistance.

D. Expenditure/Reimbursement Criteria - In order to be funded by the gross proceeds or related investment earnings, an expenditure or interfund reimbursement should be an element of cost that is allocable to the project scope of work approved for funding by the TWDB in its loan commitment and is a lawful obligation of the political subdivision.

E. Land Acquisition - Loan proceeds may not be used to fund the cost of acquiring land, rights-of-way or easements that are not an integral part of the treatment process.

F. Arbitrage Reimbursement Limitations (for tax exempt debt) - In accordance with Federal arbitrage reimbursement regulations (26 CFR 1.150-2):

1. Tax exempt loan proceeds may not be used to reimburse the costs of acquiring land, rights-of-way or easements paid before the date of loan issuance unless the political subdivision has declared an "official intent" to reimburse the expenditure on or before the date the expenditure is paid.

2. A reimbursement allocation of tax exempt loan proceeds to an expenditure must generally occur on or before the latter of either the date one year after the expenditure was paid or the date one year after the property was placed in service.

G. Interest, Operation and Maintenance (O&M) Costs and Interfund Transfers - In accordance with the Public Security Procedures Act (§1201.042, Government Code), proceeds of loans which, in whole or in part, are payable from and secured by the revenues of the system may be used to:

1. pay interest on the loans during the period of construction and one year thereafter;

2. pay system operation and maintenance during the estimated period of construction and one year thereafter; and

3. fund debt service, reserve, contingency and other funds relating to the loans.

Political subdivisions should consult TWDB before using loan proceeds in the above manner.

H. Contractors' Retainage - Retainage should be withheld from construction contractors' periodic payments in accordance with State law. Under certain circumstances, interest earnings on contractors' retainage accrue to the benefit of the contractor. Regardless of the source of funds, final release of construction retainage to the contractor shall not be made until the political subdivision has requested and received a contract "Certificate of Approval" from the TWDB.

I. Final Accounting - At the time the project is complete or when all loan proceeds and investment earnings are expended, a final accounting review will be completed to determine the total sources and authorized uses of project funds. Any unexpended (surplus) loan proceeds or related investment earnings are generally used to redeem loan maturities held by the TWDB.

J. Colonia Wastewater Treatment Assistance Program (CWTAP) – If the political subdivision is receiving CWTAP Federal assistance from the TWDB and the bond proceeds provided to the political subdivision by the TWDB represent the State match for the CWTAP assistance, the authorized uses of the bond proceeds are subject to the allowability criteria of U.S. Office of Management and Budget Circular A-87.

III. ANNUAL INDEPENDENT AUDITS

A. Standards and Auditor's Qualifications - Annual audits required by law and the loan documents should be conducted:

1. in accordance with generally accepted auditing standards (GAAS); and

2. by a certified public accountant or public accountant licensed to practice in the state by the State Board of Public Accountancy.

B. Audited Annual Financial Statements - Annual audits required by state law and the loan documents must, as a minimum:

1. include the political subdivision's fiscal year general purpose financial statements;

2. include the auditor's report and opinion on the general purpose financial statements;

3. be completed and made available for public inspection within 120 days (135 days for districts and authorities) of the close of the fiscal year; and

4. be promptly submitted to the TWDB upon completion.

III. MONTHLY AND QUARTERLY OPERATING STATEMENTS

Monthly operating statements may be required by the loan documents and/or the Development Fund Director. Forms are available for submission of the required information or for guidance in the submission of copies of financial statements presented at the political subdivision's monthly council or board meeting.

This policy has proven to be especially beneficial to borrowers issuing first-time debt, new system debt, systems with 500 or fewer customers, and others designated during staff review.

V. ACCOUNTING AND BUDGETING

A. Accounting Standards - The political subdivision's accounting systems, records and reports related to the loan with the TWDB should:

1. comply with generally accepted accounting principles (GAAP);

2. demonstrate compliance with finance-related legal and contractual provisions; and

3. contain current, accurate and complete accounts and records.

B. Loan Funds and Accounts - The funds and accounts commonly required by loan documents include:

1. Debt Service Fund - This fund is for paying principal maturities and interest coupons on the loan as they come due. Other common names for this fund include certificate fund, interest & sinking fund and bond fund.

2. Reserve Fund - This fund is for paying principal and interest payments on the loan when no other funds are available for debt service. This fund is generally required only with loans secured by system revenues. Documents generally require equal monthly deposits to the reserve

fund over a five-year period until the fund's balance reaches the loan's average annual debt service requirement.

3. Construction Fund - This fund is for the deposit, investment and expenditure of the loan proceeds and other project funding sources.

4. Other Funds and Accounts - Loan documents commonly have specific requirements for the accounting of revenues pledged for repayments. This is often referred to as the "flow-of-funds." These funds are commonly referred to as system fund, revenue fund, surplus revenue fund, etc.

C. Records Retention and Access - All construction-related records should be retained for no less than three years from completion of final accounting. For as long as the loan is outstanding, all other loan-related records should be retained for no less than three years from the close of each fiscal year. The staff of the TWDB or its authorized representative shall have access to any records of the political subdivision related to the loans.

D. Annual Operating Budgets - Political subdivisions are required by state law to prepare and adopt fiscal year operating budgets. Annual budgets should reflect sufficient revenues to adequately operate and maintain the system and to meet both general obligation and revenue debt of the system. The TWDB requests selected political subdivisions to submit annual operating budgets for review.

VI. PLEDGED REVENUES

A. System Revenue Pledge - This type of pledge requires that system revenues be sufficient to pay system operation and maintenance expenses and system revenue debt. Revenue Bond Coverage is a measure of whether system revenues remaining after the payment of system O&M costs (net revenues) are sufficient to pay debt service requirements on revenue loans. The coverage factor is computed by dividing annual net revenues by the annual debt service requirement. The coverage factor can be computed on the current (next year's) debt service requirement or the average annual debt service requirement. Most loan documents require a 1.00 coverage factor on the average annual or current debt service requirement.

B. Tax Pledge - This pledge requires the political subdivision to levy and collect an ad valorem interest and sinking (I&S) fund tax sufficient to pay system general obligation debt service requirements on the loans.

C. Combination Tax and System Revenue Pledge - This pledge requires the political subdivision to levy and collect an ad valorem I&S tax and/or generate system net revenues that are in combination sufficient to pay system general obligation and revenue debt service requirements.

D. Contract Revenue Pledge - This pledge requires the political subdivision to set rates and charges to parties who are contracting to repay the debt issued by the political subdivision in an amount sufficient to pay debt service on the contract revenue loan. In addition, the underlying contracting parties are required to set rates and charges to their customers sufficient to pay the portion of the debt service on the contract revenue debt for which the underlying contracting party is obligated.

E. System Rates and Charges - Loan documents generally provide that rates and charges for services provided by the system be sufficient to pay at all times the operating expenses and debt of the system. Rates should be examined at least once a year as a part of the annual budget process and should be based on sound system operating and customer records.

VII. SYSTEM OPERATIONS AND INSURANCE COVERAGE

TWDB Financial Interests - In order to protect the economic viability and financial solvency of the system and the State's investment, the political subdivision shall provide adequate operation and maintenance and insurance

coverage on the system for as long as the loan is outstanding. Insurance coverage on the system's operations and facilities shall be sufficient to protect it against damages or losses.

VIII. FINANCIAL MONITORING AND MANAGEMENT ASSISTANCE

A. Financial Monitoring - The TWDB monitors political subdivisions' financial stability and loan document compliance through the review of:

1. audited annual financial reports
2. monthly and quarterly operating statements as appropriate
3. annual operating budgets as appropriate
4. reports issued by the Municipal Advisory Council
5. other sources of financial data as appropriate and
6. on-site financial reviews when necessary

In cases where there is evidence of financial instability or material noncompliance with the loan docements, the TWDB requests and monitors corrective action by the political subdivision.

B. Financial Management Assistance - The TWDB's audit staff will provide whatever assistance is necessary or requested in matters of financial stability and loan document compliance.