

# **An Overview of Texas Water Development Board Financial Assistance Programs for Saltwater Desalination Projects**

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## **Introduction**

The future of seawater desalination projects in Texas will rely upon not only proven and innovative technology, but also, as with any project - affordability. While seawater desalination opens the door to a vast resource, the associated costs can be prohibitive as the scale needed for cost effectiveness of these plants is typically large. Not only is the capital outlay for initial construction of these water treatment plants substantial, but the operational costs are even more so an issue as seawater desalination projects are energy intensive users. In order for this relatively new technology to be effective in meeting the water supply needs of Texas and all areas of the world, efforts must be focused on both the initial costs and the ongoing operational impacts of the plants. This paper will focus only on the capital outlay costs and how the Texas Water Development Board's (TWDB) financial assistance programs can help assist in the financing of desalination projects.

## **What TWDB Programs Would Seawater Desalination Projects be Eligible Under?**

The Texas Water Development Fund, State Participation, Drinking Water State Revolving Fund, Rural Water Assistance Fund and the Water Infrastructure Fund, *in general*, would allow for funding of a seawater desalination project. In addition to these sources, private activity bonds could also be utilized. However, each of these programs has their own eligibility criteria and requirements that are further described below. Research and planning grants through the TWDB are also available for planning purposes only.

The Texas Water Development Fund (Development Fund) – obtains its funding from the issuance of state general obligation bonds. Political subdivisions and non-profit water supply corporations are eligible for funding of water-related projects (i.e. water supply, wastewater, flood control). Financial assistance is in the form of loans with typically 20-year maturities, although longer maturities are available. Interest rates are dependant upon market conditions at the time the TWDB sells its bonds. For tax-exempt and taxable issuers, the rates are set based on a methodology which adds 35 basis points over TWDB borrowing costs. There is no limit to the amount of funding per applicant and funds can be readily available.

While this program may be considered the most flexible and non-restrictive of the TWDB financial assistance programs, its interest rates are not subsidized. Therefore, the cost benefit may not be attractive, especially to larger borrowers who can access the open market at reduced interest rate costs, particularly those of investment grade ratings. Interest rates in the

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Development Fund are generally more attractive to smaller and taxable issuers, or possibly to those that benefit from shorter timeframes to access funds.

State Participation – Funding for this program is through the issuance of bonds as authorized by the Legislature. To date \$135 million bonds have been issued. No available funding remains in this program, however, the TWDB has included a request for \$50 million in bond authorization in its 2006-2007 Legislative Appropriations Request. Political subdivisions and water supply corporations sponsoring construction of regional water or wastewater projects are eligible for funding through this program. Financial assistance is in the form of the state's temporary purchase of the excess capacity portion of a project. The eligible participation in the project is that portion which results in excess capacity above current and near-term projected needs of the entity that is beyond the entity's ability to repay based on their current rate-paying base. The terms of the state's purchase is outlined in a Master Agreement as to payment and repurchase cost to the applicant that includes the interest costs of the TWDB's funds in financing the project. These repurchase rates are based upon cost of funds for loans at the time the TWDB's acquisition payment is made to establish its participation in the project. Financial assistance is typically over a 34 year period.

The intent of this program is to allow for optimization of regional projects through limited state participation where the benefits can be documented, and such development is unaffordable without state participation. Desalination projects could benefit through this program, as participants can build regional projects to optimum size, thereby, taking advantage of economies of scale and providing for future capacity. To keep projects from being a burden to local rate payers, the state bears the cost of excess capacity in the first several years following construction, when the excess capacity is not needed. As growth occurs and more of the capacity is needed, the TWDB sells its share of the capacity to the project's ultimate owner. The TWDB uses money from the sale to retire the state's debt or to finance other projects. Participants in this program receive the benefit of deferred payments until their customer base grows to the added capacity. Interest is not accrued on the deferred interest portion – thereby reducing overall carrying costs, and by optimizing regional projects, the need to build new facilities or replace undersized facilities is reduced resulting in over all, over time savings.

State Participation projects are subject to an administrative cost recovery fee of \$0.77 per \$100 of funds. The TWDB currently considers applications for this program every six months, in March and October each year. If there is more than one project competing for limited funds, an established priority rating system will be utilized. Although the state may purchase an ownership interest of up to 100% by law, the TWDB Board has imposed restrictions upon the amount of State Participation funding allowed per project. New water supply projects can fund up to 80% of costs through this program, provided the applicant will finance at least 20% of the total project cost from other sources, and at least 20% of the total capacity of the proposed project will serve existing needs. For all other types of projects eligible for the program, 50% of costs can be funded, provided at least 50% of the total project costs are from other sources and at least 50% of the total capacity of the proposed project must serve existing needs.

Drinking Water State Revolving Fund (DWSRF) – obtains its funding from annual capitalization grants from the Environmental Protection Agency (EPA) matched with TWDB issued general obligation bonds and loan repayments. The program was established by Congress in 1996 with approval of the federal Safe Drinking Water Act. The DWSRF is a low-interest, state revolving loan fund for financing public drinking water systems that facilitate compliance with primary

drinking water regulations, or otherwise significantly further the health protection objectives of the Safe Drinking Water Act. Political subdivisions, non-profit water supply corporations, privately-owned water systems, and state agencies are eligible applicants. For a desalination project to be eligible for funding under the DWSRF, the project must be providing a solution to an existing compliance problem such as poor water quality (i.e. arsenic, existence of high TDS). Problems relating to capacity only issues would not be eligible under the program.

Under the mainstream DWSRF program, financial assistance is in the form of loans with maturities up to 20 years. Interest rates are subsidized up to 1.2% below the rate the borrower would receive on the open market at the time of loan closing. Additional interest rate subsidies are given to entities qualifying for bond insurance. An administrative cost recovery fee of 2.25% is applicable to this program.

For applicants qualifying under the disadvantaged community portion of the program, loan forgiveness and further subsidized rates are available in addition to maturity lengths of 30 years. Eligible applicants can receive a net fixed interest rate from 0% to 1%, and possible loan forgiveness of either 15% or 35% of the principal amount of the loan.

Being a federal program, the DWSRF is subject to cross-cutter requirements such as small, minority, women owned-business enterprises (SMWBE) and stricter environmental compliance. In addition, an annual project ranking list, or Intended Use Plan, is a requirement by EPA.

Rural Water Assistance Fund (RWAf) – Should size and/or costs of desalination projects decrease in the future, smaller entities may be able to access this technology in order to meet their water supply needs. Senate Bill 2, 77th Legislative Session, provided for the creation of the RWAf for the purpose of providing small rural areas of the state with an additional means of financing water projects. The 78<sup>th</sup> Texas Legislature expanded the program to include wastewater projects. Eligible applicants include non-profit water supply and sewer service corporations, water districts, and municipalities serving populations of up to 10,000, or that otherwise qualify for federal financing, or counties in which no urban area has a population exceeding 50,000. Generally, this program targets non-profit water supply corporations who receive an added benefit in that construction purchases qualify for a sales tax exemption. Financial assistance is in the form of loans with maturities of up to 40 years.

Although created, the RWAf did not receive any general revenue appropriations from the Texas Legislature. However, since its inception, the TWDB has applied for and received an allocation of \$75 million of the state's Private Activity Bond volume cap. By selling general obligation bonds, the TWDB can offer loans to non-profit water supply corporations at tax-exempt rates. Interest rates are dependant upon market conditions and are set at approximately .125% above the TWDB's borrowing cost.

Water Infrastructure Fund (WIF) – was created under Senate Bill 2 during the 77<sup>th</sup> Texas Legislative Session for the purpose of funding projects in the State Water Plan. No funds were appropriated, even though \$50 million in new bond authorization is required to be used for this purpose. This program would allow for funding for water projects in the form of both loans and grants. Current restrictions allow for up to 10% of the annual financial assistance to be utilized in the form of grants or low to 0% interest loans. A 10% restriction also applies to loans that could be offered at market or below market interest rates which would include a 10-year deferral on principal and interest repayment intended for financing of planning, design and permitting costs.

Funding and changes in this program may be necessary in order for desalination projects to fully benefit from the WIF. Statutory changes to remove the limits of 10% in both areas described above could be made in order to allow the maximum flexibility for financial feasibility of all water projects.

Private Activity Bonds – Desalination projects would benefit from funding through the use of private activity bonds (PAB) which could be accessed through existing TWDB financial assistance programs such as the Development Fund, RWAF and the WIF. PABs are municipal bonds which are either used entirely or partially for private purposes and are given federal tax-exempt status. The ability of an issuer to include taxable entities in its financing at a lower tax-exempt rate would be a cost benefit.

The 1986 Tax Reform Act placed substantial limitations on the use of PABs. A unified volume cap was enacted which restricts the amount of private activity debt issued within each state. Currently two options exist in Texas for PAB proceeds to be used to finance large-scale water projects, such as a desalination project. The Texas Bond Review Board allocates the state cap annually on the basis of a lottery system.

Under one option (Subceiling #2), the TWDB may apply to the Texas Bond Review Board for a portion of the state cap through the “State Voted Issues” category. The TWDB would issue PABs and proceeds would then be available for applicants under a financial assistance program. Funding under Subceiling #2 is limited to \$50 million per year.

Under the second option (Subceiling #6), a political subdivision of the state may apply directly to the Texas Bond Review Board through the “All Other Issues” category. Funding is limited to \$25 million per project under this category.

The current limitations and uncertainty of a lottery system may compromise the viability of PABs being feasible in any large-scale financing package. However, legislative changes, such as an increase to maximum amounts, could be considered that would enhance the use PABs for desalination projects.

## **Summary**

While recent improvements in membrane technology and the large population growth along the Texas coast have lowered project costs, initial outlay is still relatively high for desalination projects. The three recommended projects resulting from the TWDB October 4, 2002 Statements of Interests, are all 25mgd plants with costs ranging from \$150 to \$226 million. Costs in this range may require ‘financing packages’ in order to make the projects financially feasible. A combination of the above programs and other sources of funding, such as state appropriations, federal resources, local contributions and private financing, may be necessary along with a phased-in approach in order to make these projects affordable.