

NAVIGATING THE SWIFT APPLICATION PROCESS: Water Conservation Projects



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Acknowledgments:

Navigating the SWIFT Application Process: Water Conservation Projects is a publication of the Sierra Club, Lone Star Chapter and the Texas Living Waters Project. This document was created to complement the series of SWIFT funding workshops organized by the Sierra Club, Lone Star Chapter as part of the Texas Living Waters Project. These workshops began in January of 2016 and have taken place in various locations across the state of Texas. The purpose of these workshops is to provide insight and direction to water utilities seeking financial assistance for their water conservation projects under the Texas Water Development Board's State Water Implementation Fund for Texas (SWIFT).

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You can learn more about the
Texas Living Water Project at
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Acronyms

AMI	Advanced Meter Infrastructure
AMR	Automatic Meter Reading
DMA	District Meter Area
RWP	Regional Water Plan
RWPG	Regional Water Planning Group
SWIFT	State Water Implementation Fund for Texas
SWP	State Water Plan
TWDB	Texas Water Development Board
WCP	Water Conservation Plan
WMS	Water Management Strategy
WUG	Water User Group

Introduction

Water conservation is an integral part of ensuring an adequate water supply across the state of Texas, now and into the future. It is the least expensive strategy for meeting our water needs and should be the first choice for communities to protect their local water resources.

The Texas Living Waters Project has designed *Navigating the SWIFT Application Process: Water Conservation Projects* to assist small-to-mid-sized utilities in evaluating the funding strategies available to them for implementing their water conservation projects. This document focuses primarily on the State Water Implementation Fund for Texas (SWIFT) and includes a detailed description of the application process established by the Texas Water Development Board (TWDB).

SWIFT was created by the 83rd Texas Legislature and approved by voters via a constitutional amendment in 2013. The adoption of SWIFT was driven by the need to provide enhanced funding to incentivize the implementation of prioritized projects within the Regional and State Water Plans. Two cycles of SWIFT have taken place, and as the process continues to evolve, some uncertainty in the application procedure still exists. The purpose of this document is to bring clarity to this process so that water utilities can more easily determine whether SWIFT is a good funding option for their conservation-oriented project.

As early as 2020, the State Water Plan predicts that municipal conservation will account for 6% of Texas' total water supplies, representing 40% of total municipal needs¹. Given the significant role that municipal conservation plays in Texas' water future, SWIFT legislation establishes that the TWDB "shall undertake to apply not less than" 20% of the SWIFT funds to conservation or reuse projects and 10% towards projects benefiting rural political subdivisions or agricultural water conservation².

This guide will help your utility determine whether SWIFT is right for your utility and how to pursue SWIFT funding. It will also provide information and

resources on how to develop a conservation or water loss control project, starting from any general water management strategy described in your Regional Water Plan or from a recommended project added by amendment to the State Water Plan.

While SWIFT is a fantastic tool to help your utility implement its conservation water management strategy, there are other financing solutions that may be a better fit for your utility and its projects. These include other TWDB funding sources as well as private sector sources of capital. The final chapter of this guide provides an overview of these alternatives funding mechanisms.

We hope that this guide provides helpful tools to assist your utility in designing, funding, and implementing your conservation water management strategies.

What are the advantages of using SWIFT funding versus your own funding strategies?

Lower-cost: SWIFT's \$2 billion revolving loan fund supports the selling of bonds, which benefit from the state's AAA bond rating. Through this leveraging, SWIFT is able to offer a lower-cost option to water user groups for financing their water management strategies.

Multi-Year Commitment: SWIFT funds are available for project costs that extend multiple years. For example, the City of Fort Worth is using SWIFT funds in stages over several years. The city used initial funding for planning-related activities and subsequent funds will be used for construction.

Staged decision-making: The SWIFT application process is staged and can move in parallel with your own decision-making process. The City of Seabrook submitted its abridged application for a smart meter project and later determined that the funding mechanism would not be practical for their particular project.

Avoided cost of delay: Finally, and most importantly, SWIFT can allow you to implement a total—rather than piecemeal—conservation or leakage management program, allowing you to realize benefits now rather than years out into the future.

¹ Needs are defined by the TWDB as: *Projected water demands in excess of existing water supplies for a water user group or a wholesale water provider.*

² [HB 4](#), 83rd Texas Legislature (2013).

Designing Your Conservation Project

In each Regional Water Plan, the Regional Water Planning Group (RWPG) recommends Water Management Strategies (WMS) for individual Water User Groups (WUGs—i.e., municipalities/public water utilities and counties) and wholesale providers (i.e. river authorities, municipal utility districts, and water supply corporations). In addition to WMSs, each Regional Water Plan includes WMS projects along with their associated capital costs.

Unless you provided specific input to your RWPG in the Regional Water Plan, your recommended WMS project may be listed in more general terms like “water conservation” and/or “water loss control”. The costs associated with “general” conservation WMS projects are based upon average or typical costs for water loss control or various water conservation programs. Rather than being “priced out” for a specific approach, it has been lumped together with the costs of multiple types of conservation-related projects. If your utility’s project and its associated costs are listed in more general terms such as this, the project would still be eligible for SWIFT funding.

Submitting a SWIFT application for water loss control or water conservation requires the development of a specific project that falls under the umbrella of the WMS description included in the Regional Water Plan for your utility. This section provides an overview of how to develop a specific “fundable” project and identifies other resources to help you.

Water Conservation

It is less likely that your utility has a specific water conservation strategy detailed in the Regional Water Plan. Each Region uses its own approach to establish whether or not conservation is a water management strategy, how big the water conservation target is, when conservation targets will be met, and how much it will cost to achieve those targets. The “[Is my Project in the State Water Plan?](#)” section of this

manual provides an overview on how to find your conservation WMS (or whether you have one).

Because most Regional Water Plans describe water conservation management strategies very generally, you have an opportunity to refine your water conservation program and propose a specific objectives tailored to your service area. Keep in mind that the Regional Water Plan assumes that you will achieve specific water conservation savings targets, so those should be minimum goals for your plan. You can design your water conservation approach to address specific system needs and target specific customer segments. Key questions to consider when designing your conservation portfolio include:

- ***Who uses the most water*** – single family, multifamily, commercial, institutional, or industrial customers?
- ***When do those customers use the most water*** – summer or winter, and morning, afternoon, or evening?
- ***How do those customers use water*** – indoor fixtures, outdoor irrigation, auxiliary loads (e.g., cooling towers), or process loads?
- ***Where is the most water used*** – are there specific areas of your service territory that have capacity or pressure problems?
- ***What is driving your short- and long-term capital costs*** – production, pumping, distribution, treatment, or supply?

Answers to those questions drive the selection of water conservation programs, approaches, and practices or technologies to promote. For example, summer peaking utilities can address both water supply and capacity challenges by focusing on residential, commercial, and institutional outdoor irrigation through audits,

appropriate promotion of smart irrigation controllers (i.e., for those customers who over-water), landscape retrofits, appropriate landscaping for new development, and water reuse for irrigation. Water utilities with year-round water supply challenges also need to address indoor fixtures (e.g., toilets, urinals, commercial kitchen equipment) and industrial process loads.

Figuring out your menu of options can be best accomplished by visiting the websites of utilities that offer a full suite of conservation programs and references for designing conservation programs. Most of these utilities are willing to share information on their costs and savings, which you can then adjust to your savings targets and territory. A conservation program in a dense urban area that costs \$500 per acre foot might cost your utility \$750 per acre foot if you are located in a rural area and lack a well-developed contractor network.

Finally, you might be concerned about the impact to your short-term revenue as you implement a water conservation portfolio. While it is true that you may need to increase rates to meet debt obligations and other fixed expenses, experience has shown that rates increase more slowly where water conservation delays or limits the need for more expensive water development projects in the future. For more, see the [“*Conducting a Financial Analysis of Your Project*”](#) section.

Water Loss Control

Many Regional Water Plans include capital costs for water loss control. Based upon feedback from smaller utilities and engineering firms, the plans identify some of these costs for specific projects (e.g., deploying smart meters across all connections). Other water loss-related WMSs use generic cost estimates for main replacements or pipe repairs, acknowledging that specific projects and locations could not be determined until water loss audit efforts identified the specific system components to be repaired.

Water loss control can be a fairly cost-effective source of supply. Recent case study evaluations

in Europe have shown reductions in non-revenue water of over 50%. The most comprehensive study in the United States from 2007 identified average costs of \$544 per acre-foot (inflation-adjusted to 2016). Generally speaking, best practices in water loss control include all of the following components:

- **Advanced meter infrastructure (AMI);**
- **District meter areas (DMAs);**
- **Temporary or continuous acoustic monitoring (CAM) with nighttime flow measurement and analysis;**
- **Pressure management and reduction; and**
- **Dedicated teams to focus on water loss reduction in the field and in your data systems.**

It is important to recognize the cost savings associated with these water loss reduction strategies. The average billing process for a water utility costs \$10 to \$20 per customer per month—AMI deployment can significantly reduce that cost. Additionally, an AMI deployment can fix broken meters and install meters to shift connections from un-metered to metered, reducing apparent losses and increasing revenue for the same amount of produced water. Finally, reducing water losses also reduces energy and chemical inputs necessary to provide the same level of services.

Combining Water Loss and Conservation Water Management Strategies

One of the challenges in seeking SWIFT funding for a water conservation program is complying with the standards set by the Government Accountability Standards Board (GASB)—notably that any capital expenditure should be a utility-owned or controlled asset. Although the GASB is not an official governmental body and thus its standards do not carry the force of law, the TWDB does, in some instances, require entities to follow GASB as part of their compliance covenants. Many of the technologies promoted by water conservation programs, however, will be owned by the end use customer, such as water efficient indoor and outdoor fixtures. As a result, the utility classifies this program budget as an operating expense rather than a capital

cost.

Since SWIFT funds can be made available for capital costs associated with “hard” and “soft” assets, there can be an opportunity to combine water conservation and water loss control investments on a single SWIFT application. In this context, “hard” assets are defined as capital assets owned by the utility while “soft” assets are considered other assets providing or supporting demand reduction.

Utilities can integrate water conservation program expenses into another capital expenditure, notably a water loss control project or a supply-side project. Examples of services previously funded by SWIFT that are *not* considered “hard” assets include engineering design, project management/administrative, or permitting. These are “services” costs rather than “hard” capital costs, and they represent an integral part of any capital project. By identifying the “soft” capital costs essential to a proposed project—whether “software-as-a-service” (SaaS) or true services—water utilities can combine capital and service costs into a project eligible for SWIFT.

Resources:

Water Conservation

- [TWDB's Best Management Practices Guides](#)
- [Evaluation of Real Water Loss Control and Water Conservation Options for Suez Water New York-Rockland County \(J. Kleinman\)](#)
- [Amy Vickers' Water Conservation Handbook](#)
- [San Antonio Water System](#)
- [Seattle's Saving Water Partnership](#)
- [Texas Living Water Project's Designing Water Rate Structures for Conservation & Revenue Stability](#)
- [Alliance for Water Efficiency](#)
- [Texas Living Waters Project's Texas Water Conservation Scorecard](#)

Water Loss Control

- [Water Loss Control in North America: More Cost Effective Than Customer Side Conservation – Why Wouldn't You Do it?! \(R. Sturm and J Thornton\)](#)
- [European Commission's Good Practices on Leakage Management](#)
- [Southwest Florida Water Management District](#)
- [City of Raleigh, NC](#)

Integrating Education into your Conservation Project

A number of different measures fall under the water conservation umbrella. In particular, education represents a critical component of any water conservation program. In the two cycles of SWIFT thus far, though, many of the conservation-related projects have not demonstrated an educational component in their application to the TWDB.

How can you incorporate educational measures into your conservation project?

To be eligible for SWIFT, a proposed project must align with a recommended water management strategy whose capital costs have been identified in the State Water Plan. Even if your conservation water management strategy does not include

a hard asset, it is possible to create a more comprehensive SWIFT application by bundling soft assets into a larger conservation/water loss control project.

Take, for instance, an AMI project with a capital cost estimate of \$20 million and an educational program with a capital cost of \$2 million. The educational program promotes the value of conserving water and teaches customers how to use the smart meter data online to find leaks and save water. Bundling your educational program with your AMI program will maximize the amount of demand reduction achieved through the combined program. Structuring your project like this can translate into an application that meets the basic requirements of SWIFT. Through creative and sound planning, it is possible to incorporate educational measures into your project.

Conducting a Cost-Benefit Analysis for Your Project

While one of the main benefits of the SWIFT program is its lower interest rate, the program's flexibility and ability to fund comprehensive programs helps water user groups realize project benefits much more quickly than other options. This section focuses on how to set up a financial analysis of a potential water loss reduction or water conservation strategy and to evaluate the costs and benefits of using SWIFT or other sources of funding.

In this section, approaches for estimating projects costs, outcomes, and financial impacts are discussed.

Identifying Project Costs

The primary cost of a water management strategy is its implementation cost. For water loss reduction, this is the cost to deploy project components such as smart meters, district meters, pipe replacements and repairs, and leak detection and repair teams. For water conservation, these are the program costs including staff, public relations and awareness, rebates or incentives, and services such as audits.

Beyond the project costs, there are a variety of costs that a water user group needs to take into consideration:

- **Financing costs** – these are the costs associated with securing the funds necessary to implement the project, including the bond rate and bond closing costs.
- **Application costs** – whether applying for SWIFT or other state or federal funding programs, water user groups may need to pay for a variety of services including an amendment to the State Water Plan, engineering design, environmental assessment, and legal fees. One of the considerations of a water loss or conservation strategy is a “categorical exclusion” to the environmental assessment, given the low to negligible impact of those strategies.

- **Customer costs** – particularly for water conservation measures, you can consider the costs that customers will need to bear to implement water conservation projects. While these costs do not impact your bottom line, understanding these costs will help you forecast likely levels of participation.
- **Lost revenue** – your customers' water savings are your lost revenues, so you should estimate lost revenues by year associated with your water conservation portfolio.
- **Opportunity costs** – using operating expenses or bond capacity for a water loss control or water conservation program means that those funds are not available for other projects, such as energy efficiency improvements or treatment upgrades. Not implementing those projects may result in deferred maintenance, higher operating costs, or other impacts. These costs should be understood.

Identifying Project Benefits

The primary benefit associated with water loss control or water conservation strategies or projects is meeting an identified water need. That water need—the difference between water demand and supply—would otherwise be met by an (presumably more expensive) alternative water supply strategy. Even when deferring, a capital investment yields savings, given costs associated with interest and inflation rates. Quantifying the “avoided cost” of that alternative water supply is a critical component in evaluating a proposed strategy.¹

Beyond avoided cost benefits, there are other benefits that the WUG should consider in evaluating the project:

- **Avoided purchases of water** – meeting water needs from within your system can avoid the need to purchase additional water.

¹ The City of Westminster, Colorado offers a relevant [case study](#) on mitigating water rate increases. You can also find additional information on water rates [here](#)

- **Sales of surplus water** – if your water loss control or water conservation program allows you to sell surplus water within your water rights, or otherwise take advantage of your existing contract structure, the potential revenues should be taken into account.
- **Reduced O&M expenses** – both water loss control and water conservation lower total water production, which in turn lowers consumption of energy and chemicals.
- **Productivity and revenue gains** – some water loss control strategies, such as AMI deployment, provide productivity gains on back office services such as billing. Reducing or eliminating manual meter reads can save \$5 per customer per month and improving data accuracy has been shown to increase revenues by 5% to 25%. These improvements go straight to the utility bottom line and should be considered in a financial analysis.
- **Cost of delay** – in the absence of a funding

mechanism such as SWIFT, a water user group may delay strategy implementation for a number of years or spread implementation out over multiple years. Such a delay means that utilities will “lose out” on the above benefits for however much time it takes to complete the strategy.

Conducting the Financial Analysis

The amount of time spent on the financial analysis of the project—and whether to use SWIFT to fund the project—should be tailored to the decision-making need. Because the submission of an abridged application is a relatively low-cost proposition, a high-level analysis using general assumptions should be enough to make a go/no-go decision at this stage. The time between submittal of an abridged application and TWDB notification of possible approval is a great time to collect additional information and zero in on your costs and benefits. Ideally, by the time you need to start your final application, you know whether SWIFT is the right decision for you.

Combining Conservation & Water Loss Control: A Financial Analysis

Let’s say that your utility has a line item in the State Water Plan that is identified as “Meter replacement; municipal conservation capital cost (does not include meter replacement or water loss); water loss control.” There is a capital cost of roughly \$1.7 million, and it is expected to come online by 2020. By working with a smart meter vendor, you determine that capital cost is sufficient to deploy smart meters (advanced meter infrastructure) across your service territory.

You also learn that you could invest in a separate software package for billing, apparent loss reduction, and a behavior-based customer portal that would automatically notify your customers of leaks and provide opportunities to reduce their water use. By working with a vendor, you learn that the annual cost for this system would be around \$170,000. Your reduced costs for billing, and your reductions in apparent losses, are expected to make up the software

investment. However, you would like to bundle the software with your smart meter purchase.

Finally, combining advanced metering infrastructure (AMI) data with your system data (you have four sub-metered areas) helps you identify where in your system leaks may be occurring. Determining the exact location of the leaks and repairing the leaks require both labor and parts (e.g., internal or external clamps, liners, and pipe). Your utility has a line item for “municipal conservation” equal to \$295 per acre foot, and your savings target is 6,040 acre-feet per year for the decade from 2020 to 2029. You decide to allocate all of those operating funds to water loss detection and repair.

Across all three line items—smart meters, software, and water loss repair—you plan to meet or even exceed your total savings of 6,040 acre-feet through 2029. You expect inflation to cause prices to increase at a rate of 1.5% per year. As the accompanying table demonstrates, you establish the following schedule to cover your costs for the smart meter deployment, software, and water loss detection and repair

efforts over the next 10 years, based on all of this information.

Based upon this analysis, you choose to apply for a SWIFT loan of \$5.75 million, with the option of staging the funding streams according to when you need the funds. Assuming that this utility has 10,000 meters and annual revenues of \$10 million, and that the utility can reduce billing costs by \$5/meter/month and apparent losses by 10% from this project, the utility would save \$1.6 million annually. By providing net positive cash flow to the utility, the project can stand on its own financial merits. The fact that it provides water conservation at no net cost to the utility is an added bonus.

Year	Smart Meters	Software	Water Loss Detection & Repair	Total
2018	\$340,380	\$170,190	-	\$510,570
2019	\$345,486	\$172,743	-	\$518,229
2020	\$350,668	\$175,334	\$178,180	\$704,182
2021	\$355,928	\$177,964	\$178,180	\$712,072
2022	\$361,267	\$180,634	\$178,180	\$720,080
2023	-	\$183,343	\$178,180	\$361,523
2024	-	\$186,093	\$178,180	\$364,273
2025	-	\$188,885	\$178,180	\$367,065
2026	-	\$191,718	\$178,180	\$369,898
2027	-	\$194,594	\$178,180	\$372,774
2028	-	\$197,512	\$178,180	\$375,692
2029	-	\$200,475	\$178,180	\$378,655
TOTAL				\$5,755,012

This is an example of combining “hard” and “soft” assets to achieve demand reduction identified in the Regional Water Plan. The presence of a capital cost for water loss reduction makes the project eligible for a SWIFT application and all three components are integral to achieving the goal of the water management strategy.

Case Study: City of Fort Worth

During the 2015 round of SWIFT applications, the City of Fort Worth submitted and received approval of their municipal water conservation project, which involved the implementation of an AMI system along with an automated leak detection system, implementation of new mobile workforce management technology, and improvements to their customer-based software. Total project costs amounted to \$76,000,000 and expected annual volume of water conserved was 9,450 acre-feet per year.

Prior to submitting their application, water loss for the City of Fort Worth was an estimated 14% and total non-revenue water represented 21% of the utility’s total water production. Given the significant amount of water loss that the city was experiencing, deployment of a AMI system presented a tremendous opportunity to reduce apparent and real water losses by improving meter reading and making it easier to identify potential leaks.

Water loss reduction was not the only benefit of deploying an AMI system—through increased

operational efficiencies (i.e. fewer customer calls, more accurate data, and elimination of expenses related to 3rd party meter reading) utility revenues can also increase.¹

In addition to proposing an AMI system, the City of Fort Worth also incorporated a meter data management system into the SWIFT application. As mentioned in the previous section, while the costs associated with customer-interfacing software are not considered capital costs, the City of Fort Worth bundled this component of their conservation project into the costs required for the AMI and automatic leak detection systems.

Since closing on their SWIFT loan in late 2015, the City of Fort Worth is currently in the process of fully implementing the project and will be rolling out their first phase of smart meters this summer. For the 2016 SWIFT cycle, the TWDB committed to similar conservation and water loss control projects for the cities of Austin and Waco.

¹ Information compiled from Micah Reed’s presentation at the SWIFT Funding Workshop held on January 7, 2016. His presentation can be found [here](#).

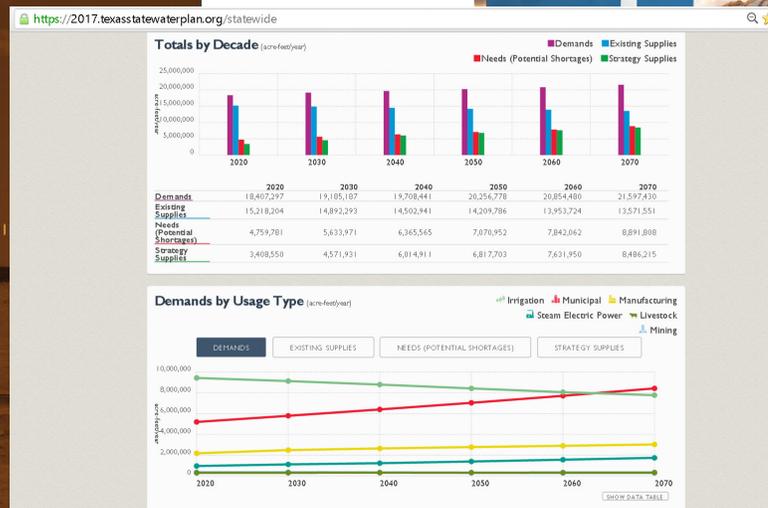
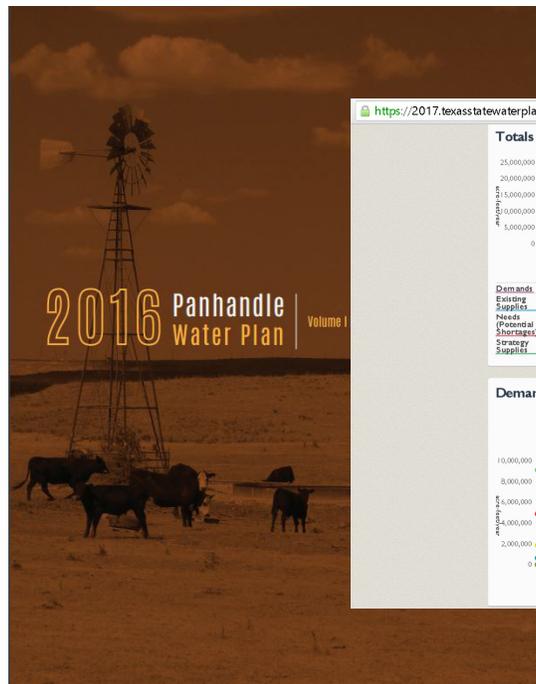
Is my Project in the State Water Plan?

In order to be eligible for SWIFT funding, a water user group's water conservation management strategy and its associated capital cost must be included in the Regional and State Water Plans. Making this determination is a critical part of the SWIFT application process. If a project is not identified as a recommended water management strategy, an amendment must be sought to add the project and its capital costs to the Regional Water Plan.

The next few pages outline how to find your water management strategies in your Regional Water Plan or in the State Water Plan. As you continue to read, you will see resources and specific steps to help you pinpoint exactly where in the plan you can find your water management strategy for conservation. These instructions serve as a general guide for how to locate this information. Please keep in mind that each of the RWPGs present their recommended water management strategies in different formats and with different levels of detail. Should you encounter any issues locating this information, please refer directly to your RWPG or [TWDB](http://www.twdb.org) for assistance.

Where to Find it

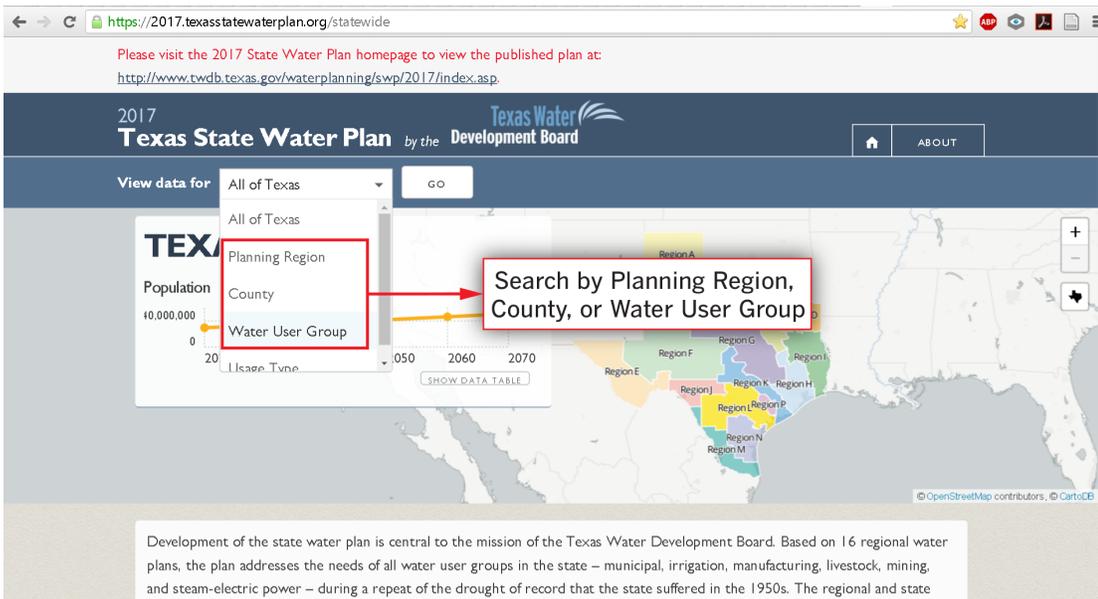
You can find your recommended conservation water management strategies and projects in your Regional Water Plan, in the State Water Plan, on the TWDB's online database, and on the TWDB's Prioritization of Projects List. While the materials provided by the TWDB provide a good starting point, you will need to track down specific information outlined in your Regional Water Plan when completing the abridged application for SWIFT funding. When searching for your water management strategies, do keep in mind that for smaller municipal water providers (e.g., entities serving a population of less than 500), your water user group may fall under the rural municipal umbrella category and will be labeled as "county-other".



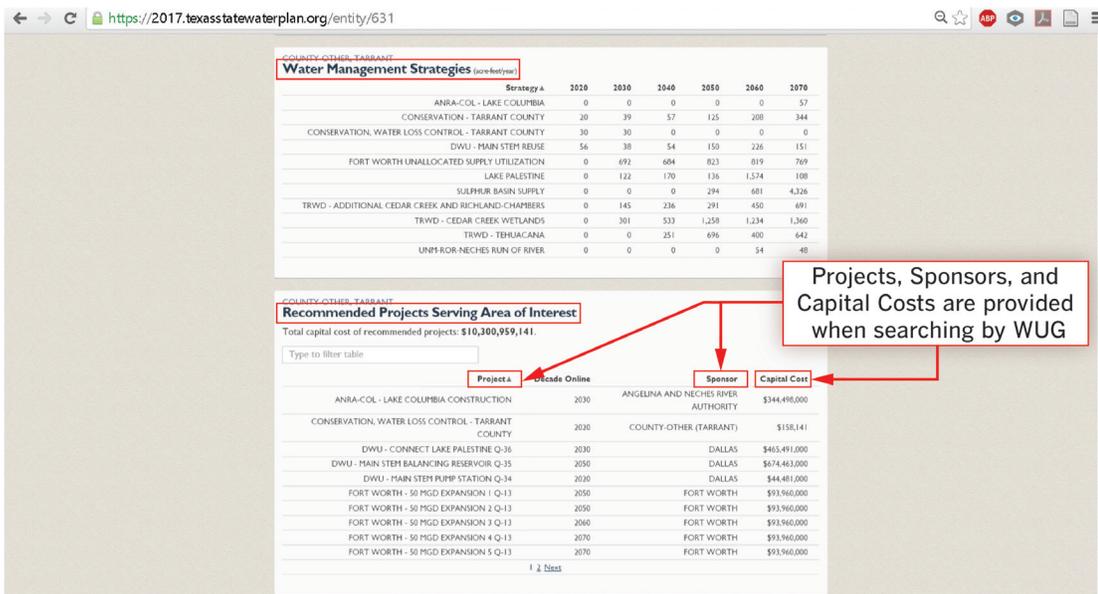
How to Find it

State Water Plan's Online Database

The [State Water Plan's interactive website](https://2017.texasstatewaterplan.org) is the most comprehensive source for searching for your conservation water management strategy. This database compiles all of the Regional Water Plans into an easy format that allows you to view water management strategies, projects, and costs, as recommended in the Regional Water Plan and included in the State Water Plan. This website is particularly helpful because you can search the database by water user group, in addition to planning region and county.



Here, you can view water management strategies and projects, as recommended in the RWP and included in the SWP, by region, county, or WUG.



This feature generates a table outlining the recommended projects associated with a region's water management strategies. Within this table, additional information for each project listing is provided, including the decade it is expected to be online, the name of the sponsor (WUG), and the capital cost associated with the project.

TWDB's Prioritization of Recommended WMS Projects

In addition to the TWDB's interactive State Water Plan website, the TWDB publishes a complete [list](#) of all recommended water management strategies (including capital costs), as determined by RWPGs in their Regional Water Plan.

Final Prioritizations of Recommended Water Management Strategy Projects in the 2016 Regional Water Plan, as submitted by the RWPG
REGION C

Unique ID #	Sponsor	Recommended Water Management Strategy (WMS) Name	Capital Cost (\$)	Final Prioritization Score (max = 1,000)
1	FORT WORTH	Trophy Club, Westlake, Fort Worth - Phase I: Joint 36" Water Delivery Line Q-197	\$ 233,000	932.01
2	TROPHY CLUB	Trophy Club, Westlake, Fort Worth - Phase I: Joint 36" Water Delivery Line Q-197	\$ 273,000	932.01
3	WESTLAKE	Trophy Club, Westlake, Fort Worth - Phase I: Joint 36" Water Delivery Line Q-197	\$ 3,861,000	932.01
4	WYLE NORTHEAST SUD	Wylie NE SUD - Increase Delivery Infrastructure to Purchase Additional Water from NTMWD Q-80	\$ 1,250,000	931.91
5	DONALD	DWS - Infrastructure to Treat and Deliver to Customers 2020 New Water Plant Q-49	\$ 36,187,000	922.33
6	EAST FORK SUD	East Fork SUD - Increase Delivery Infrastructure to Purchase Additional Water from NTMWD Q-181	\$ 5,500,000	911.04
7	ATHENS MUNICIPAL WATER AUTHORITY	Athens MWA WTP Infrastructure Improvements Q-145	\$ 1,900,000	904.08
8	BEELER	Keller - Increase Delivery Infrastructure to Purchase Additional Water From Fort Worth Q-189	\$ 2,535,000	904.07
9	CROSS TIMBERS WSC	Cross Timbers WSC - Infrastructure Improvements Q-99	\$ 1,858,000	904.00
10	TERRELL	Terrell	\$ 7,124,000	902.65
11	TERRELL	Terrell	\$ 5,699,100	902.65
12	TERRELL	Terrell	\$ 5,514,500	902.65
13	TERRELL	Terrell	\$ 2,395,100	902.65
14	BEAUFORT SUD	Beaufort	\$ 6,654,700	902.33
15	BEAUFORT	Beaufort	\$ 50,000,000	900.33
16	BLACKLAND WSC	Black	\$ 3,295,550	897.94
17	BEAUMONT	Beaumont	\$ 1,533,000	895.51
18	NORTH RICHLAND HILLS	Watauga & N Richland Hills - Increase Delivery Infrastructure to Purchase Additional Water Q-199	\$ 9,831,000	894.08
19	NORTH TEXAS MWD	NTMWD Treatment & Treated Water Distribution Improvements 2010-2020 Q-28	\$ 1,015,469,000	888.29
20	GRANT	IG-90 Inlet - T&A Central Phase	\$ 39,900,000	886.33
21	GRATER TEXOMA UTILITY AUTHORITY	GTUA - Grayson County Water Supply Project Q-64	\$ 92,840,000	882.33
22	UPPER TRINITY REGIONAL WID	UTRWI WTP and Treated Water Distribution System Water Management Strategies 2015-2019 Q-54	\$ 52,596,000	882.33
23	WAXAHACHE	Waxahache - 36" Raw water line from Lake Waxahache to Howard Rd WTP Q-121	\$ 5,655,000	882.33
24	WAXAHACHE	Waxahache - Increase delivery infrastructure to Rockett SUD (30" Raw water line) Q-124	\$ 11,894,900	882.33
25	WAXAHACHE	Waxahache - Raw Water Inlet Improvements at Lake Barlowell Q-127	\$ 5,168,200	882.33
26	JANNETTA	Conservation, Water Loss Control - Jannetta	\$ 2,716	880.33
27	JANNETTA NORTH	Conservation, Water Loss Control - Jannetta North	\$ 1,136	880.33
28	BRANDON-IRENE WSC	Conservation, Water Loss Control - Brandon-Irene WSC	\$ 48	880.33
29	DONALD	Conservation, Water Loss Control - Dallas	\$ 3,124,657	880.33
30	FLO COMMUNITY WSC	Conservation, Water Loss Control - Flo Community WSC	\$ 539	880.33
31	JOHNSON COUNTY SUD	Conservation, Water Loss Control - Johnson County SUD	\$ 4,470	880.33
32	LOG CABIN	Conservation, Water Loss Control - Log Cabin	\$ 1,340	880.33
33	MACREE SUD	Conservation, Water Loss Control - Macree SUD	\$ 243	880.33
34	MOUNTAIN PEAK SUD	Conservation, Water Loss Control - Mountain Peak SUD	\$ 36,158	880.33
35	PRINCE HILL WSC	Conservation, Water Loss Control - Virginia Hill WSC	\$ 4,442	880.33
36	PARKER	Parker - Increase Pump Station Capacity Q-76	\$ 1,651,000	873.99
37	COUNTY-OTHER, HENDERSON	Henderson County SCP - Transmission Facilities from Cedar Creek Lake Q-147	\$ 19,952,000	872.93
38	ADLE	Adle - Water Treatment Plant Expansion Q-13	\$ 11,046,000	871.93
39	TROPHY CLUB	Trophy Club - Phase II: Increase delivery infrastructure from Ft. Worth Q-158	\$ 7,282,600	870.34

Both the prioritization list and the State Water Plan website provide similar information. Using both of these features is a convenient and quick way to confirm what water management strategies/projects have been approved for your utility.

With this information, you can determine whether your RWPG has identified specific water conservation

strategies/projects for your utility. In most instances, water conservation is a recommended WMS for many municipal water user groups (e.g., utilities). You will notice, however, that the State Water Plan does not go into much detail regarding what specific "projects" qualify as water conservation.

Keep in mind, when completing the abridged SWIFT application, you will need to refer to your Regional Water Plan for the specific pages where your RWPG has listed your conservation water management strategies. You will also need to know what strategies your RWPG has recommended for your water user group when evaluating the scope of your proposed project.

RWPG Prioritization Criteria

RWPGs prioritize their recommended water management projects based on the following criteria:

- Decade in which the project will be needed
- Project feasibility—what is the hydrological/scientific practicability of the project?
- Viability of the project—is the project a comprehensive solution with a measurable outcome?
- Sustainability of the project—how long is the life of the project?
- Cost-effectiveness of the project—what is the expected unit cost of the water to be supplied?

Regardless of where your strategy is ranked on the prioritization list, this should not deter you from applying for SWIFT funding. Prioritization of water management projects is one of the factors that facilitates the SWIFT application process. Moreover, given the emphasis SWIFT places on conservation, your project stands a good chance at being selected for funding.

More information on the criteria TWDB utilizes to prioritize abridged applications can be found in Step 4 of the SWIFT Process, "[Board Review \(to determine prioritization of the abridged applications\).](#)"

Regional Water Plans

To find the more detailed information needed to develop your water conservation project and later complete the abridged application, you will need to search for your water conservation management strategy in the Regional Water Plan for your region. You can find your Regional Water Plan on the website for your RWPG or through the TWDB's [website](#).

Although each RWPG structures their Regional Water Plan similarly, the exact spot within the plan where the water management strategies are found may vary. For the most part, you can find this information in Chapter 5 of each region's Regional Water Plan.

In the accompanying images, the process for finding recommended conservation water management strategies is demonstrated using Region C for instructional purposes. When searching for your Regional Water Plan, you will find the entire plan available as one PDF document, or you may find hyperlinks to each individual chapter. For Region C, the 5D sub-chapter provides the recommended WMSs for water users by county. In other Regional Water Plans, this information may be located in a different sub-section or in another volume of the plan altogether. It is important to keep this in mind when searching your Regional Water Plan. Since these documents are PDF-searchable, you can easily search by text to find what you are looking for.

Example of Searching for Water Management Strategies and Capital Costs by WUG (Region C)

The screenshot shows the website interface for Region C. Under the 'Documents' section, a list of documents is displayed. A red box highlights the document titled 'Chapter 5D - Recommended Water Management Strategies for Water User Groups by County'. A red arrow points from this document to the 'Table 5D.315' table below.

Chapter 5D of Region C's Regional Water Plan groups each of the water user groups by county and lays out their corresponding water management strategies. This includes a table (Table 5D.315 in this example) detailing the recommended conservation strategies along with the total amount of acre-feet per year that the strategy will provide over the course of a 50-year trajectory.

Table 5D.315
Projected Population and Demand, Current Supplies, and Water Management Strategies for the City of Azle

(Values in Ac-Ft/Yr)	Projected Population and Demand					
	2020	2030	2040	2050	2060	2070
Projected Population	11,857	12,854	13,868	14,897	18,000	23,090
Projected Water Demand						
Municipal Demand	1,858	1,958	2,068	2,198	2,647	3,390
Total Projected Demand	1,858	1,958	2,068	2,198	2,647	3,390
Currently Available Water Supplies						
Tarrant Regional Water District (limited by treatment plant capacity)	1,682	1,682	1,664	1,562	1,678	1,682
Total Current Supplies	1,682	1,682	1,664	1,562	1,678	1,682
Need (Demand - Current Supply)	177	277	404	636	969	1,709
Water Management Strategies						
Water Conservation	15	22	21	29	44	68
Additional Raw Water Needed from TRWD with treatment as below:	162	255	383	607	925	1,641
3 MGD WTP Expansion (TRWD)	162	255	383	607	925	1,641
Total Water Management Strategies	177	277	404	636	969	1,709
Reserve (Shortage)	0	0	0	0	0	0

Table 5D.355
Costs for Recommended Water Management Strategies for Tarrant County Not Covered Under Wholesale Water Providers

Water User Group	Strategy	Implemented by:	Quantity** (Ac-Ft/Yr)	Capital Costs	Unit Cost (\$/1000 gal)		Table for Details
					With Debt Service	After Debt Service	
Arlington	Conservation	2020	2,865	\$3,066,441	\$1.73	\$0.48	Q-10
	Other Measures						See Arlington in Section C.2.
Azle*	Conservation	2020	68	\$217,081	\$3.72	\$0.00	Q-10
	Additional TRWD	2020	1,411	\$0	\$0.97	\$0.97	None
Bedford	Water treatment plant expansion	2020	1,641	\$11,046,000	\$2.47	\$0.74	Q-13
	Conservation	2020	428	\$91,493,519	\$22.97	\$0.79	Q-10 & Q-208
Benbrook	Additional TRA (TRWD)	2040	3,900	\$0	\$0.20	\$2.90	None
	Conservation	2020	112	\$218,669	\$2.51	\$0.79	Q-10
WSC*	Additional TRWD	2020	5,483	\$0	\$0.97	\$0.97	None
	Water treatment plant expansion	2020	2,192	\$13,715,000	\$6.15	\$0.64	Q-13
Bethesda	Conservation	2020	132	\$139,100	\$3.21	\$1.00	Q-10
	Additional Fort Worth Supply from Arlington	2020	3,498	\$0	\$1.96	\$1.96	None
WSC*	Supply from Arlington	2020	2,614	\$0	\$2.50	\$2.50	None
	Connection to Arlington	2020	2,614	\$18,698,000	\$2.16	\$0.32	Q-184

At the end of each county section, another table (Table 5D.355 in this example) aggregates all of these strategies by water user group to demonstrate the capital costs associated with each of the strategies. In addition, the rightmost column in the table indicates a table in the appendix that contains additional information regarding capital costs.

RWPGs may format this information differently in their Regional Water Plans, so pay special attention to **Chapter 5** and how the plan divides this chapter into sub-sections. Doing so will allow you to more quickly pinpoint the exact location of your water conservation management strategy. It may also be helpful to check if the Table of Contents lists any tables describing WMSs. The different sub-sections included within Chapter 5 of the Regional Water Plans should present useful clues for narrowing down this information.

Before you can begin the SWIFT application process, you will need to confirm which water management strategies, projects, and

associated costs your RWPG has recommended and identified for your utility. After confirming that your project has capital costs included within your Regional Water Plan, you will use this information to fill out the abridged application. Alternatively, if your Regional Water Plan does not specify capital costs for your WMS, it is possible that you may need an amendment added to your Regional Water Plan to address these capital costs.

The RWPGs rely upon information provided by the WUGs when specifying WMS projects/costs in the Regional Water Plan. Keeping RWPGs informed of what projects you intend to implement in the future will help to ensure your project is included in the next Regional Water Plan.

Things to Remember:

 The TWDB has staff dedicated to each RWPG. They serve as a great resource for any specific questions or concerns you may have with respect to your WMS and locating it in the State Water Plan. You can find their contact information [here](#).

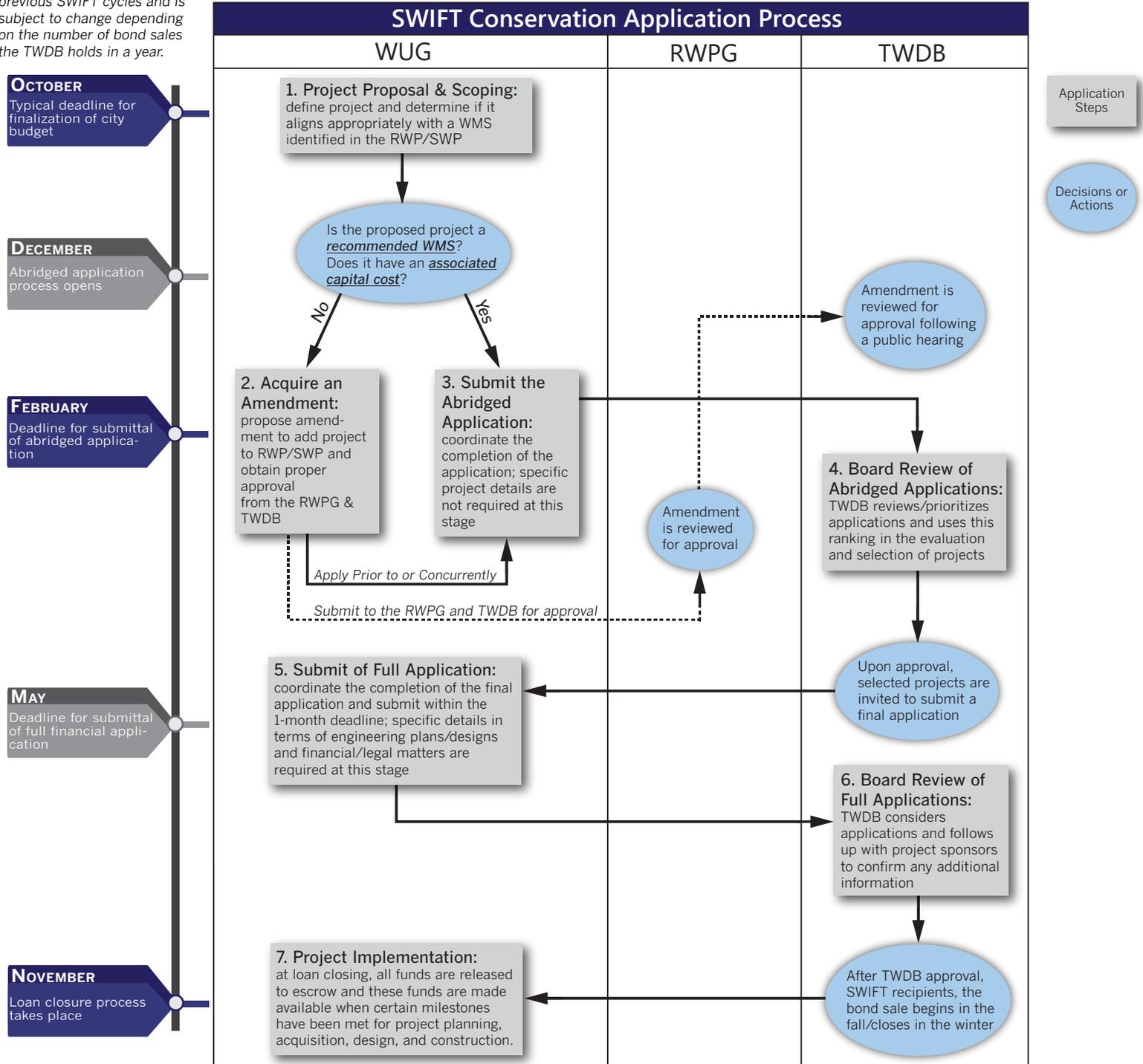
 Your RWPG is another valuable source of assistance. Given the large role your RWPG's planning/engineering consultant played in the development of your Regional Water Plan, it may also be helpful to engage in conversations with them early on in the application process.

 Regional Water Plans vary in terms of how much detail is provided by the RWPG for the recommended water management strategies and projects. Since the first cycle of SWIFT in 2015, many RWPGs have added language to their most recent Regional Water Plans to reduce obstacles WUGs may encounter as they begin applying for SWIFT funding. Although this language makes it easier for projects to be consistent with the State Water Plan, if no capital costs have been identified for the water management strategy project, a minor amendment to the State Water Plan may be need. This is discussed further in "[SWIFT Process | Step by Step](#)" section.

SWIFT Process | Overview

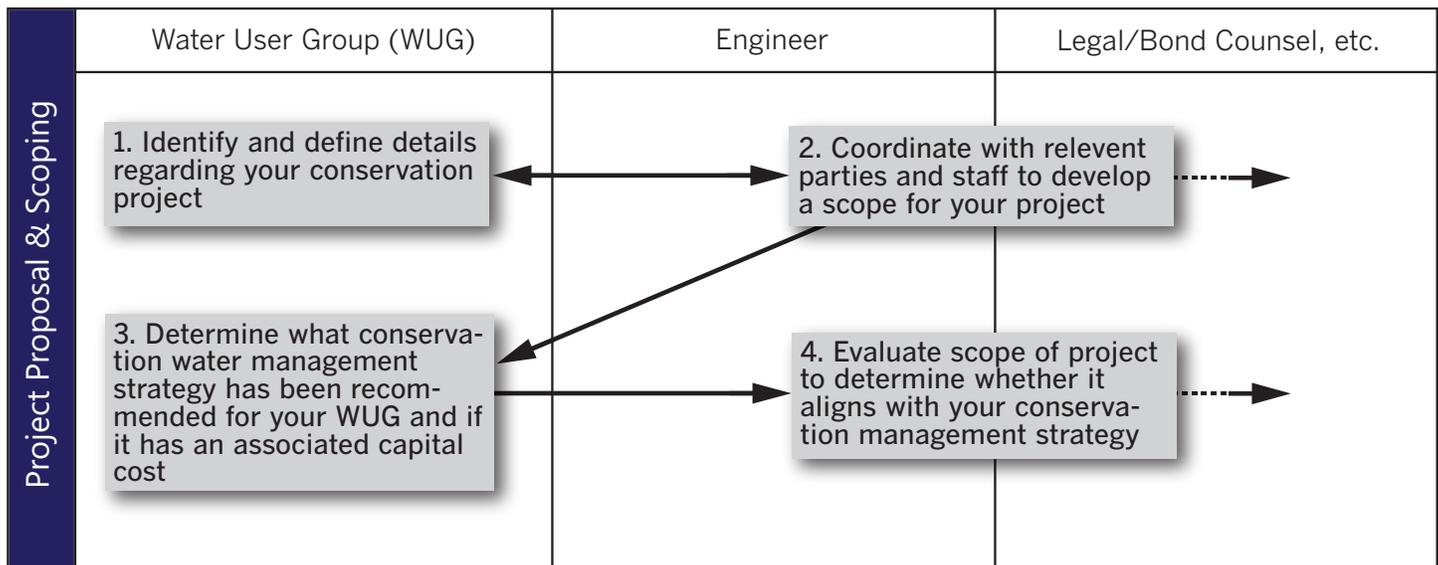
The diagram below outlines the seven major steps involved in the SWIFT application process. This diagram serves as an overview of the application process. The sections that follow explain each of these seven steps in greater detail. By delving more specifically into the SWIFT application process, the accompanying step-by-step descriptions highlight the key considerations to address when completing a SWIFT application.

Note: This timeline is based on previous SWIFT cycles and is subject to change depending on the number of bond sales the TWDB holds in a year.



SWIFT Process | Step by Step

1. PROJECT PROPOSAL & SCOPING



The project proposal and scoping phase is the first and most crucial step of the SWIFT application process. In order to be eligible for SWIFT funding, a proposed project must reflect a recommended water management strategy and have a corresponding capital cost. Careful evaluation of the project scope is necessary for demonstrating these two requirements. Although the RWPG may have developed, scoped, and included the proposed project in the Regional Water Plan, in most instances, this is not always the case.

If your Regional Water Planning Group has not developed your water conservation strategy at a specific enough level to provide cost information, you will need to hash out these details prior to the application process. See the section “[Designing Your Conservation Project](#)” presented earlier in this document for information on how to approach developing a specific water loss control or water conservation project.

Before you can begin the abridged SWIFT application, you must determine whether the proposed project is a recommended water

management strategy, as identified within your Regional Water Plan and included in the State Water Plan. Using the instructions outlined in the section “[Is my Project in the State Water Plan?](#)” you can assess the elements of your utility’s proposed project to determine consistency with the strategies recommended in the Regional Water Plan.

Development of the water conservation strategies and projects included in your Regional Water Plan is a collaborative effort between the RWPG and WUG. Playing a greater role in the regional water planning process helps to ensure that your WMSs have been developed to sufficient detail to provide cost information to support a loan request. If not, you will need to seek an amendment to add your water conservation strategy/project and its associated capital costs to the Regional Water Plan and State Water Plan.

Water loss control measures are a commonly recommended WMS because the capital costs associated with these types of projects are tied to “hard” assets. For instance, projects involving

the replacement of leaky water pipelines or the deployment of advanced meters require hard infrastructure with direct capital costs.

Alternatively, a project that involves implementation of a conservation educational program requires capital costs associated with “soft” assets. Unlike capital costs related to hard infrastructure, these “soft” capital costs are based on “services” costs such as project management/administration or “software-as-a-service”. As mentioned in the section “[Designing Your Conservation Project](#),” it is possible to bundle an educational component into a water loss control measure project.

The initial project proposal and scoping phase determines how the next steps in the SWIFT application process unfold. If you have determined that you will need a Regional Water Plan amendment to continue pursuing SWIFT funding, you will need to start the amendment process as soon as possible (see Step 2). It may be possible to obtain an amendment at the same time that you are completing your abridged application, but the amendment will need to make it into the State Water Plan by the date of the deadline for the full application. If your project does not require an amendment, you can proceed directly to submitting the abridged application (see Step 3).

Checklist

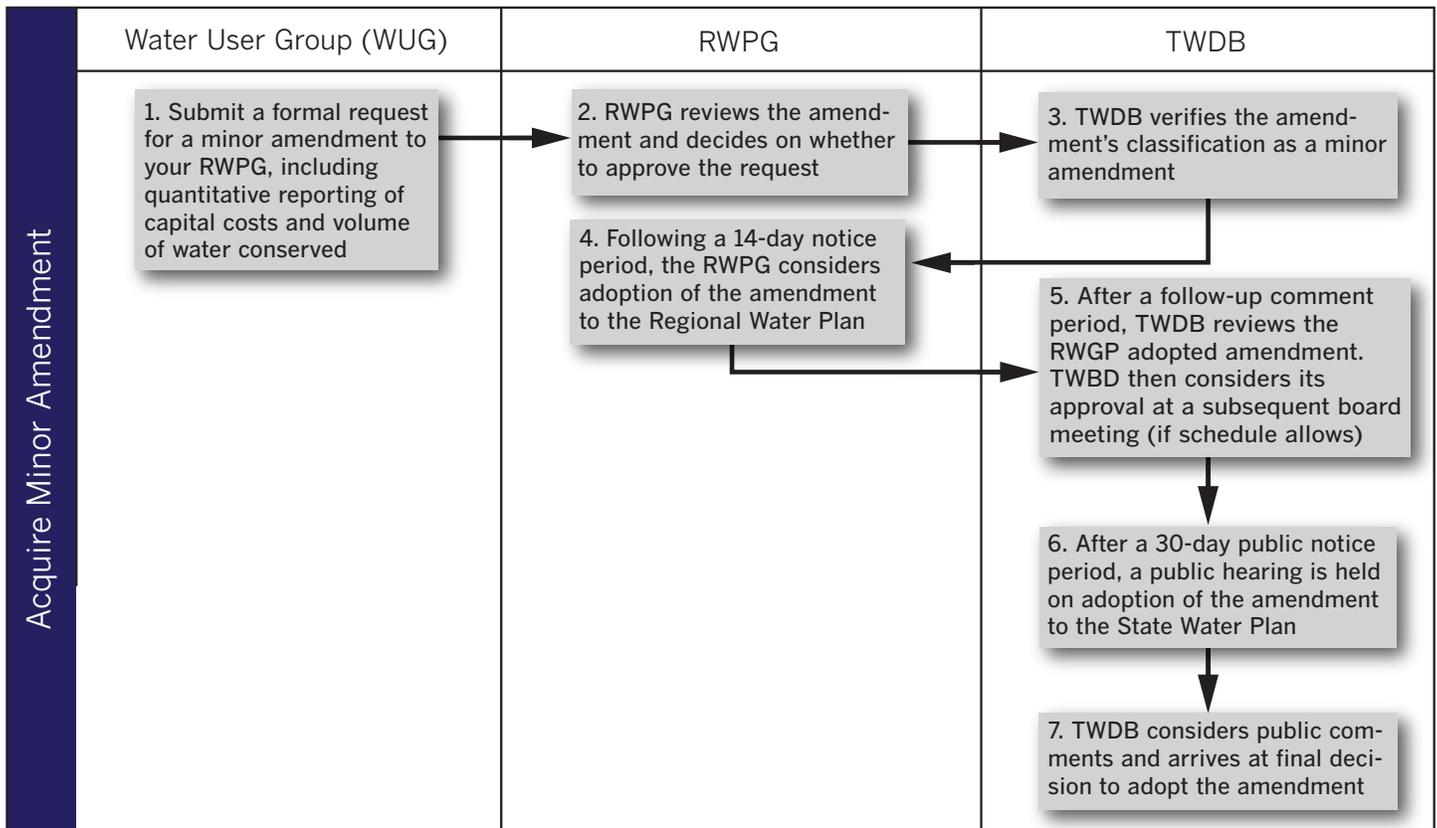
As you begin developing your proposal:

-  Assess the local context of your water system by asking the following questions:
 - Who uses the most water?
 - When do those customers use the most water?
 - How do those customers use water?
 - Where is the most water used?
 - What is driving your short- and long-term capital costs?
-  Determine what types of outcomes/benefits you would like your project to produce.
-  Evaluate the related costs, including:
 - Financing Costs
 - Application Costs
 - Customer Costs
 - Opportunity Costs
 - Lost Revenue
-  Complete a financial analysis of your project and evaluate SWIFT and other available funding options to decide which works best for your project.
-  If you decide to pursue SWIFT funding, evaluate whether the scope of your project aligns appropriately with your conservation WMS identified for your utility.

Tips

-  There are a wide array of conservation program types to consider when developing your project. It is to your benefit to reach out to other utilities and gain insight from their own experiences. To learn more about what other utilities are doing in terms of conservation, you can check out the Texas Living Water’s [Texas Water Conservation Scorecard](#).
-  The amount of capital costs identified for your water management strategy project is only an estimate, so keep in mind that you are not bound by the amount indicated in the State Water Plan. This allows for greater flexibility when defining and scoping your water conservation program.
-  The abridged application period typically opens in the December preceding that year’s round of SWIFT. For that reason, you should be begin discussing and planning your proposed water conservation/water loss program well in advance of this time. Since city budgets are finalized in October of the fiscal year, you may also need to get the discussion rolling well before this time.
-  As you begin developing your conservation project, it is a good idea to contact the TWDB to discuss whether SWIFT or another financial assistance program would be a better fit for project you are considering.

2. ACQUIRE AN AMENDMENT (if project is not included in the RWP)



If your RWPG has not identified a conservation water management strategy and/or its associated capital costs for your WUG, the TWDB requires the adoption of an [amendment](#). This step in the process should begin immediately upon determining that the proposed project is not included within the Regional and State Plans, which would ideally occur prior to beginning the abridged application.

In order to request an amendment, you first need to define the scope and objectives for your proposed water conservation project with enough detail that the proposal can be translated into a capital cost. Based on this information, you must demonstrate through quantitative reporting the quantity (volume of water conserved per decade), reliability, capital costs, environmental factors, and any other factors associated with the proposed project that are deemed relevant by the Regional Water Planning Group.

The next step is deciding what type of amendment you are pursuing—a major or a minor amendment. The TWDB considers an amendment to be minor if it adheres to the following: does not result in over-allocation of an existing or planned source of water; does not relate to a new reservoir; does not have a significant substantive impact on water planning or previously adopted management strategies; and does not delete or change any legal requirements of the plan. Conversely, a major amendment is simply any proposed project that does not meet those criteria. Generally speaking, an amendment involving a water conservation project is a minor amendment.

For minor amendments, you must submit the proposed amendment to the RWPG for approval of the request. Once the RWPG has given the clearance to proceed, you will submit the amendment to the TWDB for verification of its

classification as a minor amendment. After the TWDB has confirmed this, they issue a 14-day notice, after which the amendment goes before the RWPG for comments and consideration. Upon adoption by the RWPG, another 14-day follow-up period allows for any additional commenting and then the adopted RWPG amendment is submitted to the TWDB. During the TWDB's review process, the proposed amendment to the State Water Plan is presented at a public hearing. After completion of the hearing, the TWDB considers comments and reaches a decision on adopting the amendment.

The established deadline for adoption of amendments to Regional Water Plans is prior to TWDB's prioritization of abridged applications, which occurs once the abridged application acceptance period closes. Once an amendment has been approved by the RWPG, it must then be approved by the TWDB for adoption into the State Water Plan. The deadline for this is prior to a WUG submitting their full financial application.

In the first two cycles of SWIFT, TWDB accepted abridged applications until February and final applications until May of the SWIFT funding cycle. However, these deadlines are subject to change each year, so be sure to consult TWDB staff prior to beginning the amendment process.

Although the precise length of time it will take to acquire an amendment can vary, please keep in mind that at a **minimum** it can take 30 to 45 days (or more) for RWPGs to approve final amendments to their Regional Water Plans and an additional 45 to 75 days for the TWDB to adopt amendments to the State Water Plan. The time requirements for processing an amendment can, however, extend beyond these timeframes due to unexpected administrative delays. For that reason, it is recommended that you submit your amendment for approval by your RWPG prior to the December leading up to that year's round of SWIFT funding.

Due to the time sensitivity of requesting an amendment, it is critical that you recognize the need for an amendment early on in the development of the project scope. Doing so will help to ensure that your proposed project remains eligible for SWIFT funding and that there is sufficient time to obtain approval should any delays occur. While you are seeking an amendment, you can also move forward in completing the abridged application for TWDB review.

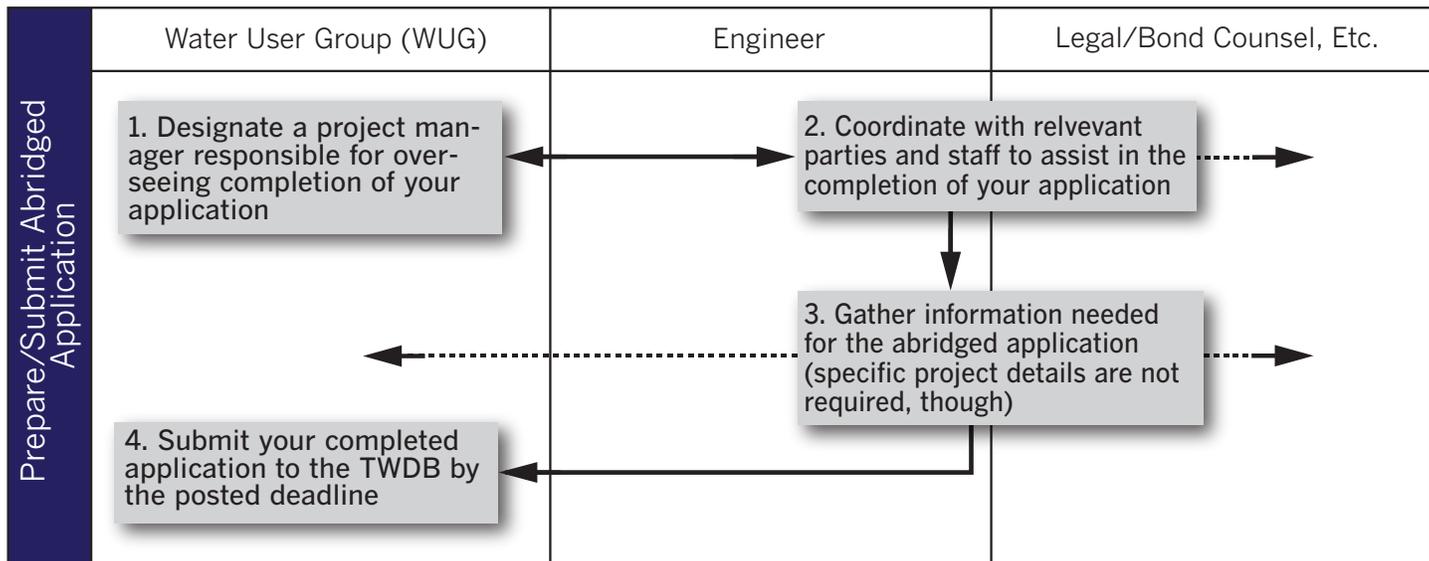
Checklist

-  Confirm the **timeline** and procedural criteria for obtaining an amendment with the TWDB (since the TWDB may revise the amendment process from year-to-year).
-  For your water conservation/water loss control project, demonstrate the *quantity* (volume of water conserved per decade), *reliability*, *capital costs*, *environmental factors*, and other factors that your RWPG has deemed relevant.
-  Submit your formal request for a minor amendment to your RWPG attaching the supplemental quantitative reporting described above.

Tips

-  Be sure to allow ample time for approval of your amendment. Additional clarifications may be needed, so it is best to begin this process as soon as possible.
-  Many regions have added language to their Regional Water Plan to make it easier for projects to be consistent with the strategies identified in the plan, though the Regional Water Plan may not have identified capital costs for the WMS. If that is the case, a minor amendment is likely only needed to establish the capital costs associated with your project.
-  If you know that you will need to obtain an amendment, keep in mind that you can complete the abridged application at the same time.

3. SUBMITTAL OF ABRIDGED APPLICATION



The initial round of SWIFT applications involves the submission of an [abridged application](#). The purpose of the abridged application is to demonstrate the applicant's eligibility for funding, to present the project's description and scope, and to identify the capital costs associated with the project.

As the name denotes, the abridged application is a very abbreviated version of the full application. However, the TWDB will utilize the information included in your abridged application to prioritize your project application. Therefore, you should develop and define your project description, scope, and costs to a sufficient enough level to demonstrate your project's consistency with eligibility requirements. Otherwise, it may be too late in the process to acquire an amendment or you may fall short in maximizing the prioritization criteria for your proposed project.

The TWDB typically begins accepting abridged applications in the December preceding that year's round of SWIFT applications—however, the TWDB

is authorized to have up to two rounds per year. This submittal period generally remains open until February. There are two methods for completing the abridged application—either through the Online Loan Application System or via email submittal using the Word document template. Specific instructions for filling out the abridged applications can be found [here](#). To further illustrate this application material, the instructions below describe the core elements of the application in greater detail.

The abridged application is broken up into three sections—*General Information*, *Project Description*, and *Estimated Costs*—with the latter two components being the most time and detail intensive. The images below identify components of the application that are particularly relevant to water conservation projects and their eligibility and prioritization criteria.

By submitting this abridged application, you understand and confirm that the information provided is true and correct to the best of your knowledge and further understand that the failure to submit a complete abridged application by the stated deadline, or to respond in a timely manner to additional requests for information, may result in the withdrawal of the abridged application without review.

GENERAL INFORMATION

Name of Entity: _____ County: _____ Regional Water Planning Area: _____

Entity Contact Information

Contact Person: Name _____ Title _____

Mailing Address: _____

Phone Number: _____ Fax Number: _____

Email Address: _____

PROJECT DESCRIPTION

Name of Project: _____
(As it appears in the 2016 Regional Water Plan)

Where can the project be found in the most recent Regional Water Plan? _____ Project described on page: _____ Capital costs listed on page: _____

Please attach a list of all water systems served by the proposed project.

Phase(s) Applied For: Planning Acquisition Design Construction

Population Served When Fully Operational: _____

Description of Proposed Project: _____

Emergency (select all that apply)

Applicant's water supply will last less than 180 days.
 Water supply need occurs earlier than anticipated in the State Water Plan.
 Applicant has received or applied for Federal emergency funding.
 None of the above.

Agricultural Efficiency Project?

Yes <1% 10%-13.9%
 No 1%-1.9% 14%-17.9%
 2%-5.9% ≥18%
 6%-9.9%

Household Cost Factor
(Household Cost Factor for SWIFT prioritization is calculated by dividing the service area's average residential water bill by its annual median household income. For regional reports, these should represent the combined service area of all participating entities.)

Estimated average annual residential water bill: _____ Annual Median Household Income: _____

The proposed project addresses: Conservation Annual Volume of Water Produced/Conserved by the Project (in acre feet per year)
 Water Loss N/A

Readiness to Proceed (select all that apply)

Preliminary planning or design work (30% of total project) has been completed or is not required.
 Applicant is prepared to begin implementation or construction within 18 months of application deadline.
 Applicant has acquired all water rights associated with the proposed project, or none will be required.

ESTIMATED COSTS

Low-Interest Loan	\$
Deferred Loan	\$
Board Participation	\$
Local Contribution	\$
Other:	\$
Total Estimated Project Costs	\$

Anticipated Commitments
Attach proposed schedule for multi-year commitments: One-Time Commitment Multi-Year Commitments

Given your prior project proposal and scoping efforts, you can readily find the information needed to answer the highlighted questions/criteria using information provided in the Regional Water Plan and details provided by the project engineer. For instance, under the *Project Description* section, the application asks for the precise page number where the Regional Water Plan has identified the proposed project and its corresponding costs. Referring back to the instructions on how to find your water management strategy, you can confirm this information in Chapter 5 of the Regional Water Plan. If you have any questions while filling out your abridged application, you can always contact [TWDB staff](#) for additional assistance.

Project Description

Name of Project: _____

Where does the Project Appear in the Regional Plan?
→ Search for the project listing in Chapter 5 (Water Management Strategies) of the RWP
→ Capital costs for the project may also be located in Chapter 5 or in a separate appendix or table, as indicated in Chapter 5

Where does the project appear in the 2016 Regional Water Plan?
→ The page on which the project is described, as well as the page where its capital costs are listed.

Please attach a list of all water systems served by the proposed project.
→ Municipalities? Counties? Special Districts? WWP's?

Population served when fully operational:
→ Can be found in the RWP, unless other projections are utilized

Phase(s) Applied For: _____

Population Served When Fully Operational: _____

Description of the Proposed Project
→ Clearly identify the scope of the project to show that it aligns appropriately with the conservation water management strategy
→ Demonstrate that the project proposal has been developed to the extent that capital costs have been established

Emergency: _____

Agricultural Efficiency Project? _____

Household Cost Factor Information: _____

The proposed project addresses Conservation/Water Loss: _____

Annual Volume of Water Produced/Conserved: _____

Readiness to Proceed: _____

Estimated Project Costs / Anticipated Commitments

Estimated Project Costs:
→ Estimated costs are based on the entire scope of the project and should fall within the total capital costs identified in the RWP

Anticipated Commitments:
→ Indicate the funding being sought, including loan-type and length of commitment, as well as the total amount of local contributions

The abridged application is a concise, straight-forward application that requires a relatively minimal amount of coordination to complete. Most of the application legwork involves acquiring pertinent information from your in-house project manager, engineering consultant, and/or legal counsel. Due to the brevity of the application, though, it is necessary for the applicant to draw a clear connection between the water management strategy, as identified in the Regional Water Plan/State Water Plan, and the project's scope, purpose, and costs. The TWDB does not, however, require extensive details regarding the project. In conjunction with the abridged application, you should also confirm that you responded to the Infrastructure Financing Report Survey. If not, you will need to do so as part of this process. You can pull the information needed for this survey directly from the abridged application. Once all of this information is complete, you can submit the application to the TWDB for review.

Case Study: City of Bedford

For the 2015 SWIFT cycle, the City of Bedford pursued a municipal conservation/water loss project involving the application of AMR and replacement of aged water pipelines. Several years prior to submitting their SWIFT application, the city began transitioning to AMR, but with 15,000 meters total, the city did not have the financial capacity to quickly make the transition. In order to expedite the process, Bill Moriarty with King Engineering approached the Director of Public Works for the City of Bedford and recommended SWIFT funding as a way to support the AMR project. The city responded with much interest and decided to move forward in the application process with King Engineering taking the lead.

When the parties began discussing the project scope in late 2014, they realized that they would need to request an amendment to the Regional and State Water Plans to include their proposed project

and its capital costs. At the time, however, City of Bedford was advised by the TWDB that they could not apply unless their project was already included in the State Water Plan—but after some discussion and clarification, the TWDB gave the city clearance to move forward in their request for an amendment in tandem with the submittal of their abridged application. As a so-called ‘guinea pig’, the City of Bedford was one of the first project sponsors (along with the City of Fort Worth) to seek SWIFT funding for an AMR- and AMI-type municipal conservation projects.

Not only was the 2015 SWIFT cycle a learning experience for the City of Bedford and Fort Worth, it was also one for the TWDB. Further refining and streamlining of the process will help encourage more water user groups to apply for SWIFT in the future.

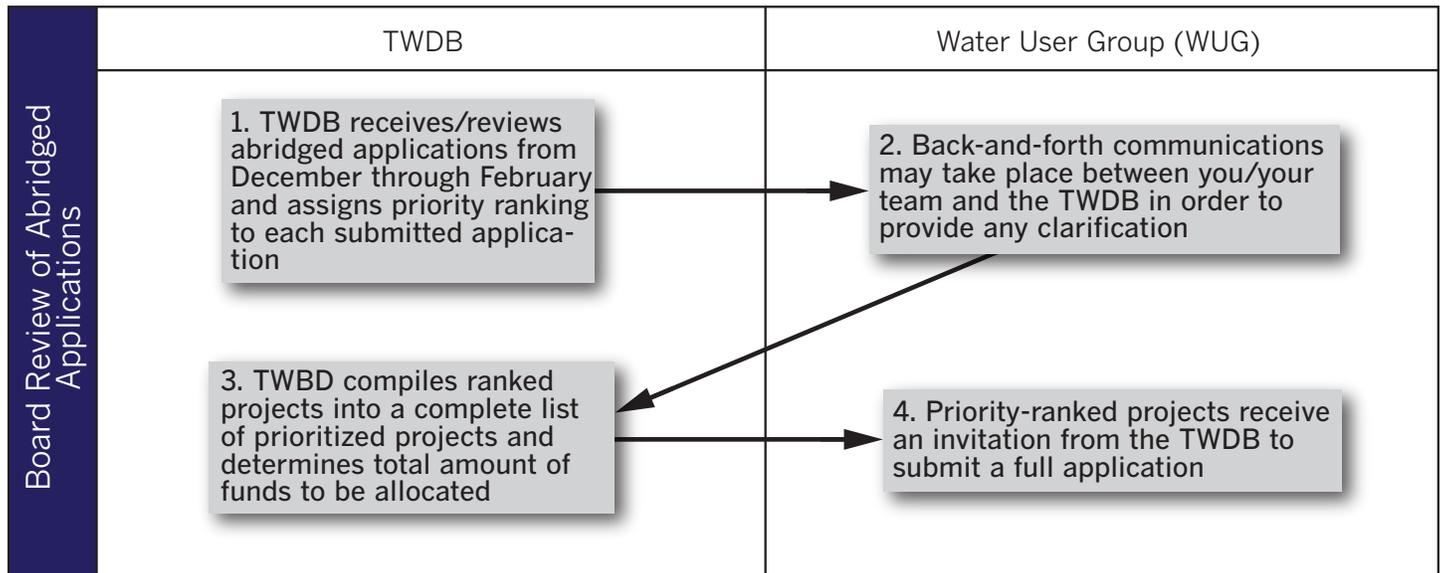
Checklist

-  Appoint a project manager to direct submittal of the abridged application.
-  Determine which staff are most knowledgeable of each section (*General Information, Project Description, and Estimated Project Costs*) and solicit their help in completing these sections and providing any supplemental information.
-  Submit the [Infrastructure Financing Report Survey](#)
-  For additional guidance, check out [TWDB's guidelines and instructions](#) for completing an online SWIFT Abridged Application

Tips

-  Plan early because the calendar may not always be on your side. The timing of the abridged application deadline does not coordinate well with the typical city government calendar, so you will need to take this into account when planning your project and preparing your application.
-  Your project manager plays a critical role in the preparation of the abridged application and later the full application. The project manager helps ensure applications are executed in a timely fashion and that appropriate staff members have been tasked with providing information for each section.
-  Hold a kick-off meeting that includes all pertinent staff and contractors if being used. This meeting should be held well before the applications are due in order to set a timeline with adequate time for review and to make sure staff is all on the same page. It is also helpful to set follow-up meetings as needed.

4. BOARD REVIEW (to determine prioritization of abridged applications)



TWDB opens the solicitation period for abridged applications in December and accepts them until a single, annual deadline (in the first two cycles, this has been in February). After the deadline to submit abridged applications, the TWDB scores each of the applications received based on the accompanying criteria.

After assigning scores, the TWDB compiles the ranked projects into a complete list of prioritized projects. This prioritized list helps guide TWDB in the evaluation and selection of projects accepted into the next round of full applications. At this stage, the TWDB also determines the amount of SWIFT funds available by category and how the SWIFT financing will be structured.

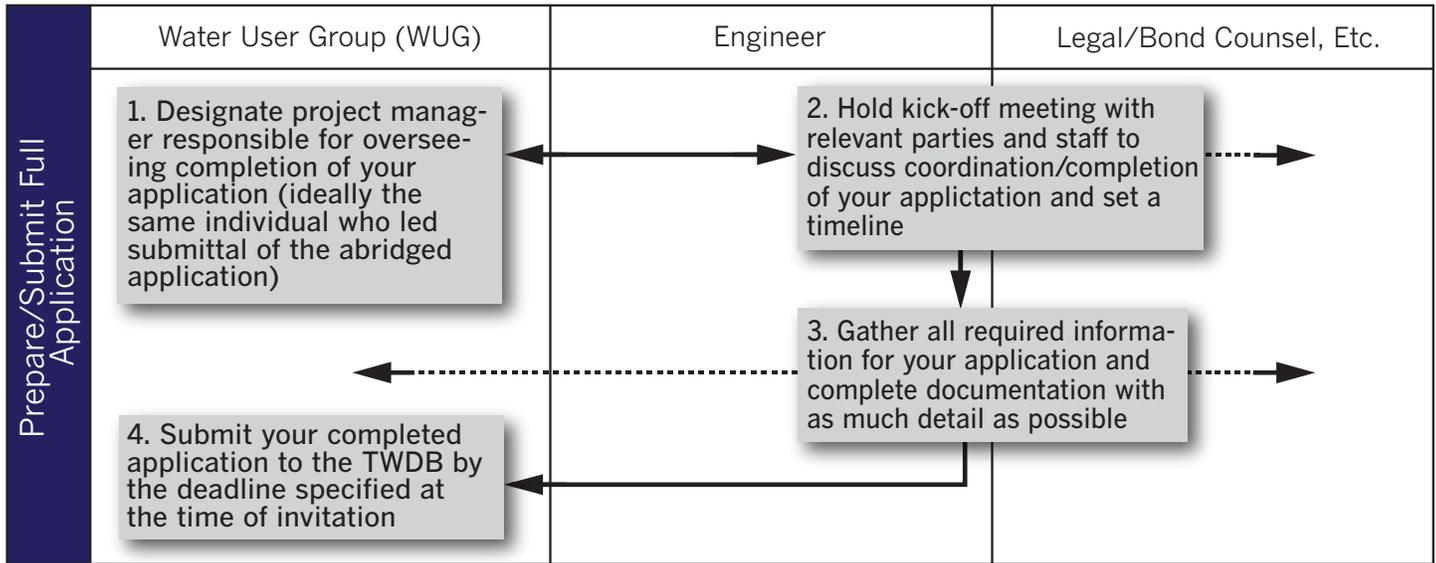
Based on their priority for funding and the amount of funding available, the TWDB then invites projects to submit a full financial assistance application. If you receive an invitation, you must submit your full financial application within 30 days from the time at which TWDB established priority ranking for your project.

This phase of the SWIFT application process is often characterized by back-and-forth information sharing between the TWDB staff and the WUG applicants as clarifications are sought amongst the parties.

TWDB Prioritization Criteria

- Serves a large population
- Provides assistance to a diverse urban and rural population
- Provides regionalization
- Meets a high percentage of water supply needs for users to be served by the project
- Amount of local and federal funding
- Financial capability of the applicant to repay
- Emergency need
- Readiness to proceed
- Demonstration or projected effect of the project on water conservation (including water loss prevention)
- Priority assigned by the RWPG

5. SUBMITTAL OF FULL APPLICATION



Once you have received an invitation from the TWDB to submit a [full financial assistance](#) application, you have approximately 30 days, subject to the deadline to complete this. If you do not submit your application within this timeframe, your project will lose its priority ranking, and the TWDB may commit to other projects pursuant to the prioritization system. Please keep in mind that this application is far more extensive in comparison to the abridged application and requires a significant amount of input from a number of parties, including legal counsel, bond counsel, engineering consultant, financial advisor, accountant, and any other relevant departments or individuals. In consideration of this time constraint and the extensiveness of the application, there is minimal allowance for delays in commencing and executing the final application.

You will need to submit the full financial application by the deadline indicated on the formal invitation letter you received from the TWDB. There are two options for submitting the application: you can prepare and complete everything online or you can submit a hard copy, in which case you will need to provide one double-sided copy and one

indexed electronic copy. You can find additional details regarding [submittal requirements](#) on TWDB's website.

The full application currently contains seven applicable sections: General Information, Legal Information, Financial Information, Project Information, SWIFT Applicants Only, Summary of Attachments to Application, and Guidance/Forms.

Part A: General Information — this section requests basic information regarding the applicant and the proposed project.

Part B: Legal Information — this section requests a range of information involving legal matters related to the project. In particular, this section requests a Resolution Form formally requesting financial assistance, an Application Affidavit, a Certificate of Secretary, and a Water Conservation Plan, among other applicable information and documents.

Part C: Financial Information — this section requests information regarding the customers that the WUG serves as well as the contracts it holds

with other political subdivisions. In addition, tax revenue/rate information, debt status, and the method for repaying debt are also requested.

Part D: Project Information — this section asks for specific information regarding the project including need, description, location, schedule, cost estimates, and the Preliminary Engineering Feasibility Data.

Part E: SWIFT Applications Only — this section requests information regarding the type of funding being sought, acknowledgment of applicable state and federal legal obligations related to business contracting, and copies of the Proposed Bond Ordinance and Private Placement Memorandum.

Part I: Summary of Attachments to Application — this section provides a list of attachments that may be required for the application to be considered complete. The questions laid out in the previous sections explicitly indicate which

attachments are needed, though whether or not an attachment is included depends on how the question is answered.

Part J: Guidance and Forms — this section serves as a reference for confirming the specific requirements for the Project Information section.

To facilitate completion of the full application, it is recommended that you schedule a pre-application meeting with TWDB staff. Even though this is not a requirement, TWDB staff is available to provide guidance and answer any questions you may have. After meeting with TWDB staff to clarify information necessary for completing the full application, you will need to determine who in your staff is knowledgeable of or has access to the specific information being requested. The best way to accomplish this is to hold a in-house kick-off meeting. The purpose of this meeting is to evaluate the requirements of each section so that you can designate responsibility for each

Case Study: City of Keller

The City of Keller decided to tackle water conservation at one of the most basic levels within their water distribution system: the replacement of excessively leaking water pipes. The City recognized that SWIFT was an excellent vehicle to finance these improvements and accomplish them in a finite period of time.

The City recognized that within their water distribution system of nearly 286 miles, there existed about 12 miles of leaking, deficient water pipe. Further the City identified approximately 15,600 water services (city side) that were leaking excessively. In the late 80's the City had allowed the use of polybutylene water services, instead of the more reliable copper type, when copper prices soared. The polybutylene services have proved to be problematic and leak excessively.

The City of Keller had been approaching this needed replacement program in an incremental fashion funded through the City's Annual Water Budget, but the work was expected to take an extended period of time to complete. Director

of Public Works Keith Fisher decided to take advantage of the SWIFT Program to complete the work much faster and achieve significant savings for the City of Keller.

The City applied for \$12,000,000 of SWIFT funding during the 2016 funding period. The City's plan was to gain the \$12 Million commitment, but only close on one third of the money initially with the expectation of closing on the remainder as the project moved forward. The City was fortunate that their water conservation strategy was already in the Region C Water Plan, so an amendment was not needed.

Additionally, the City was interested in possibly using the services of an outside Program Manager, given the City's current internal resources were over-extended. TWDB granted this request and it was included in the SWIFT budget.

The City expects to close on their SWIFT Loan in November of 2016.

part to the appropriate party. This also affords an opportunity to set the time-line for completing the application. This time-line should establish an internal deadline that allows enough time to verify and review the application prior to submittal.

After the initial kick-off meeting, it may also be advantageous to schedule weekly meetings to ensure that the application is moving forward at an adequate pace. The most valuable individual in this phase of the SWIFT application process is anyone who has already been through the process. Seeking this individual out, whether they are a project manager or legal counsel, can be extremely

beneficial in avoiding any potential setbacks leading up to submittal of the application.

With all of this in mind, completion of the application should be relatively straightforward. Although the application is quite long, you can streamline the process by breaking it up and tasking appropriate parties with each individual section and allocating an adequate amount of time to complete the application, including time for review. Once you have submitted your application, you will then present it before the TWDB for final review.

Checklist

Attached the following to your complete application:

-  *Preliminary Engineering Feasibility Data or Engineering Feasibility Report* (see Rule § 363.1307 of the Texas Administrative Code for a complete listing of the required information)
-  Contracts for engineering services
-  Adopted *Water Conservation Plan* for applications requesting more than \$500,000 in funding (if your utility has more than 3,300 connections, you should already have a WCP, but you will need to make sure it is current)
-  Project Description/Schedule
-  *Water Project Information Form*
-  Environmental Assessment determinations, if applicable
-  *Proposed Bond Ordinance and Private Placement Memorandum*
-  Any and all relevant attachments

Tips

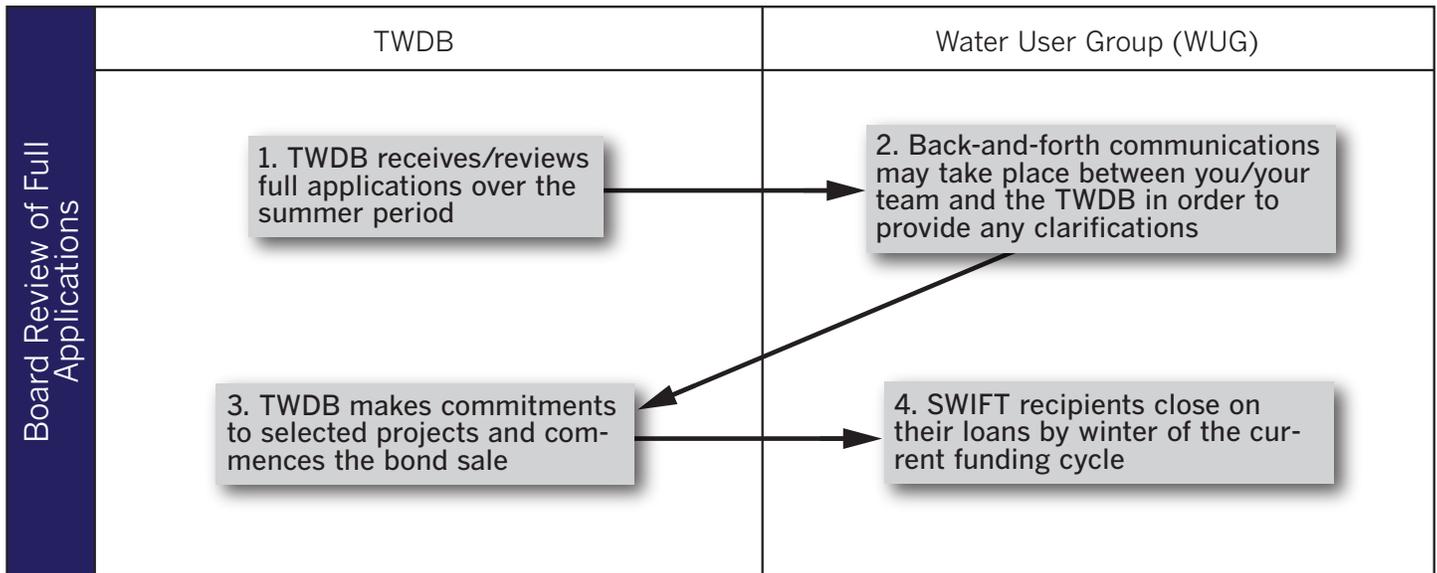


As always, time is of the essence. Due to the extent of paperwork required for the full application and the 30-day timeframe in which to submit, it is important that preparation of the full application begin right away. The project manager should schedule a kick-off meeting with all relevant staff members to discuss the strategy and timeline for submission of the application. It is also recommended that regular status meetings take place to ensure nothing falls through the gaps.



In order to comply with environmental standards, you may obtain a 'categorical exclusion' for your project. Though this is not required prior to submitting your application or receiving a commitment from TWDB, you may want to begin addressing this early on depending on your type of conservation or water loss control project. Since AMR and AML-type projects typically do not require extensive environmental impact review, obtaining a 'categorical exclusion' for these types of projects is straightforward—in fact, you have the option of completing the short-form application for a 'categorical exclusion' in conjunction with your full application. Alternatively, projects involving the replacement of leaking pipes may require more environmental study, so it is recommended to address this early on.

6. FINAL BOARD REVIEW OF FULL APPLICATIONS



In the first two rounds of SWIFT, the TWDB began accepting and reviewing full applications over the summer period following the abridged application period in February. It should be noted, however, this is subject to change based on the schedule established by the TWDB for each round of SWIFT.

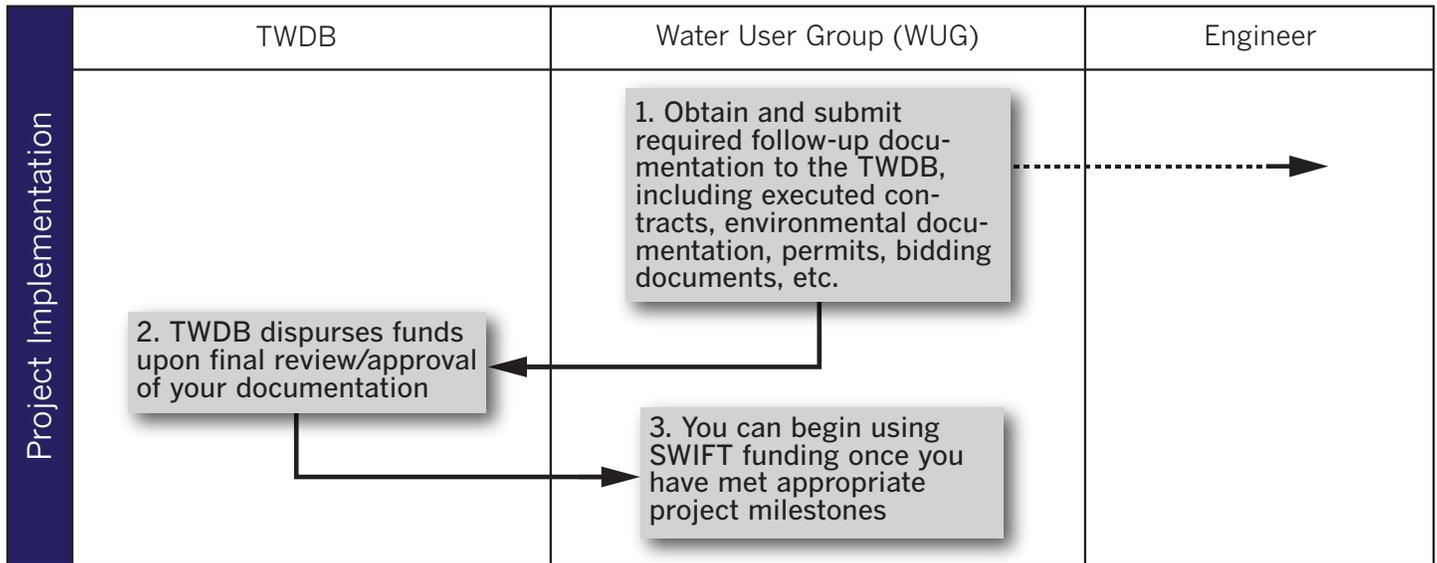
During the final review process, the TWDB has the authority to approve, disapprove, approve with conditions, or continue review of the application. After making commitments to the selected projects, the TWDB bond sale takes place in the fall, and by winter of the current funding cycle, the bond sale concludes and borrowers begin closing on their loans.

From the time that the TWDB commits to a project and the closing of the loan, the TWDB maintains a constant stream of communication with the project sponsors to follow-up on comments, to ensure all criteria is met, and to address any issues that may arise.

In order for the TWDB to release the funds to the project sponsors, the following milestones must be met, otherwise the TWDB places the funds in escrow until they have been reached:

- **For planning and permitting costs:** after receipt of executed contracts for the planning and permitting phase
- **For acquisition and design costs:** after receipt of executed contracts for the design phase and upon approval of an engineering feasibility report and compliance with environmental documentation requirements
- **For construction costs:** after issuance of any applicable permits, and after bid documents are approved and executed construction documents are contingently awarded

7. PROJECT IMPLEMENTATION



Upon closure of the loans, the TWDB fully reviews and approves the required contracts, engineering feasibility reports, environmental documentation, bidding documents and other [financial reporting](#) prior to disbursing the funding. During this time, you should make sure TWDB is aware of your project schedule. If any issues arise related to your schedule and TWDB review times, you should discuss these concerns with TWDB staff.

Once all of these final details have been hashed out and confirmed, you can begin using the SWIFT funding to get your project off of the ground.

While outlay reports are not required as part of the SWIFT program, the TWDB may require you to submit quarterly progress reports, which are used to determine the amount of funds to be released as project milestones are met. This is typically done, however, for projects involving funding for the planning phase only.

Alternative Sources of Funding

There are several other options available to water user groups for funding their water conservation projects. These alternative sources are outlined below. You can find more detailed information regarding TWDB's funding programs on their website. The TWDB staff is a valuable resource in helping to determine which financial assistance program is the best option for the water conservation project that you are considering. Please note that while the TWDB offers additional financial assistance programs beyond what is listed here, these are funding mechanisms that you can utilize specifically for conservation-related projects.

State & Federal Programs

Rural Water Assistance Fund

The [RWAFF program](#) is available to rural political subdivisions, including nonprofit water supply corporations, districts, municipalities serving a population of 10,000 or less, and counties comprised solely of urban areas smaller than 50,000 people. This program offers low-interest loans based on a repayment period of up to 40 years. These loans can be used for water projects that are consistent with the State Water Plan or a Regional Water Plan. There are no application deadlines for this program; however, it is recommended that you arrange a pre-application conference your Regional Project Implementation Team to discuss your proposed project and solicit any necessary guidance. You can find more information on the TWDB website.



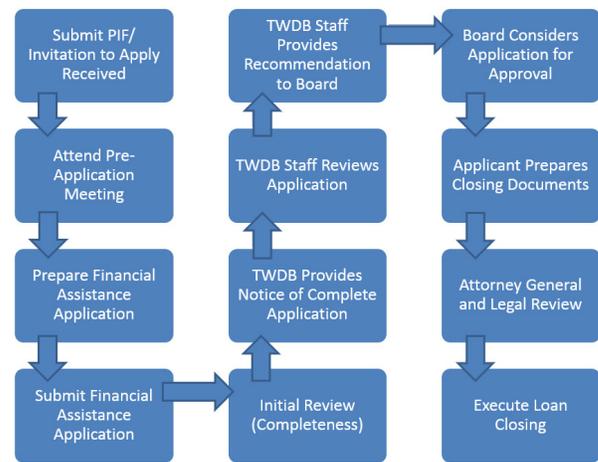
Texas Water Development Fund (DFund)

The [DFund program](#) is available to political subdivisions and nonprofit water supply corporations and districts. To be eligible for funding, water conservation projects must be consistent with the State Water Plan. As with SWIFT, the conservation project can be in the planning, design, acquisition, or construction phase of development. Benefits of the program include long-term fixed interest rates, 20- to 30-year repayment terms, and no cap on total funding amount. Another advantage of the DFund is that a single loan can be applied to a bundle of eligible projects including both water and wastewater components. The application process starts with an optional pre-application conference with TWDB staff to discuss the project's eligibility for funding through the DFund. You can find more information on the TWDB website.



Drinking Water State Revolving Fund (DWSRF)

The [DWSRF program](#) is available to publicly and privately owned community water systems, including nonprofit water supply corporations and nonprofit, non-community public water systems. Financial assistance offered through this program can be applied to projects involving the replacement of water infrastructure, such as leaky water pipes. To receive funding, projects must be consistent with the State Water Plan. In addition to providing low-interest loans with a payback period of up to 30 years, the DWSRF program offers principal forgiveness to eligible disadvantaged communities, very small systems, urgent need projects, and green projects. The TWDB accepts DWSRF applications year round—however, you must submit a Project Information Form (PIF) before the TWDB will invite you to apply. After receiving a invitation, a pre-application meeting is required. You can find more information on the TWDB website.



Clean Water State Revolving Fund (CWSRF)

The [CWSRF program](#) is available to political subdivisions (including water supply corporations that are Designated Management Agencies) and authorized Indian tribal organizations. Although this program does not offer funding for projects geared specifically towards conservation, wastewater recycling and reuse projects with purple pipe distribution systems and other types of non-potable reuse systems can access financing. Benefits of the program include below-market fixed interest rates, principal forgiveness for qualifying projects, 30-year repayment periods, no limit on available funding, multi-year commitments, and year-round funding. To be eligible for funding, projects must be listed in the current CWSRF Intended Use Plan, which requires submittal of a Project Information Form. You can find additional requirements and information on the TWDB website.



Agricultural Water Conservation Grants Program

The [Agricultural Water Conservation Grants Program](#) is available to state agencies and political subdivisions. The program's primary goal is to promote best management practices aimed at agricultural water conservation and irrigation water use efficiency. To help ensure implementation of agricultural irrigation conservation strategies identified in the State Water Plan, TWDB offers funding and technical assistance to support projects seeking to research, educate, demonstrate, and implement agricultural water conservation best management practices. Grants offered by the TWDB vary by topic, and requests for applications can be tracked [here](#). For more information on guidelines and application instructions, you can contact the [TWDB](#).



USDA Rural Development's Water & Waste Disposal Loan & Grant Program

The [Water & Waste Water program](#) is available to most state and federal entities as well as private nonprofits and federally recognized tribes. Areas eligible for funding include rural areas with a population of 10,000 or less, Tribal land located in rural areas, or Colonias. The low-interest loans offered through this program can be used to finance conservation projects involving water distribution (e.g., replacement of leaking pipes and smart metering installation). These funds can be applied to the acquisition and construction phases of the project, and in some instances, the funds can be used for legal/engineering fees, the purchase of equipment, start-up operations/maintenance, and interest incurred during construction, among other costs. A key advantage of this program is its 40-year payback period and fixed interest rate, which is based on need for the project and the median household income of the area to be served. Applications are accepted on a year-round basis through the USDA's local office. You can find more information [here](#).



Water & Waste Disposal Loan & Grant Program

What does this program do?

Provides funding for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and storm water drainage to households and businesses in eligible rural areas.

Who may apply?

This program assists qualified applicants that are not otherwise able to obtain commercial credit on reasonable terms.

Eligible applicants include:

- Most State and local governmental entities
- Private nonprofits
- Federally recognized Tribes

What is an eligible area?

Areas that may be served include:

- Rural areas and towns with fewer than 10,000 people (check eligible addresses)
- Tribal lands in rural areas
- Colonias

What kinds of funding are available?

Long-term, low-interest loans. If funds are available, grants may be combined with a loan if necessary to keep user costs reasonable.

How may the funds be used?

Funds may be used to finance the acquisition, construction or improvement of:

- Drinking water sourcing, treatment, storage and distribution
 - Sewer collection, transmission, treatment and disposal
 - Solid waste collection, disposal and closure
 - Storm water collection, transmission and disposal
- In some cases, funding may also be available for related activities such as:
- Legal and engineering fees
 - Land acquisition, water and land rights, permits and equipment

- Start-up operations and maintenance
- Interest incurred during construction
- Purchase of existing facilities to improve service or prevent loss of service
- Other costs determined to be necessary for completion of the project

For a complete list, see 7 CFR Part 1780.7 and 1780.9

What is the loan term and rate?

Up to 40-year payback period, based on the useful life of the facilities financed with a fixed interest rate. The interest rate is based on the need for the project and the median household income of the area to be served. Contact us for details and current interest rates applicable for your project

Are there additional requirements?

- Borrowers must have the legal authority to construct, operate and maintain the proposed services or facilities
- All facilities receiving federal financing must be used for a public purpose
- Partnerships with other federal, state, local, private and nonprofit entities that offer financial assistance are encouraged
- Projects must be financially sustainable

Self-Financed Options

An alternative to any TWDB finance program, whether backed by Federal or State funds, is to pay for the project yourself. Conventionally, this can be accomplished through the issuance of your own bonds. The challenge is that some of these projects may be too small to justify bonding costs, and water conservation programs are not conventionally funded via capital assets.

Here are two options that you can consider as an alternative to TWDB and your own capital programs.

Cost “riders” for water conservation

For non-capital expenditures such as water conservation programs, you could consider establishing a dedicated “rider” or fee for water conservation. This surcharge on the bill would be sufficient to cover not only program costs but also lost contributions to fixed costs – the difference between lost revenue and variable costs such as the purchase of water, energy, and chemicals to provide water.

While calling attention to the water conservation rate impact through a dedicated surcharge may seem counterintuitive, it gives you a good story to tell and connects your overall water strategy. You can tell your customers that this investment will help you keep costs down to deliver reliable, safe, and affordable water into the future. And it heightens awareness of your water conservation programs.

Municipal Leases

Municipal or tax-exempt leases are offered by leasing companies as a low-cost alternative to bonds. In this instance, the equipment (which could include smart meters, pipes, or other tangible assets) are owned by the financing company during the term of the lease. While it may seem odd that a leasing company would be willing to finance property that would be difficult to repossess, in practice this does occur on large-scale heating and cooling equipment and other “attached” property.

While the effective rate of a municipal lease can be higher than a bond, there are other advantages that make up for that cost difference. For one, closing costs can be much lower. For another, the financing process is much faster for a municipal lease than a bond, creating a lower cost of delay. Analysis of multiple energy efficiency projects have shown that municipal leases are more cost-effective if bond issuance takes only a few months longer.

Depending upon your willingness to consider alternatives, municipal leases are worth considering.

Public-Private Partnerships (P3)

A “public-private partnership” combines elements of public and private sector financing, construction, and operation of capital assets for a municipally-owned water system. Notably, in lieu of a public entity using their own bond capacity to finance the construction a capital asset, private sector firms bring their own financing and assume project element risks. The municipal entity is then responsible to make regular payments typically based on actual performance. These payments can cover the financing costs, construction costs, and / or the annual operating costs, depending upon the nature of the contract. One notable example of this type of approach is the Carlsbad Desalination Plant in San Diego County, California. San Diego County has entered into a 30-year purchase agreement with Poseidon Water for the entire output of the plant. These payments cover the financing, construction, and ongoing operation of the plant.

A significant advantage of public-private partnerships is that the private sector entity assumes the risk and responsibility of project life cycle costs. Additionally, a common misconception is that assets of a P3 project must be owned by the private firm. This, among many other variables, can be structured on a project by project basis to meet the needs of the public entity as well as that of the private partner.

For conservation water management strategies, a P3 can be used in two ways. The most straightforward would be the installation and operation of advanced meter infrastructure (AMI) and district meter area (DMA) systems. A third party could finance, install, and maintain a water utility's AMI and DMA meters. That third party could also handle the meter data management. The utility would then make operating payments to that third party (as well as on leak repair efforts) and preserve their debt capacity for other capital assets. A second option would be to work with water service companies (WASCOs) on the implementation of water conservation

projects at industrial, commercial, or residential customers. The WASCOs would work with utility customers to identify and implement projects, and either the WASCO or the customer would finance the installation of the equipment. The utility could then also pay the WASCO a "cost of conserved water" rebate, which could be captured by the WASCO or a portion passed to the end use customer as a credit. This could create the functional equivalent of a "conservation purchase agreement" to capture water conservation savings within the State Water Plan.

Conclusion

Navigating the SWIFT Application Process: Water Conservation Projects was designed to provide insight, clarification, and tools to small-to-mid-sized utilities looking to secure SWIFT funding for their water conservation project. The information, tips, and strategies identified in this document serve to assist utilities in a number of ways: evaluating available funding mechanisms, designing conservation/water loss projects, assessing projects benefits and costs, and submitting a SWIFT application.

Water conservation represents an integral component of Texas' current and future water supply strategies. In fact, the State Water Plan predicts that municipal conservation will meet 40% of municipal water needs by 2020. The water conservation and water loss control projects need to meet these projections will come, in large part, from the efforts of

municipal water utilities. To help accelerate the implementation of projects prioritized in the Regional and State Water Plans, SWIFT was introduced by the 83rd Texas Legislature and approved by voters via a constitutional amendment in 2013. Further underscoring the importance of water conservation in Texas' water future, SWIFT legislation establishes that the TWDB "shall undertake to apply not less than" 20% of the SWIFT funds to conservation or reuse projects and 10% towards projects benefiting rural political subdivisions or agricultural water conservation.

Ultimately, we hope that by creating this useful and easily accessible resource, municipal and rural water utilities can be better equipped to design, finance, and implement their water conservation or water loss projects.

Additional Resources

Websites



[State Water Plan](#)



[Amendment Process Timeline](#)



[Interactive State Water Plan](#)



[Unified Costing Model User's Guide](#)



[Regional Water Planning Groups](#)



[2016 Prioritization List](#)



[SWIFT Info](#)



[Texas Administrative Code](#)

TWDB Contacts

Regional Teams

Team 1 - Panhandle/West (A/O/E/F)

Lee Huntoon, Regional Team Manager
lee.huntoon@twdb.texas.gov | (512) 463-6021

Team 2 - Brazos (G/B)

Caaren Skrobarczyk, Regional Team Manager
caaren.skrobarczyk@twdb.texas.gov | (512) 475-1128

Team 3 - Northeast (C/D)

Luis Farias, Regional Team Manager
luis.farias@twdb.texas.gov | (512) 475-4816

Team 4 - East (H/I)

Nancy Richards, Regional Team Manager
nancy.richards@twdb.texas.gov | (512) 463-0250

Team 5 - Central (J/K/L/P)

Clay Schultz, Regional Team Manager
clay.schultz@twdb.texas.gov | (512) 463-6277

Team 6 - South (M/N)

Mireya Loewe, Regional Team Manager
mireya.loewe@twdb.texas.gov | (512) 475-0590

Program Administration

Tom Entsminger, State Programs Coordinator
tom.entsminger@twdb.texas.gov | (512) 936-0802

SWIFT Program Team
swift@twdb.texas.gov

Outlays & Escrows

Shelli Coe-Mackie, Manager
outlays@twdb.texas.gov | (512) 463-5070

Reporting

Marvin Chaney, Manager
marvin.chaney@twdb.texas.gov | (512) 463-8750

For a complete TWDB Staff Directory, click [here](#).

You can learn more about the
Texas Living Water Project at
www.texaslivingwaters.org

