

Texas Water Development Board

Infrastructure Project Financing

\$\$\$ Show Me The Money \$\$\$

Today's Topics

- What is the Texas Water Development Board (TWDB)?
- What financing tools do we offer?
- How can the TWDB help you complete your project?

TWDB Mission

The ***mission*** of the Texas Water Development Board is to provide leadership, information, education, and support for planning, financial assistance, and outreach for the conservation and responsible development of water for Texas.

TWDB Resources



Project Financing

- Water
- Wastewater
- Flood Control
- Nonpoint Source Pollution Control



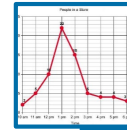
Science

- Groundwater availability
- Environmental flows
- Lake surveys
- Conservation
- Innovative Technologies
- TexMesonet (Weather Data)



Planning

- State Water Plan
- Interface with regional water planning groups
- Water Use Surveys

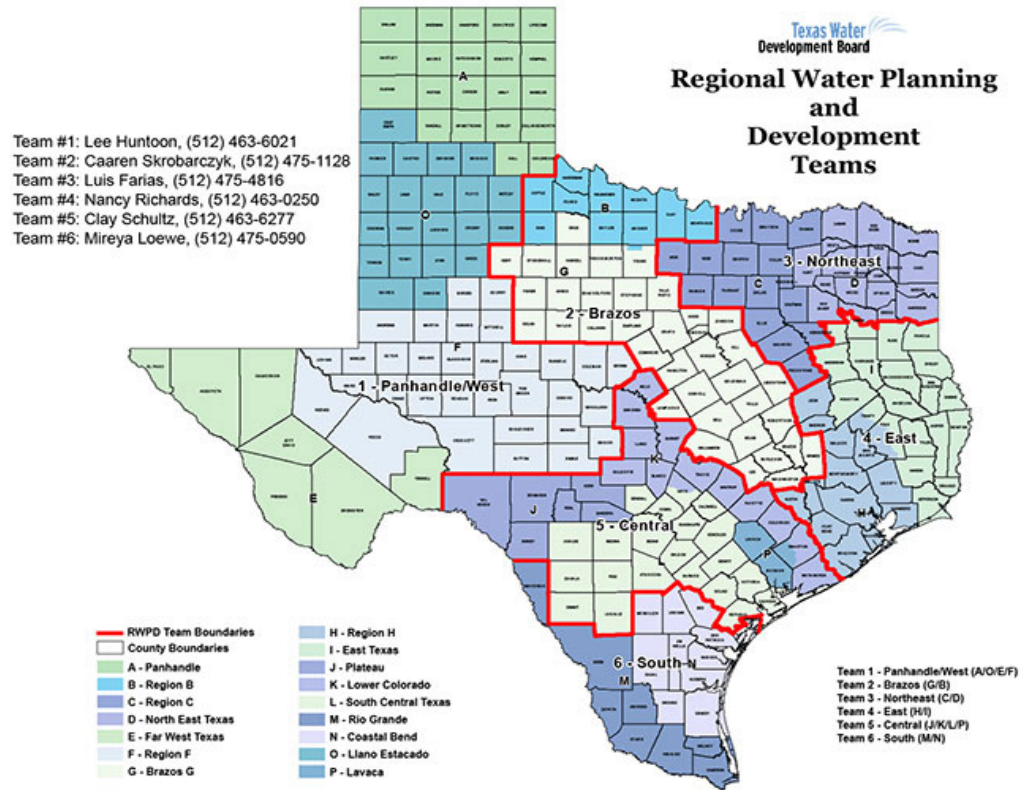


Data

- State's official repository for mapping & GIS data
- Demographics
- Flood data
- Interactive State Water Plan

TWDB Across Texas

- Austin
- Harlingen
- Houston
- Lubbock
- Mesquite

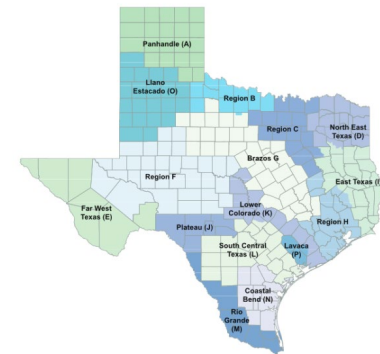


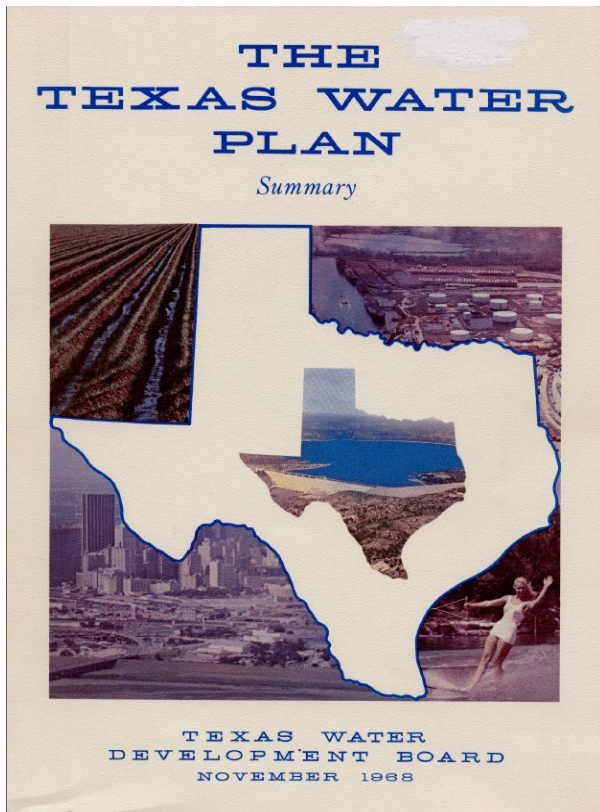
Water Planning in Texas



Regional Planning Groups analyze water supply needs on a 50-year planning horizon

- Municipalities, agriculture, industry, and power generation are all considered
- Each regional plan lists **recommended water management strategies** and their anticipated costs





State Water Plan by Year:

1961, 1968, 1984, 1990, 1992, 1997,



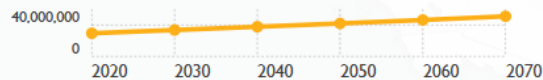
2002, 2007, 2012, **2017** next 2022

View data for All of Texas

GO

TEXAS

Population


[SHOW DATA TABLE](#)

Interactive State Water Plan
texasstatewaterplan.org

Development of the state water plan is central to the mission of the Texas Water Development Board. Based on 16 regional water plans, the plan addresses the needs of all water user groups in the state – municipal, irrigation, manufacturing, livestock, mining, and steam-electric power – during a repeat of the drought of record that the state suffered in the 1950s. The regional and state water plans consider a 50-year planning horizon: 2020 through 2070.

This website lets water users statewide take an up-close look at data in the 2017 State Water Plan and how water needs change over time by showing:

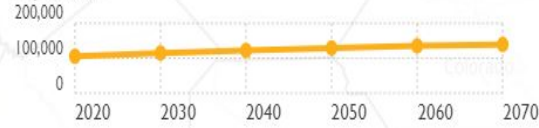
- o projected water demands,
- o existing water supplies,
- o the relative severity and projected water needs (potential shortages),
- o the water management strategies recommended to address potential shortages, and
- o recommended capital projects and their sponsors.

© OpenStreetMap contributors, ©

SUGAR LAND

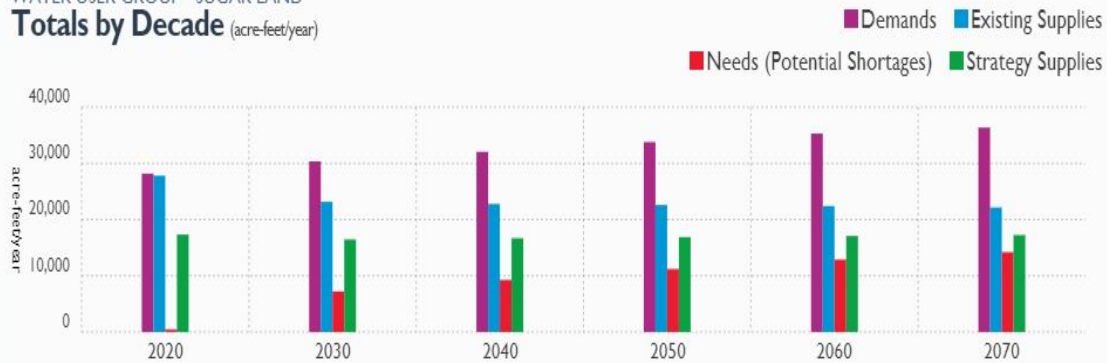
Water User Group in Fort Bend

Population



SHOW DATA TABLE

WATER USER GROUP - SUGAR LAND Totals by Decade (acre-feet/year)





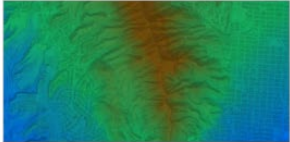





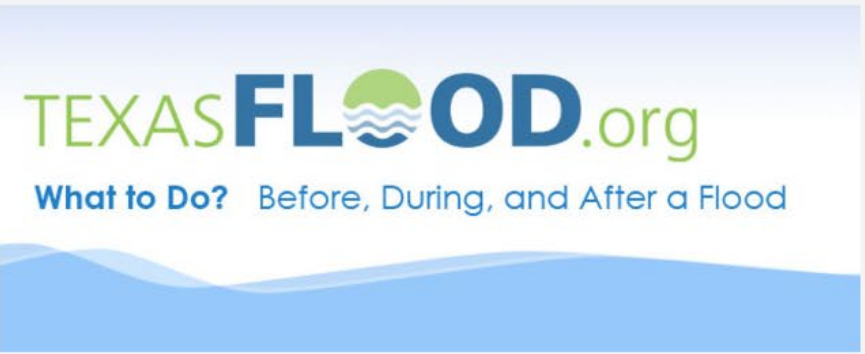
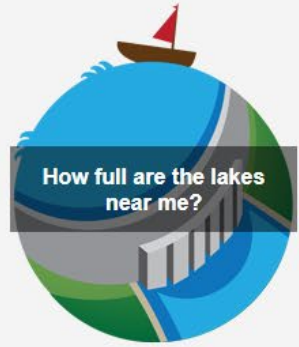
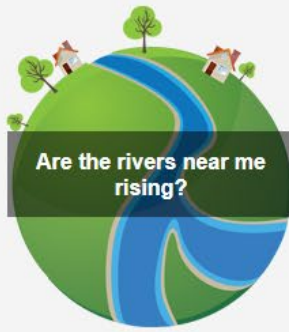
	2020	2030	2040	2050	2060	2070
Demands	28,173	30,347	32,045	33,780	35,292	36,352
Existing Supplies	27,800	23,143	22,783	22,586	22,413	22,149
Needs (Potential Shortages)	447	7,204	9,262	11,194	12,879	14,203
Strategy Supplies	17,332	16,454	16,677	16,885	17,075	17,237

WATER USER GROUP - SUGAR LAND



TEXAS NATURAL RESOURCES INFORMATION SYSTEM

 <p>GLO Coastal Zone Boundary The official boundary of the Texas Coastal Management Program (CMP).</p> <p>Direct Download</p> <p>Boundary</p>	 <p>GLO Navigation Districts Submerged lands granted with mineral reservations by the Texas legislature to Navigation Districts.</p> <p>Direct Download</p> <p>Boundary</p>	 <p>GLO State Agency Lands State agency-owned land in Texas.</p> <p>Direct Download</p> <p>Boundary</p>	 <p>StratMap Brazos 2017 6in NC\CIR Orthoimagery The 6-inch orthoimagery in Brazos County were flown during the 2017 leaf-off season in early January.</p> <p>Data Search & Download Online Service</p> <p>Orthoimagery - Regional</p>
 <p>FEMA 2014 Rio Grande River Lidar FEMA Lidar for portions of the Rio Grande River</p> <p>Data Search & Download Ordering</p> <p>Lidar</p>	 <p>FEMA 2014 Upper Clear Fork Brazos Lidar FEMA Lidar for the Upper Clear Fork Brazos</p> <p>Data Search & Download Ordering</p> <p>Lidar</p>	 <p>FEMA 2016 DeWitt County Lidar FEMA Lidar for DeWitt County</p> <p>Data Search & Download Ordering</p> <p>Lidar</p>	 <p>StratMap SARA 2016 12in NC\CIR Orthoimagery The 12-inch orthoimagery covering the San Antonio River, southeastern Refugio County, Aransas County, and Calhoun County, TX were flown during the 2016 leaf-off season in early January.</p> <p>Data Search & Download Online Service</p> <p>Orthoimagery - Regional</p>



Texas is no stranger to flood. With its diverse geography and extensive, hurricane-prone coastline, the state frequently leads the nation not only in structural damage but also in loss of lives related to flooding events. Given the deadly nature of floods and the rapid timeframe in which they can occur, being ready for the next event is essential. We list the most critical steps to take in each stage of the flood

What to Do? Before, After, and During a Flood

- What is a flood?
- Before a Flood
- During a Flood
- After a Flood

Flood Protection Grant Programs

National Flood Insurance Program (NFIP)

Workshop & Training

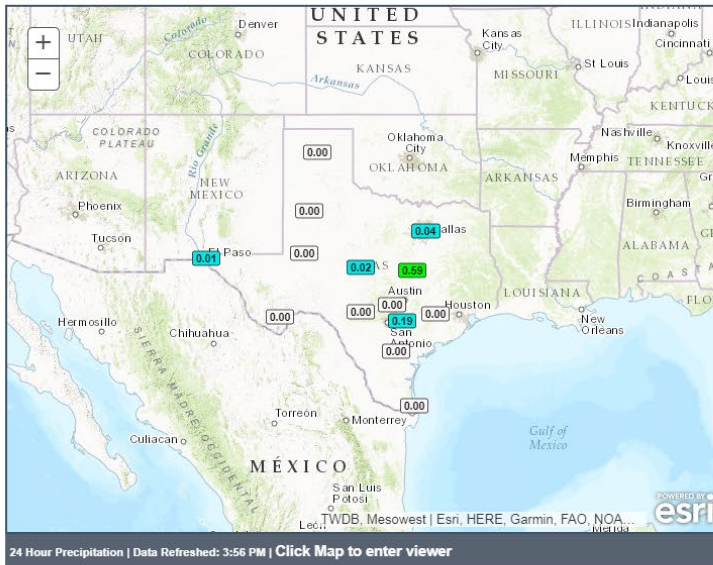
Community Resources

Flood Mitigation Planning Staff

www.TexMesonet.org



Weather Forecast Historical Weather Data Services About



2017 Hurricane Season

June 1st to November 30th

[TxDOT Hurricane Info](#)

[Texas Emergency Preparedness](#)

Austin, TX

Thursday (8/24/2017) | Chance Showers And Thu... | (95°F / 75°F)

National Weather Service Forecast

50%	30%	80%
This Afternoon: 95°F Chance Showers And Thunderstorms	Friday: 94°F Chance Showers And Thunderstorms	Saturday: 85°F Tropical Storm Conditions Possible

Historical Weather

Data Services

Flood Protection Grant Programs



Flood Protection Planning – *Next Cycle 2020 - 2021*

- State funding grants to conduct feasibility studies for structural and non-structural solutions to flood hazards in an entire watershed



Flood Mitigation Assistance - *Next Cycle October 2019*

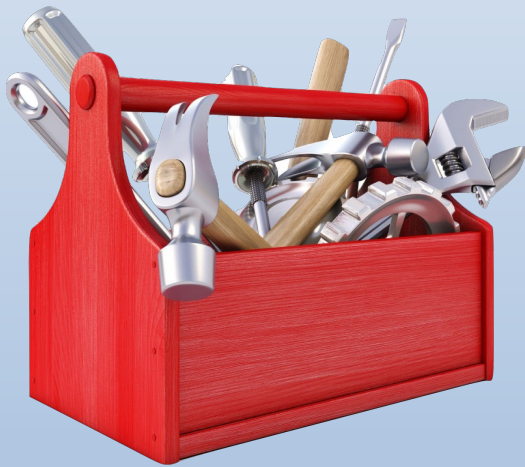
- Federal funding for cost-effective measures to reduce or eliminate long-term flooding risk

State-Wide Commitments Since 1957



A Toolbox for Public Water Utilities

With the creation of the TWDB, the legislature created a set of financing tools to help public utilities achieve their infrastructure goals.



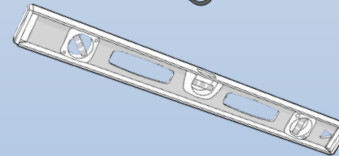
Many of our financing options are unique, and some are designed for specific purposes:



Rural Projects



Projects serving
Economically Distressed
Areas



Right-sizing
projects for future demand

Programs

- **Federal Funds**

- Drinking Water State Revolving Fund (DWSRF)
- Clean Water State Revolving Fund (CWSRF)

- **State Funds**

- State Water Implementation Fund for Texas (SWIFT)
- Texas Water Development Fund (DFund)
- Economically Distressed Areas Program (EDAP)
- Rural Water Assistance Fund (RWAFF)
- State Participation (SP)
- Agricultural Conservation Loans (AG)

How Can These Tools Work for You?

AAA Bond Rating/
Interest Rate
Subsidization

Funding to
accommodate
projects of all sizes











































Some projects
qualify for combined
funding through
multiple programs

All project phases are
eligible for funding

Eligible Applicants

	SWIFT	CWSRF	DWSRF	EDAP	RWAF	SP	DFund
Political Subdivisions							
Non-profit WSC's							
Investor-owned Utilities							

Eligible Projects

	SWIFT	CWSRF	DWSRF	EDAP	RWAF	SP	DFund
Water Supply: Current Need							
Water Supply: Future Need							
Water Treatment							
Water Transmission & Distribution							
Potable Reuse							
Wastewater Collection							
Wastewater Treatment							
Nonpoint Source Pollution Control							
Flood Control & Storm Water Management							

Illustrative Lending Rates – February 22, 2019

General Obligation Loan Programs

Type of Funds	Terms	ESTIMATED RATE Market Rate	TWDB Rate	VARIANCE
Development Fund (Tax Exempt)	30	4.09%	3.91%	0.17%
Agricultural Loans (Taxable)	7	3.81%	2.54%	1.27%
Rural Water Assistance Fund (Taxable)	40	N/A	4.42%	N/A

State Revolving Funds - for projects in the SFY 2019 Intended Use Plans

Type of Funds	Terms	ESTIMATED RATE Market Rate	TWDB Rate	VARIANCE
Clean Water SRF Non-Equivalency (AA)	30	3.02%	1.72%	1.30%
Clean Water SRF Non-Equivalency (BAA)	30	3.67%	2.02%	1.30%
Clean Water SRF Equivalency (AA)	30	3.02%	1.37%	1.65%
Clean Water SRF Equivalency (BAA)	30	3.67%	2.02%	1.65%
Drinking Water SRF (AA)	30	3.02%	1.67%	1.35%
Drinking Water SRF (BAA)	30	3.67%	2.32%	1.35%

Federal Funds (SRF) Programs

- Funded by the **US Environmental Protection Agency (EPA)**
- Interest rate subsidization
- Partial Principal Loan Forgiveness **PLF** available for certain project types
- Multi-year Commitment option

Two Paths for State Revolving Fund

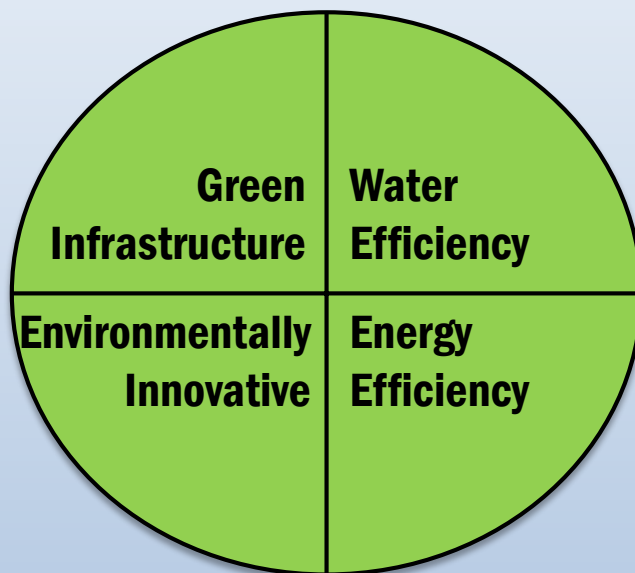


Disadvantaged Community Eligibility

- 75% or less of state-wide Annual Median Household Income (AMHI)
 - State's AMHI is \$54,727 (per 2016 ACS data)
 - $\$54,727 \times .75 = \mathbf{\$41,045}$ eligibility threshold
- Also takes into consideration average household size, utility rates, loan repayment, unemployment rates and population declines
- Documented using Census information or a household survey
- 30%, 50%, or 70% Principal Loan Forgiveness

Green Project Principal Loan Forgiveness

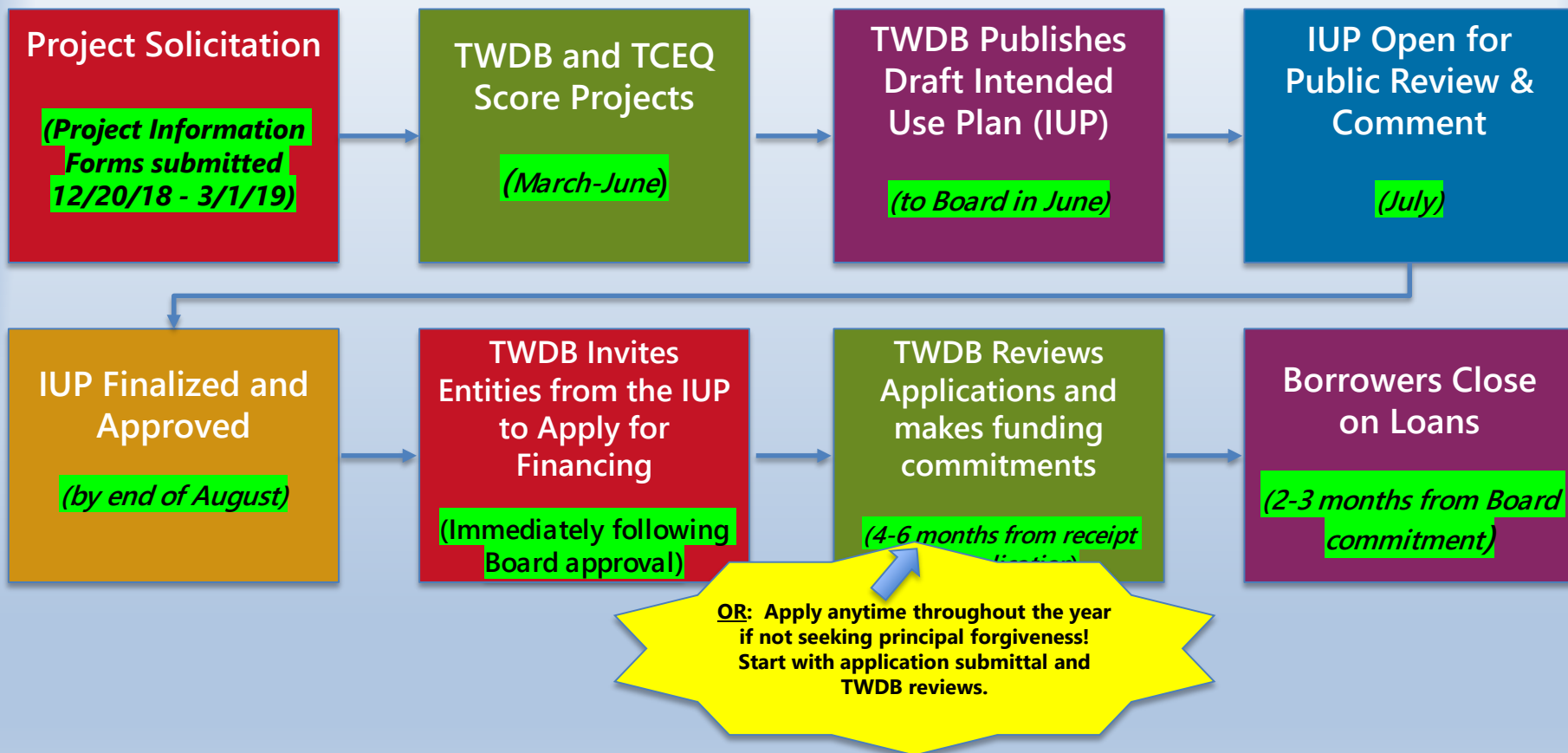
- **Green initiatives** If at least 30% of project costs green, eligible for up to **15% PLF** on green dollars
- Entire project or discrete components



GREEN INFRASTRUCTURE

- permeable pavement
- bioretention
- trees/urban forestry
- green roofs
- constructed wetlands
- stormwater reuse piping

SRF Annual Funding Cycle



Drinking Water State Revolving Fund



Offers financing 125 basis points below the applicant's market interest rate



<u>Year</u>	<u>Capacity</u>	<u>PLF</u>
SFY 2018	\$250M	\$21M
SFY 2019	\$250M	\$30M



Partial Principal Loan Forgiveness available for Disadvantaged Communities, Very Small Systems, Urgent Need projects, and projects with Green components

Sample DWSRF Project

Harris County MUD 50 Water System Improvements



- Treatment plant improvements at 2 facilities
- Replace distribution lines
- \$3,504,409 total DWSRF loan
- \$1,034,409 Principal Forgiveness
- \$421,851 Interest Savings
- Total Cost Savings: **\$1,456,260**

Clean Water State Revolving Fund



Offers financing up to 155 basis points below the applicant's market interest rate



Year	Capacity	PLF
SFY 2018	\$525M	\$23M
SFY 2019	\$525M	\$28.6M



Partial Principal Loan Forgiveness available for Disadvantaged Communities and projects with Green components

Sample CWSRF Project

Houston

Collection System Rehabilitation

- Ongoing effort to renew at least 600,000 linear feet of collection system each year
- Pipe sizes range from 6" to 72"
- Project will reduce sanitary sewer overflows
- Inflow and infiltration are addressed, resulting in optimized performance
- \$65,750,000 total CWSRF loan
- Cost savings: **\$19,499,242**



Primary SRF Program Requirements



- Disadvantaged Business Enterprise (DBE) Procurement
- National Environmental Policy Act (NEPA) Environmental Review
- Davis-Bacon prevailing wage rates
- American Iron & Steel

Technical assistance available!

The background of the slide features a low-angle shot of the Texas State Capitol dome, showing its classical architecture with columns and arches. The top of the dome is visible, along with the Statue of Liberty on top. To the right, an American flag is flying on a tall pole against a clear blue sky.

Texas Funded Programs

- Funded with bond proceeds (AAA bond rating)
- Loans based on TWDB's cost of funds
- ~~Grants available (EDAP)~~
- Subsidization and deferral available (SWIFT)

Texas Water Development Fund (DFund)



Versatile funding for water and wastewater



TWDB's oldest financial assistance program



Powered by agency's AAA bond rating

Sample DFund Project

Fort Bend County WCID 8



- Water Well & Generator
- Goal to provide second water source and emergency power service
- \$4,900,000 total DFund loan
- Cost savings: **\$70,539**



**State Water Implementation
Fund for Texas**

Funding Commitments 2015 – 2018

\$8.1 Billion

\$825 Million in interest savings

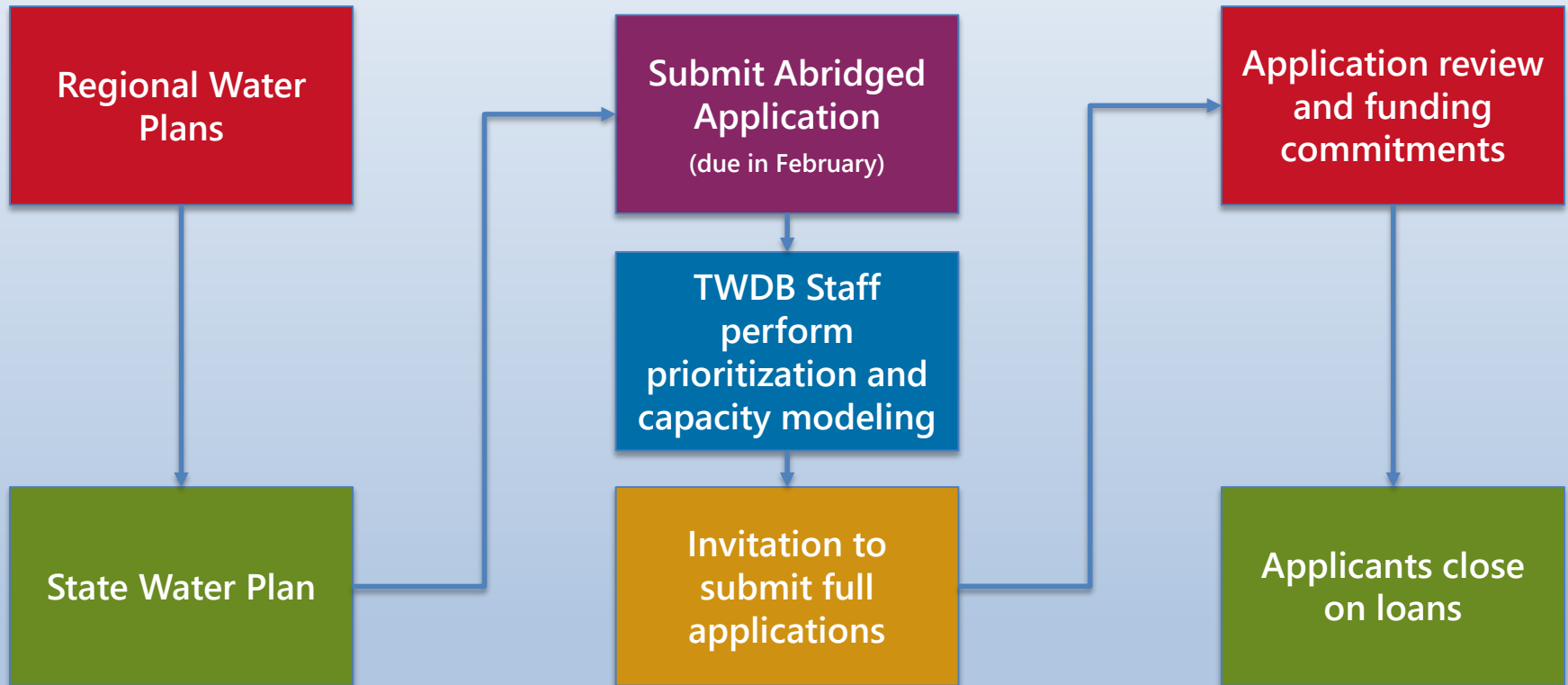
Eligible Projects

- Recommended Water Management Strategies in the state water plan
- Includes a wide range of water supply and conservation projects

Financing Options

- Low-interest loans
- Deferred loans
- Board Participation
- Multi-year commitments

SWIFT Funding Cycle



Sample SWIFT Project

Austin

Direct Reuse

- Supply needs identified in regional planning will be met by increased conservation and expanded use of reclaimed water
- Rehab & expansion of filtration systems, new storage tank & pump stations, and approx. 74,000 feet of transmission mains
- \$86,900,000 SWIFT *multi-year* commitment
- Cost savings: **\$2,035,348!** (on \$20 million closed in 2016)



SWIFT Commitments - Luce Bayou Interbasin Transfer & NEWPP Expansion



- Address subsidence - convert from groundwater to surface water
- Meet water demands

	Total Committed
Houston	449,280,000
North Harris Co RWA	2,075,995,000
Central Harris Co RWA	71,105,000
West Harris Co RWA	957,140,000
North Fort Bend WA	895,325,000
Coastal WA	300,000,000
Total	4,748,845,000

Pre-Application Meetings



Need Info? Check out our website!

www.TWDB.texas.gov

Texas Water Development Board

Home Board SWIFT **Financial Assistance** Water Planning Groundwater Surface Water Flood Conservation Innovative Water

Search site Search

Connect with us: f t in y i s

WATER for TEXAS
2019 conference
Austin, Texas | January 23-25, 2019
VISIT THE WEBSITE

Board Meetings

Agency Tweets

Hot Topics

Hurricane Harvey Assistance

Disaster recovery financial assistance available

www.TWDB.texas.gov

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