Cost Estimate Summary
J-7 Public Conservation Education
Bandera County FWSD No. 1
June 12, 2025

Public Conservation Education Calculation Methodology

Introduction

Public education may be one of the most productive actions that can result in the greatest amount of water savings. Most citizens are willing to actively do their part to conserve water once the need is communicated and how to accomplish the most benefit is explained. Numerous state, county, and academic agencies provide educational material and demonstrations. Groundwater conservation districts also provide water conservation activities.

The TWDB provides a significant amount of information and services pertaining to water conservation that can be accessed at: TWDB Water Conservation.

Methodology

The process described below has been utilized in previous planning cycles and was formally adopted by the Plateau Water Planning Group (PWPG) for the purposes of this Plan.

Process 1: Collecting Data - No. of Connections
Steps

1. Go to the Texas Drinking Water Watch webpage. https://dww2.tceq.texas.gov/DWW/
2. Type in the name of the Public Water System (PWS) and hit "enter".
3. Click on the "Fact Sheet" hyperlink.
4. Log the "count" value into the table below.

WUG Name	No. of Connections	2030	2040	2050	2060	2070	2080
Bandera County FWSD #1	438	438	446.400	446.627	446.837	446.662	446.494

Process 2: Calculating Percent Change
Steps

1. Utilize the TWDB Approved Population Projections (Chapter 2 Table 2-1) for the appropriate entity.
2. Calculate percent change from one projected decade value to the next, for the entire planning period (see calculations below).

WUG Name	2030	2040	2050	2060	2070	2080	2030-2040	2040-2050	2050-2060	2060-2070	2070-2080
Bandera County FWSD #1	1,074	1,095	1,117	1,140	1,163	1,186	0.019178082	0.01969561	0.02017544	0.01977644	0.01939292

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Process 3: Calculating Total Annual Cost

Steps

1. Cost per connection was derived from "Best Management Practices for Municipal Water Users" – Texas Water Development Board Report, November 2013, Page 81.
2. Calculate total annual cost per decade by multiplying cost per customer ($2) to the decadal number of connections (see calculations below).

WUG Name	No. of Connections	2030	2040	2050	2060	2070	2080	Cost Per Customer	Total Annual Cost					
									2030	2040	2050	2060	2070	2080
Bandera County FWSD #1	438.0	438.0	446.4	446.6	446.8	446.7	446.5	$2.00	$876.00	$892.80	$893.25	$893.67	$893.32	$892.99

Process 4: Calculating Strategy Supply Volume (Acre-Feet per Year)

Steps

1. Utilize the TWDB Approved Water Demand Projections (Chapter 2 Table 2-2) for the appropriate entity.
2. Strategy supply volume is calculated at one percent of the water user group projected water demand by decade (see calculations below).
3. For planning purposes, use the largest calculated strategy supply volume.

WUG Name	WUG Demand (Acre-Feet per Year)						Strategy Supply (Acre-Feet per Year)					
	2030	2040	2050	2060	2070	2080	2030	2040	2050	2060	2070	2080
Bandera County FWSD #1	342	348	355	363	370	377	3	3	4	4	4	4

Process 5: Calculating Strategy Cost per Acre-Foot per Year

Steps

1. Derived by dividing the annual cost by the largest strategy supply volume for each decade (see calculations below).

WUG Name	Total Annual Cost						Strategy Cost Per Acre-Foot per Year					
	2030	2040	2050	2060	2070	2080	2030	2040	2050	2060	2070	2080
Bandera County FWSD #1	$876.00	$892.80	$893.25	$893.67	$893.32	$892.99	$256.14	$256.55	$251.62	$246.19	$241.44	$236.87