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CHAPTER 11: IMPLEMENTATION AND COMPARISON TO THE PREVIOUS REGIONAL WATER PLAN

This chapter presents a discussion and survey of water management strategy projects that were recommended in the 2016 Regional Water Plan and have since been implemented, as well as providing a summary comparison of the 2021 Regional Water Plan to the 2016 Regional Water Plan with respect to population, demands, water availability and supplies, and water management strategies.

11.1 IMPLEMENTATION

The Texas Water Development Board (TWDB) uses a survey to track the implementation status of all recommended strategies from the previous planning cycle. The TWDB survey template was used to collect the required information from the Water User Groups (WUGs) and wholesale water providers in the region. *Appendix 11A* contains two versions of the Implementation Template used to record the survey results. *Table 11A.1* is a shortened summary version of the results, based on survey responses. *Table 11A.2* is the full version of the TWDB template containing all of the information based on survey responses, presented to meet TWDB requirements. As of October 2020, seventeen (17) project sponsors had responded to the survey.

In general, water management strategies related to return flows, conservation, reuse, drought management, and new water sale contracts and contract amendments have been implemented to some extent since the 2016 Region K Water Plan. Based on responses to date, approximately twenty-five (25) of the water management strategies recommended in the 2016 Region K Water Plan were found to either be currently operating or to have all phases implemented. Based on responses to date, fifteen (15) others have been initiated or are in some state of progress. Supply numbers that were provided in the surveys have been included in the results tables in *Appendix 11A*. Many of these particular strategies are on-going and will continue to be recommended and implemented during future planning cycles.

Results showed that thirteen (13) water management strategies with capital costs that were recommended in the 2016 Region K Water Plan have been implemented to the point of operation. These projects include the following:

- City of Austin Direct Non-Potable Reuse
- City of Austin Other Reuse
- City of Austin Rainwater Harvesting
- City of Austin Conservation
- Direct Reuse – Buda
- Direct Reuse – Horseshoe Bay
- Direct Reuse – Pflugerville

- LCRA – Lane City Off-Channel Reservoir
- Expansion of Carrizo-Wilcox Aquifer Supplies – Aqua WSC
- Municipal Conservation – Bertram
- Municipal Conservation – Buda
- Municipal Conservation – Cedar Park
- Municipal Conservation – Horseshoe Bay
- Municipal Conservation – Smithville

Several of the reuse and conservation strategies are considered to be on-going and will continue to be recommended in future planning cycles. Implementation costs and water supply volumes are included in *Appendix 11A*, as available. Generally, strategies that are currently operating without capital costs include strategies such as Drought Management and Conservation for some Water User Groups.

Based on survey responses, a number of additional strategies recommended in the 2016 Region K Water Plan are underway, but not currently to the point of operation. This includes strategies that have permit applications submitted, are performing feasibility studies, or are in some stage of planning, design, or construction. The following projects have been started, but have not been completed:

- City of Austin Return Flows
- Drought Management – Fayette WSC
- Expansion of Carrizo-Wilcox Aquifer Supplies – LCRA
- Expansion of Ellenburger-San Saba Aquifer Supplies – Bertram
- LCRA – Acquire Additional Water Rights
- LCRA – Contract Amendments
- LCRA – New LCRA Contracts
- LCRA – Excess Flows Permit Off-Channel Reservoir
- LCRA – Mid-Basin Off-Channel Reservoir
- Municipal Conservation – Pflugerville
- Urgent Water Loss Reduction Project – Creedmoor-Maha WSC
- BS/EACD Edwards/Middle Trinity ASR

See *Appendix 11A* for additional information related to these and the rest of the water management strategies that were recommended in the 2016 Region K Water Plan.

11.2 COMPARISON TO THE PREVIOUS REGIONAL WATER PLAN

This section discusses how the 2021 Regional Water Plan compares to the 2016 Regional Water Plan, with respect to population, water demands, water supplies, and water management strategies.

11.2.1 Population Projections

The major change related to population that was made for the 2021 Region K Plan is related to the definition of a municipal Water User Group (WUG). In the 2016 Region K Plan, municipal WUGs were both city-based and utility-based. For the 2021 Region K Plan, the municipal WUGs are all utility-based. In addition, the threshold for being defined as an individual WUG changed so that water utilities providing more than 100 ac-ft/yr of water met the definition. In the 2016 Region K Plan, the threshold was 280 ac-ft/yr. This change increased the number of municipal WUGs in the region as compared to the 2016 Region K Plan.

Overall for Region K, there is a population projection increase of approximately 25,000 for Year 2020 between the 2016 Region K Plan and the 2021 Region K Plan. By 2070, the 2021 Region K Plan shows a population projection that is approximately 47,000 higher than the 2070 population projection in the 2016 Region K Plan. The rate of population projection growth by planning decade is approximately the same as (no change from) the rates shown in the 2016 Region K Plan. Tabular data and bar graphs comparing the two (2) plans can be found in *Appendix 11B*.

Overall, population estimates for most counties have not changed between the 2016 Region K Plan and the 2021 Region K Plan. Travis County was found to have a higher population projection predicted by year 2070 in the 2021 RWP, as compared to the 2016 Region K Plan. All other counties were found to have no change in population projection by Year 2070.

Overall, population projection growth rates for most counties have not changed between the 2016 Region K Plan and the 2021 Region K Plan. Travis County was found to have a negligibly faster population projection growth rate (<0.1% increase) in the 2021 RWP, as compared to the 2016 Region K Plan. All other counties were found to have no change in population projection growth rate.

These changes by county are summarized in *Table 11.1*.

Table 11.1: Comparison of 2021 Region K Plan and 2016 Region K Plan with respect to the 2070 Population Projections and Overall Projection Growth Rates by County

County	Population in Year 2070 (2021 RWP compared to 2016 RWP)	Population Growth Rate (2021 RWP compared to 2016 RWP)
Bastrop	No Change	No Change
Blanco	No Change	No Change
Burnet	No Change	No Change
Colorado	No Change	No Change
Fayette	No Change	No Change
Gillespie	No Change	No Change
Hays (partial)	No Change	No Change
Llano	No Change	No Change
Matagorda	No Change	No Change
Mills	No Change	No Change
San Saba	No Change	No Change
Travis	Increase	Negligible Increase
Wharton (partial)	No Change	No Change
Williamson (partial)	No Change	No Change
Total (Region K)	Increase	No Change

11.2.2 Water Demand Projections

Overall for Region K, there is a decrease in water demand of approximately 66,000 acre-feet/year for Year 2020 between the 2016 Region K Plan and the 2021 Region K Plan. By 2070, the 2021 Region K Plan shows a total water demand that is approximately 154,000 acre-feet/year lower than the 2070 total water demand in the 2016 Region K Plan. The rate of water demand growth by planning decade is approximately 1.1% lower than was shown in the 2016 Region K Plan. Tabular data and bar graphs comparing the two plans can be found in *Appendix 11B*. Water demand projection methodologies for this cycle are discussed in *Chapter 2*.

Water demand projections for each usage category have changed between the 2016 Region K Plan and the 2021 Region K Plan. Only the municipal water usage category has a higher water demand predicted by Year 2070 in the 2021 Region K Plan. The remaining water usage categories had a smaller water demand predicted by Year 2070 in the 2021 Region K Plan: Livestock, Irrigation, Manufacturing, Mining, and Steam-Electric Power Generation.

Water demand projection growth rates for each usage category have also changed between the 2016 Region K Plan and the 2021 Region K Plan. The following water usage categories had a less than one percent (1%) change in the water demand projection growth rate when comparing the 2021 Region K Plan to the 2016 Region K Plan: Municipal, Livestock, and Irrigation. The remaining water usage categories had slower demand projection rates in the 2021 Region K Plan, as compared to the 2016 Region K Plan: Manufacturing, Mining, and Steam-Electric Power Generation.

These changes are summarized in *Table 11.2*.

Table 11.2: Demand Change in Year 2070 by Water Usage Category, from 2016 to 2021 Region K Plan

Water Usage Category	Water Demand in Year 2070 (2021 RWP compared to 2016 RWP)	Water Demand Growth Rate (2021 RWP compared to 2016 RWP)
Municipal	Increase	No Change
Livestock	Decrease	No Change
Irrigation	Decrease	No Change
Manufacturing	Decrease	Decrease
Mining	Decrease	Decrease
Steam-Electric Power Generation	Decrease	Decrease
Total Water Demand	Decrease	Decrease

Table 11.3 identifies counties that have a higher projected water demand by Year 2070 in the 2021 Region K Plan than was shown in the 2016 Region K Plan, based on all water use categories. In addition, the usage category that has the greatest impact on that county’s growth is shown in *Table 11.3*.

Table 11.3: Counties with Year 2070 Total Water Demand Increase from 2016 to 2021 Region K Plan

County	Total Water Demand Increase in Year 2070 (acre-feet/year)	Greatest Water Usage Category Increase
Blanco	801	Irrigation
Colorado	11,553	Irrigation
Mills	1,919	Irrigation
San Saba	2,294	Irrigation
Williamson (partial)	1,201	Municipal

Table 11.4 identifies counties that have a lower projected water demand by Year 2070 than was shown in the 2016 Region K Plan. In addition, the water usage category that has the greatest impact on each county’s decrease is shown in *Table 11.4*.

Table 11.4: Counties with Year 2070 Total Water Demand Decrease from 2011 RWP

County	Total Water Demand Decrease in Year 2070 (acre-feet/year)	Greatest Water Usage Category Decrease
Bastrop	-13,930	Mining
Burnet	-1,849	Manufacturing
Fayette	-4,054	Steam-Electric Power Generation
Gillespie	-511	Manufacturing
Hays (partial)	-738	Municipal
Llano	-1,639	Irrigation
Matagorda	-55,156	Steam-Electric Power Generation
Travis	-78,275	Manufacturing
Wharton (partial)	-15,780	Irrigation

11.2.3 Drought of Record and Hydrologic Assumptions

The Drought of Record for the 2016 Region K Water Plan occurred from 1947-1957, while the Drought-of-Record for the 2021 Region K Water Plan occurred from 2007-2016. The Region K Cutoff Model was used in both plans for determining the surface water availability numbers. In the 2016 Region K Plan, the period of record was from 1940-2013, with a critical dry year of 2011. For the 2021 Region K Plan, the period of record was from 1940-2016, with a critical dry year of 2011. Hydrologic assumptions for the surface water modeling involving the Region K Cutoff Model are included in *Chapter 3*.

11.2.4 Groundwater and Surface Water Availability and Water Supplies

Overall for Region K, the total water source availability in the 2021 Region K Plan has slightly increased from the availability in the 2016 Region K Plan. In the 2016 Region K Plan, the total water availability for 2020 is approximately 1.29 million acre-feet/year, with 75 percent surface water and 25 percent groundwater. In the 2021 Region K Plan, the total water availability for 2020 and 2070 was approximately 1.3 million acre-feet/year, with 71 percent surface water and 29 percent groundwater.

Figure 11.1 shows a comparison of water availability by type of source, for 2020 and 2070, in the 2016 Region K Plan and the 2021 Region K Plan.

Figure 11.1: Comparison of Water Availability by Type of Source for 2020 and 2070

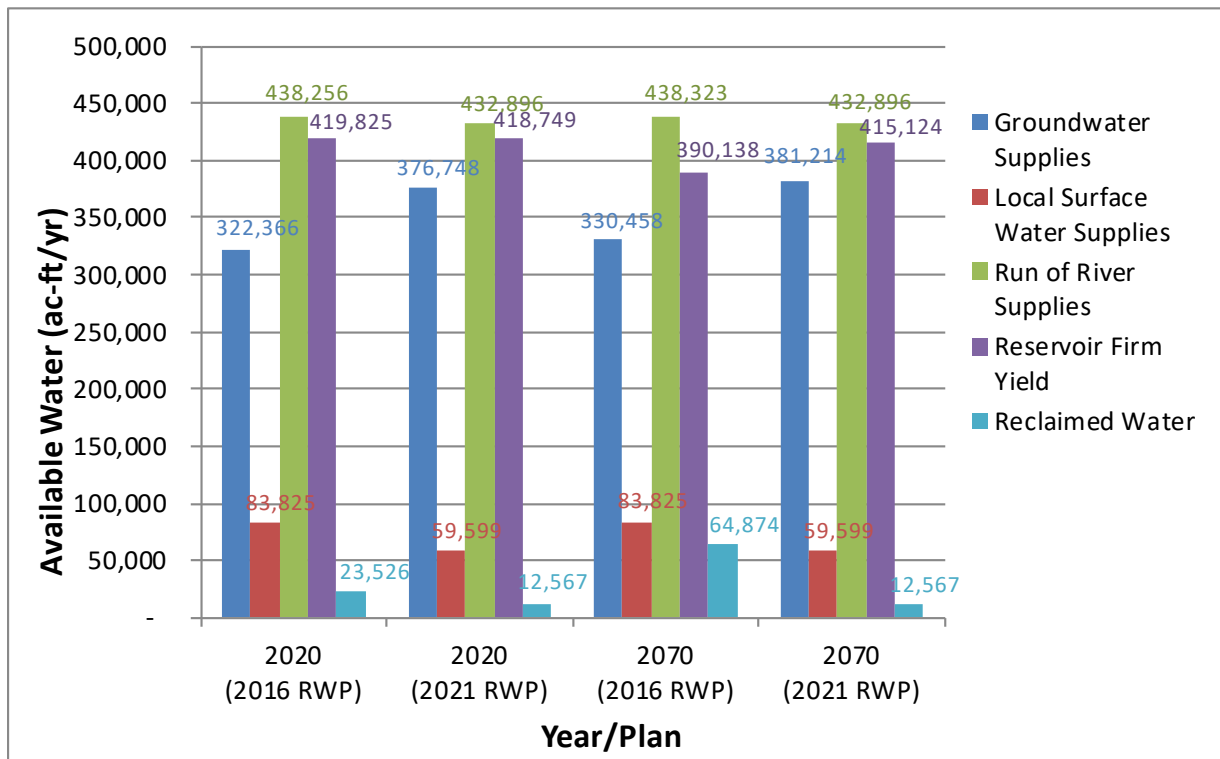
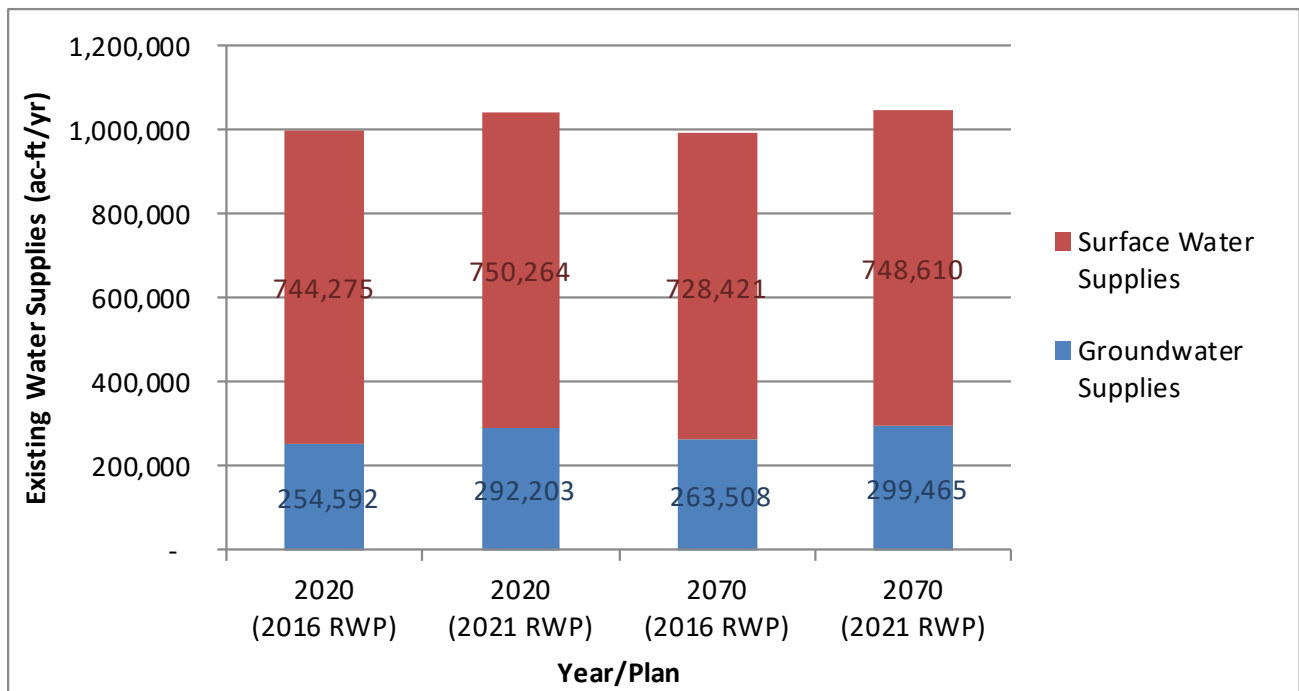


Figure 11.2 provides a comparison of the existing surface water and groundwater supplies in Region K for the 2016 Region K Plan and 2021 Region K Plan, shown for the 2020 and 2070 planning decades. Existing water supplies are those that can be currently accessed by Water User Groups, both physically and legally. Existing water supplies are generally less than the available source volumes. Total existing water supplies increase in the 2021 Region K Plan as compared to the 2016 Region K Plan. In the 2016 Region K Plan, the total existing water supplies (surface water plus groundwater) are 998,867 ac-ft/yr in 2020 and 991,929 ac-ft/yr in 2070. In the 2021 Region K Plan, the total existing water supplies are 1,042,067 ac-ft/yr in 2020 and 1,048,075 ac-ft/yr in 2070.

Figure 11.2: Comparison of Existing Water Supplies for 2020 and 2070



11.2.5 Water Needs

Water needs in the region are determined by comparing the demand projections to the existing supplies. The 2070 water needs for Region K have decreased by approximately 192,000 ac-ft/yr in the 2021 Region K Plan, as compared to the 2016 Region K Plan. This decrease in needs is due to a combination of decreased total demands and increased total existing supplies (source availability) for Region K, as described in Sections 11.2.2 and 11.2.4 above. Table 11.5 shows a comparison of the 2070 needs by county for the 2016 Region K Plan and the 2021 Region K Plan. The needs have decreased due in part to reductions in water demands for Irrigation, Manufacturing, and Steam-Electric demands in certain counties.

Table 11.5: Comparison of Water Needs by County for 2070

County	2070 Water Needs from 2016 RWP (ac-ft/yr)	2070 Water Needs from 2021 RWP (ac-ft/yr)	Comparison (Positive = Increased Need) (ac-ft/yr)
Bastrop	47,187	37,368	-9,819
Blanco	230	82	-148
Burnet	10,457	9,033	-1,424
Colorado	38,205	37,433	-772
Fayette	8,750	5,246	-3,504
Gillespie	848	0	-848
Hays	23,294	18,990	-4,304
Llano	629	642	13
Matagorda	164,999	110,277	-54,722
Mills	583	1,756	1,173
San Saba	152	0	-152
Travis	134,438	43,787	-86,851
Wharton	82,532	53,386	-29,146
Williamson	0	785	785
Total (Region K)	512,304	320,685	-189,719

The 2070 firm water needs for Major Water providers (LCRA and Austin) in the region have changed between the 2016 Region K Plan and the 2021 Region K Plan, as shown in *Table 11.6* below. The decrease in needs for LCRA was related to a reduced sedimentation impact in the firm yield of the Highland Lakes and to the construction of the Arbuckle Reservoir. The decrease in needs for Austin was related in part to a decrease in demands, particularly a decrease in reported manufacturing demands. For the 2021 Plan, the West Travis County Public Utility Agency is also a Major Water Provider, but was not included in that category last cycle, so no comparison has been included.

Table 11.6: Comparison of 2070 Firm Water Surplus/Needs by Major Water Provider

Major Water Provider	2070 Firm Water Surplus/Need from 2016 RWP (ac-ft/yr)	2070 Firm Water Surplus/Need from 2021 RWP (ac-ft/yr)
LCRA	(8,163)	8,127
Austin	(87,441)	(11,658)

11.2.6 Recommended Water Management Strategies

As strategies have been implemented or determined infeasible since the previous planning cycle, the water management strategies identified in the 2021 Region K Plan have key differences from the identified water management strategies in the 2016 Region K Plan. The next two sections identify only the differences between the two plans.

There are several recommended water management strategies that were included in the 2016 Region K Plan but are no longer recommended in the 2021 Region K Plan. Those strategies include the following:

- Lake Long Enhanced Storage (removed from Plan)
- LCRA Lane City Reservoir (implemented strategy; moved to existing supply – see *Chapter 3*)
- LCRA Groundwater Supply for FPP (on-site and off-site) (considered in 2021 Plan)
- Expand Local Use of Groundwater Supplies – Hickory Aquifer (removed from Plan)
- Expand Local Use of Groundwater Supplies – Marble Falls Aquifer (removed from Plan)
- Development of New Groundwater Supplies – Carrizo-Wilcox Aquifer (removed from Plan)

There are many recommended water management strategies in the 2021 Region K Plan that are new and were not included as Recommended in the 2016 Region K Plan. They include the following:

- Import Return Flows from Williamson County (Alternative in 2016 Plan)
- Baylor Creek Reservoir (Alternative in 2016 Plan)
- LCRA Aquifer Storage and Recovery in Carrizo-Wilcox (Alternative in 2016 Plan)
- LCRA Enhanced Recharge (Alternative in 2016 Plan)
- Austin (COA) Brackish Groundwater Desalination (Alternative in 2016 Plan)
- Austin Onsite and Community-Scale Rainwater and Stormwater Harvesting (expansion of strategy in 2016 Plan)
- Austin Blackwater and Greywater Reuse (expansion of strategies from 2016 Plan)
- Austin Off-Channel Reservoir and Evaporation Suppression (modification and expansion of strategy in 2016 Plan)
- Direct Potable Reuse (Alternative in 2016 Plan - Buda; Recommended in 2021 Plan for multiple WUGs)
- Water Supply Infrastructure Expansion
- Expand Local Use of Groundwater Supplies – Yegua-Jackson Aquifer
- Development of New Groundwater Supplies – Ellenburger-San Saba Aquifer
- Development of New Groundwater Supplies – Marble Falls Aquifer
- Development of New Groundwater Supplies – Sparta Aquifer
- Development of New Groundwater Supplies – Yegua-Jackson Aquifer
- Wharton Water Supply Strategy
- Irrigation Conservation - Drip Irrigation
- Irrigation Conservation - Real-Time Use Metering and Monitoring

11.2.7 Alternative Water Management Strategies

There are several alternative water management strategies that were included in the 2016 Region K Plan but are no longer included as alternative strategies in the 2021 Region K Plan. Those strategies include the following:

- Groundwater Importation – Carrizo-Wilcox Aquifer to LCRA System (considered in 2021 Plan)
- Import Return Flows from Williamson County (moved to Recommended in 2021 Plan)
- Baylor Creek Reservoir (moved to Recommended in 2021 Plan)
- LCRA Aquifer Storage and Recovery in Carrizo-Wilcox (moved to Recommended in 2021 Plan)
- LCRA Enhanced Recharge (moved to Recommended in 2021 Plan)
- Austin (COA) Brackish Groundwater Desalination (moved to Recommended in 2021 Plan)
- COA Reclaimed Water Bank Infiltration to Colorado Alluvium (removed from consideration)
- HCPUA Pipeline (alternative version removed; Recommended version kept – renamed ARWA Pipeline)
- Direct Potable Reuse (moved to Recommended in 2021 Plan)

There are also a couple of alternative water management strategies in the 2021 Region K Plan that are new and were not in the 2016 Region K Plan. They include the following:

- Expand Use of Carrizo-Wilcox Aquifer (Bastrop County)
- LCRA Expand Use of Groundwater in Bastrop County

11.2.6 Recommended Water Management Strategy Projects

As strategies have been implemented or determined infeasible since the previous planning cycle, the associated water management strategy projects identified in the 2021 Region K Plan have key differences from the identified water management strategy projects in the 2016 Region K Plan. The next two sections identify only the differences between the two plans.

There are several recommended water management strategy projects that were included in the 2016 Region K Plan but are no longer recommended in the 2021 Region K Plan. Strategies that were removed from the Plan or considered but not recommended have no associated projects in the 2021 Plan. Those strategies include the following:

- Lake Long Enhanced Storage (removed from Plan)
- LCRA Lane City Reservoir (removed from Plan)
- LCRA Groundwater Supply for FPP (on-site and off-site) (considered in 2021 Plan)
- Expand Local Use of Groundwater Supplies – Hickory Aquifer (removed from Plan)
- Expand Local Use of Groundwater Supplies – Marble Falls Aquifer (removed from Plan)

- Development of New Groundwater Supplies – Carrizo-Wilcox Aquifer (removed from Plan)

There are many recommended water management strategies and associated projects in the 2021 Region K Plan that are new and were not included as Recommended in the 2016 Region K Plan. They include the following:

- Import Return Flows from Williamson County (Alternative in 2016 Plan)
- Baylor Creek Reservoir (Alternative in 2016 Plan)
- LCRA Aquifer Storage and Recovery in Carrizo-Wilcox (Alternative in 2016 Plan)
- LCRA Enhanced Recharge (Alternative in 2016 Plan)
- Austin (COA) Brackish Groundwater Desalination (Alternative in 2016 Plan)
- Austin Onsite and Community-Scale Rainwater and Stormwater Harvesting (expansion of strategy in 2016 Plan)
- Austin Blackwater and Greywater Reuse (expansion of strategies from 2016 Plan)
- Austin Off-Channel Reservoir and Evaporation Suppression (modification and expansion of strategy in 2016 Plan)
- Direct Potable Reuse (Alternative in 2016 Plan - Buda; Recommended in 2021 Plan for multiple WUGs)
- Water Supply Infrastructure Expansion
- Expand Local Use of Groundwater Supplies – Yegua-Jackson Aquifer
- Development of New Groundwater Supplies – Ellenburger-San Saba Aquifer
- Development of New Groundwater Supplies – Marble Falls Aquifer
- Development of New Groundwater Supplies – Sparta Aquifer
- Development of New Groundwater Supplies – Yegua-Jackson Aquifer
- Irrigation Conservation - Drip Irrigation
- Irrigation Conservation - Real-Time Use Metering and Monitoring
- Rainwater Harvesting

There are a number of strategies recommended in the 2016 Region K Plan, also recommended in the 2021 Region K Plan, that include new projects in this 2021 planning cycle for multiple WUGs. This may be due to new WUG boundaries/designations or increased WUG interest. New projects are included for the following strategies:

- Municipal Conservation
- Direct Reuse
- Direct Potable Reuse

- BS/EACD Edwards / Middle Trinity ASR
- New Surface Water Infrastructure
- Expansion of Gulf Coast Aquifer Supplies
- Expansion of Sparta Aquifer Supplies
- Expansion of Trinity Aquifer Supplies
- Development of New Gulf Coast Aquifer Supplies
- Development of New Hickory Aquifer Supplies
- Development of New Trinity Aquifer Supplies

A considered strategy in the 2016 Plan for the Wharton Water Supply was recommended for the 2021 Plan. However, the project associated with this strategy is Expansion of Gulf Coast Aquifer Supplies, which is an existing strategy included in the 2016 Plan.

11.2.7 Alternative Water Management Strategy Projects

There are two alternative water management strategies with associated projects that were included in the 2016 Region K Plan but are no longer included as alternative in the 2021 Region K Plan. Strategies that were removed from consideration or considered but not recommended as an alternative have no associated projects in the 2021 Plan. Those strategies include the following:

- Groundwater Importation – Carrizo-Wilcox Aquifer to LCRA System (considered in 2021 Plan)
- COA Reclaimed Water Bank Infiltration to Colorado Alluvium (removed from consideration)

There are several alternative water management strategies that were included in the 2016 Region K Plan that were moved to recommended in the 2021 Region K Plan. All listed recommended strategies have associated projects with capital costs. Those strategies include the following:

- Import Return Flows from Williamson County (moved to Recommended in 2021 Plan)
- Baylor Creek Reservoir (moved to Recommended in 2021 Plan)
- LCRA Aquifer Storage and Recovery in Carrizo-Wilcox (moved to Recommended in 2021 Plan)
- LCRA Enhanced Recharge (moved to Recommended in 2021 Plan)
- Austin (COA) Brackish Groundwater Desalination (moved to Recommended in 2021 Plan)
- Direct Potable Reuse (moved to Recommended in 2021 Plan)

The alternative strategy for the HCPUA Pipeline was removed from the 2021 Plan, but the recommended strategy was kept and renamed under the ARWA Pipeline strategy. The project associated with this strategy is the ARWA/GBRA Project, included in the 2021 South Central Texas Regional Water Plan (Region L).

There are also a couple of alternative water management strategies in the 2021 Region K Plan that are new and were not in the 2016 Region K Plan. These strategies both have associated projects with capital costs. They include the following:

- Expand Use of Carrizo-Wilcox Aquifer (Bastrop County)
- LCRA Expand Use of Groundwater in Bastrop County

11.2.8 Region’s Progress Towards “Regionalization”

HB 807 requires that the regional water plan shall “assess the progress of the RWPA in encouraging cooperation between water user groups for the purpose of achieving economies of scale and otherwise incentivizing strategies that benefit the entire region.”

The 2021 Region K Water Plan has recommended a number of water management strategies that encourage cooperation between water user groups and have the ability to benefit a large part of the region. In addition, the Lane City off-channel reservoir (now known as the Arbuckle Reservoir) was recommended in the 2016 Region K Water Plan and has since been constructed. This reservoir has the ability to benefit a large portion of the region by capturing additional flood flows that would previously have been lost downstream and allowing release of them when needed, and by reducing the need to release stored water from lakes Buchanan and Travis to meet downstream needs.

Recommended strategies in the 2021 Region K Water Plan that make progress towards “regionalization” include other proposed LCRA off-channel reservoirs, importing return flows from Williamson County, the Burnet County Regional Projects (Buena Vista, East Lake Buchanan, and Marble Falls), the proposed Bastrop Regional Project (future surface water infrastructure for Aqua WSC, Bastrop, and Bastrop County WCID 2), and the Hays County Pipeline project.

APPENDIX 11A

*IMPLEMENTATION SURVEY TEMPLATE FOR 2016 REGION K
WATER PLAN PROJECTS*

**Table 11A.1 - Summary of TWDB Template Containing Survey Results of
Implementation Status of Water Management Strategies from the 2016
Region K Water Plan**

**Table 11A.2 - Full TWDB Template Containing Survey Results of Implementation
Status of Water Management Strategies from the 2016 Region K Water
Plan**

Table 11A-1: Summary of TWDB Template Containing Survey Results of Implementation Status of Water Management Strategies from the 2016 Region K Water Plan

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefiting WUGs	Implementation Survey Record Type	Database ID	Has Sponsor taken affirmative vote or actions?* (TWC 16.053(h)(10))	If yes, in what year did this occur?	If yes, by what date is the action on schedule for implementation?	At what level of implementation is the project currently?*	If not implemented, why?* (When "If other, please describe" is selected, please add the descriptive text to that field)	What impediments presented to implementation?* (When "If other, please describe" is selected, please add the descriptive text to that field)	Current water supply project yield (ac-ft/yr)	Funds expended to date (\$)	Project Cost (\$)	Year the project is online?*
K	BUENA VISTA REGIONAL PROJECT	2020	PROJECT SPONSOR(S): BERTRAM; BURNET; COUNTY-OTHER (BURNET)	RECOMMENDED WMS PROJECT	2258	No			Not implemented	The City is adding additional sources to the Water Plan and not using this strategy					
K	CITY OF AUSTIN - AQUIFER STORAGE AND RECOVERY	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2135	Yes	2018 - AWFP approved by City Council	Began in 2019	Sponsor has taken official action to initiate project		TBD	0	\$250,000	\$367 million	
K	CITY OF AUSTIN - CAPTURE LOCAL INFLOWS TO LADY BIRD LAKE	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2148	Yes	2018 - AWFP approved by City Council	2040 - target for completion	Not implemented	Too soon	TBD	0	\$250,000	Capital costs included as part of the COA Indirect Potable Reuse through Lady Bird Lake strategy	
K	CITY OF AUSTIN - DIRECT REUSE	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2132	Yes	1974	Ongoing	Currently operating		TBD	4,500 AFY	Approx \$119M since 1974	\$422M through 2115	
K	CITY OF AUSTIN - INDIRECT POTABLE REUSE THROUGH LADY BIRD LAKE	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2152	Yes	2018 - AWFP approved by City Council	2040 - target for completion	Not implemented	Too soon	TBD	0	\$750,000	\$91M	
K	CITY OF AUSTIN - LAKE AUSTIN OPERATIONS	2020	WMS SUPPLY RECIPIENT: AUSTIN	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	33371	Yes	2018 - AWFP approved by City Council	As necessary to respond to drought	Not implemented	Would be implemented in response to drought	TBD	0	\$0	No capital costs; O&M costs only	
K	CITY OF AUSTIN - LAKE LONG ENHANCED STORAGE	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2146	No			Not implemented	Project is no longer being considered as a strategy					
K	CITY OF AUSTIN - LONGHORN DAM OPERATIONS IMPROVEMENTS	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2144	Yes	2018	Ongoing	Sponsor has taken official action to initiate project		TBD	0	\$0	\$11M	
K	CITY OF AUSTIN - OTHER REUSE	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2147	Yes	2018 - AWFP approved by City Council	Ongoing	Currently operating		TBD	450 AFY	Ongoing	This strategy was broken into several individual strategies for the 2021 planning cycle; costs are being developed for these strategies	
K	CITY OF AUSTIN - RAINWATER HARVESTING	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2145	Yes	Rainwater harvesting rebates have been in place since 2009.	Rainwater harvesting rebates are currently in place.	Currently operating		Not applicable	3.55 ac-ft total (2014-2019)	\$723k (Funds expended to date)	TBD; generally to be borne by development with potential for cost offsets through utility incentives	
K	CITY OF AUSTIN CONSERVATION	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2131	Yes	Ongoing - various actions on multiple conservation strategies	Ongoing	Currently operating		Not applicable	Varies annually (TBD)	Varies annually (TBD)	Varies annually (TBD)	
K	CITY OF AUSTIN RETURN FLOWS DEVELOPMENT OF NEW HICKORY AQUIFER SUPPLIES - LLANO	2020	WMS SUPPLY RECIPIENT: AUSTIN	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	32320	Yes	Ongoing	Ongoing	Permit application submitted/pending	In process	TBD	0	n/a	TBD	
K	DIRECT REUSE - LLANO	2020	PROJECT SPONSOR(S): LLANO	RECOMMENDED WMS PROJECT	1766										
K	DIRECT REUSE - BUDA	2020	PROJECT SPONSOR(S): BUDA	RECOMMENDED WMS PROJECT	2321	Yes			Currently operating			18 AFY			2017
K	DIRECT REUSE - HORSESHOE BAY	2020	WMS SUPPLY RECIPIENT: HORSESHOE BAY	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	33297	Yes	2017		Currently operating	Two phase project	n/a	583 AFY	\$70,000	\$1,070,000	2017
K	DIRECT REUSE - LLANO	2020	PROJECT SPONSOR(S): LLANO	RECOMMENDED WMS PROJECT	2322	No			Not implemented	Financing	Funding				

Table 11A-1: Summary of TWDB Template Containing Survey Results of Implementation Status of Water Management Strategies from the 2016 Region K Water Plan

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Implementation Survey Record Type	Database ID	Has Sponsor taken affirmative vote or actions?* (TWC 16.053(h)(10))	If yes, in what year did this occur?	If yes, by what date is the action on schedule for implementation?	At what level of implementation is the project currently?*	If not implemented, why?* (When "If other, please describe" is selected, please add the descriptive text to that field)	What impediments presented to implementation?* (When "If other, please describe" is selected, please add the descriptive text to that field)	Current water supply project yield (ac-ft/yr)	Funds expended to date (\$)	Project Cost (\$)	Year the project is online?*
K	DIRECT REUSE - PFLUGERVILLE	2020	PROJECT SPONSOR(S): PFLUGERVILLE	RECOMMENDED WMS PROJECT	2323	Yes	2008	2009	Currently operating	n/a	n/a	n/a	n/a	n/a	2014
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: AQUA WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10389	No			Not implemented	Too soon	Trigger mechanism not met				
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: AUSTIN	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10645	Yes	2016 (most recent DCP)	Ongoing	Currently operating		TBD	Variable depending on drought restriction stage	Funding for outreach and enforcement as needed	Funded through operating budget	
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BAY CITY	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10987	Yes	2019	5-Nov-19	All phases fully implemented		n/a		\$0	\$0	2019
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BERTRAM	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10494	Yes	2019	15-Oct-19	Currently operating		n/a	n/a	\$3,500	\$3,500	2019
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BUDA	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10653	Yes	2012; 2019		All phases fully implemented						2017
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: CREEDMOOR-MAHA WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10437	Yes	2018	2019	Currently operating			Plan is in place. Will be implemented during drought.			2019
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: DRIPPING SPRINGS WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10670										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: FAYETTE WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10593	Yes	2017	2023	Feasibility study ongoing		Access to funding		\$8,000	\$2,100,000	2023
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: HORSESHOE BAY	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10525	Yes	2015	16-Jan-15	Sponsor has taken official action to initiate project	Limit Customer landscape irrigation to twice weekly only with limited hours.	n/a	300 AFY	\$0	\$0	2017
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LLANO	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10715	Yes	2019	May-19	Currently operating						2020
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: MANVILLE WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10846	Yes	2016								
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: PFLUGERVILLE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10862	Yes	2006		All phases fully implemented	n/a	n/a	n/a	n/a	n/a	2014
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SMITHVILLE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10460	Yes	2000	Immediate	All phases fully implemented		Not applicable	4000 AFY	\$500,000	\$44,745	
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - AQUA WSC	2020	PROJECT SPONSOR(S): AQUA WSC	RECOMMENDED WMS PROJECT	1668	Yes	2018	2019	Currently operating						
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - LCRA	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	1673	Yes	2019	Permit apps were submitted Feb 2018	Permit application submitted/pending		Permitting process	0 AFY	excess of \$3M		2023
K	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - BERTRAM	2020	PROJECT SPONSOR(S): BERTRAM	RECOMMENDED WMS PROJECT	1705	Yes	2019	2021	Feasibility study ongoing	Evaluating costs and options	Permitting process; Groundwater rights; financing	366.5 AFY	\$63,000	\$16,345,000	2022
K	LCRA - ACQUIRE ADDITIONAL WATER RIGHTS	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2129	No			Feasibility study ongoing	No suitable water rights opportunities have arisen		0 AFY	\$0	\$145/AF	
K	LCRA - CONTRACT AMENDMENTS	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2438	No			Feasibility study ongoing	No customers listed in the 2016 RWP have yet requested contract amendments		0 AFY	\$0	\$151/AF	
K	LCRA - ENHANCED MUNICIPAL AND INDUSTRIAL CONSERVATION	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2018	Yes	2019	5/22/2019	Sponsor has taken official action to initiate project			4,500	\$200,000 for incentives, no internal labor costs		2019
K	LCRA - EXCESS FLOWS PERMIT OFF-CHANNEL RESERVOIR	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2128	No			Feasibility study ongoing	LCRA is in the process of obtaining permit	Permitting process	0 AFY	\$0	\$1,446/AF	2021
K	LCRA - GROUNDWATER SUPPLY FOR FPP (OFF-SITE)	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2233	No									
K	LCRA - GROUNDWATER SUPPLY FOR FPP (ON-SITE)	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2019	No									
K	LCRA - LANE CITY OFF-CHANNEL RESERVOIR	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2090	Yes		2019	All phases fully implemented						
K	LCRA - MID-BASIN OFF-CHANNEL RESERVOIR	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2127	No			Feasibility study ongoing	Too soon	Lack of need	0 AFY	in excess of \$500,000	\$512,792,000	
K	LCRA - NEW LCRA CONTRACTS	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2439	No			Acquisition and design phase	Too soon	Not applicable	0 AFY	\$0	\$151/AF	

Table 11A-1: Summary of TWDB Template Containing Survey Results of Implementation Status of Water Management Strategies from the 2016 Region K Water Plan

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefiting WUGs	Implementation Survey Record Type	Database ID	Has Sponsor taken affirmative vote or actions? (TWC 16.053(h)(10))	If yes, in what year did this occur?	If yes, by what date is the action on schedule for implementation?	At what level of implementation is the project currently?	If not implemented, why? (When "If other, please describe" is selected, please add the descriptive text to that field)	What impediments presented to implementation? (When "If other, please describe" is selected, please add the descriptive text to that field)	Current water supply project yield (ac-ft/yr)	Funds expended to date (\$)	Project Cost (\$)	Year the project is online?*
K	MUNICIPAL CONSERVATION - AQUA WSC	2020	PROJECT SPONSOR(S): AQUA WSC	RECOMMENDED WMS PROJECT	1808	Yes	2006	AMR completed 2012	Currently operating						
K	MUNICIPAL CONSERVATION - BAY CITY	2020	PROJECT SPONSOR(S): BAY CITY	RECOMMENDED WMS PROJECT	1919	Yes	2019	5-Nov-19	All phases fully implemented		n/a	\$300/yr	\$0		2019
K	MUNICIPAL CONSERVATION - BERTRAM	2020	PROJECT SPONSOR(S): BERTRAM	RECOMMENDED WMS PROJECT	1872	Yes	2019	2020	Currently operating		n/a	12 AFY	\$12,300	\$12,300	2020
K	MUNICIPAL CONSERVATION - BUDA	2020	PROJECT SPONSOR(S): BUDA	RECOMMENDED WMS PROJECT	1908	Yes	2015	2019	Currently operating				\$2,622,393		2017
K	MUNICIPAL CONSERVATION - CEDAR PARK	2020	PROJECT SPONSOR(S): CEDAR PARK	RECOMMENDED WMS PROJECT	1948	Yes	2016	9/12/16 - full AMI implementation project	All phases fully implemented				\$5,257,758	\$5,257,758	2017
K	MUNICIPAL CONSERVATION - DRIPPING SPRINGS WSC	2020	PROJECT SPONSOR(S): DRIPPING SPRINGS WSC	RECOMMENDED WMS PROJECT	1912										
K	MUNICIPAL CONSERVATION - HORSESHOE BAY	2020	PROJECT SPONSOR(S): HORSESHOE BAY	RECOMMENDED WMS PROJECT	1886	Yes	2015		All phases fully implemented		n/a	9.97 AFY	\$80	Ongoing Leak detection surveys - \$20-\$30 annually	2017
K	MUNICIPAL CONSERVATION - LLANO	2020	PROJECT SPONSOR(S): LLANO	RECOMMENDED WMS PROJECT	1917	Yes	2019	May-19	All phases fully implemented						
K	MUNICIPAL CONSERVATION - PFLUGERVILLE	2020	PROJECT SPONSOR(S): PFLUGERVILLE	RECOMMENDED WMS PROJECT	1959	Yes		2021	Feasibility study ongoing	Awaiting approval in future budget proposal.	Access to funding	n/a	n/a	n/a	2022
K	MUNICIPAL CONSERVATION - SAN SABA	2020	PROJECT SPONSOR(S): SAN SABA	RECOMMENDED WMS PROJECT	1922	Yes	2013		Not implemented	Implementation is currently not required	Not applicable				2016
K	MUNICIPAL CONSERVATION - SMITHVILLE	2020	PROJECT SPONSOR(S): SMITHVILLE	RECOMMENDED WMS PROJECT	1865	Yes	2015	2016	All phases fully implemented		Not applicable	n/a		\$2.3M AMI upgrade	2017
K	URGENT WATER LOSS REDUCTION PROJECT - CMWSC	2020	PROJECT SPONSOR(S): CREEDMOOR-MAHA WSC	RECOMMENDED WMS PROJECT	2869	Yes	2018	2020-2021	Feasibility study ongoing		n/a	1,130 AFY		\$9,335,000	
K	BS/EACD EDWARDS / MIDDLE TRINITY ASR	2030	PROJECT SPONSOR(S): BUDA; COUNTY-OTHER (HAYS); MINING (HAYS); MOUNTAIN CITY; SUNSET VALLEY	RECOMMENDED WMS PROJECT	2238	Yes	Approved in FY 2017-2018 Budget	In progress, complete in 2020	Under construction			2020 - 150 AFY; 2021 - 300 AFY	\$1,896,000	\$2,500,000	2020
K	BS/EACD SALINE EDWARDS ASR	2030	PROJECT SPONSOR(S): BUDA; COUNTY-OTHER (HAYS); CREEDMOOR-MAHA WSC	RECOMMENDED WMS PROJECT	2241	No			Not implemented	Too soon; financing; permitting; environmental	Project viability, cost. This project might be viable by Desalinating Saline Edwards and having an ASR component				
K	WATER PURCHASE	2030	WMS SELLER: DRIPPING SPRINGS WSC; WMS SUPPLY RECIPIENT: DRIPPING SPRINGS	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	32528										
K	EXPANSION OF EDWARDS (BFZ) AQUIFER SUPPLIES - PFLUGERVILLE	2040	PROJECT SPONSOR(S): PFLUGERVILLE	RECOMMENDED WMS PROJECT	1708	No				n/a	n/a	n/a	n/a	n/a	
K	NEW SURFACE WATER INFRASTRUCTURE - AQUA WSC	2040	PROJECT SPONSOR(S): AQUA WSC	RECOMMENDED WMS PROJECT	2317	No			Not implemented	Too soon					
K	EXPANSION OF TRINITY AQUIFER SUPPLIES - MANVILLE WSC	2050	PROJECT SPONSOR(S): MANVILLE WSC	RECOMMENDED WMS PROJECT	1736	No			Not implemented	Too soon					
K	DEVELOPMENT OF NEW QUEEN CITY AQUIFER SUPPLIES - SMITHVILLE	2070	PROJECT SPONSOR(S): SMITHVILLE	RECOMMENDED WMS PROJECT	2214	No			Not implemented	No need. We are permitted for 4000 acre-ft and only use 850 acre-ft / year	Not applicable				

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Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Is this a phased project?*	(Phased) Ultimate volume (ac-ft/yr)	(Phased) Ultimate project cost (\$)	Year project reaches maximum capacity?*	What is the project funding source(s)?*	Funding Mechanism if Other?	Included in 2021 plan?*	Does the project or WMS involve reallocation of flood control?*	Does the project or WMS provide any measurable flood risk reduction?*	Optional Comments
K	BUENA VISTA REGIONAL PROJECT	2020	PROJECT SPONSOR(S): BERTRAM; BURNET; COUNTY-OTHER (BURNET)							No			
K	CITY OF AUSTIN - AQUIFER STORAGE AND RECOVERY	2020	PROJECT SPONSOR(S): AUSTIN	Yes	90,000 AFY	TBD		Other	TWDB - SWIFT; TWDB - SRF; Cash; Bonds; etc.	Yes	No		Notes: (1) Sponsor is in consultant procurement process (2) Project is anticipated to be online by 2040, with further expansions planned in the future; (2) project is anticipated to continue expanding up to 2115 as needed.
K	CITY OF AUSTIN - CAPTURE LOCAL INFLOWS TO LADY BIRD LAKE	2020	PROJECT SPONSOR(S): AUSTIN	No	3,000 AFY		2040	Other	TWDB - SWIFT; TWDB - SRF; Cash; Bonds; etc.	Yes	No	No	Notes: (1) Per Austin's Water Forward Plan, this strategy is targeted to be online by 2040
K	CITY OF AUSTIN - DIRECT REUSE	2020	PROJECT SPONSOR(S): AUSTIN	Yes	54,600 AFY	\$422M through 2115		Other	TWDB - SWIFT; TWDB - SRF; Cash; Bonds; etc.	Yes	No	No	Notes: (1) Direct Reuse refers to centralized direct non-potable reuse, or purple pipe systems; (2) this strategy is currently operating, but will continue to expand; (3) the planned maximum capacity is through the year 2115; future plans will continue to update planning horizon.
K	CITY OF AUSTIN - INDIRECT POTABLE REUSE THROUGH LADY BIRD LAKE	2020	PROJECT SPONSOR(S): AUSTIN	No	20,000 AFY	\$91M	2040	Other	TWDB - SWIFT; TWDB - SRF; Cash; Bonds; etc.	Yes	No	No	Note: (1) Project is planned to be online by 2040; (2) project would only be used in drought conditions when combined storage in the Highland Lakes falls below 400,000 AF.
K	CITY OF AUSTIN - LAKE AUSTIN OPERATIONS	2020	WMS SUPPLY RECIPIENT: AUSTIN	No	2,500 AFY	No capital costs; O&M costs only		Other	Cash - revenues	Yes	No	No	Note: (1) Project would come online as necessary to respond to drought conditions; (2) project would be used during non-peak months (Oct.-May) and after combined storage in the Highland Lakes is below 600,000 AF.
K	CITY OF AUSTIN - LAKE LONG ENHANCED STORAGE	2020	PROJECT SPONSOR(S): AUSTIN							No			
K	CITY OF AUSTIN - LONGHORN DAM OPERATIONS IMPROVEMENTS	2020	PROJECT SPONSOR(S): AUSTIN	Yes	3,000 AFY	Pending earlier phases		Other	Bonds	Yes	No	No	
K	CITY OF AUSTIN - OTHER REUSE	2020	PROJECT SPONSOR(S): AUSTIN	Yes	64,350 AFY in 2115	This strategy was broken into several individual strategies for the 2021 planning cycle; costs are being developed for these strategies		Other	Developers/Program Participants; TWDB - SWIFT; TWDB - SRF; Cash; Bonds; etc.	Yes	No	No	Note: (1) Project implementation is ongoing; (2) Water Forward plans for implementation to continue through 2115, with corresponding capacity increases.
K	CITY OF AUSTIN - RAINWATER HARVESTING	2020	PROJECT SPONSOR(S): AUSTIN	Yes	9,250 ac-ft/yr	TBD; generally to be borne by development with pot		Other	TBD; generally funded by development with potential for cost offsets through utility incentives	Yes	No	No	Notes: (1) This strategy has been re-evaluated as part of the 2018 Water Forward Plan; (2) this strategy is currently operating, but will continue to expand; (3) the planned maximum capacity is through the year 2115; future plans will continue to update planning horizon.
K	CITY OF AUSTIN CONSERVATION	2020	PROJECT SPONSOR(S): AUSTIN	Yes	37,000 AFY	\$41M		Other	Combination of funding including TWDB SWIFT and Utility O&M and CIP	Yes	No	No	conservation program since the 1980s and continues to advance the program, (2) Austin's Water Forward Plan includes implementation of conservation strategies through the full planning horizon to 2115
K	CITY OF AUSTIN RETURN FLOWS	2020	WMS SUPPLY RECIPIENT: AUSTIN						n/a	Yes	No	No	Notes: Austin and LCRA have a pending joint water right permit application at TCEQ for bed and banks reuse of Austin's return flows. As part of the regional planning process, prior to the issuance of the permit and development of a project, Austin's projected return flows are a water management strategy for downstream uses.
K	DEVELOPMENT OF NEW HICKORY AQUIFER SUPPLIES - LLANO	2020	PROJECT SPONSOR(S): LLANO										
K	DIRECT REUSE - BUDA	2020	PROJECT SPONSOR(S): BUDA	Yes	1680 AFY		2050			Yes	No		Effluent forcemain to Sunfield MUD, complete by 2022. Sunfield can take up to 1120ac-ft/yr for use in the MUD. Feasibility study underway to maximize current system use and potentially add additional storage capacity.
K	DIRECT REUSE - HORSESHOE BAY	2020	WMS SUPPLY RECIPIENT: HORSESHOE BAY	Yes	1,344	\$1,070,000	2050	Market	Private funds from golf course	Yes	No	No	
K	DIRECT REUSE - LLANO	2020	PROJECT SPONSOR(S): LLANO	No						Yes			

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Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Is this a phased project?*	(Phased) Ultimate volume (ac-ft/yr)	(Phased) Ultimate project cost (\$)	Year project reaches maximum capacity?*	What is the project funding source(s)?*	Funding Mechanism if Other?	Included in 2021 plan?*	Does the project or WMS involve reallocation of flood control?*	Does the project or WMS provide any measurable flood risk reduction?*	Optional Comments
K	DIRECT REUSE - PFLUGERVILLE	2020	PROJECT SPONSOR(S): PFLUGERVILLE	Yes	n/a	n/a	2030		n/a	No	No	No	Water reuse for irrigation already in effect for a nearby county park, with a tentative plan to distribute reused water to all city parks within the next 10 years. Any project costs or funds expended to date are currently not available for input.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: AQUA WSC								No	No	
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: AUSTIN	No				Other	Revenues from customers		No	No	Project is currently online and anticipated to remain online through the planning horizon.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BAY CITY	No				Other	Bay City - Utility Enterprise Fund	Yes	No	No	DCP was reviewed/updated & adopted by City Council on 11/5/2019. Since plan inception in 1999 the City of Bay City has not faced drought conditions or a water demand that require implementation of drought trigger responses.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BERTRAM	No			2040	TWDB - Other	DWSRF	Yes	No	No	
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BUDA							Yes	No		
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: CREEDMOOR-MAHA WSC	No			2025	TWDB - Other		Yes	No	No	Drought contingency plan has been adopted by the WSC; steps will be implemented once triggers are reached. While plan will not create new water, it will postpone need to find new sources/supply.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: DRIPPING SPRINGS WSC										The DSWSC Drought Contingency Plan is currently being revised with help from the LCRA. DSWSC staff will be presenting a draft copy to the Board of Directors for their review and approval.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: FAYETTE WSC	No			2025	Commercial/Bank loan		Yes	No	No	
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: HORSESHOE BAY					Other		Yes	No	No	
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LLANO	No						Yes			
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: MANVILLE WSC										During the most recent drought of record in 2011, Manville implemented stage II, twice a week outside watering water restrictions on July 1, 2011.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: PFLUGERVILLE	Yes	n/a	n/a	2070		n/a	Yes	No	No	"Year Project is online" is actually 2006 but year not available in drop-down option, used earliest provided. Any project costs or funds expended to date are currently not available for input.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SMITHVILLE	No			2070	Other	Utility Fund	Yes	No	Potentially, but no technical flood analysis performed	
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - AQUA WSC	2020	PROJECT SPONSOR(S): AQUA WSC							Yes			Added 1200 gpm Behrend Well to McDade Well Field
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - LCRA	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	Yes	25,000 AFY	\$46,629,000		Other	Any combination of funding sources listed.	Yes	No	No	Year project reaches maximum capacity will depend on demand
K	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - BERTRAM	2020	PROJECT SPONSOR(S): BERTRAM	Yes	2,000 AFY	\$16,345,000		TWDB - Other	DWSRF	Yes	No	No	
K	LCRA - ACQUIRE ADDITIONAL WATER RIGHTS	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	Yes		25,000		Other	Any combination of funding sources listed.	Yes	No	No	Water rights will be acquired as they become available at a suitable cost.
K	LCRA - CONTRACT AMENDMENTS	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	Yes		39,466	\$151/AF	Other	Customer project revenue	Yes	No	No	Project will come online as needed by customers
K	LCRA - ENHANCED MUNICIPAL AND INDUSTRIAL CONSERVATION	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY			20,000	2050	Other	General revenue from water rates	Yes	No	No	This references the 2019 LCRA WCP, which is updated every five years.
K	LCRA - EXCESS FLOWS PERMIT OFF-CHANNEL RESERVOIR	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	No				Other	Any combination of funding sources listed.	Yes	No	Potentially, but no technical flood analysis performed	If an existing OCR site is chosen, and permitting is successful, then project could be online before 2030.
K	LCRA - GROUNDWATER SUPPLY FOR FPP (OFF-SITE)	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY							No			LCRA is no longer recommending this alternative
K	LCRA - GROUNDWATER SUPPLY FOR FPP (ON-SITE)	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY							No			LCRA is no longer recommending this alternative
K	LCRA - LANE CITY OFF-CHANNEL RESERVOIR	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY										
K	LCRA - MID-BASIN OFF-CHANNEL RESERVOIR	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	No			2030	Other	Any combination of funding sources listed.	Yes			
K	LCRA - NEW LCRA CONTRACTS	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	No						Yes	No	No	New contracts will be entered as needed.

Table 11A-1: Summary of TWDB Template Containing Survey Results of Implementation Status of Water Management Strategies from the 2016 Region K Water Plan

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Is this a phased project?*	(Phased) Ultimate volume (ac-ft/yr)	(Phased) Ultimate project cost (\$)	Year project reaches maximum capacity?*	What is the project funding source(s)?*	Funding Mechanism if Other?	Included in 2021 plan?*	Does the project or WMS involve reallocation of flood control?*	Does the project or WMS provide any measurable flood risk reduction?*	Optional Comments
K	MUNICIPAL CONSERVATION - AQUA WSC	2020	PROJECT SPONSOR(S): AQUA WSC									No	
K	MUNICIPAL CONSERVATION - BAY CITY	2020	PROJECT SPONSOR(S): BAY CITY	No				Other	Bay City - Utility Enterprise Fund	No	No	No	Council on 11/5/2019. Water saving target achieved in 2019 for the residential class via capital measures (replace aging waterlines & install AMI) & outreach/education. Future efforts will target commercial & institutional classes.
K	MUNICIPAL CONSERVATION - BERTRAM	2020	PROJECT SPONSOR(S): BERTRAM	Yes	80 AFY	\$130,000	2060	Other	Rates and Fees	Yes	No	No	
K	MUNICIPAL CONSERVATION - BUDA	2020	PROJECT SPONSOR(S): BUDA				2020	Commercial/Bank loan		Yes	No		also had a leak detection survey performed on part of the system, and will continue with more sections in the future along with other programs outlined in the WCP updated in 2019.
K	MUNICIPAL CONSERVATION - CEDAR PARK	2020	PROJECT SPONSOR(S): CEDAR PARK	No			2040	Other	Self pay and Bonds	Yes	No	No	
K	MUNICIPAL CONSERVATION - DRIPPING SPRINGS WSC	2020	PROJECT SPONSOR(S): DRIPPING SPRINGS WSC										DSWSC staff is currently revising and updating the WCP with help from the LCRA. A draft copy is planned to be reviewed and approved by the DSWSC Board of Directors.
K	MUNICIPAL CONSERVATION - HORSESHOE BAY	2020	PROJECT SPONSOR(S): HORSESHOE BAY	No			2040	Other	Utility rates of customers	Yes	No	No	
K	MUNICIPAL CONSERVATION - LLANO	2020	PROJECT SPONSOR(S): LLANO							Yes			
K	MUNICIPAL CONSERVATION - PFLUGERVILLE	2020	PROJECT SPONSOR(S): PFLUGERVILLE		n/a	n/a	2025		n/a	Yes	No	No	Advanced Metering Infrastructure - not yet implemented. Any project costs or funds expended to date are currently not available for input.
K	MUNICIPAL CONSERVATION - SAN SABA	2020	PROJECT SPONSOR(S): SAN SABA										
K	MUNICIPAL CONSERVATION - SMITHVILLE	2020	PROJECT SPONSOR(S): SMITHVILLE	No			2070	Other	Qualified Energy Conservation Bonds	Yes	No	Yes, flood risk study confirmed benefits	
K	URGENT WATER LOSS REDUCTION PROJECT - CMWSC	2020	PROJECT SPONSOR(S): CREEDMOOR-MAHA WSC	No			2025	TWDB - Other			No	No	
K	BS/EACD EDWARDS / MIDDLE TRINITY ASR	2030	PROJECT SPONSOR(S): BUDA; COUNTY-OTHER (HAYS); MINING (HAYS); MOUNTAIN CITY; SUNSET VALLEY	Yes	~600 AFY	\$7,750,000	2030	Other	Current project is funded from Certificate of Obligation Utility Bond, options being explored for future phases	Yes	No	No	
K	BS/EACD SALINE EDWARDS ASR	2030	PROJECT SPONSOR(S): BUDA; COUNTY-OTHER (HAYS); CREEDMOOR-MAHA WSC							Yes	No	No	not an option Buda will pursue since we can store in the Trinity Aquifer. A feasibility study desalinating Saline Edwards and having an ASR component to keep plant size efficient is a possible option for Buda, and I think the original intent of this WMS.
K	WATER PURCHASE	2030	WMS SELLER: DRIPPING SPRINGS WSC; WMS SUPPLY RECIPIENT: DRIPPING SPRINGS										Currently there is no purchase contract with the City of Dripping Springs and DSWSC.
K	EXPANSION OF EDWARDS (BFZ) AQUIFER SUPPLIES - PFLUGERVILLE	2040	PROJECT SPONSOR(S): PFLUGERVILLE		n/a	n/a				Yes			There are currently no expansion plans for Groundwater supplies.
K	NEW SURFACE WATER INFRASTRUCTURE - AQUA WSC	2040	PROJECT SPONSOR(S): AQUA WSC										
K	EXPANSION OF TRINITY AQUIFER SUPPLIES - MANVILLE WSC	2050	PROJECT SPONSOR(S): MANVILLE WSC										Current not applicable as the MWSC plan is for water expansion in 2050.
K	DEVELOPMENT OF NEW QUEEN CITY AQUIFER SUPPLIES - SMITHVILLE	2070	PROJECT SPONSOR(S): SMITHVILLE										

Table 11A-2: Full TWDB Template Containing Survey Results of Implementation Status of Water Management Strategies from the 2016 Region K Water Plan

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Implementation Survey Record Type	Database ID	Has Sponsor taken affirmative vote or actions?* (TWC 16.053(h)(10))	If yes, in what year did this occur?	If yes, by what date is the action on schedule for implementation?	At what level of implementation is the project currently?*	If not implemented, why?* (When "If other, please describe" is selected, please add the descriptive text to that field)	What impediments presented to implementation?* (When "If other, please describe" is selected, please add the descriptive text to that field)	Current water supply project yield (ac-ft/yr)	Funds expended to date (\$)	Project Cost (\$)	Year the project is online?*
K	ALTERNATE CANAL DELIVERY - STPNOC	2020	PROJECT SPONSOR(S): STEAM ELECTRIC POWER (MATAGORDA)	RECOMMENDED WMS PROJECT	2324										
K	BLEND BRACKISH SURFACE WATER IN STPNOC RESERVOIR	2020	WMS SUPPLY RECIPIENT: STEAM ELECTRIC POWER, MATAGORDA	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	39923										
K	BRUSH CONTROL	2020	PROJECT SPONSOR(S): COUNTY-OTHER (BLANCO); COUNTY-OTHER (BURNET); COUNTY-OTHER (GILLESPIE); COUNTY-OTHER (HAYS); COUNTY-OTHER (LLANO); COUNTY-OTHER (MILLS); COUNTY-OTHER (SAN SABA); COUNTY-OTHER (TRAVIS)	RECOMMENDED WMS PROJECT	2255										
K	BUENA VISTA REGIONAL PROJECT	2020	PROJECT SPONSOR(S): BERTRAM; BURNET; COUNTY-OTHER (BURNET)	RECOMMENDED WMS PROJECT	2258	No			Not implemented	The City is adding additional sources to the Water Plan and not using this strategy					
K	CITY OF AUSTIN - AQUIFER STORAGE AND RECOVERY	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2135	Yes	2018 - AWFP approved by City Council	Began in 2019	Sponsor has taken official action to initiate project		TBD	0	\$250,000	\$367 million	
K	CITY OF AUSTIN - CAPTURE LOCAL INFLOWS TO LADY BIRD LAKE	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2148	Yes	2018 - AWFP approved by City Council	2040 - target for completion	Not implemented	Too soon	TBD	0	\$250,000	Capital costs included as part of the COA Indirect Potable Reuse through Lady Bird Lake strategy	
K	CITY OF AUSTIN - DIRECT REUSE	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2132	Yes	1974	Ongoing	Currently operating		TBD	4,500 AFY	Approx \$119M since 1974	\$422M through 2115	
K	CITY OF AUSTIN - INDIRECT POTABLE REUSE THROUGH LADY BIRD LAKE	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2152	Yes	2018 - AWFP approved by City Council	2040 - target for completion	Not implemented	Too soon	TBD	0	\$750,000	\$91M	
K	CITY OF AUSTIN - LAKE AUSTIN OPERATIONS	2020	WMS SUPPLY RECIPIENT: AUSTIN	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	33371	Yes	2018 - AWFP approved by City Council	As necessary to respond to drought	Not implemented	Would be implemented in response to drought	TBD	0	\$0	No capital costs; O&M costs only	
K	CITY OF AUSTIN - LAKE LONG ENHANCED STORAGE	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2146	No			Not implemented	Project is no longer being considered as a strategy					
K	CITY OF AUSTIN - LONGHORN DAM OPERATIONS IMPROVEMENTS	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2144	Yes	2018	Ongoing	Sponsor has taken official action to initiate project		TBD	0	\$0	\$11M	
K	CITY OF AUSTIN - OTHER REUSE	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2147	Yes	2018 - AWFP approved by City Council	Ongoing	Currently operating		TBD	450 AFY	Ongoing	This strategy was broken into several individual strategies for the 2021 planning cycle; costs are being developed for these strategies	
K	CITY OF AUSTIN - RAINWATER HARVESTING	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2145	Yes	Rainwater harvesting rebates have been in place since 2009.	Rainwater harvesting rebates are currently in place.	Currently operating		Not applicable	3.55 ac-ft total (2014-2015)	\$723k (Funds expended to date)	TBD; generally to be borne by development with potential for cost offsets through utility incentives	
K	CITY OF AUSTIN CONSERVATION	2020	PROJECT SPONSOR(S): AUSTIN	RECOMMENDED WMS PROJECT	2131	Yes	Ongoing - various actions on multiple conservation strategies	Ongoing	Currently operating		Not applicable	Varies annually (TBD)	Varies annually (TBD)	Varies annually (TBD)	
K	CITY OF AUSTIN RETURN FLOWS	2020	WMS SUPPLY RECIPIENT: AUSTIN	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	32320	Yes	Ongoing	Ongoing	Permit application submitted/pending	In process	TBD	0	n/a	TBD	
K	CITY OF AUSTIN RETURN FLOWS	2020	WMS SUPPLY RECIPIENT: IRRIGATION, MATAGORDA	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	32384										

Table 11A-2: Full TWDB Template Containing Survey Results of Implementation Status of Water Management Strategies from the 2016 Region K Water Plan

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Implementation Survey Record Type	Database ID	Has Sponsor taken affirmative vote or actions?* (TWC 16.053(h)(10))	If yes, in what year did this occur?	If yes, by what date is the action on schedule for implementation?	At what level of implementation is the project currently?*	If not implemented, why?* (When "If other, please describe" is selected, please add the descriptive text to that field)	What impediments presented to implementation?* (When "If other, please describe" is selected, please add the descriptive text to that field)	Current water supply project yield (ac-ft/yr)	Funds expended to date (\$)	Project Cost (\$)	Year the project is online?*
K	CITY OF AUSTIN RETURN FLOWS	2020	WMS SUPPLY RECIPIENT: IRRIGATION, WHARTON	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	32389										
K	CITY OF AUSTIN RETURN FLOWS	2020	WMS SUPPLY RECIPIENT: STEAM ELECTRIC POWER, MATAGORDA	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	32328										
K	DEVELOPMENT OF NEW CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP	2020	PROJECT SPONSOR(S): BASTROP	RECOMMENDED WMS PROJECT	1763										
K	DEVELOPMENT OF NEW HICKORY AQUIFER SUPPLIES - LLANO	2020	PROJECT SPONSOR(S): LLANO	RECOMMENDED WMS PROJECT	1766										
K	DEVELOPMENT OF NEW QUEEN CITY AQUIFER SUPPLIES - BASTROP COUNTY MINING	2020	PROJECT SPONSOR(S): MINING (BASTROP)	RECOMMENDED WMS PROJECT	1768										
K	DIRECT REUSE - BUDA	2020	PROJECT SPONSOR(S): BUDA	RECOMMENDED WMS PROJECT	2321	Yes			Currently operating			18 AFY			2017
K	DIRECT REUSE - FLATONIA	2020	PROJECT SPONSOR(S): FLATONIA	RECOMMENDED WMS PROJECT	2320										
K	DIRECT REUSE - HORSESHOE BAY	2020	WMS SUPPLY RECIPIENT: HORSESHOE BAY	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	33297	Yes	2017		Currently operating	Two phase project	n/a	583 AFY	\$70,000	\$1,070,000	2017
K	DIRECT REUSE - LLANO	2020	PROJECT SPONSOR(S): LLANO	RECOMMENDED WMS PROJECT	2322	No			Not implemented	Financing	Funding				
K	DIRECT REUSE - MARBLE FALLS	2020	WMS SUPPLY RECIPIENT: MARBLE FALLS	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	42796										
K	DIRECT REUSE - PFLUGERVILLE	2020	PROJECT SPONSOR(S): PFLUGERVILLE	RECOMMENDED WMS PROJECT	2323	Yes	2008	2009	Currently operating	n/a	n/a	n/a	n/a	n/a	2014
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: AQUA WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10389	No			Not implemented	Too soon	Trigger mechanism not met				
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: AUSTIN	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10645	Yes	2016 (most recent DCP)	Ongoing	Currently operating		TBD	Variable depending on drought restriction stage	Funding for outreach and enforcement as needed	Funded through operating budget	
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BARTON CREEK WEST WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10789										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BASTROP	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10413										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BASTROP COUNTY WCID #2	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10417										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BAY CITY	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10987	Yes	2019	5-Nov-19	All phases fully implemented		n/a		\$0	\$0	2019
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BEE CAVE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10793										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BERTRAM	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10494	Yes	2019	15-Oct-19	Currently operating		n/a	n/a	\$3,500	\$3,500	2019
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BLANCO	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10464										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BRIARCLIFF	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10804										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BUDA	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10653	Yes	2012; 2019		All phases fully implemented						2017
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BURNET	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10498										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COLUMBUS	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10550										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COTTONWOOD SHORES	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10504										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, BASTROP	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10429										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, BLANCO	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10468										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, BURNET	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10513										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, COLORADO	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10555										

Table 11A-2: Full TWDB Template Containing Survey Results of Implementation Status of Water Management Strategies from the 2016 Region K Water Plan

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Implementation Survey Record Type	Database ID	Has Sponsor taken affirmative vote or actions?* (TWC 16.053(h)(10))	If yes, in what year did this occur?	If yes, by what date is the action on schedule for implementation?	At what level of implementation is the project currently?*	If not implemented, why?* (When "If other, please describe" is selected, please add the descriptive text to that field)	What impediments presented to implementation?* (When "If other, please describe" is selected, please add the descriptive text to that field)	Current water supply project yield (ac-ft/yr)	Funds expended to date (\$)	Project Cost (\$)	Year the project is online?*
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, FAYETTE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10585										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, GILLESPIE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10631										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, HAYS	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10660										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, LLANO	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10711										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, MATAGORDA	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10739										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, MILLS	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10751										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, SAN SABA	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10764										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, WHARTON	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10931										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: CREEDMOOR-MAHA WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10437	Yes	2018	2019	Currently operating			Plan is in place. Will be implemented during drought.			2019
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: DRIPPING SPRINGS	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10666										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: DRIPPING SPRINGS WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10670										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: EAGLE LAKE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10564										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: EAST BERNARD	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10947										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: ELGIN	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10454										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: FAYETTE WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10593	Yes	2017	2023	Feasibility study ongoing		Access to funding		\$8,000	\$2,100,000	2023
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: FLATONIA	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10602										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: FREDERICKSBURG	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10641										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: GOLDTHWAITE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10757										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: GRANITE SHOALS	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10521										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: HORSESHOE BAY	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10525	Yes	2015	16-Jan-15	Sponsor has taken official action to initiate project	Limit Customer landscape irrigation to twice weekly only with limited hours.	n/a	300 AFY	\$0	\$0	2017
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: IRRIGATION, COLORADO	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	9282										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: IRRIGATION, MATAGORDA	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	9284										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: IRRIGATION, MILLS	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	9286										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: IRRIGATION, WHARTON	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	9288										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: JOHNSON CITY	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10490										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: JONESTOWN	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10811										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: KINGSLAND WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10532										

Table 11A-2: Full TWDB Template Containing Survey Results of Implementation Status of Water Management Strategies from the 2016 Region K Water Plan

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Implementation Survey Record Type	Database ID	Has Sponsor taken affirmative vote or actions?* (TWC 16.053(h)(10))	If yes, in what year did this occur?	If yes, by what date is the action on schedule for implementation?	At what level of implementation is the project currently?*	If not implemented, why?* (When "If other, please describe" is selected, please add the descriptive text to that field)	What impediments presented to implementation?*	Current water supply project yield (ac-ft/yr)	Funds expended to date (\$)	Project Cost (\$)	Year the project is online?*
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LA GRANGE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10608										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LAGO VISTA	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10815										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LAKEWAY	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10820										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LLANO	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10715	Yes	2019	May-19	Currently operating						2020
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LOOP 360 WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10832										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LOST CREEK MUD	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10836										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: MANOR	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10842										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: MANVILLE WSC	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10846	Yes	2016								
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: MARBLE FALLS	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10541										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: MEADOWLAKES	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10546										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: NORTH AUSTIN MUD #1	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10852										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: NORTHTOWN MUD	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10858										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: PALACIOS	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10747										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: PFLUGERVILLE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10862	Yes	2006		All phases fully implemented	n/a	n/a	n/a	n/a	n/a	2014
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: POINT VENTURE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10868										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: ROLLINGWOOD	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10872										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SAN SABA	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10784										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SCHULENBURG	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10627										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SHADY HOLLOW MUD	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10876										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SMITHVILLE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10460	Yes	2000	Immediate	All phases fully implemented		Not applicable	4000 AFY	\$500,000	\$44,745	
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SUNRISE BEACH VILLAGE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10723										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SUNSET VALLEY	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10880										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: THE HILLS	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10884										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: TRAVIS COUNTY MUD #4	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10888										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: TRAVIS COUNTY WCID #10	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10892										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: TRAVIS COUNTY WCID #17	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10896										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: TRAVIS COUNTY WCID #18	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10900										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: TRAVIS COUNTY WCID #19	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10902										

Table 11A-2: Full TWDB Template Containing Survey Results of Implementation Status of Water Management Strategies from the 2016 Region K Water Plan

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Implementation Survey Record Type	Database ID	Has Sponsor taken affirmative vote or actions?* (TWC 16.053(h)(10))	If yes, in what year did this occur?	If yes, by what date is the action on schedule for implementation?	At what level of implementation is the project currently?*	If not implemented, why?* (When "If other, please describe" is selected, please add the descriptive text to that field)	What impediments presented to implementation?* (When "If other, please describe" is selected, please add the descriptive text to that field)	Current water supply project yield (ac-ft/yr)	Funds expended to date (\$)	Project Cost (\$)	Year the project is online?*
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: TRAVIS COUNTY WCID #20	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10904										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: VOLENTE	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10912										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: WEIMAR	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10570										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: WELLS BRANCH MUD	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10916										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: WEST LAKE HILLS	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10926										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10700										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: WHARTON	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	10961										
K	DROUGHT MANAGEMENT - MOUNTAIN CITY	2020	WUG REDUCING DEMAND: MOUNTAIN CITY	RECOMMENDED DEMAND REDUCTION STRATEGY WITHOUT WMS PROJECT	14786										
K	EAST LAKE BUCHANAN REGIONAL PROJECT	2020	PROJECT SPONSOR(S): COUNTY-OTHER (BURNET)	RECOMMENDED WMS PROJECT	2259										
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - AQUA WSC	2020	PROJECT SPONSOR(S): AQUA WSC	RECOMMENDED WMS PROJECT	1668	Yes	2018	2019	Currently operating						
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP COUNTY MANUFACTURING	2020	PROJECT SPONSOR(S): MANUFACTURING (BASTROP)	RECOMMENDED WMS PROJECT	1672										
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP COUNTY-OTHER	2020	PROJECT SPONSOR(S): COUNTY-OTHER (BASTROP)	RECOMMENDED WMS PROJECT	1670										
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - ELGIN	2020	PROJECT SPONSOR(S): ELGIN	RECOMMENDED WMS PROJECT	1671										
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - LCRA	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	1673	Yes	2019	Permit apps were submitted Feb 2018	Permit application submitted/pending		Permitting process	0 AFY	excess of \$3M		2023
K	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - BERTRAM	2020	PROJECT SPONSOR(S): BERTRAM	RECOMMENDED WMS PROJECT	1705	Yes	2019	2021	Feasibility study ongoing	Evaluating costs and options	Permitting process; Groundwater rights; financing	366.5 AFY	\$63,000	\$16,345,000	2022
K	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - BURNET COUNTY MINING	2020	PROJECT SPONSOR(S): MINING (BURNET)	RECOMMENDED WMS PROJECT	1706										
K	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - GILLESPIE COUNTY MANUFACTURING	2020	PROJECT SPONSOR(S): MANUFACTURING (GILLESPIE)	RECOMMENDED WMS PROJECT	1707										
K	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - JOHNSON CITY	2020	PROJECT SPONSOR(S): JOHNSON CITY	RECOMMENDED WMS PROJECT	1704										
K	EXPANSION OF GULF COAST AQUIFER SUPPLIES - COLORADO COUNTY-OTHER	2020	PROJECT SPONSOR(S): COUNTY-OTHER (COLORADO)	RECOMMENDED WMS PROJECT	1719										
K	EXPANSION OF GULF COAST AQUIFER SUPPLIES - FAYETTE COUNTY MANUFACTURING	2020	PROJECT SPONSOR(S): MANUFACTURING (FAYETTE)	RECOMMENDED WMS PROJECT	1723										
K	EXPANSION OF GULF COAST AQUIFER SUPPLIES - FAYETTE COUNTY MINING	2020	PROJECT SPONSOR(S): MINING (FAYETTE)	RECOMMENDED WMS PROJECT	1721										
K	EXPANSION OF GULF COAST AQUIFER SUPPLIES - FAYETTE COUNTY-OTHER	2020	PROJECT SPONSOR(S): COUNTY-OTHER (FAYETTE)	RECOMMENDED WMS PROJECT	1720										
K	EXPANSION OF GULF COAST AQUIFER SUPPLIES - FLATONIA	2020	PROJECT SPONSOR(S): FLATONIA	RECOMMENDED WMS PROJECT	1722										
K	EXPANSION OF SPARTA AQUIFER SUPPLIES - FAYETTE COUNTY MINING	2020	PROJECT SPONSOR(S): MINING (FAYETTE)	RECOMMENDED WMS PROJECT	1731										
K	EXPANSION OF TRINITY AQUIFER SUPPLIES - HAYS COUNTY MINING	2020	PROJECT SPONSOR(S): MINING (HAYS)	RECOMMENDED WMS PROJECT	1732										
K	EXPANSION OF TRINITY AQUIFER SUPPLIES - LAKEWAY	2020	PROJECT SPONSOR(S): LAKEWAY	RECOMMENDED WMS PROJECT	1734										
K	EXPANSION OF TRINITY AQUIFER SUPPLIES - MILLS COUNTY IRRIGATION	2020	PROJECT SPONSOR(S): IRRIGATION (MILLS)	RECOMMENDED WMS PROJECT	1733										
K	IRRIGATION CONSERVATION - ON FARM	2020	PROJECT SPONSOR(S): IRRIGATION (COLORADO); IRRIGATION (MATAGORDA); IRRIGATION (WHARTON)	RECOMMENDED WMS PROJECT	1977										
K	IRRIGATION CONSERVATION - SPRINKLER	2020	PROJECT SPONSOR(S): IRRIGATION (COLORADO); IRRIGATION (MATAGORDA); IRRIGATION (WHARTON)	RECOMMENDED WMS PROJECT	1988										
K	IRRIGATION OPERATIONS CONVEYANCE IMPROVEMENTS	2020	PROJECT SPONSOR(S): IRRIGATION (COLORADO); IRRIGATION (MATAGORDA); IRRIGATION (WHARTON)	RECOMMENDED WMS PROJECT	1985										
K	LCRA - ACQUIRE ADDITIONAL WATER RIGHTS	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2129	No			Feasibility study ongoing	No suitable water rights opportunities have arisen No customers listed in the 2016 RWP have yet requested contract amendments		0 AFY	\$0	\$145/AF	
K	LCRA - CONTRACT AMENDMENTS	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2438	No			Feasibility study ongoing			0 AFY	\$0	\$151/AF	
K	LCRA - ENHANCED MUNICIPAL AND INDUSTRIAL CONSERVATION	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2018	Yes	2019	5/22/2019	Sponsor has taken official action to initiate project			4,500	\$200,000 for incentives, no internal labor costs		2019
K	LCRA - EXCESS FLOWS PERMIT OFF-CHANNEL RESERVOIR	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2128	No			Feasibility study ongoing	LCRA is in the process of obtaining permit	Permitting process	0 AFY	\$0	\$1,446/AF	2021

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K	LCRA - GROUNDWATER SUPPLY FOR FPP (OFF-SITE)	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2233	No									
K	LCRA - GROUNDWATER SUPPLY FOR FPP (ON-SITE)	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2019	No									
K	LCRA - INTERRUPTIBLE WATER FOR AGRICULTURE (LCRA WMP AMENDMENTS)	2020	WMS SELLER: LOWER COLORADO RIVER AUTHORITY; WMS SUPPLY RECIPIENT: IRRIGATION, COLORADO	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	16505										
K	LCRA - INTERRUPTIBLE WATER FOR AGRICULTURE (LCRA WMP AMENDMENTS)	2020	WMS SELLER: LOWER COLORADO RIVER AUTHORITY; WMS SUPPLY RECIPIENT: IRRIGATION, MATAGORDA	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	16510										
K	LCRA - INTERRUPTIBLE WATER FOR AGRICULTURE (LCRA WMP AMENDMENTS)	2020	WMS SELLER: LOWER COLORADO RIVER AUTHORITY; WMS SUPPLY RECIPIENT: IRRIGATION, WHARTON	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	16515										
K	LCRA - LANE CITY OFF-CHANNEL RESERVOIR	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2090	Yes		2019	All phases fully implemented						
K	LCRA - MID-BASIN OFF-CHANNEL RESERVOIR	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2127	No			Feasibility study ongoing	Too soon	Lack of need	0 AFY	in excess of \$500,000	\$512,792,000	
K	LCRA - NEW LCRA CONTRACTS	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2439	No			Acquisition and design phase	Too soon	Not applicable	0 AFY	\$0	\$151/AF	
K	MARBLE FALLS REGIONAL PROJECT	2020	PROJECT SPONSOR(S): COTTONWOOD SHORES; COUNTY-OTHER (BURNET); MARBLE FALLS	RECOMMENDED WMS PROJECT	2260										
K	MUNICIPAL CONSERVATION - AQUA WSC	2020	PROJECT SPONSOR(S): AQUA WSC	RECOMMENDED WMS PROJECT	1808	Yes	2006	AMR completed 2012	Currently operating						
K	MUNICIPAL CONSERVATION - BARTON CREEK WEST WSC	2020	PROJECT SPONSOR(S): BARTON CREEK WEST WSC	RECOMMENDED WMS PROJECT	1925										
K	MUNICIPAL CONSERVATION - BASTROP	2020	PROJECT SPONSOR(S): BASTROP	RECOMMENDED WMS PROJECT	1852										
K	MUNICIPAL CONSERVATION - BASTROP COUNTY OTHER	2020	PROJECT SPONSOR(S): COUNTY-OTHER (BASTROP)	RECOMMENDED WMS PROJECT	1861										
K	MUNICIPAL CONSERVATION - BAY CITY	2020	PROJECT SPONSOR(S): BAY CITY	RECOMMENDED WMS PROJECT	1919	Yes	2019	5-Nov-19	All phases fully implemented		n/a	\$300/yr		\$0	2019
K	MUNICIPAL CONSERVATION - BEE CAVE VILLAGE	2020	PROJECT SPONSOR(S): BEE CAVE	RECOMMENDED WMS PROJECT	1929										
K	MUNICIPAL CONSERVATION - BERTRAM	2020	PROJECT SPONSOR(S): BERTRAM	RECOMMENDED WMS PROJECT	1872	Yes	2019	2020	Currently operating		n/a	12 AFY	\$12,300	\$12,300	2020
K	MUNICIPAL CONSERVATION - BLANCO	2020	PROJECT SPONSOR(S): BLANCO	RECOMMENDED WMS PROJECT	1869										
K	MUNICIPAL CONSERVATION - BUDA	2020	PROJECT SPONSOR(S): BUDA	RECOMMENDED WMS PROJECT	1908	Yes	2015	2019	Currently operating				\$2,622,393		2017
K	MUNICIPAL CONSERVATION - BURNET	2020	PROJECT SPONSOR(S): BURNET	RECOMMENDED WMS PROJECT	1876										
K	MUNICIPAL CONSERVATION - BURNET COUNTY-OTHER	2020	PROJECT SPONSOR(S): COUNTY-OTHER (BURNET)	RECOMMENDED WMS PROJECT	2641										
K	MUNICIPAL CONSERVATION - CEDAR PARK	2020	PROJECT SPONSOR(S): CEDAR PARK	RECOMMENDED WMS PROJECT	1948	Yes	2016	9/12/16 - full AMI implementation project	All phases fully implemented				\$5,257,758	\$5,257,758	2017
K	MUNICIPAL CONSERVATION - COLUMBUS	2020	PROJECT SPONSOR(S): COLUMBUS	RECOMMENDED WMS PROJECT	1892										
K	MUNICIPAL CONSERVATION - COTTONWOOD SHORES	2020	PROJECT SPONSOR(S): COTTONWOOD SHORES	RECOMMENDED WMS PROJECT	1878										
K	MUNICIPAL CONSERVATION - DRIPPING SPRINGS	2020	PROJECT SPONSOR(S): DRIPPING SPRINGS	RECOMMENDED WMS PROJECT	1909										
K	MUNICIPAL CONSERVATION - DRIPPING SPRINGS WSC	2020	PROJECT SPONSOR(S): DRIPPING SPRINGS WSC	RECOMMENDED WMS PROJECT	1912										
K	MUNICIPAL CONSERVATION - EAST BERNARD	2020	PROJECT SPONSOR(S): EAST BERNARD	RECOMMENDED WMS PROJECT	1975										
K	MUNICIPAL CONSERVATION - FLATONIA	2020	PROJECT SPONSOR(S): FLATONIA	RECOMMENDED WMS PROJECT	1900										
K	MUNICIPAL CONSERVATION - FREDERICKSBURG	2020	PROJECT SPONSOR(S): FREDERICKSBURG	RECOMMENDED WMS PROJECT	1906										
K	MUNICIPAL CONSERVATION - GOLDTHWAITE	2020	PROJECT SPONSOR(S): GOLDTHWAITE	RECOMMENDED WMS PROJECT	1921										
K	MUNICIPAL CONSERVATION - HORSESHOE BAY	2020	PROJECT SPONSOR(S): HORSESHOE BAY	RECOMMENDED WMS PROJECT	1886	Yes	2015		All phases fully implemented		n/a	9.97 AFY	\$80	Ongoing Leak detection surveys - \$20-\$30 annually	2017
K	MUNICIPAL CONSERVATION - JOHNSON CITY	2020	PROJECT SPONSOR(S): JOHNSON CITY	RECOMMENDED WMS PROJECT	1871										
K	MUNICIPAL CONSERVATION - JONESTOWN	2020	PROJECT SPONSOR(S): JONESTOWN	RECOMMENDED WMS PROJECT	2213										
K	MUNICIPAL CONSERVATION - LA GRANGE	2020	PROJECT SPONSOR(S): LA GRANGE	RECOMMENDED WMS PROJECT	1902										
K	MUNICIPAL CONSERVATION - LAGO VISTA	2020	PROJECT SPONSOR(S): LAGO VISTA	RECOMMENDED WMS PROJECT	1950										
K	MUNICIPAL CONSERVATION - LAKEWAY	2020	PROJECT SPONSOR(S): LAKEWAY	RECOMMENDED WMS PROJECT	1952										
K	MUNICIPAL CONSERVATION - LLANO	2020	PROJECT SPONSOR(S): LLANO	RECOMMENDED WMS PROJECT	1917	Yes	2019	May-19	All phases fully implemented						
K	MUNICIPAL CONSERVATION - LOOP 360	2020	PROJECT SPONSOR(S): LOOP 360 WSC	RECOMMENDED WMS PROJECT	1955										
K	MUNICIPAL CONSERVATION - LOST CREEK MUD	2020	PROJECT SPONSOR(S): LOST CREEK MUD	RECOMMENDED WMS PROJECT	1956										
K	MUNICIPAL CONSERVATION - MARBLE FALLS	2020	PROJECT SPONSOR(S): MARBLE FALLS	RECOMMENDED WMS PROJECT	1887										
K	MUNICIPAL CONSERVATION - MEADOWLAKES	2020	PROJECT SPONSOR(S): MEADOWLAKES	RECOMMENDED WMS PROJECT	1889										
K	MUNICIPAL CONSERVATION - PFLUGERVILLE	2020	PROJECT SPONSOR(S): PFLUGERVILLE	RECOMMENDED WMS PROJECT	1959	Yes		2021	Feasibility study ongoing	Awaiting approval in future budget proposal.	Access to funding	n/a	n/a	n/a	2022
K	MUNICIPAL CONSERVATION - POINT VENTURE	2020	PROJECT SPONSOR(S): POINT VENTURE	RECOMMENDED WMS PROJECT	1961										
K	MUNICIPAL CONSERVATION - ROLLINGWOOD	2020	PROJECT SPONSOR(S): ROLLINGWOOD	RECOMMENDED WMS PROJECT	1962										
K	MUNICIPAL CONSERVATION - ROUND ROCK	2020	PROJECT SPONSOR(S): ROUND ROCK	RECOMMENDED WMS PROJECT	1963										
K	MUNICIPAL CONSERVATION - SAN SABA	2020	PROJECT SPONSOR(S): SAN SABA	RECOMMENDED WMS PROJECT	1922	Yes	2013		Not implemented	Implementation is currently not required	Not applicable				2016
K	MUNICIPAL CONSERVATION - SCHULENBURG	2020	PROJECT SPONSOR(S): SCHULENBURG	RECOMMENDED WMS PROJECT	1904										

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K	MUNICIPAL CONSERVATION - SHADY HOLLOW MUD	2020	PROJECT SPONSOR(S): SHADY HOLLOW MUD	RECOMMENDED WMS PROJECT	1964										
K	MUNICIPAL CONSERVATION - SMITHVILLE	2020	PROJECT SPONSOR(S): SMITHVILLE	RECOMMENDED WMS PROJECT	1865	Yes	2015	2016	All phases fully implemented		Not applicable	n/a		\$2.3M AMI upgrade	2017
K	MUNICIPAL CONSERVATION - SUNSET VALLEY	2020	PROJECT SPONSOR(S): SUNSET VALLEY	RECOMMENDED WMS PROJECT	1965										
K	MUNICIPAL CONSERVATION - THE HILLS	2020	PROJECT SPONSOR(S): THE HILLS	RECOMMENDED WMS PROJECT	1966										
K	MUNICIPAL CONSERVATION - TRAVIS COUNTY MUD #4	2020	PROJECT SPONSOR(S): TRAVIS COUNTY MUD #4	RECOMMENDED WMS PROJECT	1967										
K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #10	2020	PROJECT SPONSOR(S): TRAVIS COUNTY WCID #10	RECOMMENDED WMS PROJECT	1968										
K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #17	2020	PROJECT SPONSOR(S): TRAVIS COUNTY WCID #17	RECOMMENDED WMS PROJECT	1969										
K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #18	2020	PROJECT SPONSOR(S): TRAVIS COUNTY WCID #18	RECOMMENDED WMS PROJECT	1971										
K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #19	2020	PROJECT SPONSOR(S): TRAVIS COUNTY WCID #19	RECOMMENDED WMS PROJECT	1972										
K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #20	2020	PROJECT SPONSOR(S): TRAVIS COUNTY WCID #20	RECOMMENDED WMS PROJECT	1973										
K	MUNICIPAL CONSERVATION - WEIMAR	2020	PROJECT SPONSOR(S): WEIMAR	RECOMMENDED WMS PROJECT	1895										
K	MUNICIPAL CONSERVATION - WEST LAKE HILLS	2020	PROJECT SPONSOR(S): WEST LAKE HILLS	RECOMMENDED WMS PROJECT	1974										
K	MUNICIPAL CONSERVATION - WEST TRAVIS COUNTY PUA	2020	PROJECT SPONSOR(S): WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	RECOMMENDED WMS PROJECT	1913										
K	MUNICIPAL CONSERVATION - WHARTON	2020	PROJECT SPONSOR(S): WHARTON	RECOMMENDED WMS PROJECT	1976										
K	NEW SURFACE WATER INFRASTRUCTURE - VOLENTE URGENT WATER LOSS REDUCTION PROJECT - CMWSC	2020	PROJECT SPONSOR(S): VOLENTE	RECOMMENDED WMS PROJECT	2311										
K		2020	PROJECT SPONSOR(S): CREEDMOOR-MAHA WSC	RECOMMENDED WMS PROJECT	2869	Yes	2018	2020-2021	Feasibility study ongoing		n/a	1,130 AFY		\$9,335,000	
K	BS/EACD EDWARDS / MIDDLE TRINITY ASR	2030	PROJECT SPONSOR(S): BUDA; COUNTY-OTHER (HAYS); MINING (HAYS); MOUNTAIN CITY; SUNSET VALLEY	RECOMMENDED WMS PROJECT	2238	Yes	Approved in FY 2017-2018 Budget	In progress, complete in 2020	Under construction			2020 - 150 AFY; 2021 - 300 AFY	\$1,896,000	\$2,500,000	2020
K	BS/EACD SALINE EDWARDS ASR	2030	PROJECT SPONSOR(S): BUDA; COUNTY-OTHER (HAYS); CREEDMOOR-MAHA WSC	RECOMMENDED WMS PROJECT	2241	No			Not implemented	Too soon; financing; permitting; environmental	Project viability, cost. This project might be viable by Desalinating Saline Edwards and having an ASR component				
K	EXPANSION OF HICKORY AQUIFER SUPPLIES - BURNET COUNTY MINING	2030	PROJECT SPONSOR(S): MINING (BURNET)	RECOMMENDED WMS PROJECT	1726										
K	EXPANSION OF TRINITY AQUIFER SUPPLIES - MANOR	2030	PROJECT SPONSOR(S): MANOR	RECOMMENDED WMS PROJECT	1735										
K	HAYS COUNTY PIPELINE - REGION K PORTION	2030	PROJECT SPONSOR(S): WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY; COUNTY-OTHER (HAYS); DRIPPING SPRINGS WSC	RECOMMENDED WMS PROJECT	1771										
K	LCRA - PRAIRIE SITE OFF-CHANNEL RESERVOIR	2030	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	RECOMMENDED WMS PROJECT	2126										
K	NEW SURFACE WATER INFRASTRUCTURE - ELGIN	2030	PROJECT SPONSOR(S): ELGIN	RECOMMENDED WMS PROJECT	2316										
K	WATER PURCHASE	2030	WMS SELLER: DRIPPING SPRINGS WSC; WMS SUPPLY RECIPIENT: DRIPPING SPRINGS	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	32528										
K	CITY OF AUSTIN RETURN FLOWS DEVELOPMENT OF NEW CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP COUNTY MINING	2040	PROJECT SPONSOR(S): MINING (BASTROP)	RECOMMENDED WMS PROJECT	1764										
K	DEVELOPMENT OF NEW TRINITY AQUIFER SUPPLIES - SUNSET VALLEY	2040	PROJECT SPONSOR(S): SUNSET VALLEY	RECOMMENDED WMS PROJECT	1769										
K	DIRECT REUSE - BASTROP	2040	PROJECT SPONSOR(S): BASTROP	RECOMMENDED WMS PROJECT	2319										
K	DIRECT REUSE - BUDA	2040	WMS SELLER: BUDA; WMS SUPPLY RECIPIENT: MINING, HAYS	RECOMMENDED WMS SUPPLY WITHOUT WMS PROJECT	33305										
K	EXPANSION OF EDWARDS (BFZ) AQUIFER SUPPLIES - PFLUGERVILLE	2040	PROJECT SPONSOR(S): PFLUGERVILLE	RECOMMENDED WMS PROJECT	1708	No				n/a	n/a	n/a	n/a	n/a	
K	NEW SURFACE WATER INFRASTRUCTURE - AQUA WSC	2040	PROJECT SPONSOR(S): AQUA WSC	RECOMMENDED WMS PROJECT	2317	No			Not implemented	Too soon					
K	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - BLANCO COUNTY-OTHER	2050	PROJECT SPONSOR(S): COUNTY-OTHER (BLANCO)	RECOMMENDED WMS PROJECT	1703										
K	EXPANSION OF HICKORY AQUIFER SUPPLIES - BLANCO COUNTY-OTHER	2050	PROJECT SPONSOR(S): COUNTY-OTHER (BLANCO)	RECOMMENDED WMS PROJECT	1725										
K	EXPANSION OF TRINITY AQUIFER SUPPLIES - MANVILLE WSC	2050	PROJECT SPONSOR(S): MANVILLE WSC	RECOMMENDED WMS PROJECT	1736	No			Not implemented	Too soon					
K	NEW SURFACE WATER INFRASTRUCTURE - BASTROP	2050	PROJECT SPONSOR(S): BASTROP	RECOMMENDED WMS PROJECT	2313										
K	DEVELOPMENT OF NEW GULF COAST AQUIFER SUPPLIES - WHARTON COUNTY STEAM-ELECTRIC	2060	PROJECT SPONSOR(S): STEAM ELECTRIC POWER (WHARTON)	RECOMMENDED WMS PROJECT	1765										
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP COUNTY WCID #2	2060	PROJECT SPONSOR(S): BASTROP COUNTY WCID #2	RECOMMENDED WMS PROJECT	1669										
K	EXPANSION OF MARBLE FALLS AQUIFER SUPPLIES - BURNET COUNTY MINING	2060	PROJECT SPONSOR(S): MINING (BURNET)	RECOMMENDED WMS PROJECT	1729			5							
K	DEVELOPMENT OF NEW QUEEN CITY AQUIFER SUPPLIES - SMITHVILLE	2070	PROJECT SPONSOR(S): SMITHVILLE	RECOMMENDED WMS PROJECT	2214	No			Not implemented	No need. We are permitted for 4000 acre-ft and only use 850 acre-ft / year	Not applicable				

Table 11A-2: Full TWDB Template Containing Survey Results of Implementation Status of Water Management Strategies from the 2016 Region K Water Plan

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Implementation Survey Record Type	Database ID	Has Sponsor taken affirmative vote or actions?* (TWC 16.053(h)(10))	If yes, in what year did this occur?	If yes, by what date is the action on schedule for implementation?	At what level of implementation is the project currently?*	If not implemented, why?* (When "If other, please describe" is selected, please add the descriptive text to that field)	What impediments presented to implementation?*	Current water supply project yield (ac-ft/yr)	Funds expended to date (\$)	Project Cost (\$)	Year the project is online?*
K	MUNICIPAL WATER CONSERVATION (RURAL)	2070	WUG REDUCING DEMAND: MOUNTAIN CITY	REDUCTION STRATEGY WITHOUT WMS PROJECT	14779										

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Is this a phased project?*	(Phased) Ultimate volume (ac-ft/yr)	(Phased) Ultimate project cost (\$)	Year project reaches maximum capacity?*	What is the project funding source(s)?*	Funding Mechanism if Other?	Included in 2021 plan?*	Does the project or WMS involve reallocation of flood control?*	Does the project or WMS provide any measurable flood risk reduction?*	Optional Comments
K	ALTERNATE CANAL DELIVERY - STPNOC	2020	PROJECT SPONSOR(S): STEAM ELECTRIC POWER (MATAGORDA)										
K	BLEND BRACKISH SURFACE WATER IN STPNOC RESERVOIR	2020	WMS SUPPLY RECIPIENT: STEAM ELECTRIC POWER, MATAGORDA										
K	BRUSH CONTROL	2020	PROJECT SPONSOR(S): COUNTY-OTHER (BLANCO); COUNTY-OTHER (BURNET); COUNTY-OTHER (GILLESPIE); COUNTY-OTHER (HAYS); COUNTY-OTHER (LLANO); COUNTY-OTHER (MILLS); COUNTY-OTHER (SAN SABA); COUNTY-OTHER (TRAVIS)										
K	BUENA VISTA REGIONAL PROJECT	2020	PROJECT SPONSOR(S): BERTRAM; BURNET; COUNTY-OTHER (BURNET)							No			
K	CITY OF AUSTIN - AQUIFER STORAGE AND RECOVERY	2020	PROJECT SPONSOR(S): AUSTIN	Yes	90,000 AFY	TBD		Other	TWDB - SWIFT; TWDB - SRF; Cash; Bonds; etc.	Yes	No		Notes: (1) Sponsor is in consultant procurement process (2) Project is anticipated to be online by 2040, with further expansions planned in the future; (2) project is anticipated to continue expanding up to 2115 as needed.
K	CITY OF AUSTIN - CAPTURE LOCAL INFLOWS TO LADY BIRD LAKE	2020	PROJECT SPONSOR(S): AUSTIN	No	3,000 AFY		2040	Other	TWDB - SWIFT; TWDB - SRF; Cash; Bonds; etc.	Yes	No	No	Notes: (1) Per Austin's Water Forward Plan, this strategy is targeted to be online by 2040
K	CITY OF AUSTIN - DIRECT REUSE	2020	PROJECT SPONSOR(S): AUSTIN	Yes	54,600 AFY	\$422M through 2115		Other	TWDB - SWIFT; TWDB - SRF; Cash; Bonds; etc.	Yes	No	No	Notes: (1) Direct Reuse refers to centralized direct non-potable reuse, or purple pipe systems; (2) this strategy is currently operating, but will continue to expand; (3) the planned maximum capacity is through the year 2115; future plans will continue to update planning horizon.
K	CITY OF AUSTIN - INDIRECT POTABLE REUSE THROUGH LADY BIRD LAKE	2020	PROJECT SPONSOR(S): AUSTIN	No	20,000 AFY	\$91M	2040	Other	TWDB - SWIFT; TWDB - SRF; Cash; Bonds; etc.	Yes	No	No	Note: (1) Project is planned to be online by 2040; (2) project would only be used in drought conditions when combined storage in the Highland Lakes falls below 400,000 AF.
K	CITY OF AUSTIN - LAKE AUSTIN OPERATIONS	2020	WMS SUPPLY RECIPIENT: AUSTIN	No	2,500 AFY	No capital costs; O&M costs only		Other	Cash - revenues	Yes	No	No	Note: (1) Project would come online as necessary to respond to drought conditions; (2) project would be used during non-peak months (Oct.-May) and after combined storage in the Highland Lakes is below 600,000 AF.
K	CITY OF AUSTIN - LAKE LONG ENHANCED STORAGE	2020	PROJECT SPONSOR(S): AUSTIN							No			
K	CITY OF AUSTIN - LONGHORN DAM OPERATIONS IMPROVEMENTS	2020	PROJECT SPONSOR(S): AUSTIN	Yes	3,000 AFY	Pending earlier phases		Other	Bonds	Yes	No	No	
K	CITY OF AUSTIN - OTHER REUSE	2020	PROJECT SPONSOR(S): AUSTIN	Yes	64,350 AFY in 2115	This strategy was broken into several individual strategies for the 2021 planning cycle; costs are being developed for these strategies		Other	Developers/Program Participants; TWDB - SWIFT; TWDB - SRF; Cash; Bonds; etc.	Yes	No	No	Note: (1) Project implementation is ongoing; (2) Water Forward plans for implementation to continue through 2115, with corresponding capacity increases.
K	CITY OF AUSTIN - RAINWATER HARVESTING	2020	PROJECT SPONSOR(S): AUSTIN	Yes	9,250 ac-ft/yr	TBD; generally to be borne by development with pot		Other	TBD; generally funded by development with potential for cost offsets through utility incentives	Yes	No	No	Notes: (1) This strategy has been re-evaluated as part of the 2018 Water Forward Plan; (2) this strategy is currently operating, but will continue to expand; (3) the planned maximum capacity is through the year 2115; future plans will continue to update planning horizon.
K	CITY OF AUSTIN CONSERVATION	2020	PROJECT SPONSOR(S): AUSTIN	Yes	37,000 AFY	\$41M		Other	Combination of funding including TWDB SWIFT and Utility O&M and CIP	Yes	No	No	conservation program since the 1980s and continues to advance the program, (2) Austin's Water Forward Plan includes implementation of conservation strategies through the full planning horizon to 2115
K	CITY OF AUSTIN RETURN FLOWS	2020	WMS SUPPLY RECIPIENT: AUSTIN						n/a	Yes	No	No	Notes: Austin and LCRA have a pending joint water right permit application at TCEQ for bed and banks reuse of Austin's return flows. As part of the regional planning process, prior to the issuance of the permit and development of a project, Austin's projected return flows are a water management strategy for downstream uses.
K	CITY OF AUSTIN RETURN FLOWS	2020	WMS SUPPLY RECIPIENT: IRRIGATION, MATAGORDA										

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefiting WUGs	Is this a phased project?*	(Phased) Ultimate volume (ac-ft/yr)	(Phased) Ultimate project cost (\$)	Year project reaches maximum capacity?*	What is the project funding source(s)?*	Funding Mechanism if Other?	Included in 2021 plan?*	Does the project or WMS involve reallocation of flood control?*	Does the project or WMS provide any measurable flood risk reduction?*	Optional Comments
K	CITY OF AUSTIN RETURN FLOWS	2020	WMS SUPPLY RECIPIENT: IRRIGATION, WHARTON										
K	CITY OF AUSTIN RETURN FLOWS	2020	WMS SUPPLY RECIPIENT: STEAM ELECTRIC POWER, MATAGORDA										
K	DEVELOPMENT OF NEW CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP	2020	PROJECT SPONSOR(S): BASTROP										
K	DEVELOPMENT OF NEW HICKORY AQUIFER SUPPLIES - LLANO	2020	PROJECT SPONSOR(S): LLANO										
K	DEVELOPMENT OF NEW QUEEN CITY AQUIFER SUPPLIES - BASTROP COUNTY MINING	2020	PROJECT SPONSOR(S): MINING (BASTROP)										
K	DIRECT REUSE - BUDA	2020	PROJECT SPONSOR(S): BUDA	Yes	1680 AFY		2050			Yes	No		Effluent forcemain to Sunfield MUD, complete by 2022. Sunfield can take up to 1120ac-ft/yr for use in the MUD. Feasibility study underway to maximize current system use and potentially add additional storage capacity.
K	DIRECT REUSE - FLATONIA	2020	PROJECT SPONSOR(S): FLATONIA										
K	DIRECT REUSE - HORSESHOE BAY	2020	WMS SUPPLY RECIPIENT: HORSESHOE BAY	Yes	1,344	\$1,070,000	2050	Market	Private funds from golf course	Yes	No	No	
K	DIRECT REUSE - LLANO	2020	PROJECT SPONSOR(S): LLANO	No						Yes			
K	DIRECT REUSE - MARBLE FALLS	2020	WMS SUPPLY RECIPIENT: MARBLE FALLS										
K	DIRECT REUSE - PFLUGERVILLE	2020	PROJECT SPONSOR(S): PFLUGERVILLE	Yes	n/a	n/a	2030		n/a	No	No	No	Water reuse for irrigation already in effect for a nearby county park, with a tentative plan to distribute reused water to all city parks within the next 10 years. Any project costs or funds expended to date are currently not available for input.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: AQUA WSC								No	No	
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: AUSTIN	No				Other	Revenues from customers		No	No	Project is currently online and anticipated to remain online through the planning horizon.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BARTON CREEK WEST WSC										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BASTROP										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BASTROP COUNTY WCID #2										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BAY CITY	No				Other	Bay City - Utility Enterprise Fund	Yes	No	No	DCP was reviewed/updated & adopted by City Council on 11/5/2019. Since plan inception in 1999 the City of Bay City has not faced drought conditions or a water demand that require implementation of drought trigger responses.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BEE CAVE										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BERTRAM	No			2040	TWDB - Other	DWSRF	Yes	No	No	
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BLANCO										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BRIARCLIFF										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BUDA							Yes	No		
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: BURNET										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COLUMBUS										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COTTONWOOD SHORES										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, BASTROP										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, BLANCO										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, BURNET										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, COLORADO										

Table 11A-2: Full TWDB Template Containing Survey Results of Implementation Status of Water Management Strategies from the 2016 Region K Water Plan

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Is this a phased project?*	(Phased) Ultimate volume (ac-ft/yr)	(Phased) Ultimate project cost (\$)	Year project reaches maximum capacity?*	What is the project funding source(s)?*	Funding Mechanism if Other?	Included in 2021 plan?*	Does the project or WMS involve reallocation of flood control?*	Does the project or WMS provide any measurable flood risk reduction?*	Optional Comments
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, FAYETTE										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, GILLESPIE										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, HAYS										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, LLANO										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, MATAGORDA										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, MILLS										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, SAN SABA										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: COUNTY-OTHER, WHARTON										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: CREEDMOOR-MAHA WSC	No			2025	TWDB - Other		Yes	No	No	Drought contingency plan has been adopted by the WSC; steps will be implemented once triggers are reached. While plan will not create new water, it will postpone need to find new sources/supply.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: DRIPPING SPRINGS										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: DRIPPING SPRINGS WSC										The DSWSC Drought Contingency Plan is currently being revised with help from the LCRA. DSWSC staff will be presenting a draft copy to the Board of Directors for their review and approval.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: EAGLE LAKE										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: EAST BERNARD										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: ELGIN										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: FAYETTE WSC	No			2025	Commercial/Bank loan		Yes	No	No	
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: FLATONIA										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: FREDERICKSBURG										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: GOLDTHWAITE										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: GRANITE SHOALS										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: HORSESHOE BAY					Other		Yes	No	No	
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: IRRIGATION, COLORADO										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: IRRIGATION, MATAGORDA										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: IRRIGATION, MILLS										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: IRRIGATION, WHARTON										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: JOHNSON CITY										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: JONESTOWN										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: KINGSLAND WSC										

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Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Is this a phased project?*	(Phased) Ultimate volume (ac-ft/yr)	(Phased) Ultimate project cost (\$)	Year project reaches maximum capacity?*	What is the project funding source(s)?*	Funding Mechanism if Other?	Included in 2021 plan?*	Does the project or WMS involve reallocation of flood control?*	Does the project or WMS provide any measurable flood risk reduction?*	Optional Comments
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LA GRANGE										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LAGO VISTA										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LAKEWAY										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LLANO	No						Yes			
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LOOP 360 WSC										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: LOST CREEK MUD										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: MANOR										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: MANVILLE WSC										During the most recent drought of record in 2011, Manville implemented stage II, twice a week outside watering water restrictions on July 1, 2011.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: MARBLE FALLS										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: MEADOWLAKES										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: NORTH AUSTIN MUD #1										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: NORTHTOWN MUD										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: PALACIOS										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: PFLUGERVILLE	Yes	n/a	n/a	2070		n/a	Yes	No	No	"Year Project is online" is actually 2006 but year not available in drop-down option, used earliest provided. Any project costs or funds expended to date are currently not available for input.
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: POINT VENTURE										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: ROLLINGWOOD										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SAN SABA										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SCHULENBURG										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SHADY HOLLOW MUD										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SMITHVILLE	No			2070	Other	Utility Fund	Yes	No	Potentially, but no technical flood analysis performed	
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SUNRISE BEACH VILLAGE										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: SUNSET VALLEY										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: THE HILLS										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: TRAVIS COUNTY MUD #4										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: TRAVIS COUNTY WCID #10										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: TRAVIS COUNTY WCID #17										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: TRAVIS COUNTY WCID #18										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: TRAVIS COUNTY WCID #19										

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Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Is this a phased project?*	(Phased) Ultimate volume (ac-ft/yr)	(Phased) Ultimate project cost (\$)	Year project reaches maximum capacity?*	What is the project funding source(s)?*	Funding Mechanism if Other?	Included in 2021 plan?*	Does the project or WMS involve reallocation of flood control?*	Does the project or WMS provide any measurable flood risk reduction?*	Optional Comments
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: TRAVIS COUNTY WCID #20										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: VOLENTE										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: WEIMAR										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: WELLS BRANCH MUD										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: WEST LAKE HILLS										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY										
K	DROUGHT MANAGEMENT	2020	WUG REDUCING DEMAND: WHARTON										
K	DROUGHT MANAGEMENT - MOUNTAIN CITY	2020	WUG REDUCING DEMAND: MOUNTAIN CITY										
K	EAST LAKE BUCHANAN REGIONAL PROJECT	2020	PROJECT SPONSOR(S): COUNTY-OTHER (BURNET)										
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - AQUA WSC	2020	PROJECT SPONSOR(S): AQUA WSC							Yes			Added 1200 gpm Behrend Well to McDade Well Field
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP COUNTY MANUFACTURING	2020	PROJECT SPONSOR(S): MANUFACTURING (BASTROP)										
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP COUNTY-OTHER	2020	PROJECT SPONSOR(S): COUNTY-OTHER (BASTROP)										
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - ELGIN	2020	PROJECT SPONSOR(S): ELGIN										
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - LCRA	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	Yes	25,000 AFY	\$46,629,000		Other	Any combination of funding sources listed.	Yes	No	No	Year project reaches maximum capacity will depend on demand
K	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - BERTRAM	2020	PROJECT SPONSOR(S): BERTRAM	Yes	2,000 AFY	\$16,345,000		TWDB - Other	DWSRF	Yes	No	No	
K	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - BURNET COUNTY MINING	2020	PROJECT SPONSOR(S): MINING (BURNET)										
K	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - GILLESPIE COUNTY MANUFACTURING	2020	PROJECT SPONSOR(S): MANUFACTURING (GILLESPIE)										
K	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - JOHNSON CITY	2020	PROJECT SPONSOR(S): JOHNSON CITY										
K	EXPANSION OF GULF COAST AQUIFER SUPPLIES - COLORADO COUNTY-OTHER	2020	PROJECT SPONSOR(S): COUNTY-OTHER (COLORADO)										
K	EXPANSION OF GULF COAST AQUIFER SUPPLIES - FAYETTE COUNTY MANUFACTURING	2020	PROJECT SPONSOR(S): MANUFACTURING (FAYETTE)										
K	EXPANSION OF GULF COAST AQUIFER SUPPLIES - FAYETTE COUNTY MINING	2020	PROJECT SPONSOR(S): MINING (FAYETTE)										
K	EXPANSION OF GULF COAST AQUIFER SUPPLIES - FAYETTE COUNTY-OTHER	2020	PROJECT SPONSOR(S): COUNTY-OTHER (FAYETTE)										
K	EXPANSION OF GULF COAST AQUIFER SUPPLIES - FLATONIA	2020	PROJECT SPONSOR(S): FLATONIA										
K	EXPANSION OF SPARTA AQUIFER SUPPLIES - FAYETTE COUNTY MINING	2020	PROJECT SPONSOR(S): MINING (FAYETTE)										
K	EXPANSION OF TRINITY AQUIFER SUPPLIES - HAYS COUNTY MINING	2020	PROJECT SPONSOR(S): MINING (HAYS)										
K	EXPANSION OF TRINITY AQUIFER SUPPLIES - LAKEWAY	2020	PROJECT SPONSOR(S): LAKEWAY										
K	EXPANSION OF TRINITY AQUIFER SUPPLIES - MILLS COUNTY IRRIGATION	2020	PROJECT SPONSOR(S): IRRIGATION (MILLS)										
K	IRRIGATION CONSERVATION - ON FARM	2020	PROJECT SPONSOR(S): IRRIGATION (COLORADO); IRRIGATION (MATAGORDA); IRRIGATION (WHARTON)										
K	IRRIGATION CONSERVATION - SPRINKLER	2020	PROJECT SPONSOR(S): IRRIGATION (COLORADO); IRRIGATION (MATAGORDA); IRRIGATION (WHARTON)										
K	IRRIGATION OPERATIONS CONVEYANCE IMPROVEMENTS	2020	PROJECT SPONSOR(S): IRRIGATION (COLORADO); IRRIGATION (MATAGORDA); IRRIGATION (WHARTON)										
K	LCRA - ACQUIRE ADDITIONAL WATER RIGHTS	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	Yes	25,000	\$125,000		Other	Any combination of funding sources listed.	Yes	No	No	Water rights will be acquired as they become available at a suitable cost.
K	LCRA - CONTRACT AMENDMENTS	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	Yes	39,466	\$151/AF		Other	Customer project revenue	Yes	No	No	Project will come online as needed by customers
K	LCRA - ENHANCED MUNICIPAL AND INDUSTRIAL CONSERVATION	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY		20,000		2050	Other	General revenue from water rates	Yes	No	No	This references the 2019 LCRA WCP, which is updated every five years.
K	LCRA - EXCESS FLOWS PERMIT OFF-CHANNEL RESERVOIR	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	No				Other	Any combination of funding sources listed.	Yes	No	Potentially, but no technical flood analysis performed	If an existing OCR site is chosen, and permitting is successful, then project could be online before 2030.

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K	LCRA - GROUNDWATER SUPPLY FOR FPP (OFF-SITE)	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY							No			LCRA is no longer recommending this alternative
K	LCRA - GROUNDWATER SUPPLY FOR FPP (ON-SITE)	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY							No			LCRA is no longer recommending this alternative
K	LCRA - INTERRUPTIBLE WATER FOR AGRICULTURE (LCRA WMP AMENDMENTS)	2020	WMS SELLER: LOWER COLORADO RIVER AUTHORITY; WMS SUPPLY RECIPIENT: IRRIGATION, COLORADO										
K	LCRA - INTERRUPTIBLE WATER FOR AGRICULTURE (LCRA WMP AMENDMENTS)	2020	WMS SELLER: LOWER COLORADO RIVER AUTHORITY; WMS SUPPLY RECIPIENT: IRRIGATION, MATAGORDA										
K	LCRA - INTERRUPTIBLE WATER FOR AGRICULTURE (LCRA WMP AMENDMENTS)	2020	WMS SELLER: LOWER COLORADO RIVER AUTHORITY; WMS SUPPLY RECIPIENT: IRRIGATION, WHARTON										
K	LCRA - LANE CITY OFF-CHANNEL RESERVOIR	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY										
K	LCRA - MID-BASIN OFF-CHANNEL RESERVOIR	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	No			2030	Other	Any combination of funding sources listed.	Yes			
K	LCRA - NEW LCRA CONTRACTS	2020	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY	No						Yes	No	No	New contracts will be entered as needed.
K	MARBLE FALLS REGIONAL PROJECT	2020	PROJECT SPONSOR(S): COTTONWOOD SHORES; COUNTY-OTHER (BURNET); MARBLE FALLS										
K	MUNICIPAL CONSERVATION - AQUA WSC	2020	PROJECT SPONSOR(S): AQUA WSC									No	
K	MUNICIPAL CONSERVATION - BARTON CREEK WEST WSC	2020	PROJECT SPONSOR(S): BARTON CREEK WEST WSC										
K	MUNICIPAL CONSERVATION - BASTROP	2020	PROJECT SPONSOR(S): BASTROP										
K	MUNICIPAL CONSERVATION - BASTROP COUNTY OTHER	2020	PROJECT SPONSOR(S): COUNTY-OTHER (BASTROP)										
K	MUNICIPAL CONSERVATION - BAY CITY	2020	PROJECT SPONSOR(S): BAY CITY	No				Other	Bay City - Utility Enterprise Fund	No	No	No	Council on 11/5/2019. Water saving target achieved in 2019 for the residential class via capital measures (replace aging waterlines & install AMI) & outreach/education. Future efforts will target commercial & institutional classes.
K	MUNICIPAL CONSERVATION - BEE CAVE VILLAGE	2020	PROJECT SPONSOR(S): BEE CAVE										
K	MUNICIPAL CONSERVATION - BERTRAM	2020	PROJECT SPONSOR(S): BERTRAM	Yes	80 AFY	\$130,000	2060	Other	Rates and Fees	Yes	No	No	
K	MUNICIPAL CONSERVATION - BLANCO	2020	PROJECT SPONSOR(S): BLANCO										
K	MUNICIPAL CONSERVATION - BUDA	2020	PROJECT SPONSOR(S): BUDA				2020	Commercial/Bank loan		Yes	No		After water savings are being tracked, the city also had a leak detection survey performed on part of the system, and will continue with more sections in the future along with other programs outlined in the WCP updated in 2019.
K	MUNICIPAL CONSERVATION - BURNET	2020	PROJECT SPONSOR(S): BURNET										
K	MUNICIPAL CONSERVATION - BURNET COUNTY-OTHER	2020	PROJECT SPONSOR(S): COUNTY-OTHER (BURNET)										
K	MUNICIPAL CONSERVATION - CEDAR PARK	2020	PROJECT SPONSOR(S): CEDAR PARK	No			2040	Other	Self pay and Bonds	Yes	No	No	
K	MUNICIPAL CONSERVATION - COLUMBUS	2020	PROJECT SPONSOR(S): COLUMBUS										
K	MUNICIPAL CONSERVATION - COTTONWOOD SHORES	2020	PROJECT SPONSOR(S): COTTONWOOD SHORES										
K	MUNICIPAL CONSERVATION - DRIPPING SPRINGS	2020	PROJECT SPONSOR(S): DRIPPING SPRINGS										
K	MUNICIPAL CONSERVATION - DRIPPING SPRINGS WSC	2020	PROJECT SPONSOR(S): DRIPPING SPRINGS WSC										DSWSC staff is currently revising and updating the WCP with help from the LCRA. A draft copy is planned to be reviewed and approved by the DSWSC Board of Directors.
K	MUNICIPAL CONSERVATION - EAST BERNARD	2020	PROJECT SPONSOR(S): EAST BERNARD										
K	MUNICIPAL CONSERVATION - FLATONIA	2020	PROJECT SPONSOR(S): FLATONIA										
K	MUNICIPAL CONSERVATION - FREDERICKSBURG	2020	PROJECT SPONSOR(S): FREDERICKSBURG										
K	MUNICIPAL CONSERVATION - GOLDTHWAITE	2020	PROJECT SPONSOR(S): GOLDTHWAITE										
K	MUNICIPAL CONSERVATION - HORSESHOE BAY	2020	PROJECT SPONSOR(S): HORSESHOE BAY	No			2040	Other	Utility rates of customers	Yes	No	No	
K	MUNICIPAL CONSERVATION - JOHNSON CITY	2020	PROJECT SPONSOR(S): JOHNSON CITY										
K	MUNICIPAL CONSERVATION - JONESTOWN	2020	PROJECT SPONSOR(S): JONESTOWN										
K	MUNICIPAL CONSERVATION - LA GRANGE	2020	PROJECT SPONSOR(S): LA GRANGE										
K	MUNICIPAL CONSERVATION - LAGO VISTA	2020	PROJECT SPONSOR(S): LAGO VISTA										
K	MUNICIPAL CONSERVATION - LAKEWAY	2020	PROJECT SPONSOR(S): LAKEWAY										
K	MUNICIPAL CONSERVATION - LLANO	2020	PROJECT SPONSOR(S): LLANO							Yes			
K	MUNICIPAL CONSERVATION - LOOP 360	2020	PROJECT SPONSOR(S): LOOP 360 WSC										
K	MUNICIPAL CONSERVATION - LOST CREEK MUD	2020	PROJECT SPONSOR(S): LOST CREEK MUD										
K	MUNICIPAL CONSERVATION - MARBLE FALLS	2020	PROJECT SPONSOR(S): MARBLE FALLS										
K	MUNICIPAL CONSERVATION - MEADOWLAKES	2020	PROJECT SPONSOR(S): MEADOWLAKES										
K	MUNICIPAL CONSERVATION - PFLUGERVILLE	2020	PROJECT SPONSOR(S): PFLUGERVILLE		n/a	n/a	2025		n/a	Yes	No	No	Advanced Metering Infrastructure - not yet implemented. Any project costs or funds expended to date are currently not available for input.
K	MUNICIPAL CONSERVATION - POINT VENTURE	2020	PROJECT SPONSOR(S): POINT VENTURE										
K	MUNICIPAL CONSERVATION - ROLLINGWOOD	2020	PROJECT SPONSOR(S): ROLLINGWOOD										
K	MUNICIPAL CONSERVATION - ROUND ROCK	2020	PROJECT SPONSOR(S): ROUND ROCK										
K	MUNICIPAL CONSERVATION - SAN SABA	2020	PROJECT SPONSOR(S): SAN SABA										
K	MUNICIPAL CONSERVATION - SCHULENBURG	2020	PROJECT SPONSOR(S): SCHULENBURG										

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Is this a phased project?*	(Phased) Ultimate volume (ac-ft/yr)	(Phased) Ultimate project cost (\$)	Year project reaches maximum capacity?*	What is the project funding source(s)?*	Funding Mechanism if Other?	Included in 2021 plan?*	Does the project or WMS involve reallocation of flood control?*	Does the project or WMS provide any measurable flood risk reduction?*	Optional Comments
K	MUNICIPAL CONSERVATION - SHADY HOLLOW MUD	2020	PROJECT SPONSOR(S): SHADY HOLLOW MUD										
K	MUNICIPAL CONSERVATION - SMITHVILLE	2020	PROJECT SPONSOR(S): SMITHVILLE	No			2070	Other	Qualified Energy Conservation Bonds	Yes	No	Yes, flood risk study confirmed benefits	
K	MUNICIPAL CONSERVATION - SUNSET VALLEY	2020	PROJECT SPONSOR(S): SUNSET VALLEY										
K	MUNICIPAL CONSERVATION - THE HILLS	2020	PROJECT SPONSOR(S): THE HILLS										
K	MUNICIPAL CONSERVATION - TRAVIS COUNTY MUD #4	2020	PROJECT SPONSOR(S): TRAVIS COUNTY MUD #4										
K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #10	2020	PROJECT SPONSOR(S): TRAVIS COUNTY WCID #10										
K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #17	2020	PROJECT SPONSOR(S): TRAVIS COUNTY WCID #17										
K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #18	2020	PROJECT SPONSOR(S): TRAVIS COUNTY WCID #18										
K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #19	2020	PROJECT SPONSOR(S): TRAVIS COUNTY WCID #19										
K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #20	2020	PROJECT SPONSOR(S): TRAVIS COUNTY WCID #20										
K	MUNICIPAL CONSERVATION - WEIMAR	2020	PROJECT SPONSOR(S): WEIMAR										
K	MUNICIPAL CONSERVATION - WEST LAKE HILLS	2020	PROJECT SPONSOR(S): WEST LAKE HILLS										
K	MUNICIPAL CONSERVATION - WEST TRAVIS COUNTY PUA	2020	PROJECT SPONSOR(S): WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY										
K	MUNICIPAL CONSERVATION - WHARTON	2020	PROJECT SPONSOR(S): WHARTON										
K	NEW SURFACE WATER INFRASTRUCTURE - VOLENTE URGENT WATER LOSS REDUCTION PROJECT - CMWSC	2020	PROJECT SPONSOR(S): VOLENTE										
K		2020	PROJECT SPONSOR(S): CREEDMOOR-MAHA WSC	No			2025	TWDB - Other			No	No	
K	BS/EACD EDWARDS / MIDDLE TRINITY ASR	2030	PROJECT SPONSOR(S): BUDA; COUNTY-OTHER (HAYS); MINING (HAYS); MOUNTAIN CITY; SUNSET VALLEY	Yes	~600 AFY	\$7,750,000	2030	Other	Current project is funded from Certificate of Obligation Utility Bond, options being explored for future phases	Yes	No	No	
K	BS/EACD SALINE EDWARDS ASR	2030	PROJECT SPONSOR(S): BUDA; COUNTY-OTHER (HAYS); CREEDMOOR-MAHA WSC							Yes	No	No	not an option Buda will pursue since we can store in the Trinity Aquifer. A feasibility study desalinating Saline Edwards and having an ASR component to keep plant size efficient is a possible option for Buda, and I think the original intent of this WMS.
K	EXPANSION OF HICKORY AQUIFER SUPPLIES - BURNET COUNTY MINING	2030	PROJECT SPONSOR(S): MINING (BURNET)										
K	EXPANSION OF TRINITY AQUIFER SUPPLIES - MANOR	2030	PROJECT SPONSOR(S): MANOR										
K	HAYS COUNTY PIPELINE - REGION K PORTION	2030	PROJECT SPONSOR(S): WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY; COUNTY-OTHER (HAYS); DRIPPING SPRINGS WSC										conversation with the DSWSC Board of Directors as well as with DSWSC staff members. At this time, no action has been taken.
K	LCRA - PRAIRIE SITE OFF-CHANNEL RESERVOIR	2030	PROJECT SPONSOR(S): LOWER COLORADO RIVER AUTHORITY										
K	NEW SURFACE WATER INFRASTRUCTURE - ELGIN	2030	PROJECT SPONSOR(S): ELGIN										
K	WATER PURCHASE	2030	WMS SELLER: DRIPPING SPRINGS WSC; WMS SUPPLY RECIPIENT: DRIPPING SPRINGS										Currently there is no purchase contract with the City of Dripping Springs and DSWSC.
K	CITY OF AUSTIN RETURN FLOWS	2040	WMS SUPPLY RECIPIENT: IRRIGATION, COLORADO										
K	DEVELOPMENT OF NEW CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP COUNTY MINING	2040	PROJECT SPONSOR(S): MINING (BASTROP)										
K	DEVELOPMENT OF NEW TRINITY AQUIFER SUPPLIES - SUNSET VALLEY	2040	PROJECT SPONSOR(S): SUNSET VALLEY										
K	DIRECT REUSE - BASTROP	2040	PROJECT SPONSOR(S): BASTROP										
K	DIRECT REUSE - BUDA	2040	WMS SELLER: BUDA; WMS SUPPLY RECIPIENT: MINING, HAYS										
K	EXPANSION OF EDWARDS (BFZ) AQUIFER SUPPLIES - PFLUGERVILLE	2040	PROJECT SPONSOR(S): PFLUGERVILLE		n/a	n/a				Yes			There are currently no expansion plans for Groundwater supplies.
K	NEW SURFACE WATER INFRASTRUCTURE - AQUA WSC	2040	PROJECT SPONSOR(S): AQUA WSC										
K	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - BLANCO COUNTY-OTHER	2050	PROJECT SPONSOR(S): COUNTY-OTHER (BLANCO)										
K	EXPANSION OF HICKORY AQUIFER SUPPLIES - BLANCO COUNTY-OTHER	2050	PROJECT SPONSOR(S): COUNTY-OTHER (BLANCO)										
K	EXPANSION OF TRINITY AQUIFER SUPPLIES - MANVILLE WSC	2050	PROJECT SPONSOR(S): MANVILLE WSC										Current not applicable as the MWSC plan is for water expansion in 2050.
K	NEW SURFACE WATER INFRASTRUCTURE - BASTROP	2050	PROJECT SPONSOR(S): BASTROP										
K	DEVELOPMENT OF NEW GULF COAST AQUIFER SUPPLIES - WHARTON COUNTY STEAM-ELECTRIC	2060	PROJECT SPONSOR(S): STEAM ELECTRIC POWER (WHARTON)										
K	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP COUNTY WCID #2	2060	PROJECT SPONSOR(S): BASTROP COUNTY WCID #2										
K	EXPANSION OF MARBLE FALLS AQUIFER SUPPLIES - BURNET COUNTY MINING	2060	PROJECT SPONSOR(S): MINING (BURNET)										
K	DEVELOPMENT OF NEW QUEEN CITY AQUIFER SUPPLIES - SMITHVILLE	2070	PROJECT SPONSOR(S): SMITHVILLE										

Table 11A-2: Full TWDB Template Containing Survey Results of Implementation Status of Water Management Strategies from the 2016 Region K Water Plan

Planning Region	WMS or WMS Project Name	Database Online Decade	Related Sponsor Entity and/or Benefitting WUGs	Is this a phased project?*	(Phased) Ultimate volume (ac-ft/yr)	(Phased) Ultimate project cost (\$)	Year project reaches maximum capacity?*	What is the project funding source(s)?*	Funding Mechanism if Other?	Included in 2021 plan?*	Does the project or WMS involve reallocation of flood control?*	Does the project or WMS provide any measurable flood risk reduction?*	Optional Comments
K	MUNICIPAL WATER CONSERVATION (RURAL)	2070	WUG REDUCING DEMAND: MOUNTAIN CITY										

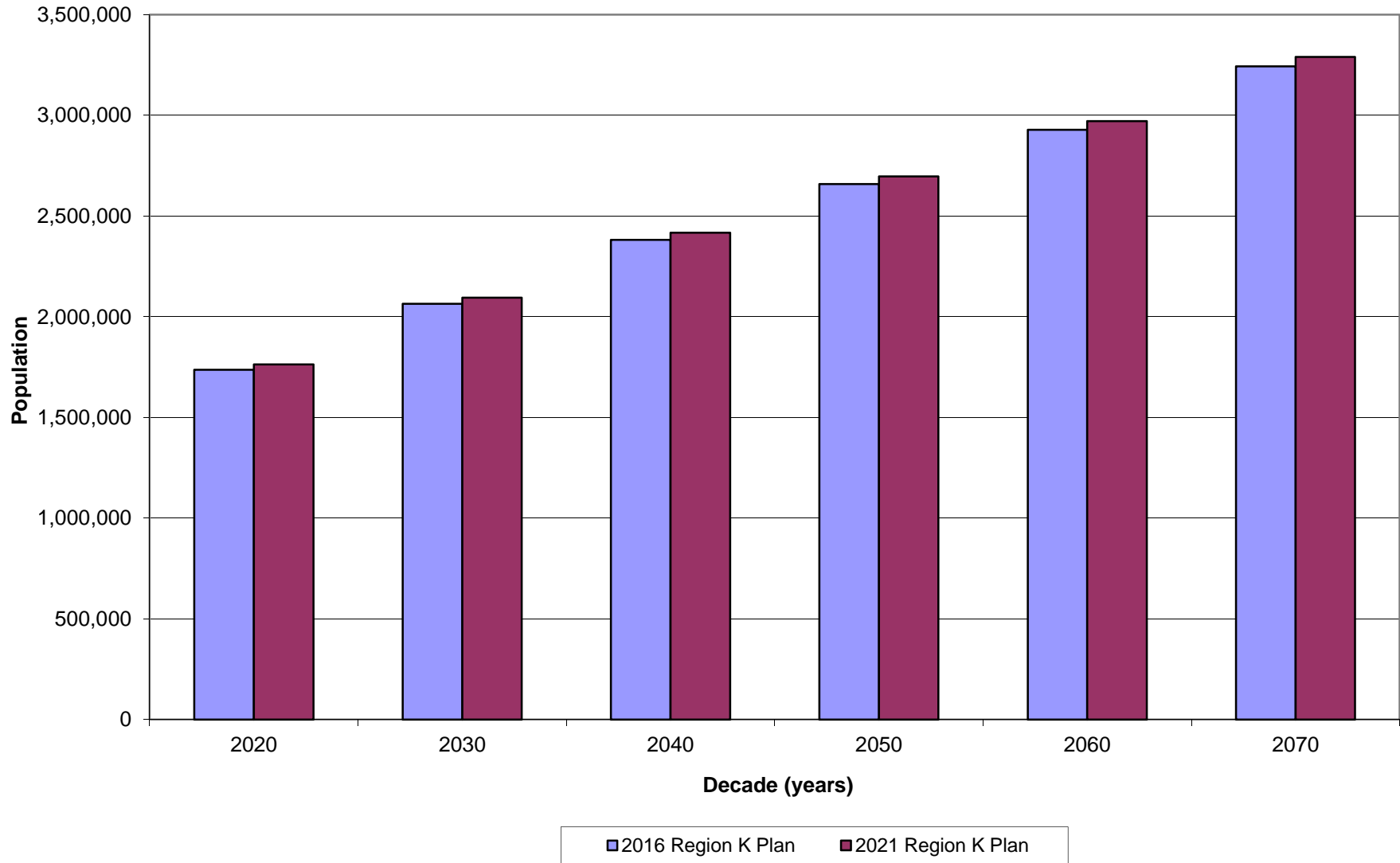
APPENDIX 11B

***COMPARISON TABLES AND GRAPHS FOR POPULATION AND
DEMAND PROJECTIONS***

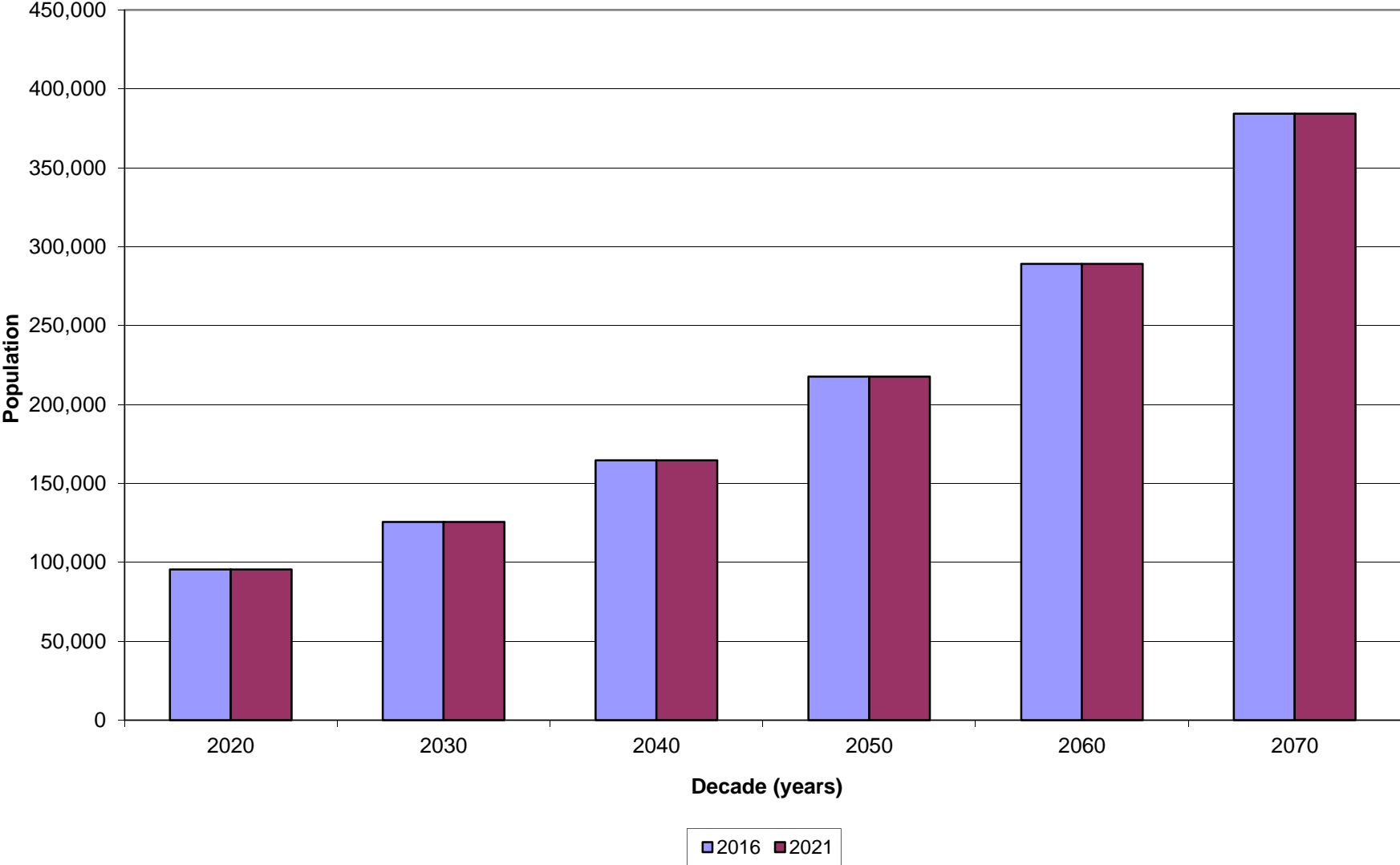
<i>RWP</i>	2020	2030	2040	2050	2060	2070
Region K						
2021	1,762,591	2,094,664	2,416,725	2,697,306	2,971,155	3,290,477
2016	1,737,227	2,064,522	2,381,949	2,658,492	2,928,400	3,243,127
Difference	25,364	30,142	34,776	38,814	42,755	47,350
% Change	1.5	1.5	1.5	1.5	1.5	1.5
Bastrop						
2021	95,487	125,559	164,648	217,608	289,140	384,244
2016	95,487	125,559	164,648	217,608	289,140	384,244
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0
Blanco						
2021	13,015	15,475	16,917	17,672	18,175	18,472
2016	13,015	15,475	16,917	17,672	18,175	18,472
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0
Burnet						
2021	53,114	64,268	73,673	82,668	90,571	97,426
2016	53,114	64,268	73,673	82,668	90,571	97,426
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0
Colorado						
2021	21,884	22,836	23,544	24,582	25,449	26,293
2016	21,884	22,836	23,544	24,582	25,449	26,293
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0
Fayette						
2021	28,373	32,384	35,108	37,351	39,119	40,476
2016	28,373	32,384	35,108	37,351	39,119	40,476
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0
Gillespie						
2021	26,795	28,852	30,548	32,536	34,365	36,142
2016	26,795	28,852	30,548	32,536	34,365	36,142
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0
Hays						
2021	55,584	73,243	94,747	121,629	152,007	186,579
2016	55,584	73,243	94,747	121,629	152,007	186,579
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0

<i>RWP</i>	2020	2030	2040	2050	2060	2070
Llano						
2021	21,291	22,453	22,422	22,035	22,779	23,549
2016	21,291	22,453	22,422	22,035	22,779	23,549
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0
Matagorda						
2021	39,166	41,226	42,548	43,570	44,296	44,815
2016	39,166	41,226	42,548	43,570	44,296	44,815
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0
Mills						
2021	4,912	5,076	5,213	5,417	5,625	5,859
2016	4,912	5,076	5,213	5,417	5,625	5,859
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0
San Saba						
2021	6,484	6,793	6,833	6,722	6,879	7,039
2016	6,484	6,793	6,833	6,722	6,879	7,039
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0
Travis						
2021	1,298,624	1,538,784	1,767,636	1,936,583	2,075,875	2,233,259
2016	1,273,260	1,508,642	1,732,860	1,897,769	2,033,120	2,185,909
Difference	25,364	30,142	34,776	38,814	42,755	47,350
% Change	2.0	2.0	2.0	2.0	2.1	2.2
Wharton						
2021	27,184	28,928	30,322	31,529	32,643	33,629
2016	27,184	28,928	30,322	31,529	32,643	33,629
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0
Williamson						
2021	70,678	88,787	102,566	117,404	134,232	152,695
2016	70,678	88,787	102,566	117,404	134,232	152,695
Difference	0	0	0	0	0	0
% Change	0.0	0.0	0.0	0.0	0.0	0.0

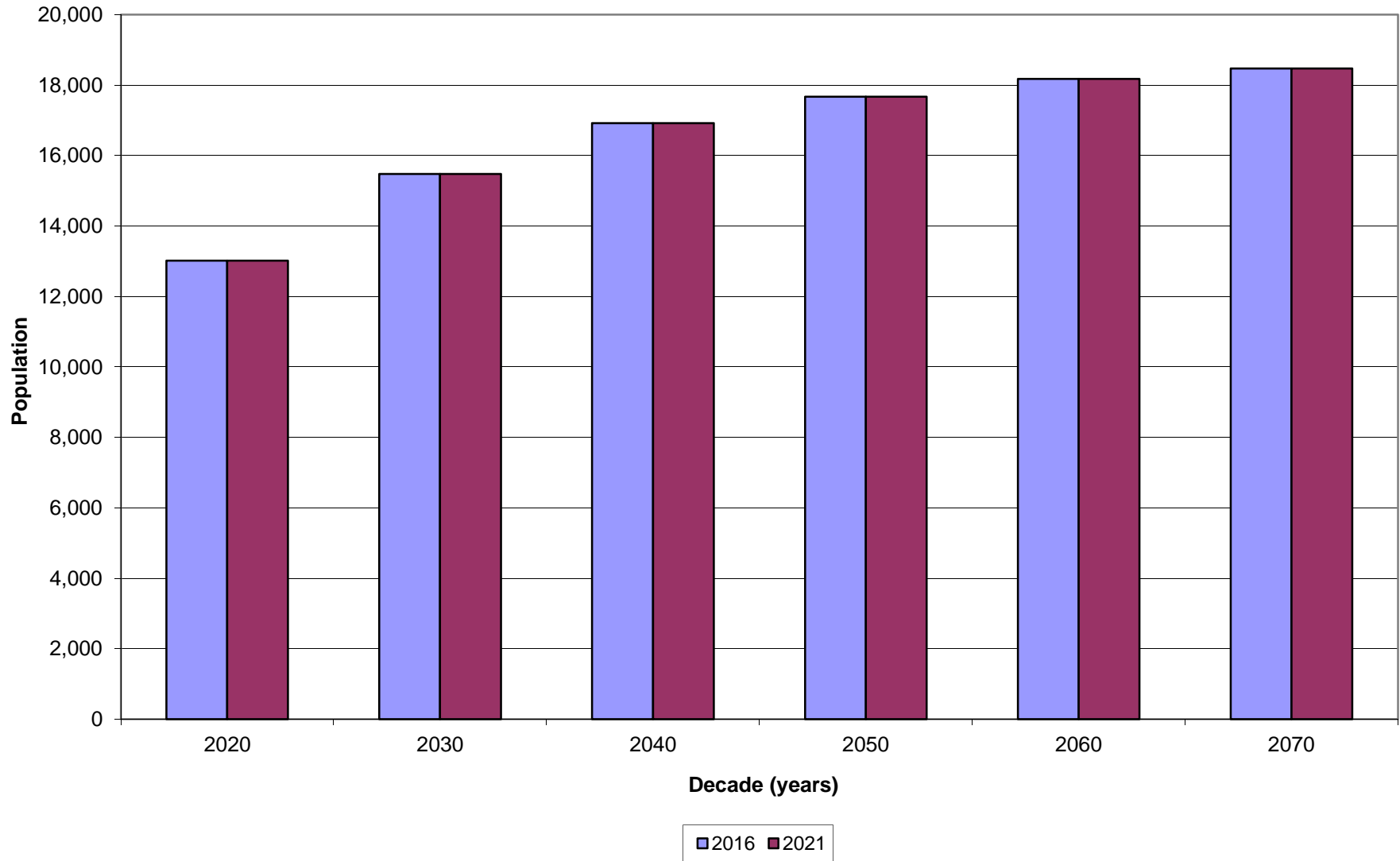
Region K Population Comparison



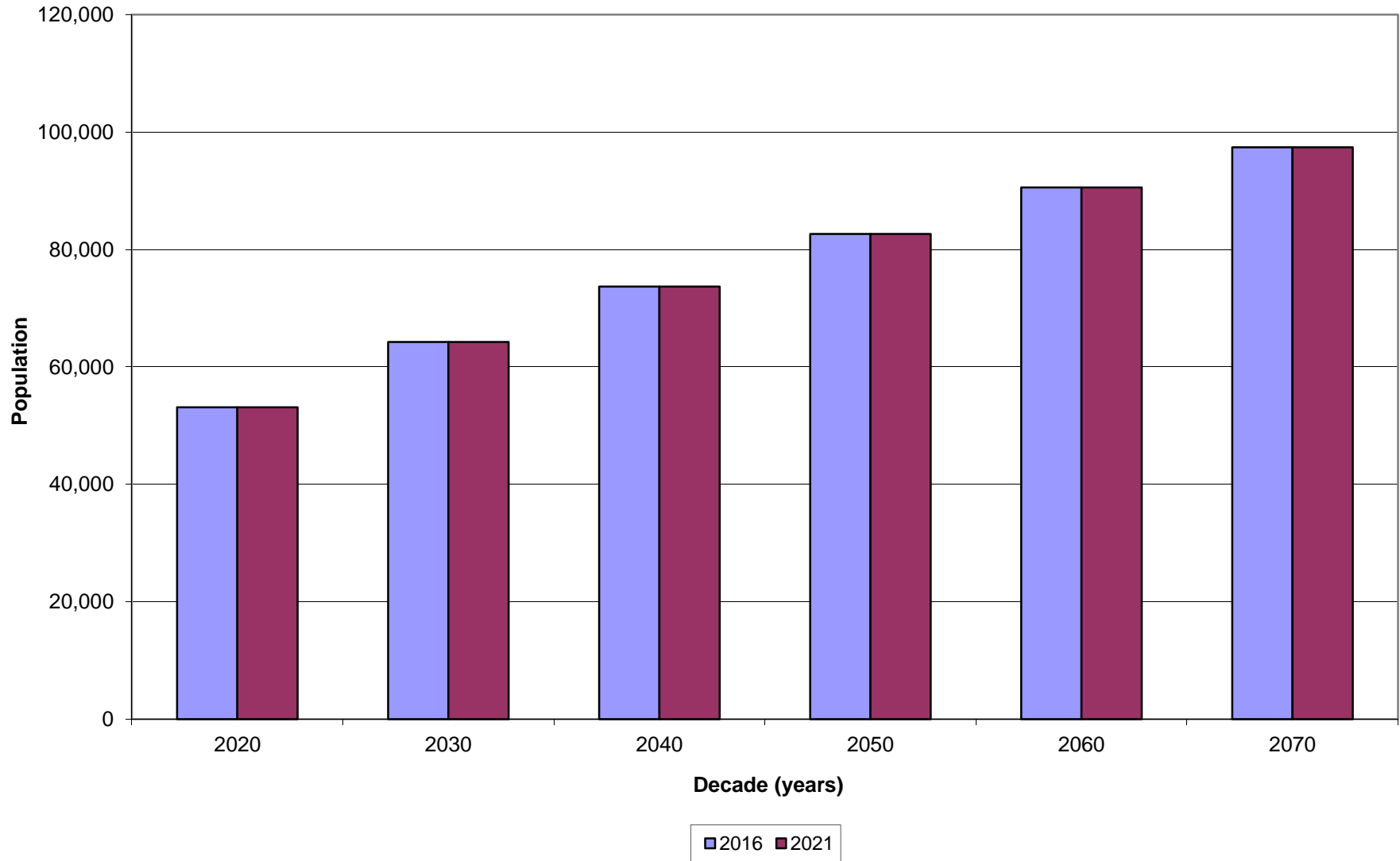
Bastrop Population Comparison



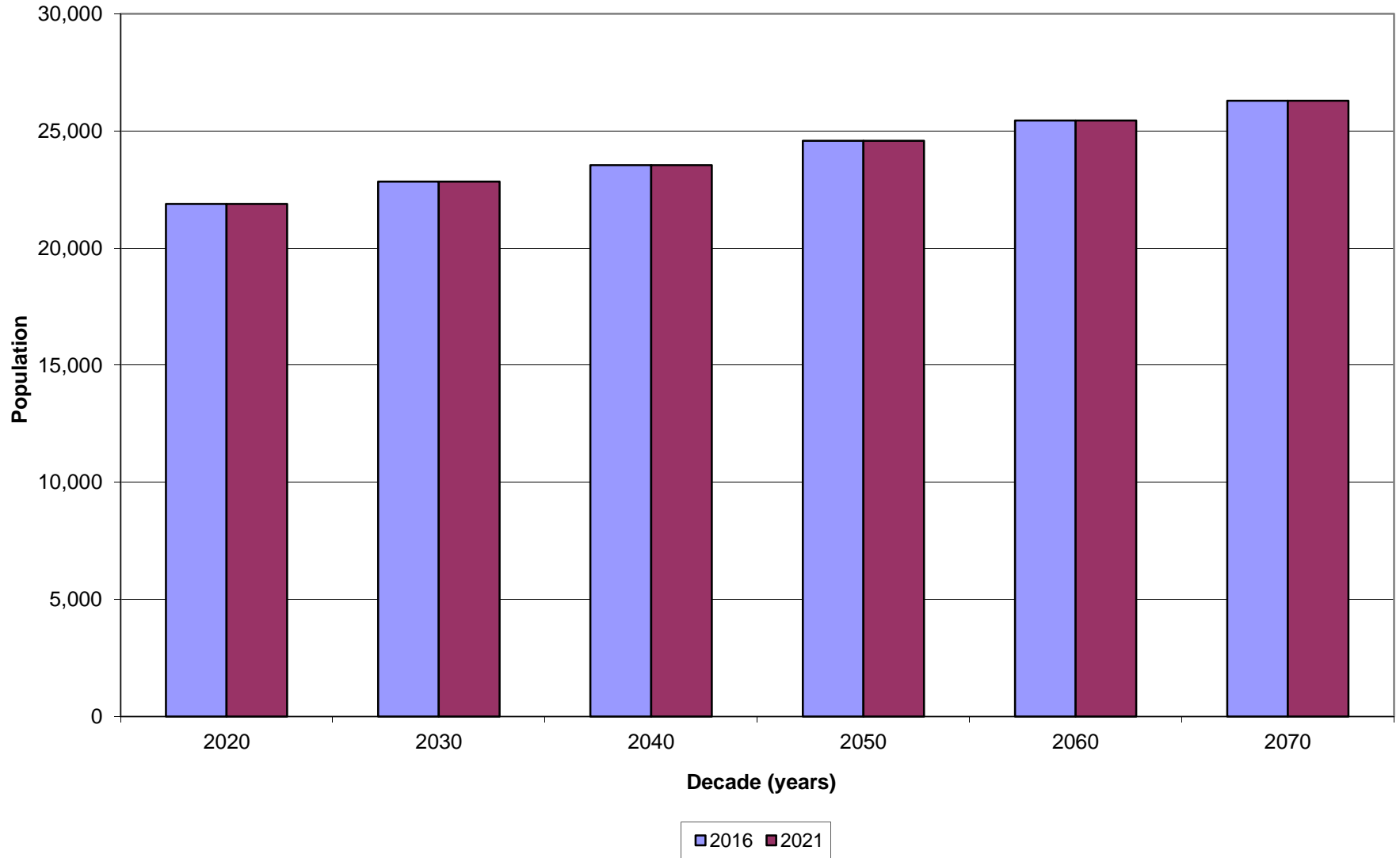
Blanco Population Comparison



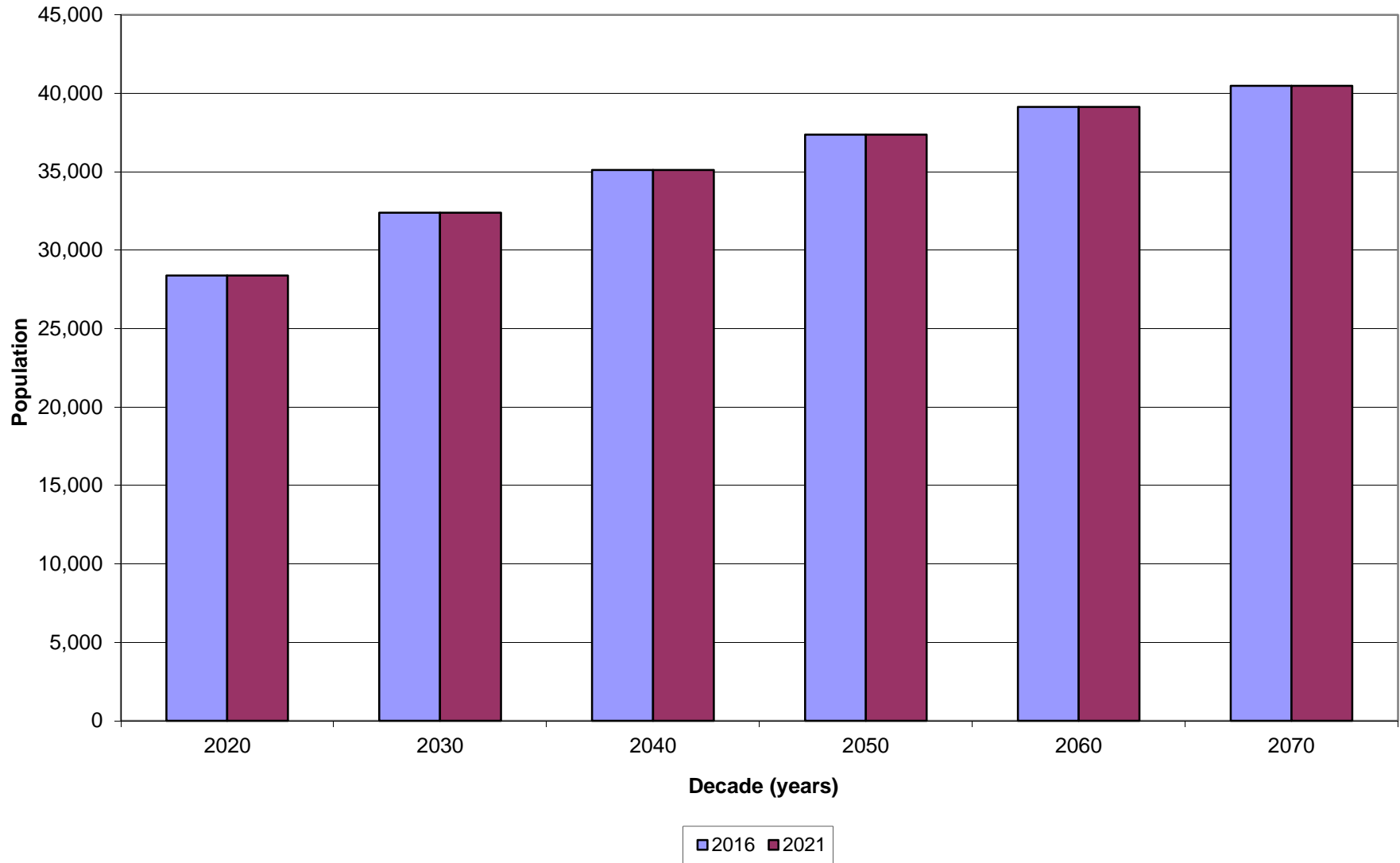
Burnet Population Comparison



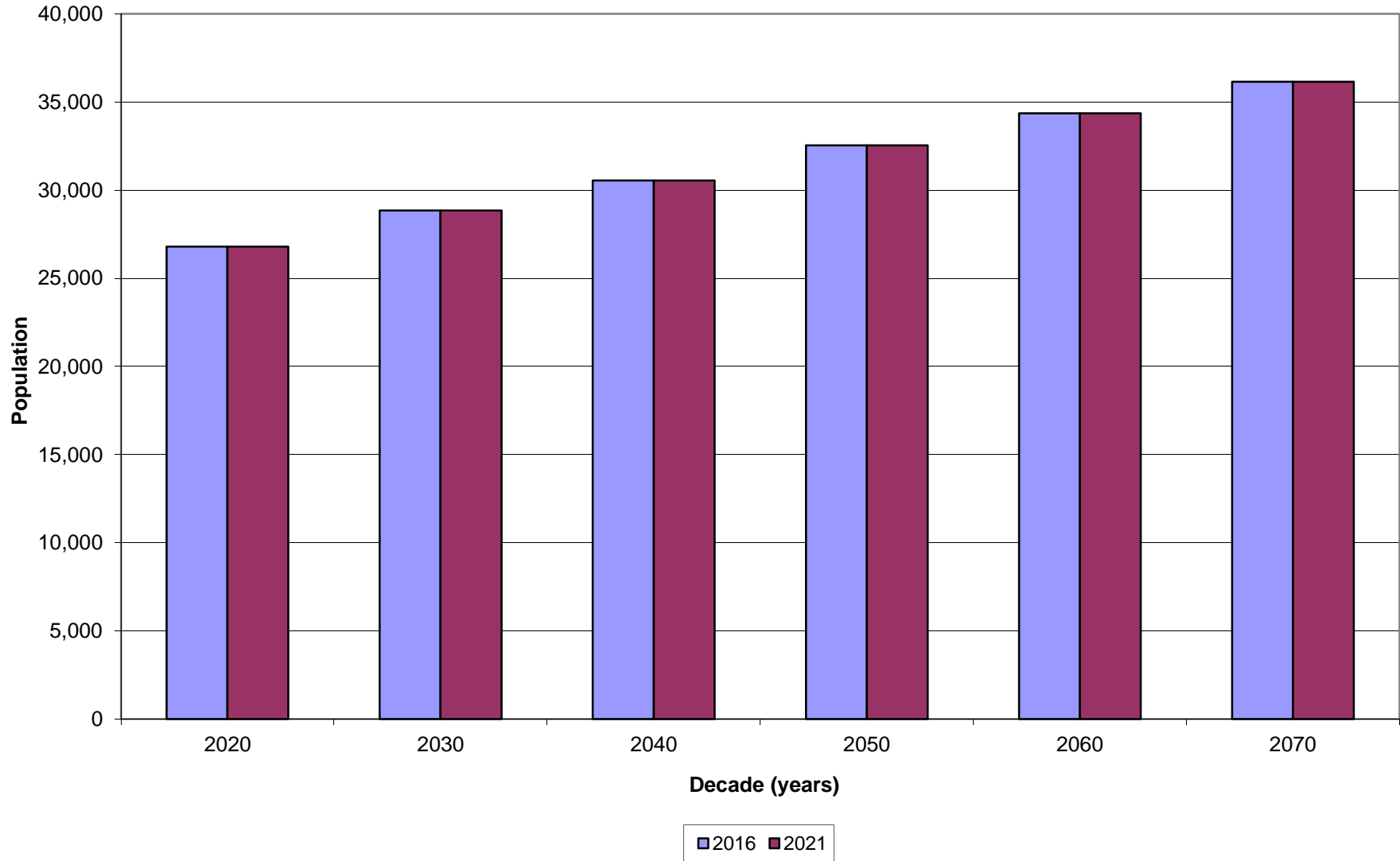
Colorado Population Comparison



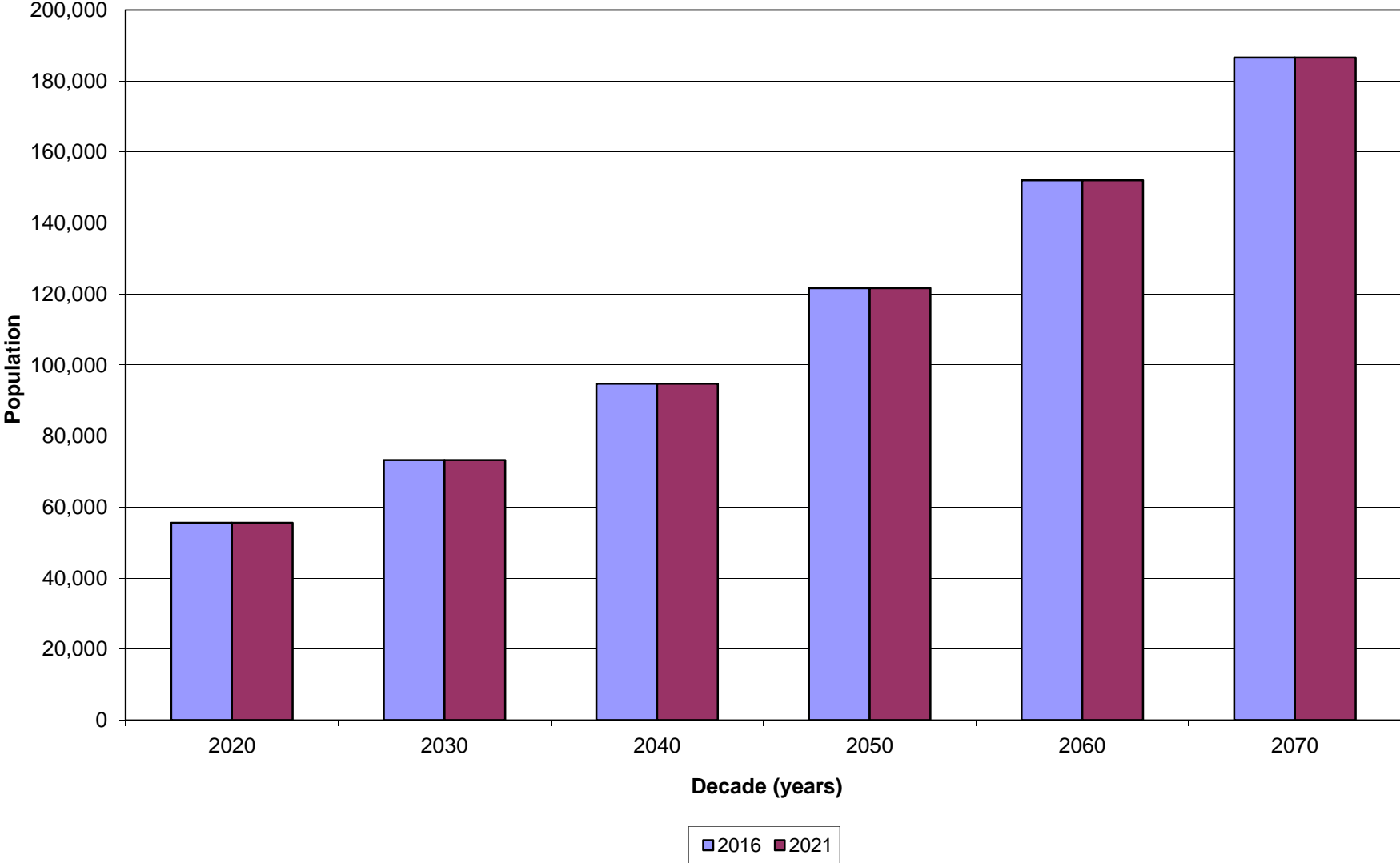
Fayette Population Comparison



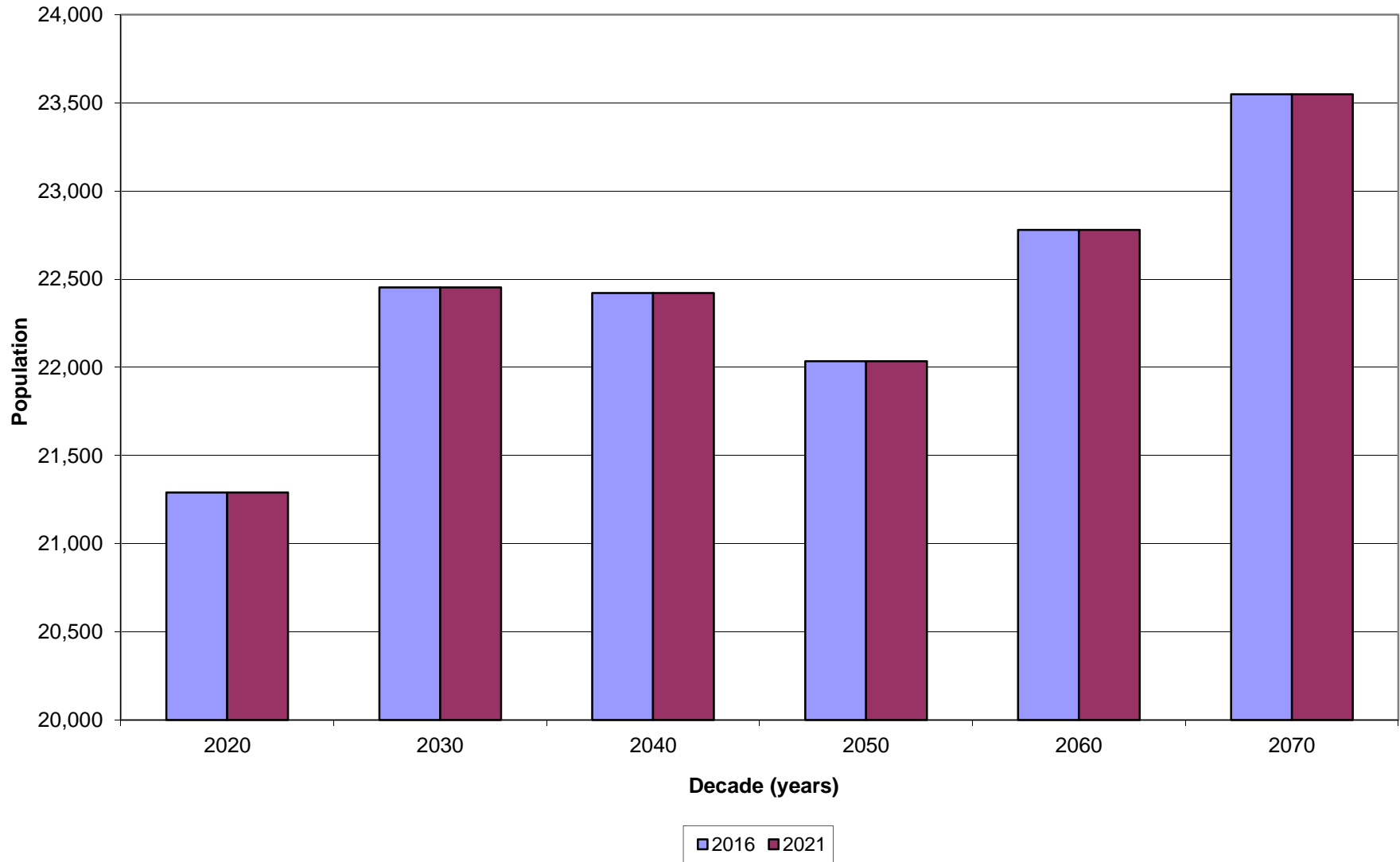
Gillespie Population Comparison



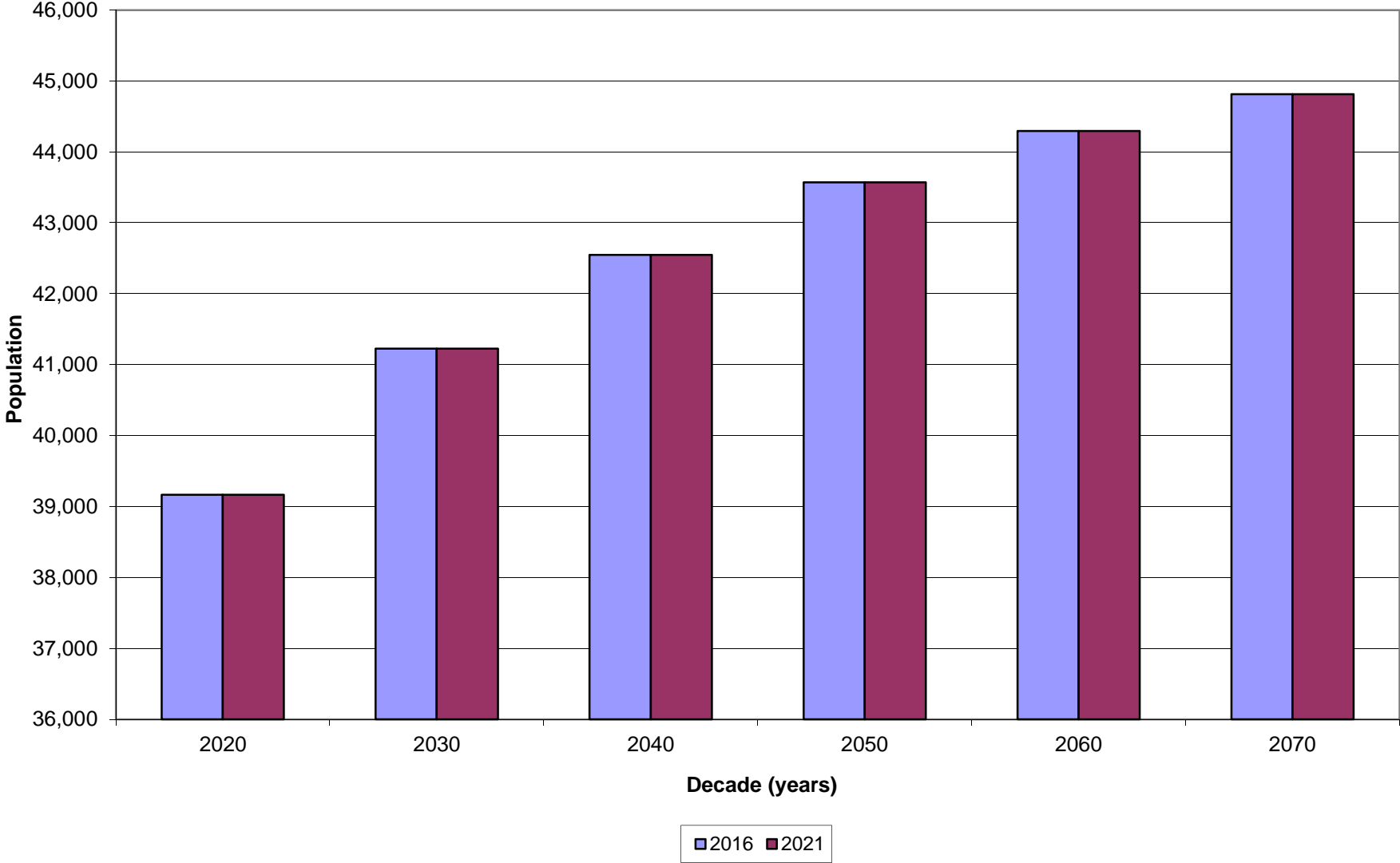
Hays (Partial) Population Comparison



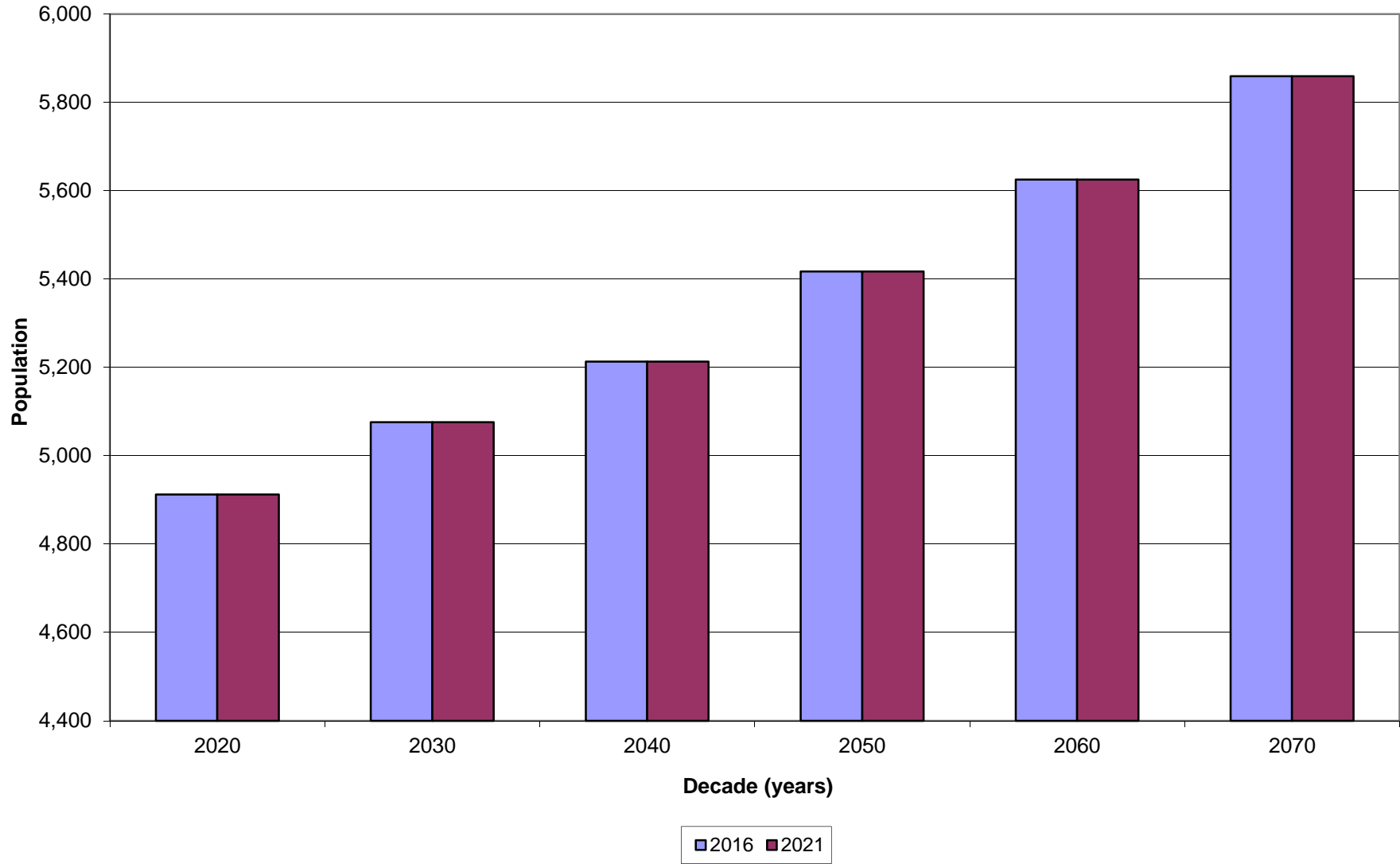
Llano Population Comparison



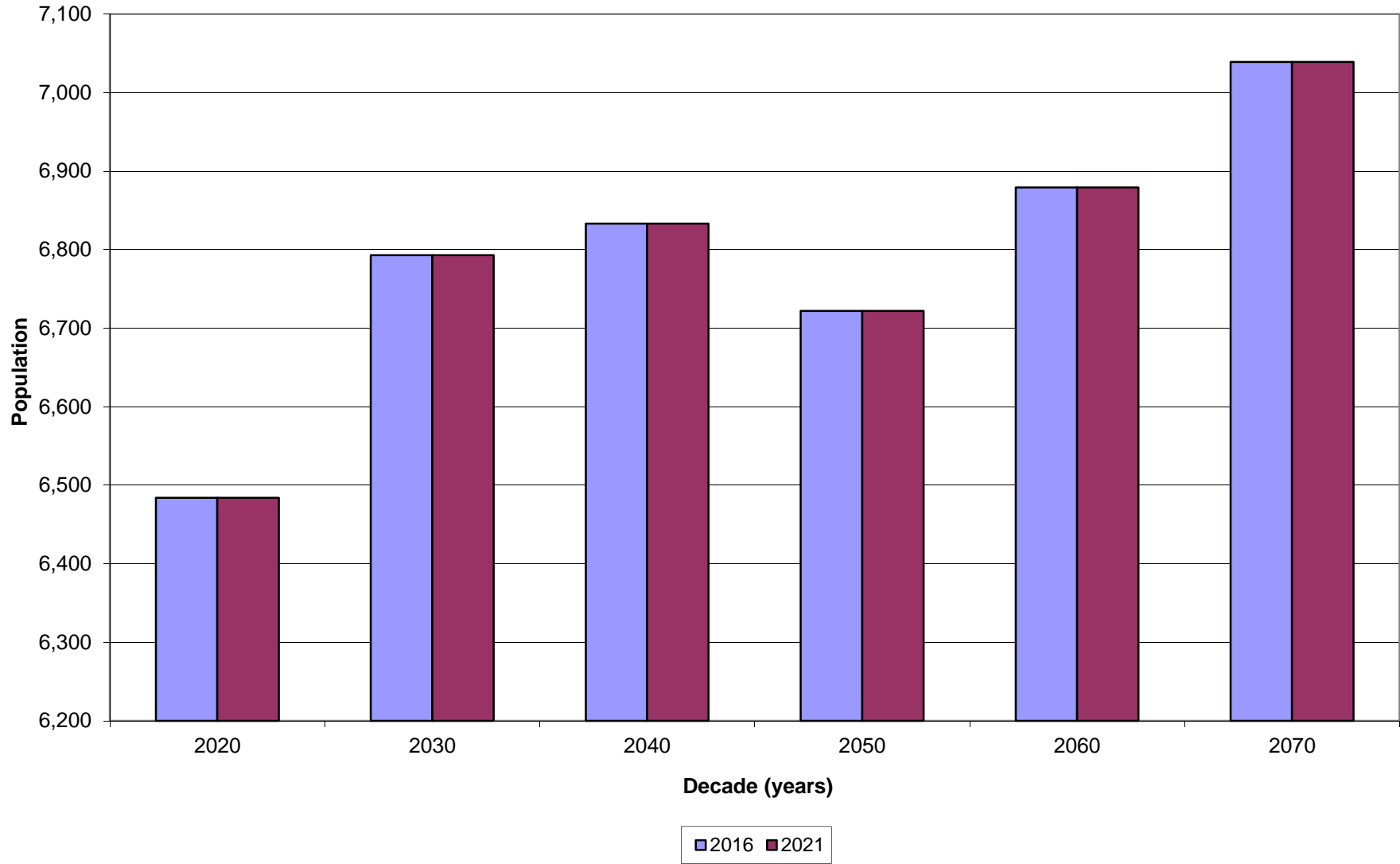
Matagorda Population Comparison



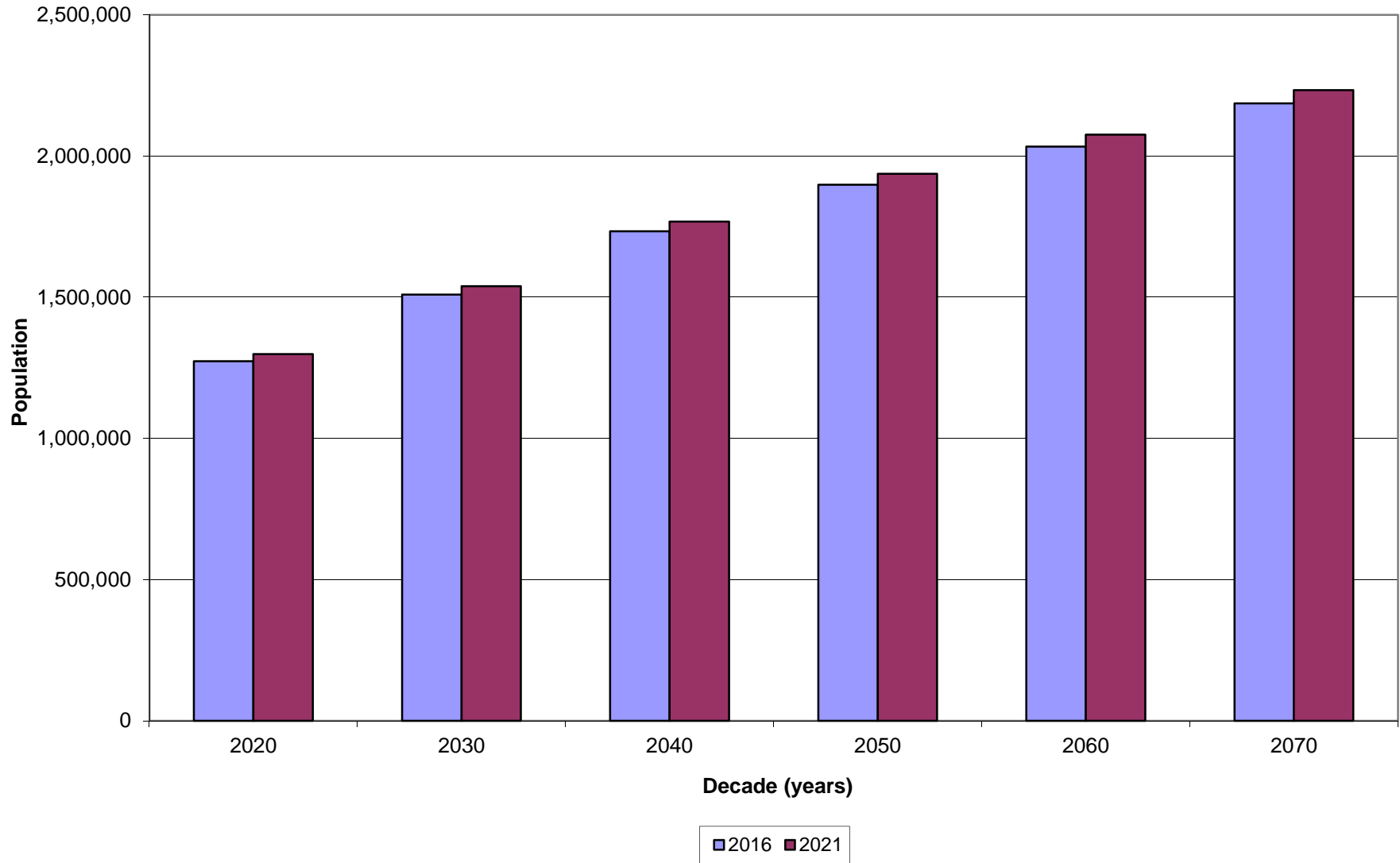
Mills Population Comparison



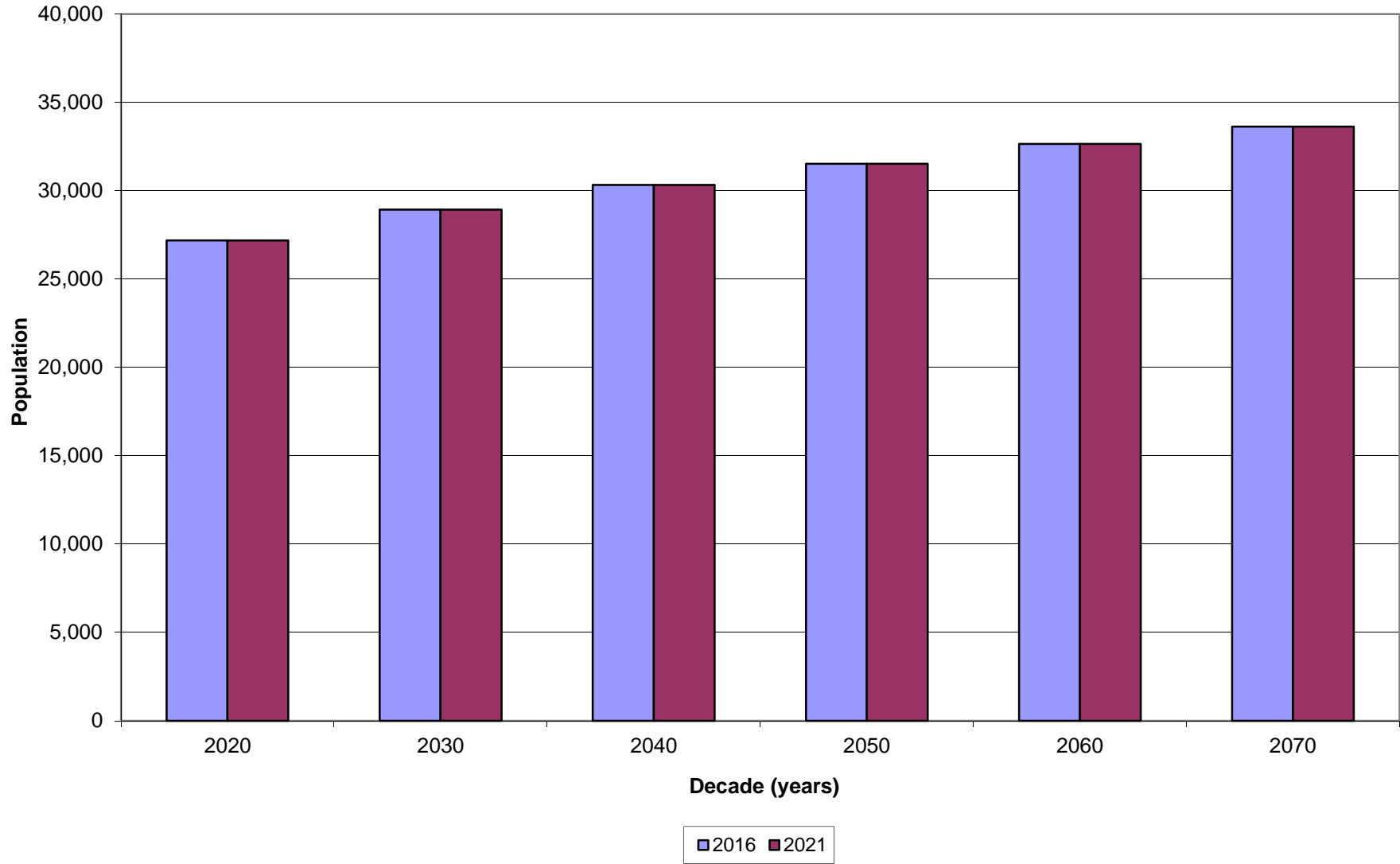
San Saba Population Comparison



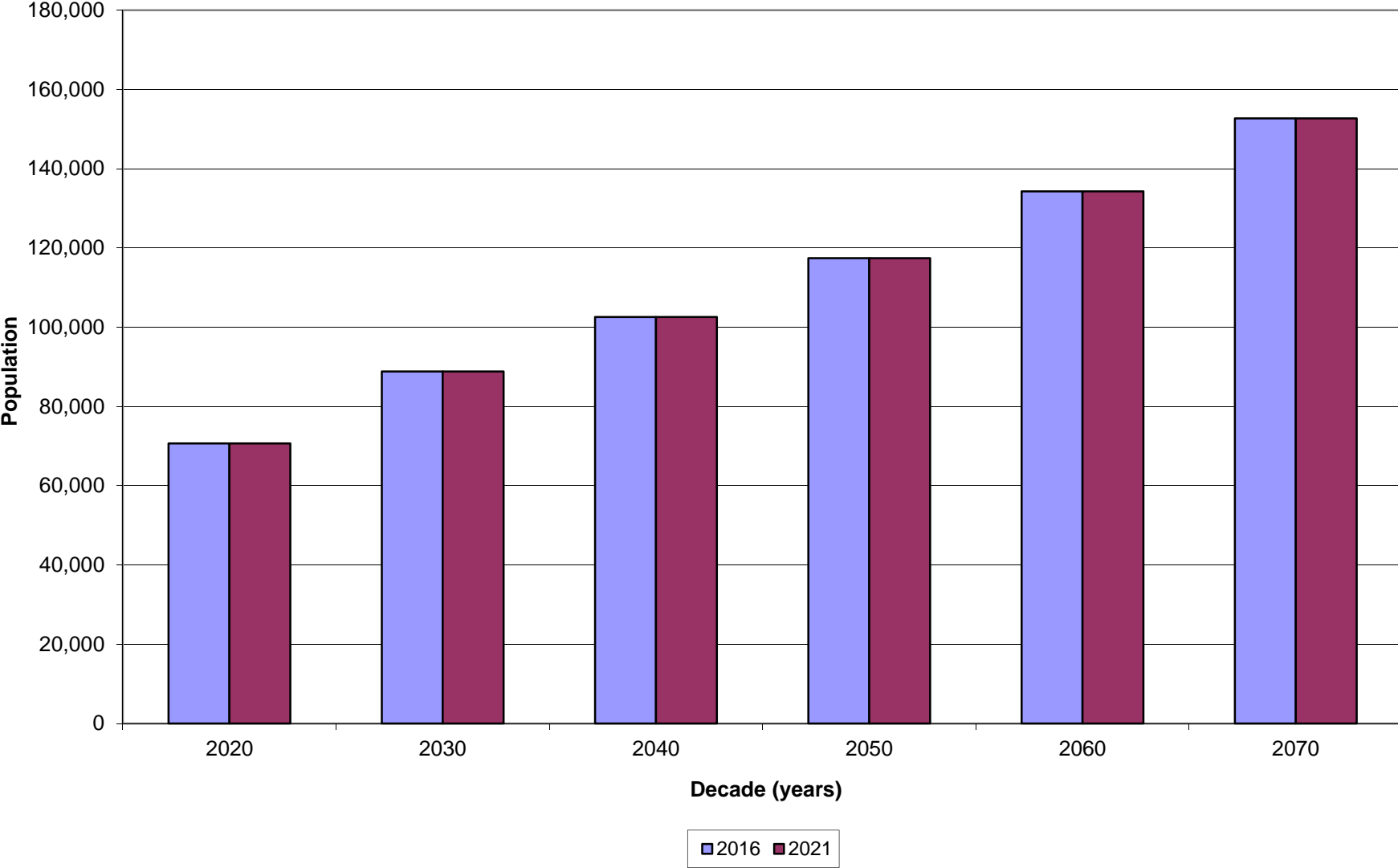
Travis Population Comparison



Wharton (Partial) Population Comparison



Williamson (Partial) Population Comparison

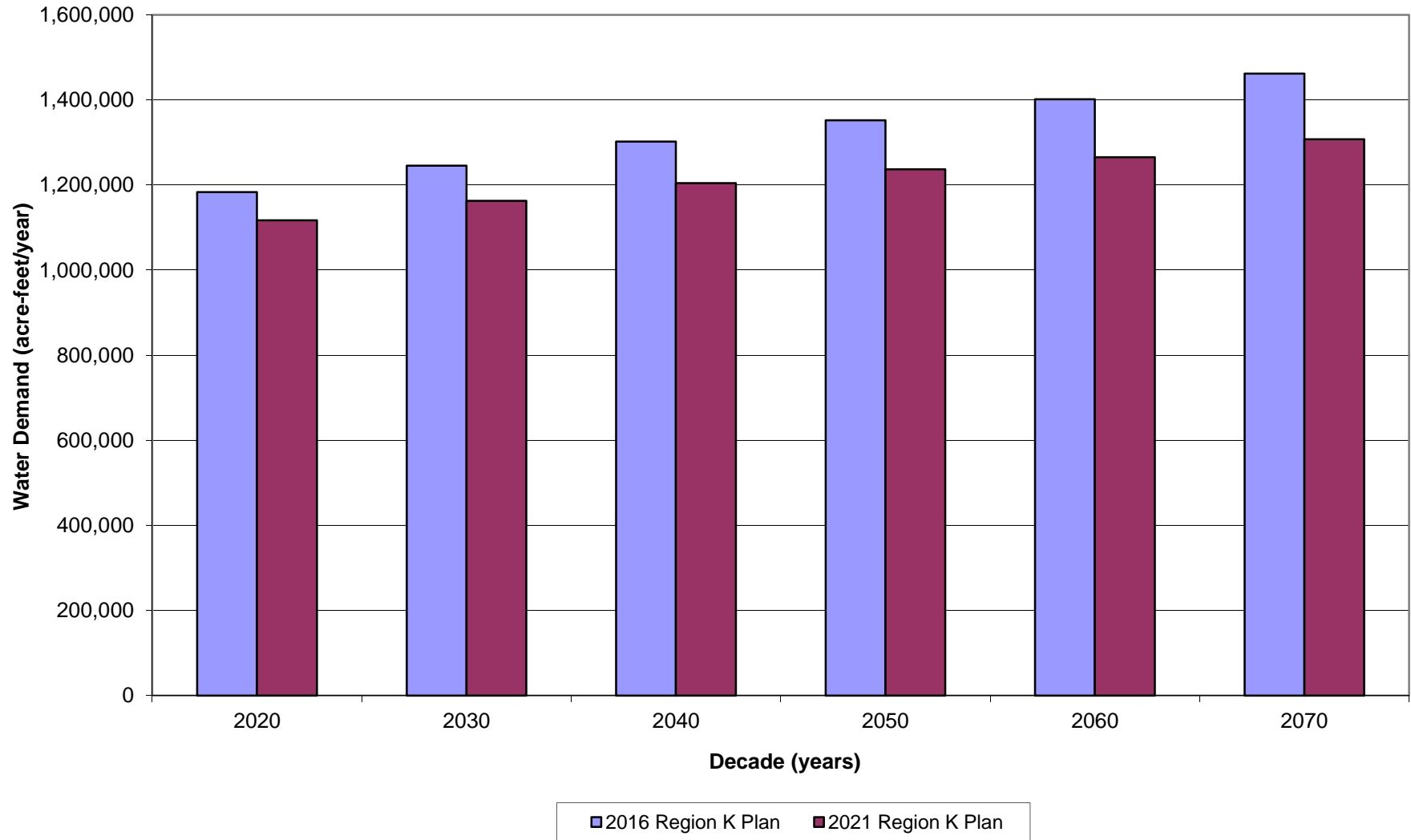


<i>RWP</i>	2020	2030	2040	2050	2060	2070
Municipal						
2021	11,708	14,659	17,013	19,559	22,458	25,644
2016	11,175	13,908	16,147	18,594	21,393	24,472
Difference	533	751	866	965	1,065	1,172
% Change	4.8	5.4	5.4	5.2	5.0	4.8
Livestock						
2021	0	0	0	0	0	0
2016	1	1	1	1	1	1
Difference	-1	-1	-1	-1	-1	-1
% Change	NA	NA	NA	NA	NA	-100.0
Irrigation						
2021	0	0	0	0	0	0
2016	0	0	0	0	0	0
Difference	0	0	0	0	0	0
% Change	NA	NA	NA	NA	NA	NA
Manufacturing						
2021	25	30	30	30	30	30
2016	0	0	0	0	0	0
Difference	25	30	30	30	30	30
% Change	NA	NA	NA	NA	NA	NA
Mining						
2021	5	3	3	3	3	3
2016	5	3	3	3	3	3
Difference	0	0	0	0	0	0
% Change	0.0	0.0	NA	NA	NA	0.0
Steam-Electric Power Generation						
2021	0	0	0	0	0	0
2016	0	0	0	0	0	0
Difference	0	0	0	0	0	0
% Change	NA	NA	NA	NA	NA	#DIV/0!

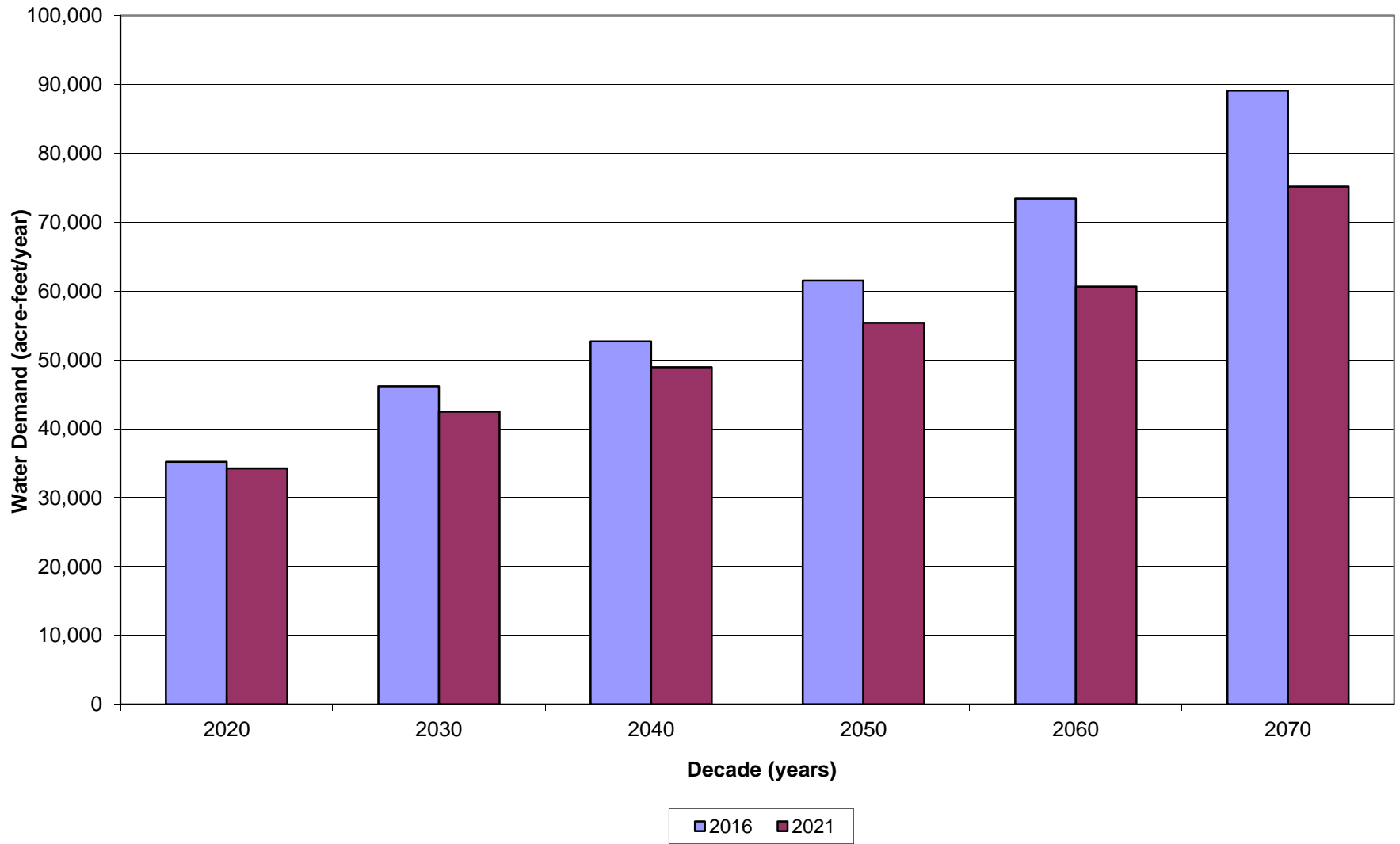
*All values are presented in acre-feet per year

Total Water Demand						
2021	11,738	14,692	17,046	19,592	22,491	25,677
2016	11,181	13,912	16,151	18,598	21,397	24,476
Difference	557	780	895	994	1,094	1,201
% Change	5.0	5.6	5.5	5.3	5.1	4.9

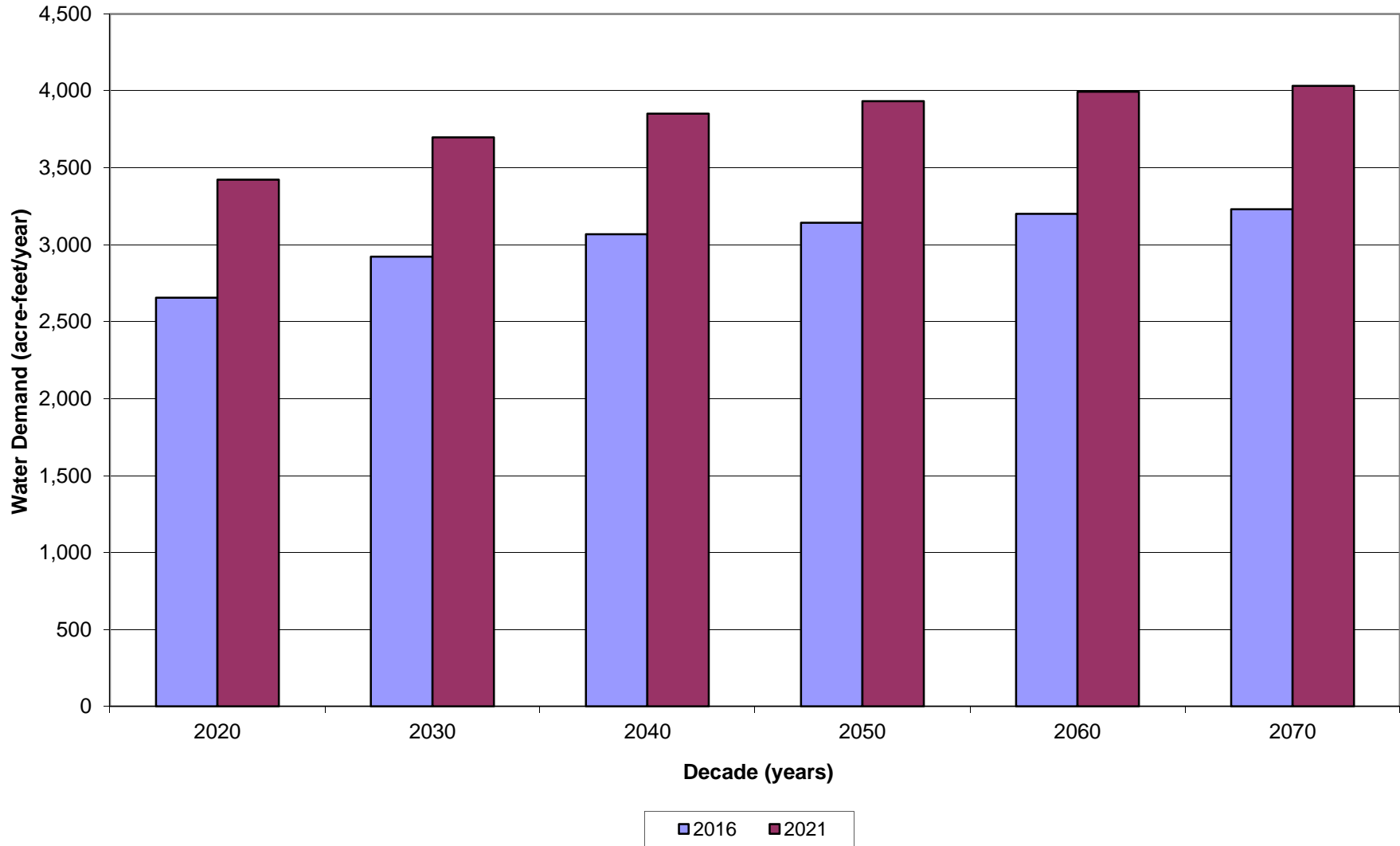
Region K Total Water Demand Comparison



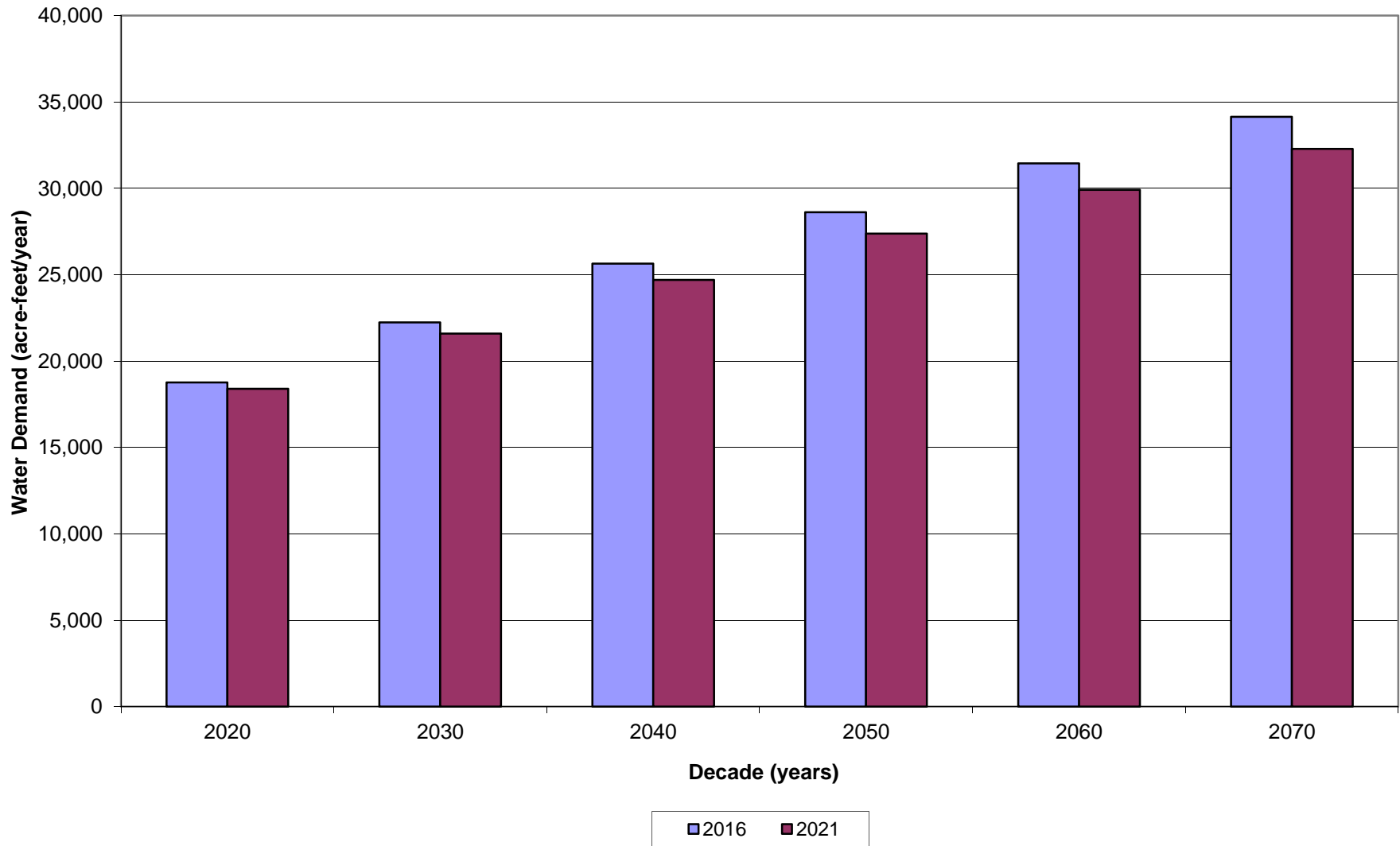
Bastrop County Total Water Demand Comparison



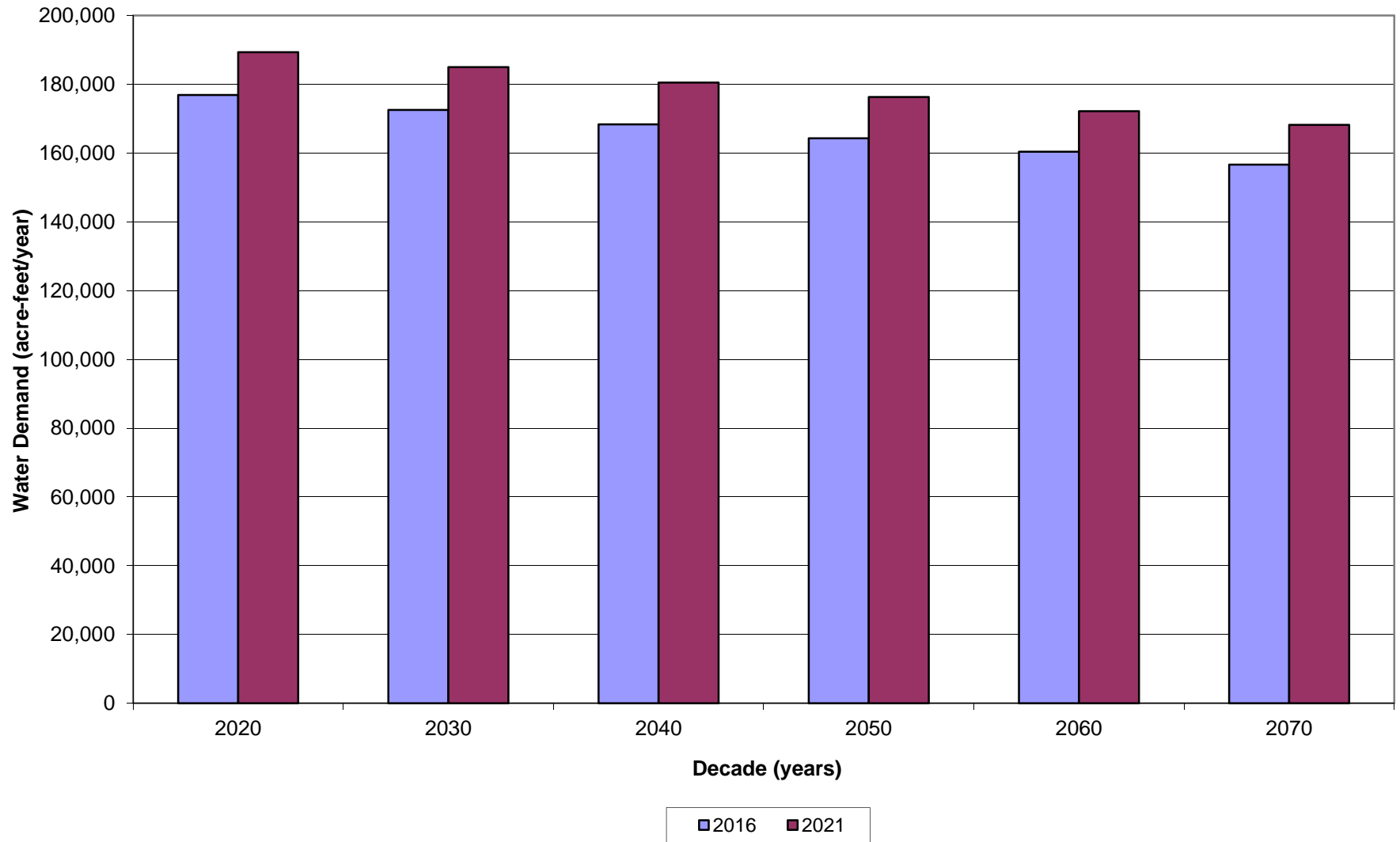
Blanco County Total Water Demand Comparison



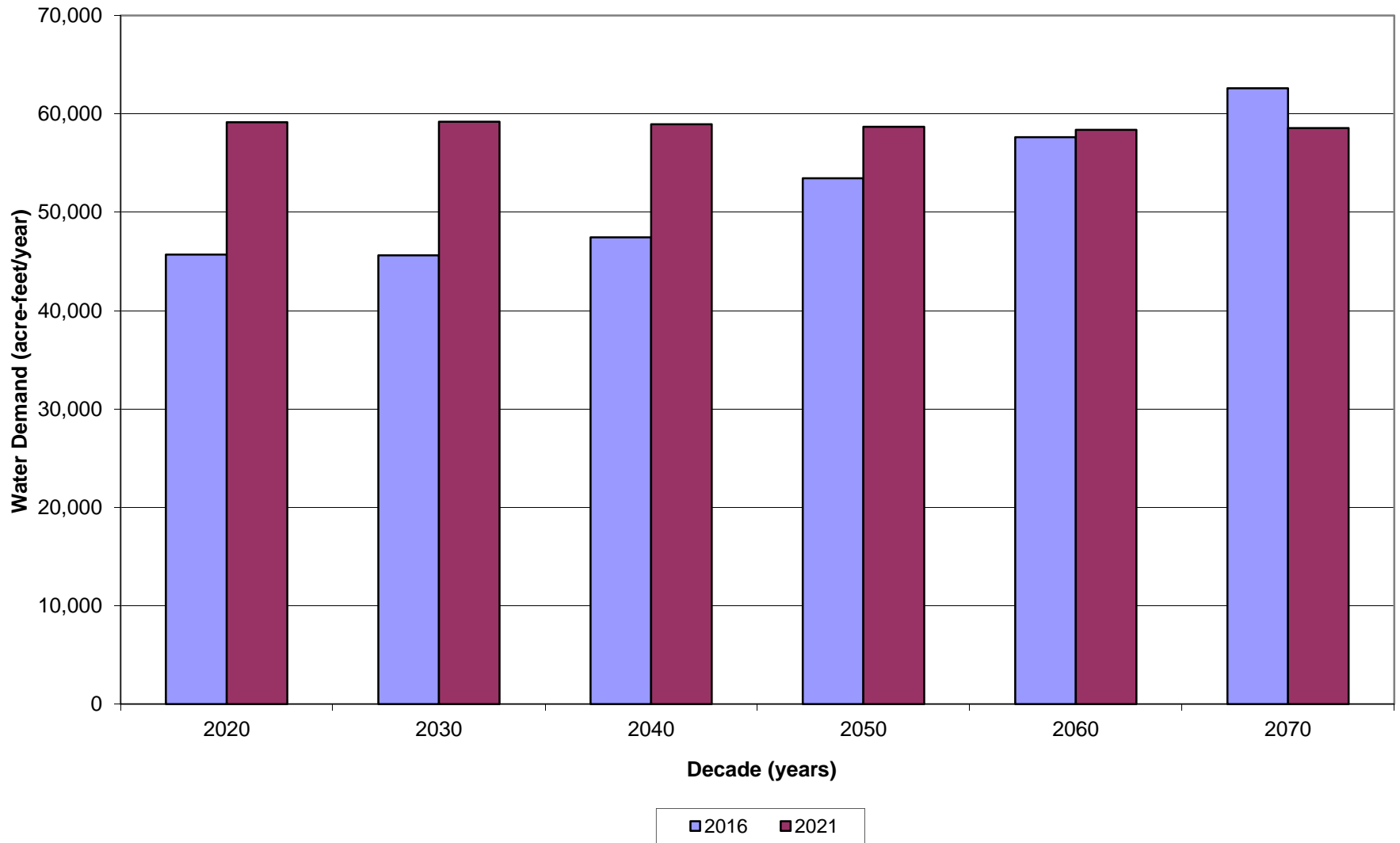
Burnet County Total Water Demand Comparison



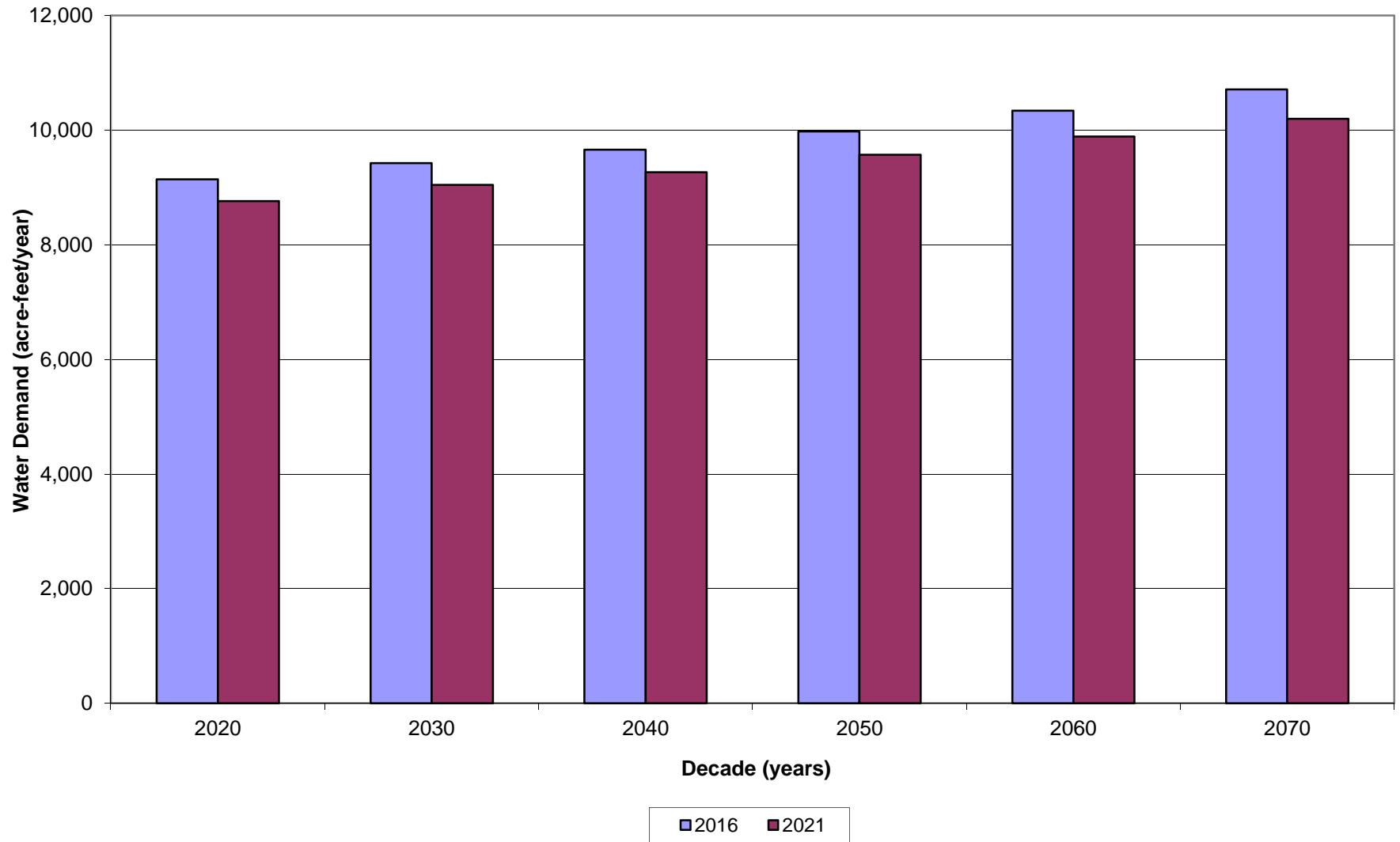
Colorado County Total Water Demand Comparison



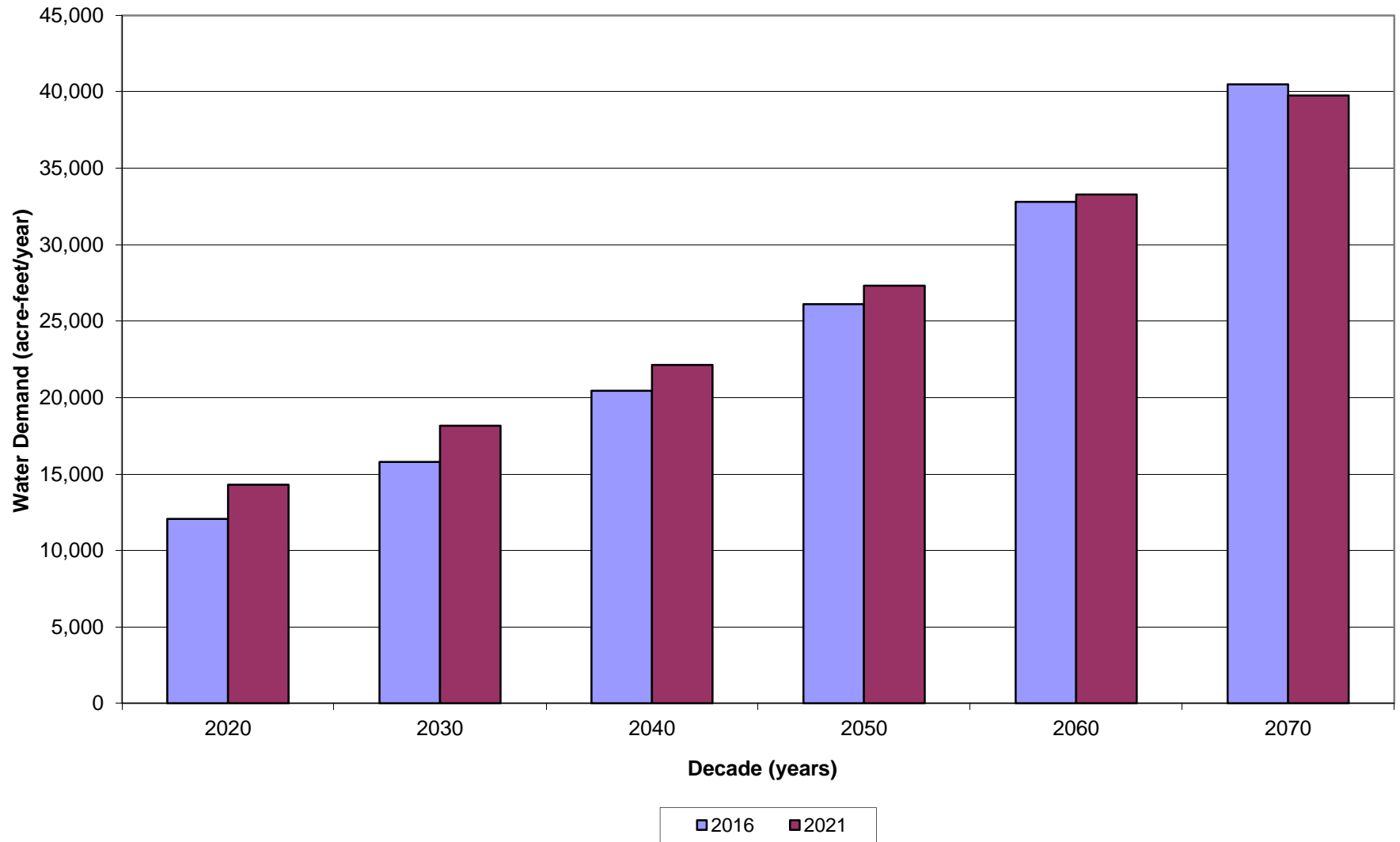
Fayette County Total Water Demand Comparison



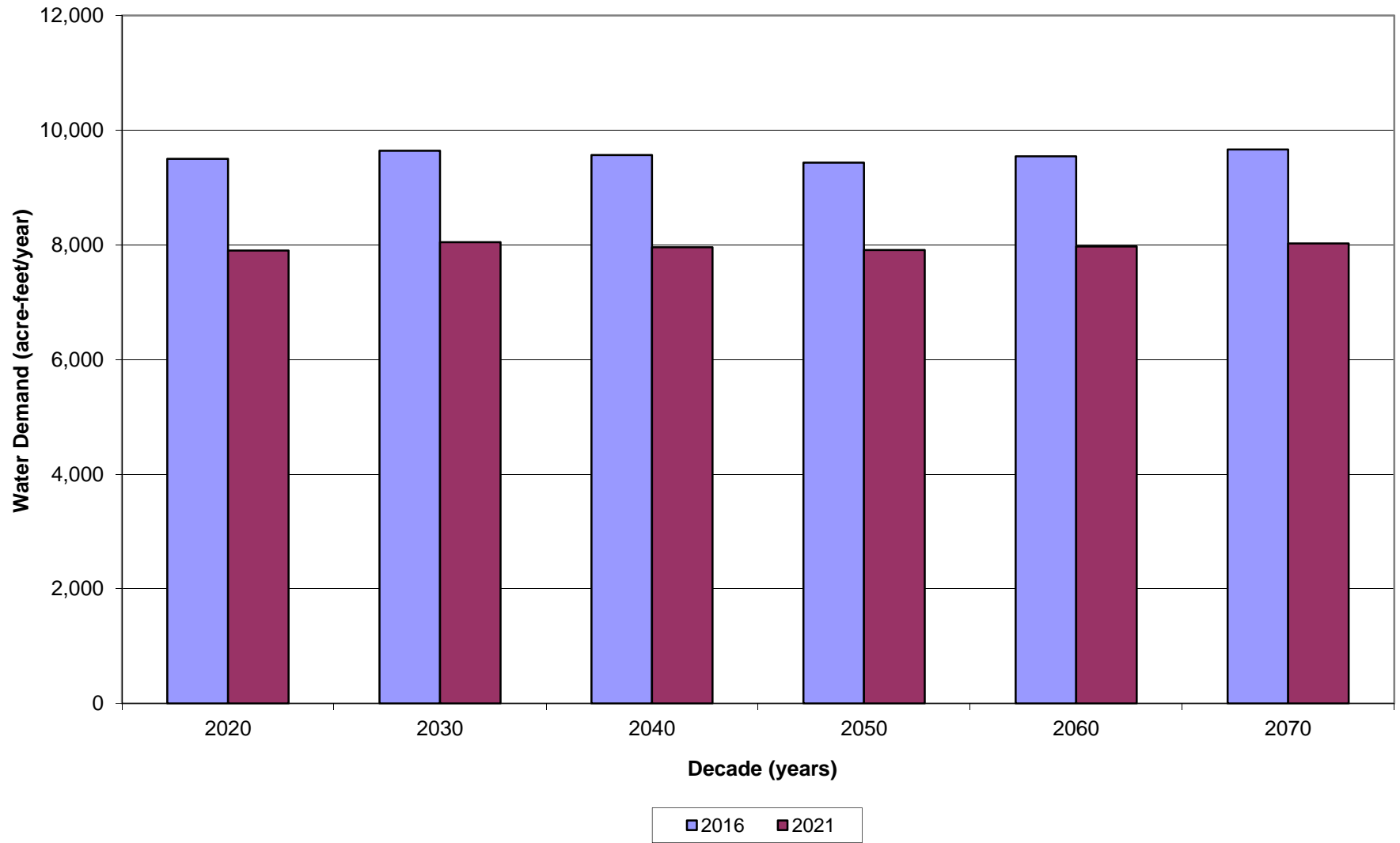
Gillespie County Total Water Demand Comparison



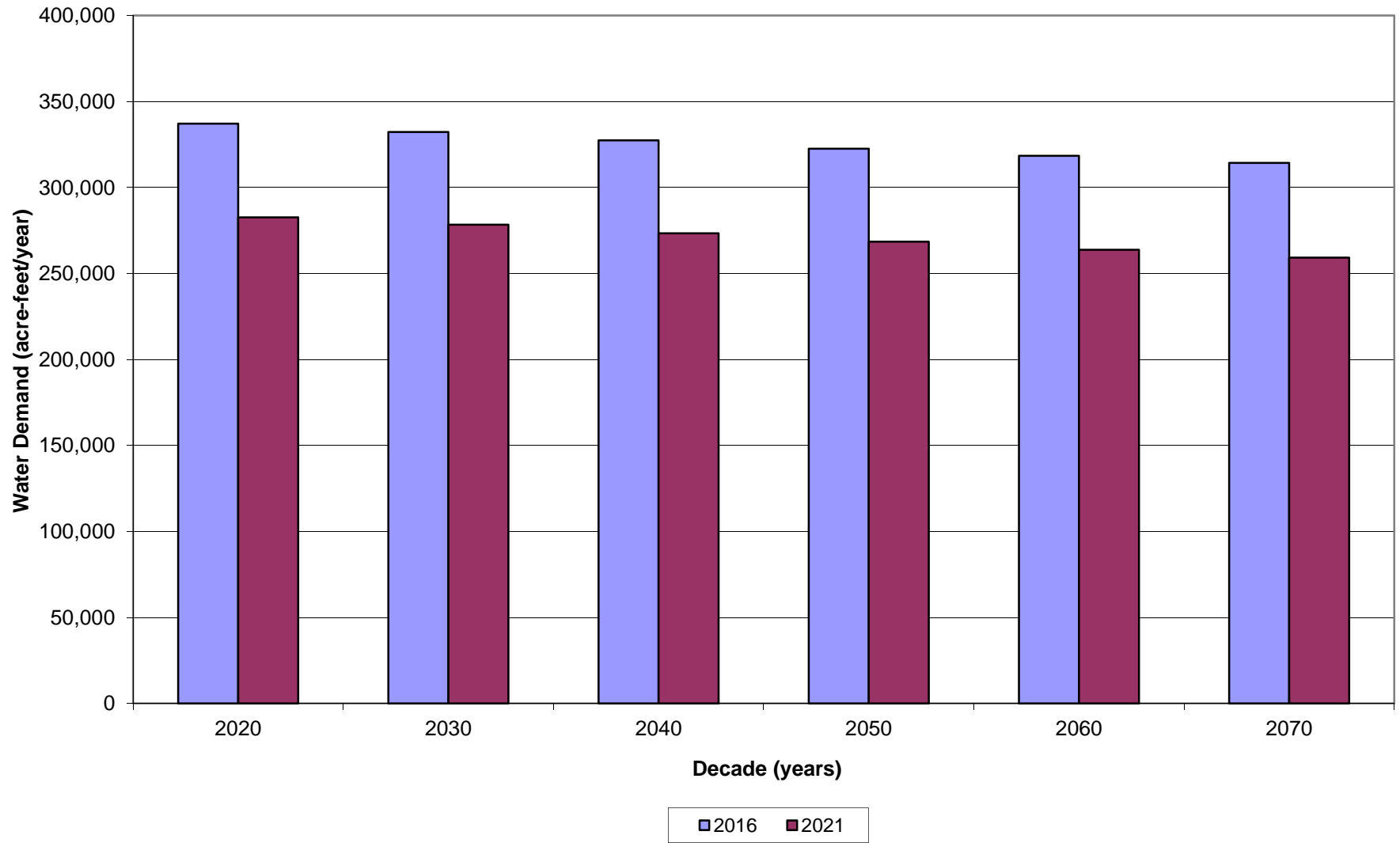
Hays County (Partial) Total Water Demand Comparison



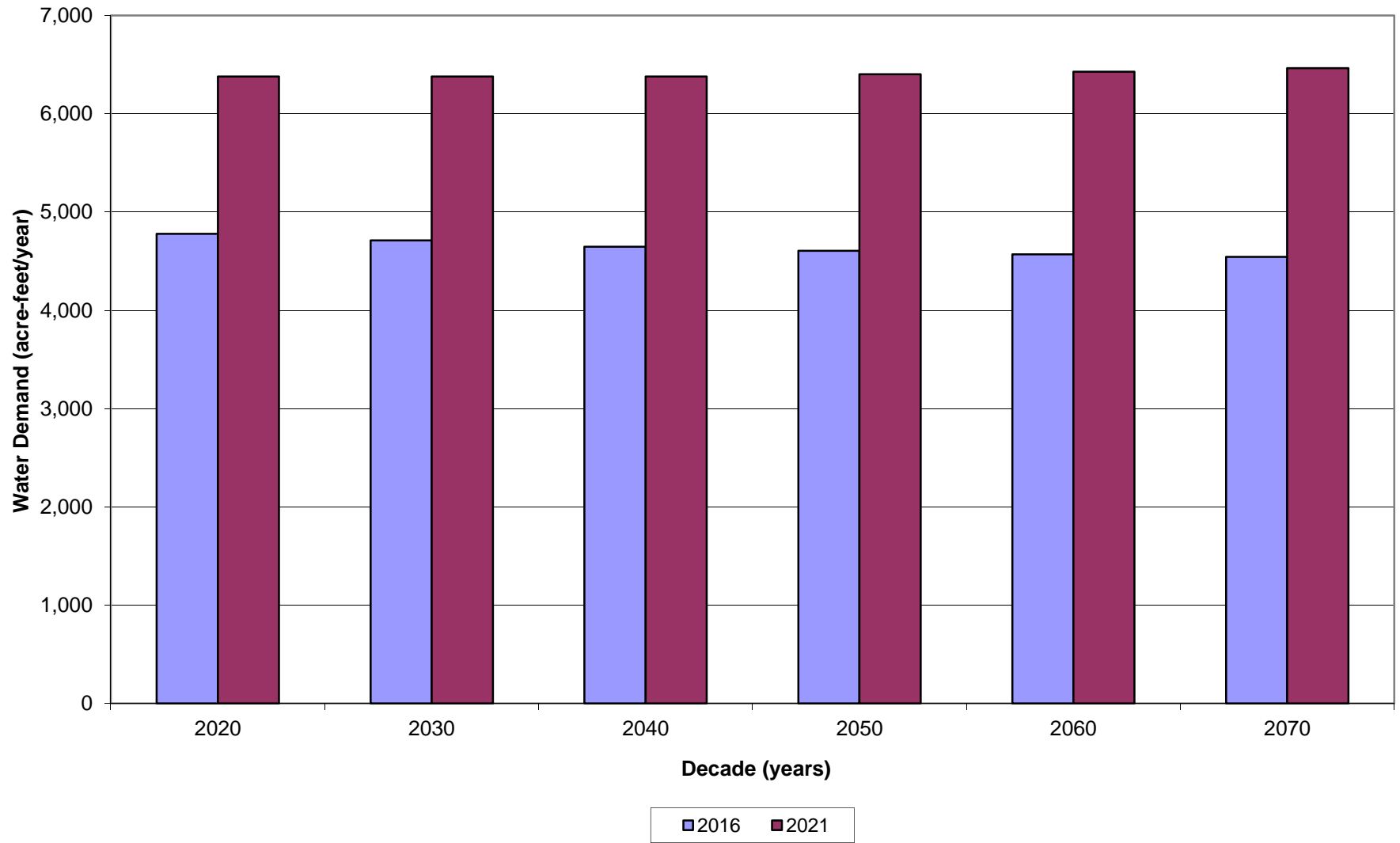
Llano County Total Water Demand Comparison



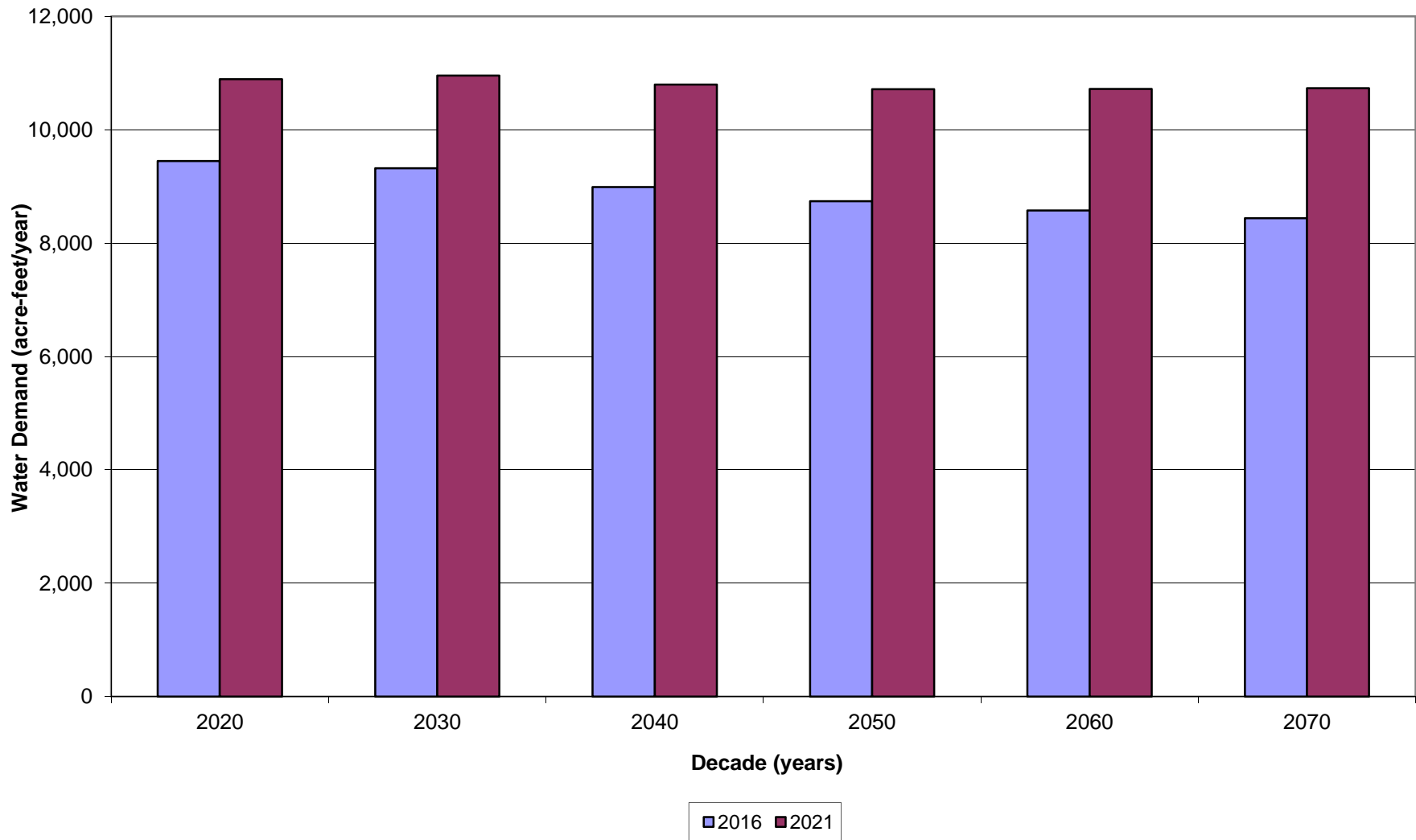
Matagorda County Total Water Demand Comparison



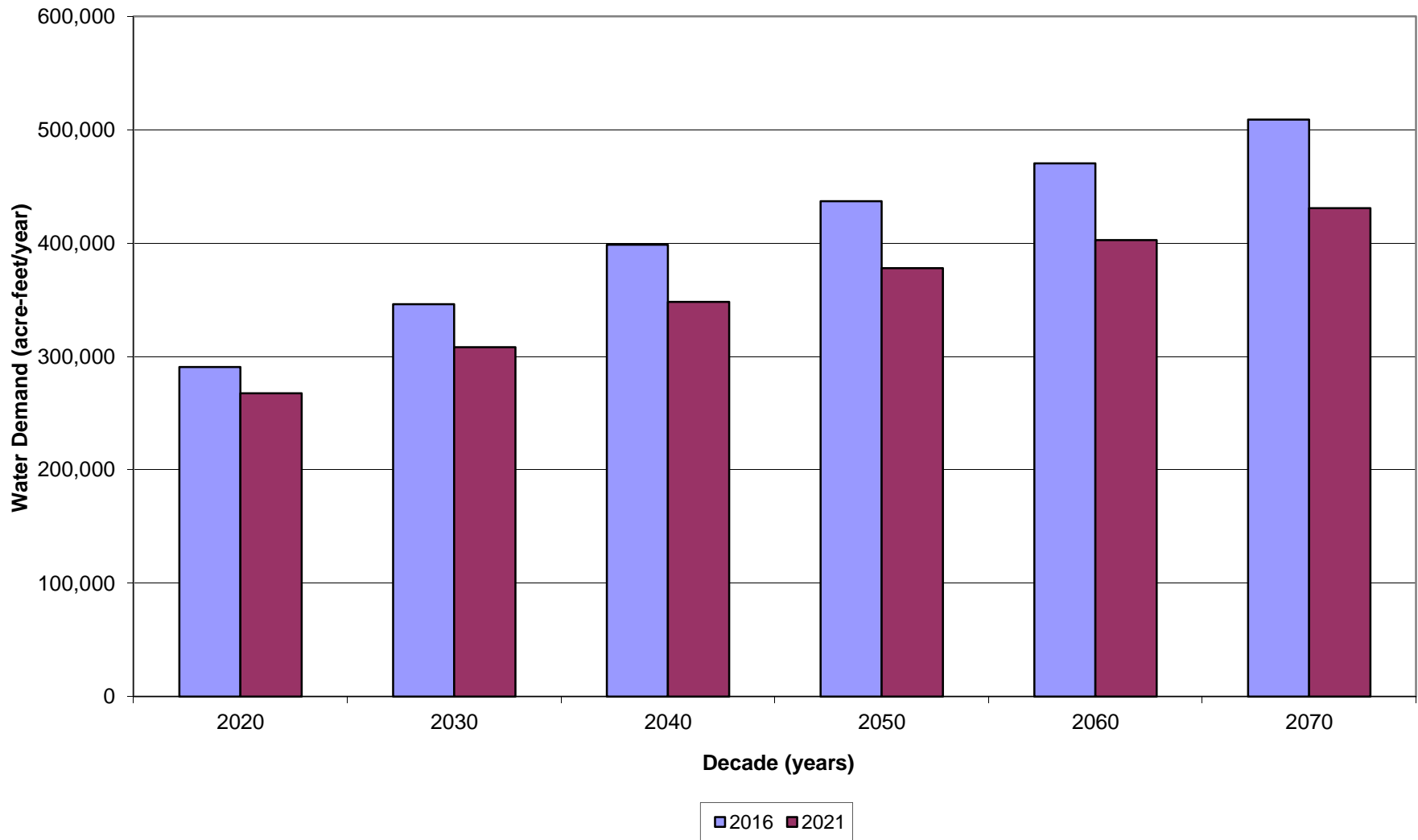
Mills County Total Water Demand Comparison



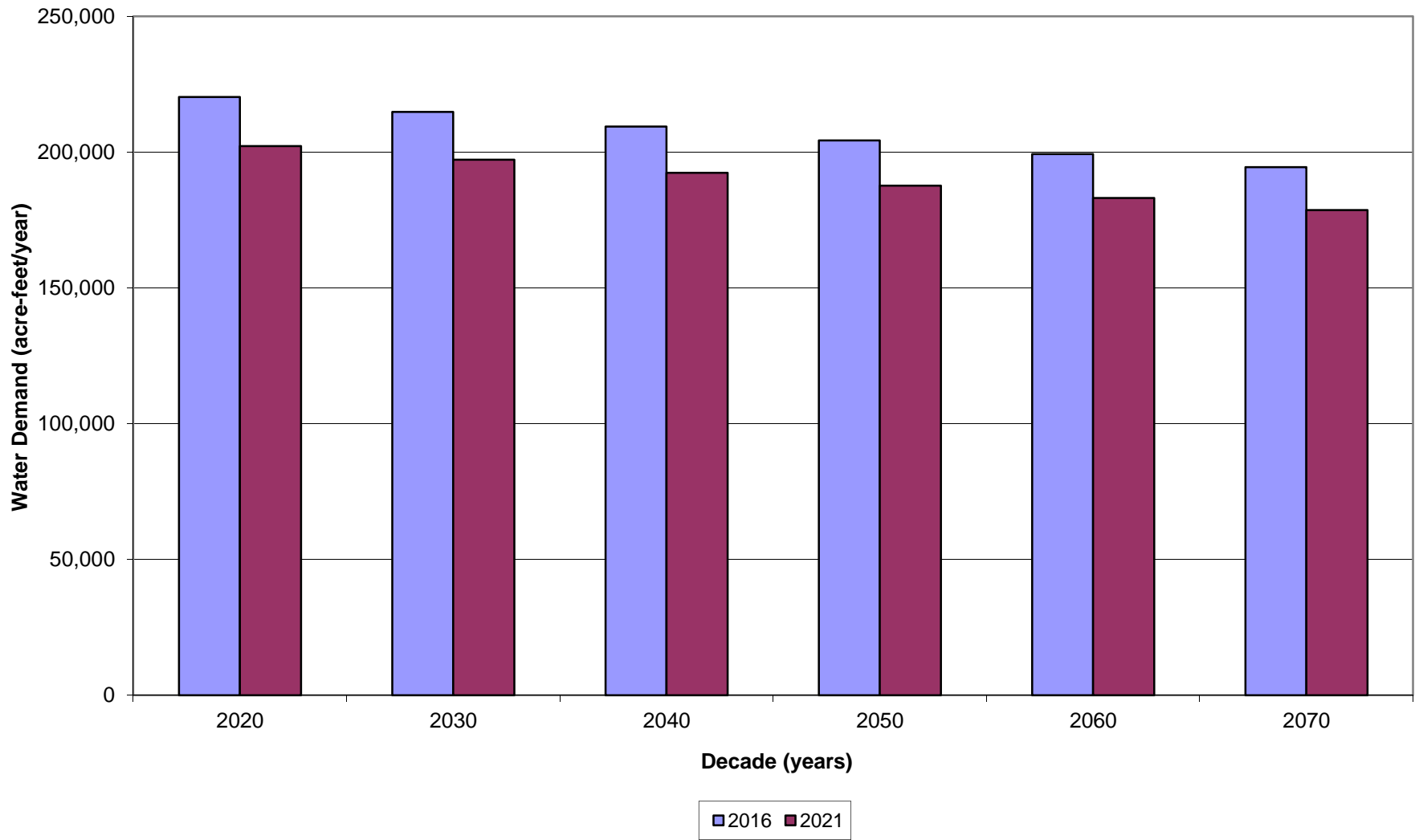
San Saba County Total Water Demand Comparison



Travis County Total Water Demand Comparison



Wharton County (Partial) Total Water Demand Comparison



Williamson County (Partial) Total Water Demand Comparison

