

TABLE OF CONTENTS – CHAPTER NINE

CHAPTER 9.0: WATER INFRASTRUCTURE FINANCING RECOMMENDATIONS 9-1

 9.1 INTRODUCTION..... 9-1

 9.2 CAPITAL COSTS FOR THE 2016 REGION K WATER PLAN 9-1

 9.3 SUMMARY OF SURVEY RESPONSES..... 9-8

 9.4 REGION K POLICY STATEMENTS FROM CHAPTER 8 THAT DISCUSS FUNDING 9-9

LIST OF TABLES

Table 9.1 Region K Recommended Water Management Strategies with Capital Costs 9-1

APPENDICES

APPENDIX 9A: Tabulated Survey Results

CHAPTER 9.0: WATER INFRASTRUCTURE FINANCING RECOMMENDATIONS

9.1 INTRODUCTION

Infrastructure financing needs have long been a key concern of the Texas Water Development Board (TWDB) as it pursues its mission of providing adequate funding to timely meet local water needs. The 77th Legislature, in Senate Bill (SB) 2, added the formal preparation of an Infrastructure Financing Report (IFR) to the regional planning process. The purpose of the IFR is to determine the amount of funding needed from outside sources to implement Region K’s management strategies as recommended in the 2016 Regional Plan. The intent of this portion of Chapter 9 is to present the following:

- The total capital cost of all the improvements recommended in the management strategies portion of the Plan.
- The results of the correspondence sent by the Regional Water Planning Group (RWPG) to each identified project sponsor that had a recommended water management strategy that required a capital cost.
- An estimate of the capital cost of the Plan improvements that cannot be funded out of local revenues and funding sources.
- A review of the Policy Statements in Chapter 8 that the RWPG adopted that dealt with funding issues.

9.2 CAPITAL COSTS FOR THE 2016 REGION K WATER PLAN

The total capital cost of the water management strategies (WMS) proposed by the 2016 Region K Water Plan is \$2.865 billion over the 50-year planning period. This total cost includes project cost estimates for the major capital improvement strategies needed for the wholesale water providers in the region. The total cost also includes estimates associated with localized WUG costs for municipal conservation, irrigation conservation, direct reuse, expansion of existing groundwater and surface water capabilities for treatment and transmission systems, additional wells, and additional storage. Costs for major capital improvement projects for wholesale water providers are estimated at \$2.281 billion. The WUG-level costs are estimated at \$585 million. *Table 9.1* lists the capital costs for all recommended water management strategies in the 2016 Region K Water Plan. Capital costs include construction costs as well as costs for planning and design services.

Table 9.1 Region K Recommended Water Management Strategies with Capital Costs

WMS Project Sponsor Region	Project Name	Project Sponsor Entity	Capital Cost
K	Alternate Canal Delivery	STEAM ELECTRIC POWER, MATAGORDA	\$ 7,669,000
K	Brush Control	COUNTY-OTHER, BLANCO	\$ 2,137,000

WMS Project Sponsor Region	Project Name	Project Sponsor Entity	Capital Cost
K	Brush Control	COUNTY-OTHER, BURNET	\$ 2,137,000
K	Brush Control	COUNTY-OTHER, GILLESPIE	\$ 2,137,000
K	Brush Control	COUNTY-OTHER, HAYS	\$ 2,137,000
K	Brush Control	COUNTY-OTHER, LLANO	\$ 2,137,000
K	Brush Control	COUNTY-OTHER, MILLS	\$ 2,137,000
K	Brush Control	COUNTY-OTHER, SAN SABA	\$ 2,137,000
K	Brush Control	COUNTY-OTHER, TRAVIS	\$ 2,137,000
K	BS/EACD Edwards / Middle Trinity ASR	BUDA	\$ 6,818,182
K	BS/EACD Edwards / Middle Trinity ASR	COUNTY-OTHER, HAYS	\$ 2,272,727
K	BS/EACD Edwards / Middle Trinity ASR	MINING, HAYS	\$ 806,818
K	BS/EACD Edwards / Middle Trinity ASR	MOUNTAIN CITY	\$ 500,000
K	BS/EACD Edwards / Middle Trinity ASR	SUNSET VALLEY	\$ 2,272,727
K	BS/EACD Saline Edwards ASR	BUDA	\$ 7,500,000
K	BS/EACD Saline Edwards ASR	COUNTY-OTHER, HAYS	\$ 3,000,000
K	BS/EACD Saline Edwards ASR	CREEDMOOR-MAHA WSC	\$ 4,500,000
K	Buena Vista Regional Project	BERTRAM	\$ 3,176,843
K	Buena Vista Regional Project	BURNET	\$ 7,187,428
K	Buena Vista Regional Project	COUNTY-OTHER, BURNET	\$ 7,187,428
K	City of Austin - Aquifer Storage and Recovery	AUSTIN	\$ 312,316,000
K	City of Austin - Capture Local Inflows to Lady Bird Lake	AUSTIN	\$ 2,949,000
K	City of Austin - Direct Reuse	AUSTIN	\$ 536,176,000
K	City of Austin - Indirect Potable Reuse through Lady Bird Lake	AUSTIN	\$ 41,970,000
K	City of Austin - Lake Long Enhanced Storage	AUSTIN	\$ 31,041,000
K	City of Austin - Longhorn Dam Operations Improvements	AUSTIN	\$ 1,036,000
K	City of Austin - Other Reuse	AUSTIN	\$ 21,772,000

WMS Project Sponsor Region	Project Name	Project Sponsor Entity	Capital Cost
K	City of Austin - Rainwater Harvesting	AUSTIN	\$ 690,167,000
K	City of Austin Conservation	AUSTIN	\$ 41,434,437
K	Development of New Carrizo-Wilcox Aquifer Supplies - Bastrop	BASTROP	\$ 2,976,000
K	Development of New Carrizo-Wilcox Aquifer Supplies - Bastrop County Mining	MINING, BASTROP	\$ 3,391,000
K	Development of New Gulf Coast Aquifer Supplies - Wharton County Steam-Electric	STEAM ELECTRIC POWER, WHARTON	\$ 2,237,000
K	Development of New Hickory Aquifer Supplies - Llano	LLANO	\$ 2,743,000
K	Development of New Queen City Aquifer Supplies - Bastrop County Mining	MINING, BASTROP	\$ 2,446,000
K	Development of New Queen City Aquifer Supplies - Smithville	SMITHVILLE	\$ 2,620,000
K	Development of New Trinity Aquifer Supplies - Sunset Valley	SUNSET VALLEY	\$ 2,228,000
K	Direct Reuse - Bastrop	BASTROP	\$ 4,625,000
K	Direct Reuse - Buda	BUDA	\$ 6,075,000
K	Direct Reuse - Flatonia	FLATONIA	\$ 1,226,000
K	Direct Reuse - Llano	LLANO	\$ 689,000
K	Direct Reuse - Pflugerville	PFLUGERVILLE	\$ 7,959,000
K	East Lake Buchanan Regional Project	COUNTY-OTHER, BURNET	\$ 10,337,000
K	Expansion of Carrizo-Wilcox Aquifer Supplies - Aqua WSC	AQUA WSC	\$ 9,777,000
K	Expansion of Carrizo-Wilcox Aquifer Supplies - Bastrop County Manufacturing	MANUFACTURING, BASTROP	\$ 2,150,000
K	Expansion of Carrizo-Wilcox Aquifer Supplies - Bastrop County WCID #2	BASTROP COUNTY WCID #2	\$ 2,150,000
K	Expansion of Carrizo-Wilcox Aquifer Supplies - Bastrop County-Other	COUNTY-OTHER, BASTROP	\$ 2,150,000
K	Expansion of Carrizo-Wilcox Aquifer Supplies - Elgin	ELGIN	\$ 2,150,000
K	Expansion of Carrizo-Wilcox Aquifer Supplies - LCRA	LOWER COLORADO RIVER AUTHORITY	\$ 4,564,000

WMS Project Sponsor Region	Project Name	Project Sponsor Entity	Capital Cost
K	Expansion of Edwards (BFZ) Aquifer Supplies - Pflugerville	PFLUGERVILLE	\$ 3,729,000
K	Expansion of Ellenburger-San Saba Aquifer Supplies - Bertram	BERTRAM	\$ 2,031,000
K	Expansion of Ellenburger-San Saba Aquifer Supplies - Blanco County-Other	COUNTY-OTHER, BLANCO	\$ 821,000
K	Expansion of Ellenburger-San Saba Aquifer Supplies - Burnet County Mining	MINING, BURNET	\$ 13,418,000
K	Expansion of Ellenburger-San Saba Aquifer Supplies - Gillespie County Manufacturing	MANUFACTURING, GILLESPIE	\$ 3,880,000
K	Expansion of Ellenburger-San Saba Aquifer Supplies - Johnson City	JOHNSON CITY	\$ 1,505,000
K	Expansion of Gulf Coast Aquifer Supplies - Colorado County-Other	COUNTY-OTHER, COLORADO	\$ 1,466,000
K	Expansion of Gulf Coast Aquifer Supplies - Fayette County Manufacturing	MANUFACTURING, FAYETTE	\$ 2,279,000
K	Expansion of Gulf Coast Aquifer Supplies - Fayette County Mining	MINING, FAYETTE	\$ 7,520,000
K	Expansion of Gulf Coast Aquifer Supplies - Fayette County-Other	COUNTY-OTHER, FAYETTE	\$ 4,558,000
K	Expansion of Gulf Coast Aquifer Supplies - Flatonia	FLATONIA	\$ 2,241,000
K	Expansion of Hickory Aquifer Supplies - Blanco County-Other	COUNTY-OTHER, BLANCO	\$ 1,316,000
K	Expansion of Hickory Aquifer Supplies - Burnet County Mining	MINING, BURNET	\$ 13,437,000
K	Expansion of Marble Falls Aquifer Supplies - Burnet County Mining	MINING, BURNET	\$ 7,257,000
K	Expansion of Sparta Aquifer Supplies - Fayette County Mining	MINING, FAYETTE	\$ 753,000
K	Expansion of Trinity Aquifer Supplies - Hays County Mining	MINING, HAYS	\$ 4,652,000
K	Expansion of Trinity Aquifer Supplies - Lakeway	LAKEWAY	\$ 2,985,000

WMS Project Sponsor Region	Project Name	Project Sponsor Entity	Capital Cost
K	Expansion of Trinity Aquifer Supplies - Manor	MANOR	\$ 3,442,000
K	Expansion of Trinity Aquifer Supplies - Manville WSC	MANVILLE WSC	\$ 5,431,000
K	Expansion of Trinity Aquifer Supplies - Mills County Irrigation	IRRIGATION, MILLS	\$ 8,289,000
K	Hays County Pipeline - Region K Portion	COUNTY-OTHER, HAYS	\$ 12,257,000
K	Hays County Pipeline - Region K Portion	DRIPPING SPRINGS WSC	\$ 6,128,500
K	Hays County Pipeline - Region K Portion	WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	\$ 6,128,500
K	Irrigation Conservation - On Farm	IRRIGATION, COLORADO	\$ 14,210,709
K	Irrigation Conservation - On Farm	IRRIGATION, MATAGORDA	\$ 52,428,108
K	Irrigation Conservation - On Farm	IRRIGATION, WHARTON	\$ 30,939,183
K	Irrigation Conservation - Sprinkler	IRRIGATION, COLORADO	\$ 882,039
K	Irrigation Conservation - Sprinkler	IRRIGATION, MATAGORDA	\$ 2,878,654
K	Irrigation Conservation - Sprinkler	IRRIGATION, WHARTON	\$ 1,780,556
K	Irrigation Operations Conveyance Improvements	IRRIGATION, COLORADO	\$ 16,129,733
K	Irrigation Operations Conveyance Improvements	IRRIGATION, MATAGORDA	\$ 59,508,036
K	Irrigation Operations Conveyance Improvements	IRRIGATION, WHARTON	\$ 35,117,231
K	LCRA - Acquire additional water rights	LOWER COLORADO RIVER AUTHORITY	\$ 125,000
K	LCRA - Enhanced Municipal and Industrial Conservation	LOWER COLORADO RIVER AUTHORITY	\$ 64,099,000
K	LCRA - Excess Flows Permit Off-Channel Reservoir	LOWER COLORADO RIVER AUTHORITY	\$ 298,000,000
K	LCRA - Groundwater Supply for FPP (Off-site)	LOWER COLORADO RIVER AUTHORITY	\$ 20,107,000

WMS Project Sponsor Region	Project Name	Project Sponsor Entity	Capital Cost
K	LCRA - Groundwater Supply for FPP (On-site)	LOWER COLORADO RIVER AUTHORITY	\$ 2,749,000
K	LCRA - Lane City Off-Channel Reservoir	LOWER COLORADO RIVER AUTHORITY	\$ 218,593,000
K	LCRA - Mid-Basin Off-Channel Reservoir	LOWER COLORADO RIVER AUTHORITY	\$ 298,000,000
K	LCRA - Prairie Site Off-Channel Reservoir	LOWER COLORADO RIVER AUTHORITY	\$ 376,000,000
K	Marble Falls Regional Project	COTTONWOOD SHORES	\$ 6,099,086
K	Marble Falls Regional Project	COUNTY-OTHER, BURNET	\$ 7,649,996
K	Marble Falls Regional Project	MARBLE FALLS	\$ 34,851,918
K	Municipal Conservation - Aqua WSC	AQUA WSC	\$ 1,384,870
K	Municipal Conservation - Barton Creek West WSC	BARTON CREEK WEST WSC	\$ 38,391
K	Municipal Conservation - Bastrop	BASTROP	\$ 224,866
K	Municipal Conservation - Bay City	BAY CITY	\$ 405,403
K	Municipal Conservation - Bee Cave Village	BEE CAVE	\$ 137,097
K	Municipal Conservation - Bertram	BERTRAM	\$ 41,421
K	Municipal Conservation - Blanco	BLANCO	\$ 47,867
K	Municipal Conservation - Buda	BUDA	\$ 221,686
K	Municipal Conservation - Burnet	BURNET	\$ 184,386
K	Municipal Conservation - Burnet County-Other	COUNTY-OTHER, BURNET	\$ 164,771
K	Municipal Conservation - Cedar Park	CEDAR PARK	\$ 238,695
K	Municipal Conservation - Columbus	COLUMBUS	\$ 100,974
K	Municipal Conservation - Cottonwood Shores	COTTONWOOD SHORES	\$ 30,672
K	Municipal Conservation - County Other	COUNTY-OTHER, BASTROP	\$ 232,736
K	Municipal Conservation - Dripping Springs	DRIPPING SPRINGS	\$ 49,510
K	Municipal Conservation - Dripping Springs WSC	DRIPPING SPRINGS WSC	\$ 68,043
K	Municipal Conservation - East Bernard	EAST BERNARD	\$ 52,607

WMS Project Sponsor Region	Project Name	Project Sponsor Entity	Capital Cost
K	Municipal Conservation - Flatonia	FLATONIA	\$ 37,553
K	Municipal Conservation - Fredericksburg	FREDERICKSBURG	\$ 291,489
K	Municipal Conservation - Goldthwaite	GOLDTHWAITE	\$ 41,809
K	Municipal Conservation - Horseshoe Bay	HORSESHOE BAY	\$ 154,204
K	Municipal Conservation - Johnson City	JOHNSON CITY	\$ 45,790
K	Municipal Conservation - Jonestown	JONESTOWN	\$ 46,456
K	Municipal Conservation - La Grange	LA GRANGE	\$ 117,647
K	Municipal Conservation - Lago Vista	LAGO VISTA	\$ 187,406
K	Municipal Conservation - Lakeway	LAKEWAY	\$ 544,773
K	Municipal Conservation - Llano	LLANO	\$ 87,599
K	Municipal Conservation - Loop 360	LOOP 360 WSC	\$ 71,683
K	Municipal Conservation - Lost Creek Mud	LOST CREEK MUD	\$ 108,519
K	Municipal Conservation - Marble Falls	MARBLE FALLS	\$ 221,276
K	Municipal Conservation - Meadowlakes	MEADOWLAKES	\$ 64,541
K	Municipal Conservation - Pflugerville	PFLUGERVILLE	\$ 1,701,900
K	Municipal Conservation - Point Venture	POINT VENTURE	\$ 31,028
K	Municipal Conservation - Rollingwood	ROLLINGWOOD	\$ 36,238
K	Municipal Conservation - Round Rock	ROUND ROCK	\$ 36,147
K	Municipal Conservation - San Saba	SAN SABA	\$ 91,823
K	Municipal Conservation - Schulenburg	SCHULENBURG	\$ 78,947
K	Municipal Conservation - Shady Hollow Mud	SHADY HOLLOW MUD	\$ 106,952
K	Municipal Conservation - Smithville	SMITHVILLE	\$ 109,412
K	Municipal Conservation - Sunset Valley	SUNSET VALLEY	\$ 31,520
K	Municipal Conservation - The Hills	THE HILLS	\$ 97,374
K	Municipal Conservation - Travis County Mud #4	TRAVIS COUNTY MUD #4	\$ 137,248
K	Municipal Conservation - Travis County WCID #10	TRAVIS COUNTY WCID #10	\$ 171,890
K	Municipal Conservation - Travis County WCID #17	TRAVIS COUNTY WCID #17	\$ 828,248
K	Municipal Conservation - Travis County WCID #18	TRAVIS COUNTY WCID #18	\$ 147,665
K	Municipal Conservation - Travis County WCID #19	TRAVIS COUNTY WCID #19	\$ 28,215

WMS Project Sponsor Region	Project Name	Project Sponsor Entity	Capital Cost
K	Municipal Conservation - Travis County WCID #20	TRAVIS COUNTY WCID #20	\$ 38,290
K	Municipal Conservation - Weimar	WEIMAR	\$ 55,778
K	Municipal Conservation - West Lake Hills	WEST LAKE HILLS	\$ 112,784
K	Municipal Conservation - West Travis County PUA	WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	\$ 461,454
K	Municipal Conservation - Wharton	WHARTON	\$ 210,832
K	New Surface Water Infrastructure - Aqua WSC	AQUA WSC	\$ 127,538,000
K	New Surface Water Infrastructure - Bastrop	BASTROP	\$ 34,858,000
K	New Surface Water Infrastructure - Elgin	ELGIN	\$ 61,623,000
K	New Surface Water Infrastructure - Volente	VOLENTE	\$ 8,263,000

9.3 SUMMARY OF SURVEY RESPONSES

Infrastructure Financing Recommendation (IFR) surveys were generated by the Texas Water Development Board, using data provided by the individual regions. The surveys were provided to the regions for distribution, and state the following:

“As part of the state water planning process, regional water planning groups recommend water supply projects for each of their respective regions. The Texas Water Development Board (TWDB) has several funding programs for water projects that support the planning, design, and construction of water supply projects with several financing options including low-interest loans and deferral of principal and interest. Texas Water Code (TAC 16.053 (q)) requires the regional water planning groups to examine the financing needed to implement the water management strategies and projects recommended in their regional plan.”

The IFR surveys were sent to each project sponsor with a recommended water management strategy containing capital costs, to gather information on how the project sponsor anticipates financing the projects recommended in the 2016 Region K Water Plan to meet current and future water demands. The survey requested contact information for the project sponsor, the amount of state funding anticipated for planning and design purposes, the amount of state funding anticipated for construction purposes, and the percent share, if any, of temporary state ownership the project sponsor anticipates.

Appendix 9A contains a table detailing the responses received as of November 12, 2015, which is the date the Region K Planning Group adopted the 2016 Region K Water Plan. The RWPG encourages project sponsors to submit their survey responses directly to the TWDB after November 12, 2015.

9.4 REGION K POLICY STATEMENTS FROM CHAPTER 8 THAT DISCUSS FUNDING

In this round of regional water planning, the RWPG has included several policy statements in Chapter 8 that discuss funding issues. These policy statements include the following:

- Support State funding for linking groundwater and surface water models by the TWDB during the development of the next generation of Groundwater Availability Models/Water Availability Models (GAMs/WAMs) with a priority for specific areas where groundwater and surface water closely relate and interact, such as concentrations of base-flow springs or stream-based recharge.
- The State should create a funding mechanism to assist with implementation of appropriate strategies to ensure environmental flows.
- Texas Legislature – Monitor the Environmental Flows Allocation Process set up by the 80th Texas Legislature through Senate Bill 3. Appropriate funding to support development of updated environmental flow standards and to support the purchase and conversion of pertinent water rights to environmental uses through voluntary transactions.
- Region K policy is to encourage new funding sources for GCDs specific to data collection and storage methods that emphasize ease of public accessibility. Region K policy is to support the funding needs of the TWDB for the maintenance and expansion of state-wide groundwater databases.
- It is Region K policy to encourage the TWDB to provide funding to facilitate GMA's role in determining groundwater availability estimates for Regional planning. Additionally, Region K supports funding for the TWDB to provide the technical assistance to the GMAs as required by SB 660.
- The LCRWPG encourages the Legislature to support funding for rural community infrastructure and water supply planning for regional planning, emergency water connections and redundant drinking supplies.
- The LCRWPG encourages the funding of research efforts to determine water savings and incorporate the information into an update of the 2004 Best Management Practices guide. This information should be aimed at providing water suppliers with useful information for developing and implementing conservation goals and successful management strategies.
- The LCRWPG encourages TWDB to aid the NRCS State Conservationist in targeting water conservation program funding to projects that offer the most water conservation benefit for the state. The TWDB should also offer expert testimony to the Agriculture Committees of both the Senate and the House regarding the need and effectiveness of water conservation accomplished through EQIP in order to highlight the ongoing need for adequate EQIP funding.
- Texas Legislature and TWDB – The LCRWPG encourages the funding of research efforts to determine water savings and incorporate the information into current and future BMPs found on the Council website.

- The LCRWPG supports the continuation and expansion of TWDB funding for retail utility water loss projects. Texas Legislature and TWDB - should market the SWIFT funding for utility water loss projects.
- LCRWPG supports water providers having the ability to set up a dedicated funding stream for water conservation programs and projects.
- The LCRWPG encourages the TSSWCB to utilize its available WSEP brush control cost-share funding to accomplish the greatest water supply enhancement for areas that are experiencing the greatest percentage reduction from average of their water supply reservoir storage levels. The LCRWPG encourages the Texas Legislature to instruct the TSSWCB to allow funding for brush control projects, via the WSEP.
- The LCRWPG recommends the State provide funding for performance of a comprehensive hydrologic study to identify and evaluate the factors that affect surface water runoff and inflows into Lakes Buchanan and Travis.
- The LCRWPG recommends the State provide funding for performance of a study to quantify the number and volume of small impoundments within the watershed, including permit-exempt impoundments, and their impacts on inflows into the Highland Lakes.
- The LCRWPG supports action by the State to continue to fund programs for the collection of water data and groundwater availability information, which remains a critical need in the planning process. The State should provide adequate, continuous funding in order to improve the collection, development, monitoring, and dissemination of such water data.
- The LCRWPG supports adequate and timely state funding for the regional water planning process. This funding is critical for the development of long-term, sustainable, environmentally protective and conservation-effective water management strategies as well as the collection of water data and groundwater availability information, including the refinement of modeling data, public information materials, and administrative assistance.
- The LCRWPG recommends the State should provide adequate funding for water treatment and radioactive waste disposal for those rural communities that may lose their water supply if such financial support is lacking.

APPENDIX 9A
TABULATED SURVEY RESULTS