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## CHAPTER 9.0: INFRASTRUCTURE FINANCING REPORT

### 9.1 BACKGROUND

The Infrastructure Financing Report (IFR) requirement was incorporated into the regional water planning process in response to Senate Bill 2 (77<sup>th</sup> Texas Legislature). For purposes of the IFR, each regional water planning group (RWPG) is required to determine proposed financing for all of the water management strategies that were proposed in the third round of planning. For each of these strategies, the RWPG must determine the funding needed to implement the strategy, and what types of funding are likely to be accessed.

According to TWDB guidelines, the primary objectives of the IFR are:

- To determine the number of political subdivisions with identified needs for additional water supplies that will be unable to pay for their water infrastructure needs without some form of outside financial assistance;
- To determine how much of the infrastructure costs in the regional water plans cannot be paid for solely using local utility revenue sources;
- To determine the financing options proposed by political subdivisions to meet future water infrastructure needs (including the identification of any State funding sources considered); and,
- To determine what role(s) the RWPGs propose for the State in financing the recommended water supply projects.

The TWDB prepared the Infrastructure Financing Report (IFR) and Policy Statement for the Region M Regional Water Planning Group (RWPG). The list, as provided as a template by the Texas Water Development Board, was used to develop the list of water user groups in need. Names and address lists were developed for each group. A sample letter is included as Attachment 9-1.

The consultant team was in charge of sending out the surveys and attempted to contact each Water User Group (WUG) to discuss the surveys and their approach to the financing their water management strategies.

#### 9.1.1 Findings

Information found in the template formulated by the TWDB was used to merge data into the required survey forms.

The entities were given ample time to add comments and corrections to the data gathered for this regional water plan. The survey in 2010 let the entity state what strategies were they interested in implementing in the next fifty years. At that time, they were asked how they were planning to fund it. The survey pertained more to the financing of the strategies. The data in these surveys were compiled and used

for this plan. Sample letters and surveys can be found in the Attachment sections at the end of this report.

## **9.2 WATER USER GROUP SUMMARIES**

### **9.2.1 Municipal Water User Groups**

The majority of municipal WUGs have strategies that include urbanization, advanced water conservation measures and purchase of Rio Grande supplies. There are total of eight counties, 52 cities, and 15 water supply corporations in this regional planning area.

The RWPG sent out a survey to each of the 63 municipal and water supply districts throughout this round of planning. Samples of the surveys are attached to this chapter. The surveys were used to obtain additional information about their current thought about water planning and their involvement with the RWPG. The survey also discussed what their focus was with regard to providing water for their future. They understood that it should be their responsibility to attend public hearings and find out what is going on. This region has an estimated total capital cost of \$135,447,300 for all municipal water management strategies. The total capital cost for the region is estimated to be \$1,863,361,321. The acquisition of water rights through purchase has the highest yield for municipal strategies at 151,237 acre-ft. Desalination of brackish groundwater came in second with 71,700 acre-ft assigned to municipal water user groups.

#### **9.2.1.1 Summary of Municipal Water Management Strategies**

For Municipal users, the strategies recommended for this regional planning area are:

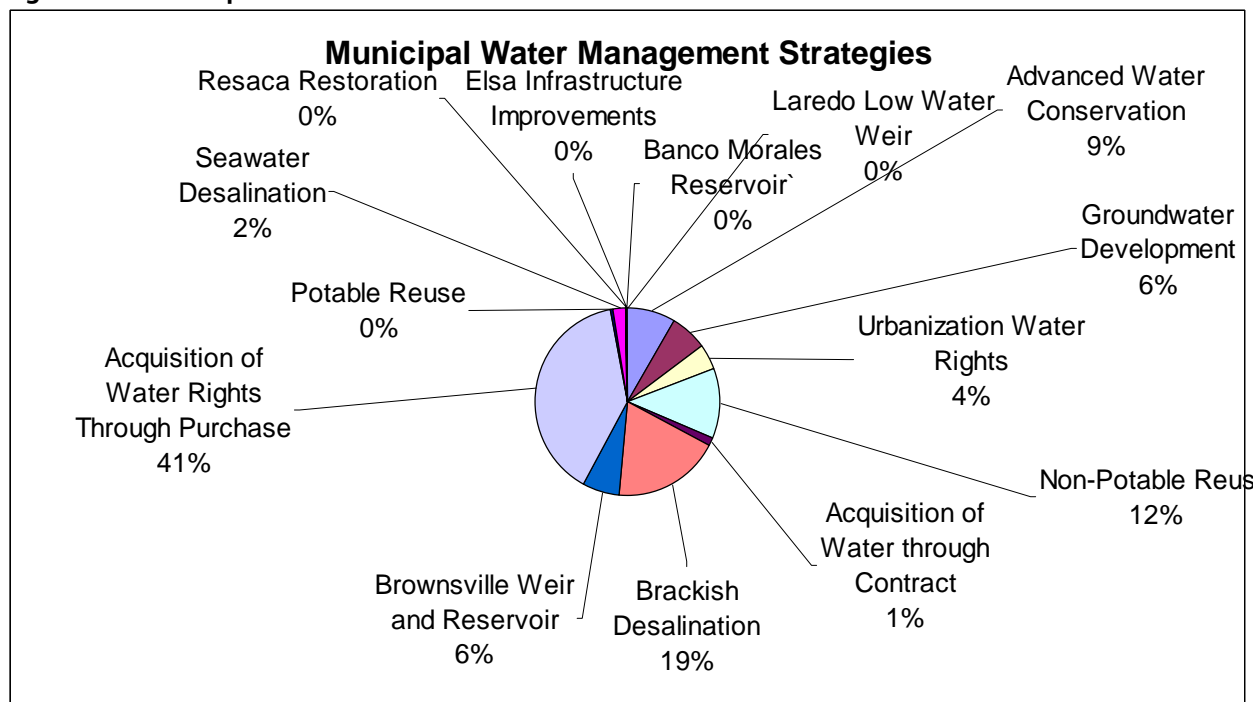
- Advanced Water Conservation;
- Potable Reuse of Reclaimed Water;
- Non-Potable Reuse of Reclaimed Water;
- Acquisition of Additional Rio Grande Water through Water Rights Purchase;
- Acquisition of Additional Rio Grande Water through Urbanization;
- Acquisition of Additional Rio Grande Water through Contract;
- Desalination of Brackish Groundwater;
- Desalination of Seawater;
- Groundwater Development;
- Brownsville Weir and Reservoir;
- Resaca Restoration;

- Laredo Low Water Weir;
- Banco Morales Reservoir; and
- Elsa Improved Infrastructure.

**Table 9.1: Summary of WMS Yields & Annual Costs**

<b>Strategy</b>	<b>Water Supply Yield</b>	<b>Total Capital Cost</b>	<b>Total Annual Cost</b>
Advanced Water Conservation	32,793	\$22,583,710	\$0
Groundwater Development	24,520	\$27,474,302	\$6,218,609
Acquisition of Water Rights through Urbanization	16,406	\$56,167,089	\$7,056,713
Non-Potable Reuse	46,382	\$173,803,091	\$6,839,307
Acquisition of Water through Contract	4,671	\$16,263,877	\$2,009,137
Brackish Desalination	71,700	\$263,599,392	\$33,347,670
Brownsville Weir and Reservoir	23,643	\$98,411,077	\$4,324,305
Acquisition of Water Rights Through Purchase	151,237	\$631,081,709	\$64,078,617
Potable Reuse	1,290	\$7,519,850	\$231,693
Seawater Desalination	7,902	\$185,940,937	\$8,301,920
Elsa Infrastructure Improvements	105	\$8,325,386	\$0
Banco Morales Reservoir	238	\$25,790,900	\$604,996
Resaca Restoration	877	\$52,000,000	\$2,229,334
Laredo Low Water Weir	0	\$294,400,000	\$205,000
<b>Total</b>	<b>381,764</b>	<b>\$1,863,361,321</b>	<b>\$135,447,300</b>

Figure 9.1: Municipal WMS



The following table shows how the Water User Groups in this region plan to fund the recommended strategies. The categories in Table 9.2: Summary of Funding for Municipal Strategies are types of funding available from TWDB and can be received by each WUG, if warranted.

Table 9.2: Summary of Funding for Municipal Strategies

	Total Capital Costs	Acquisition and Construction	Disadvantaged	Planning, Design, and Permitting	Excess Capacity	Rural	Other
<b>Municipal WMS</b>	<b>\$1,863,361,321</b>	2%	73%	0%	24%	1%	3%

Below, each TWDB program available for each WUG is briefly described.

Acquisition and Construction - WIF Acquisition and Construction offers subsidized interest for all construction costs, including planning, acquisition, design, and construction.

Disadvantaged-Economically Distressed Areas Program (EDAP) - offers funding through grants and loans for service areas within a project which meet the EDAP eligibility criteria. Eligibility for the TWDB's EDAP requires that the median household income of the area to be served by the proposed project be less than 75 percent of the Texas median household income (\$39,927), as shown in the 2000 Census. EDAP eligibility also requires adoption of Model Subdivision rules by the appropriate planning entities.

Planning, Design, and Permitting - this WIF-deferred program offers subsidized interest and deferral of principal and interest for up to 10 years for planning, design and permitting.

Excess Capacity – the State Participation Fund offers partial interest and principal deferral for the incremental cost of project elements, which are designed and built to serve needs beyond 10 years.

Rural - offers grants and 0% interest loans for service areas which are not in a Metropolitan Statistical Area (MSA) and in which the population does not exceed 5,000. The service areas must also meet the EAP eligibility criteria.

Listed below are descriptions of each WMS and the estimated costs associated with each project.

1. Advanced Water Conservation Measures – All municipal WUGs listed this strategy for water supply needs. All cities had a water conservation plan in place according to TCEQ regulations. The larger entities usually had a budget for information and education. McAllen has a full time staff member to implement water conservation measures.

To achieve the estimated water savings associated with the advanced municipal water conservation scenario, a significant commitment of funding and other resources to implement the measures will be required. Cost elements of a program to achieve the estimated savings include funding for educational and public awareness activities and staff to manage and implement the various programs. It is important to note that the investment in municipal water conservation requires substantial front-end funding at the outset and for the duration of the planning period. Because the effects of conservation are incremental and build over time, the initial costs on a unit basis are relatively high at the outset and then decline significantly over time. The cost for Advanced Conservation will take into consideration the population of the region multiplied by the cost proposed for public education & school education by Best Management Practices Guide provided by TWDB which is estimated to be \$5/person. The population will be multiplied by the cost of conservation education and divided by the savings of water annually for public education. The population of school age children based on the 2010 US Census will be multiplied by the cost of school conservation education and divided by the savings of water annually for school education.

There is not a total annual cost for Advanced Water Conservation. Every WUG indicated that the extended portion strategy would have to be funded by some other source than local funds.

- Acquisition of Water Rights Through Urbanization – Discussions with the WUGs have resulted in some confusion as to what urbanization is and how the costs were generated by the RWPG. Some entities require developers to pay the infrastructure costs to provide water required by the development of agricultural land into residential/commercial development. The process varies considerably from entity to entity. Most areas receive some sort of funds or water rights through development in the form of impact fees, direct transfer of water rights, tap-in fees or other methods of accounting for the growth within the city. Other entities receive no compensation for development and water rights are retained within the irrigation district without compensation to the city. Most of these entities indicated that they are pursuing changes in this procedure.

Most of the WUGs in the survey did not realize that treatment costs were included in this strategy and thought it was only for the cost of the water supply to the facilities.

- Acquisition of Water Rights Through Purchase of Additional Rio Grande Supply - The cost of water rights in this area has increased significantly over the last few years. Current costs exceed the range of \$1,900 to \$2,300 per acre-foot for municipal rights compared to approximately \$700 per acre-foot ten years ago. Most entities have planned purchases as they need water rights.

A total annual cost for this strategy is estimated to be \$64,078,617 at a 151,237 acre-ft yield which comes out to \$430 an acre-ft.

**Table 9.3: Water Yield for Acquisition of Rio Grande Water Rights**

	Cameron	Hidalgo	Jim Hogg	Maverick	Starr	Webb	Willacy	Zapata
<b>Purchase (ac-ft)</b>	15,121	65663	7	2,226	11,149	55,060	198	1,813
<b>Urbanization (ac-ft)</b>	0	16,406	0	0	0	0	0	0
<b>Contract (ac-ft)</b>	892	2,201	0	0	235	1,338	5	0
<b>Total:</b>	16,013	84,270	7	2,226	11,384	56,398	203	1,813

- Acquisition of Water Rights Through Contract – It is not possible to predict the exact cost of either future water rights purchases or the price of water provided to DMI users under contract. The specific terms of such transactions will be determined by the parties willing buyers and willing sellers, which will also dictate the specific components required to implement this strategy. However, for this planning process it is necessary to provide cost estimates for acquisition of additional Rio Grande water supplies for DMI use. Using the purchase prices for recent water transactions, the estimated cost to purchase water rights is approximated to range from \$1,900 to \$2,300 per acre-feet.

A total annual cost for this strategy is estimated to be \$2,009,137 at a 4,671 acre-ft yield which comes out to \$430 an acre-ft.

5. Non-Potable Reuse – Ten WUGs in the region listed Non-Potable Reuse as a water management strategy. They are: Brownsville, Harlingen, Laguna Madre Water District, Alamo, Edinburg, McAllen, Mission, Pharr, Rio Grande City, and Laredo. Those entities that have listed this strategy generally agreed that the costs associated with this strategy were projected to be too high. Most of these entities utilize effluent as currently treated for irrigation of golf courses or provide this water for industrial or power plant use. Many of those for whom this strategy is not listed are planning on using effluent as a strategy in the future.

A total annual cost for this strategy is estimated to be \$6,839,307 at a 46,382 acre-ft yield which comes out to \$150 an acre-ft.

**Table 9.4: County Yields for Non-Potable Reuse**

	Cameron	Hidalgo	Jim Hogg	Maverick	Star	Webb	Willacy	Zapata
Yield (ac-ft)	3,755	29,964	0	0	125	12,523	15	0

6. Potable Reuse - Currently, only the City of Weslaco is interested in pursuing indirect potable water reuse. In 2010, their goal is to use 1 million gallons/day (1290 ac-ft/yr) of reuse water to facilitate potable water demand by blending it with raw water before it enters a treatment facility. This quantity would be available to Weslaco for the extent of the planning study.

The cost estimates developed for the full-scale potable reuse system evaluated for the City of McAllen were reviewed for this planning effort. In 2007 dollars, capital costs of the project would be approximately \$7.5 million. The total annual cost, which includes debt service (6% for 30 years) and operations and maintenance costs, is estimated to be \$231,693 per year. However, it should be noted that these estimates do not include the costs associated with conventional treatment of the blended raw/reclaimed water supply. These numbers were referenced from the previous regional plan and are based on the McAllen, TX – Demonstration of ZenoGem and RO for Indirect Potable Reuse Pilot Study performed by CH2M Hill.

A total annual cost for this strategy is estimated to be \$231,693 at a 1,290 acre-ft yield which comes out to \$150.45 an acre-ft.

7. Brownsville Weir and Reservoir – Of all the municipal WUGs in Region M, only the Brownsville Public Utilities Board (BPUB) listed this strategy as a long term approach to their water supply needs. In addition to other water rights, BPUB currently has authorization to divert up to 40,000 acre-feet per year of

“excess flows” from the Rio Grande under TNRCC Permit No. 1838. However, the firm yield of the project (based on hydrologic analysis for the period from 1960 to 2007) is estimated to be 20,643 acre-feet per year. This project is currently in the process of funding and environmental and international approvals.

Based on information supplied in the last regional plan, the cost estimate to construct the Brownsville Weir and Reservoir is just less than \$36.2 million. TWDB guidelines require an annualized cost to construct the project to deliver water to the end user based on firm yield requirements. Assuming the firm yield from the diversion is used as the basis for providing treated water for DMI use, the following determination of unit cost was developed. Using TWDB cost estimation guidelines, the inflation adjusted annualized cost to construct, operate, and maintain the project, and provide required treatment, is approximately \$3.7 million dollars per year.

A total cost for this strategy is estimated to be \$4,324,305 at a 20,643 acre-ft yield which comes out to \$182.90 an acre-ft.

8. Develop Local Groundwater – Twenty-four water user groups in the region listed this strategy. This is a major increase from the last round of regional planning.

The estimated construction cost of the wellfield is about \$3,265,444 (2007 dollars). The estimated construction cost for the wells (assuming depth and production rate for each well of 300 feet and 7.5 MGD). TWDB guidelines require an annualized cost to construct the project and deliver water to the end user based on yield assumptions.

A total annual cost for this strategy is estimated to be \$6,218,609 at a 24,520, acre-ft yield which comes out to \$214 an acre-ft.

**Table 9.5: Groundwater Supply Yield**

	Cameron	Hidalgo	Jim Hogg	Maverick	Starr	Webb	Willacy	Zapata
Yield (ac-ft/yr)	2,947	9,147	73	0	4,188	8,173	0	0

9. Seawater Desalination – There are three water user groups with seawater desalination as a water management strategy. They are Laguna Madre Water District (864 acre-ft), The City of Brownsville (7,013 acre-ft), and Laguna Vista (25 acre-ft). Cost estimates were developed for a 1 million gallons per day (mgd) desalination facility near Port Isabel in 1996. Estimated total project costs are \$6 million, with total annual costs of nearly \$1.5 million. Based on an estimated firm yield of 1,120 acre-feet per year, the cost

estimate per acre-foot is \$1,300. During a presentation, the project team for the Port of Brownsville project indicated a capital cost of \$120 million with a combined debt service and operation cost of \$2.50/1000 gallons or \$820 per acre –foot.<sup>1</sup> This indicates that a larger facility is more cost effective due to economies of scale. It is also site-specific where placed in conjunction with power generation facilities will lower power costs and provide a combined water intake. It should be noted that this cost representation is only conceptual in nature. It leaves out pipelines and discharge costs that a plant would have to also take into consideration.

A total annual cost for this strategy is estimated to be \$8,301,920 at a 7,902 acre-ft yield which comes out to \$1,051 an acre-ft.

10. Brackish Desalination – The annual cost per acre-ft for this strategy to be implemented in this region was estimated to be at \$465.10. The sizes of the brackish desalination plants in this region range from .25 MGD to 7.5 MGD<sup>2</sup>. Further cost data updated to include current projects completed or in the planning and design stage are summarized in the Attachment part of this plan. Costs include Well Field, Well Field Collection and Treatment Facilities. It does not include pumping and distribution costs. A major factor not included in these figures is the cost of water rights. The latest cost to purchase water rights has been approximately \$2,300/acre-foot. This could be deducted from the following costs as the capital cost includes the development of the groundwater source. Costs vary due to plant size, location, and water source salinity.

**Table 9.6: Water Supply Yield for Brackish Water Desalination**

	Cameron	Hidalgo	Jim Hogg	Maverick	Starr	Webb	Willacy	Zapata
Yield (ac-ft)	25,069	23,066	0	641	1,498	10,100	11,326	0

A total annual cost for this strategy is estimated to be \$33,347,670 at a 71,700 acre-ft yield which comes out to \$465 an acre-ft.

11. Resaca Restoration - Currently only one user, Brownsville, has this as a recommended water management strategy. The total annual cost of this strategy is \$2,229,334 for 877 acre-feet of yield. This comes out to be \$577 an acre-ft.
12. Elsa Infrastructure Improvements - The City of Elsa is proposing a new elevated storage tank and distribution improvements to the city. The total capital cost of this \$8,325,386. This will create 105 acre-feet of yield for the City of Elsa. There is no annual cost for this particular strategy.

<sup>1</sup> The Future of Desalination in Texas Workshop, Austin, Texas 2003, Concept Paper Presented by Dannenbaum Engineering Co. and URS Company.

<sup>2</sup> Data Provided By NRS Consulting Engineers

13. Banco Morales Reservoir - Of all the municipal WUGs in Region M, Brownsville is the only WUG that lists this strategy as a long term approach to their water supply needs. This is a new WMS for this round of planning.

A total annual cost for this strategy is estimated to be \$604,996 at 238 acre-feet of yield which comes out to be \$182 an acre-ft.

14. Laredo Low Water Weir - The Laredo Low Water Weir does not produce a water supply yield for this project. This particular project increases the flow of the river downstream of the weir. It is estimated the total capital cost of this project is \$294,400,000. Its total annual cost is estimated to be \$205,000 at a 0 acre-feet of yield.

## 9.2.2 County Other User Groups

The County-Other groups consist of entities other than Cities within a county. These are listed as Cameron County-Other, Hidalgo County-Other, Willacy County-Other, Starr County-Other, Jim Hogg County-Other, Maverick County-Other, Webb County-Other, and Zapata County-Other. The official survey was sent to the County Judge in each of these counties.

### 9.2.2.1 Summary of County-Other Water Management Strategies

1. Advanced Water Conservation Measures – Of the 8 County-Other WUGs, 8 were listed as using this strategy for water supply needs. All indicated that the extended portion strategy would have to be funded by some other source than local funds.

A total annual cost does not exist for this WMS.

2. Develop Local Groundwater – Of the 8 County-Other WUGs, 4 were listed as using this strategy for water supply needs.

A total annual cost for this strategy is estimated to be \$1,793,626 for 8,344 acre-ft of yield which comes out to \$214 an acre-ft.

3. Purchase Additional Rio Grande Supply - Of the 8 County-Other WUGs, 6 were listed as using this strategy for water supply needs.

A total annual cost for this strategy is estimated to be \$12,218,272 at a 28,406 acre-ft yield which comes out to \$430 an acre-ft.

### 9.2.3 Irrigation Water User Groups

The adopted plan lists irrigation groups by county without specific irrigation districts listed with needs. For each county irrigation group, two strategies are listed. These are on-farm improvements and conveyance system improvements.

**Table 9.7: Summary of Irrigation Strategies**

<b>Irrigation Data</b>			
WMS	Yield	Total Annual Cost	Unit Cost
On Farm	219,226.00	55,547,585.23	253.38
Conveyance	218,783.00	26,402,708.30	120.68

The counties that used these strategies are Willacy (Both), Starr (On-Farm), Maverick (Both), Hidalgo (Both), and Cameron (Both).

#### 9.2.3.1 Summary of Water Management Strategies

1. On-Farm Improvements – This strategy consists of improvements to flow measurements, installation of polypipe delivery systems, improved management and technology, installation of SCADA systems and implementation of a verification program to monitor effectiveness of the program. A wide range of comments were received from Irrigation District Mangers prior to the previous plan and this plan. It was made clear that it was not their responsibility to fund on-farm improvements. A range of affordability included the inability for the farmer to pay for any improvements to 50% of on-farm improvements. At the meeting, a reluctant consensus, representing several irrigation districts in Cameron and Hidalgo Counties, suggested that 40% of on-farm improvements could be paid for with local funds with the remaining 60% from outside sources, such as the Texas Water Development Board, the U.S. Bureau of Reclamation (Reclamation) and legislative appropriations. Based on further discussions with the irrigation districts and the RWPG, it was suggested that the affordability of irrigation improvements be changed to 10%, as many districts could not afford any improvement cost. This was recommended and approved at the RWPG.

A total annual cost for this strategy is estimated to be \$55,547,585 at a 219,226 acre-ft yield which comes out to \$253.38 an acre-ft. The total capital cost of this project is \$194,417,692.

2. Irrigation Conveyance System Improvements - The Texas Agricultural Experiment Station (TAES) evaluated and developed water savings and cost estimates for a comprehensive program to rehabilitate and improve the management of irrigation conveyance and distribution facilities. The program

would consist of six principal components: 1) Installation of no-leak gates; 2) Installation of additional water measurement weirs; 3) Conversion of smaller concrete canals that are in poor condition to pipeline; 4) Relining of concrete-lined canals that are in poor condition; 5) Lining of smaller earthen canals constructed of more porous soils; and, 6) Implementation of verification programs to monitor and measure the effectiveness of the efficiency improvements.

Like on-farm improvements, comments varied greatly amongst the District Managers. In recent years a great deal of experience was gained in the funding of these projects. Several projects have been completed since the previous plan. The Districts that were prepared for construction, i.e. had approved Project Reports for Reclamation and subsequent Cost-Share agreements executed, were able to take advantage of funding from the North American Development Bank (NADBank) to supplement the 50% share from Reclamation. Most Districts were able to achieve at least a 90% combined funding level with federal and NADBank funds. Districts have further realized that the 50% cost share agreement with Reclamation does not mean that reimbursement will occur rapidly and actually may take several years to get reimbursement of Reclamation's share. This means that the Districts will need to finance that portion in some way in addition to their own portion. Most Districts cannot afford the construction of new facilities given the need to finance 100% of a project up-front. The addition of the NADBank funds allowed Districts to complete the projects while awaiting reimbursement. One district was unable to complete its project even with the 50% cost share from Reclamation. According to NADBank, these funds will not be used for other projects and it is not expected that additional funds will be available in the future. A summary of projects and funding levels are shown in Chapter 4, page 4-135, based on information from Sonia Kaniger of Cameron County Irrigation District 2 as of June 2010.

A general consensus was given for the ability to afford 40% financing. Discussions however indicate that even that would be far too costly for the irrigator to afford. When presented to the Region M RWPG, it was approved to use 10% affordability. Even at that, some could still not afford to implement on-farm water conservation initiatives.

A total annual cost for this strategy is estimated to be \$26,402,708.30 at a 218,783 acre-ft yield which comes out to \$120.68 an acre-ft. The total capital cost of this project is 130,757,978.

**Table 9.8: Funding for Irrigation Strategies**

<b>Irrigation WMSs</b>	<b>Funded Locally</b>	<b>Outside Sources</b>
On-Farm Conservation	40%	60%
Irrigation Conveyance System Improvements	10%	90%

### 9.2.4 Manufacturing

The Rio Grande Region, for the most part, has adequate supplies to meet manufacturing water demands. Throughout the planning period, currently available water supply for manufacturing exceeds projected water demand. However, certain local areas do have small manufacturing water supply deficits. Cameron and Hidalgo County show a water supply deficit. The shortages were assigned three water management strategies. They are Non-Potable Reuse, Expand Groundwater Wells, and Acquisition of Water Rights through the Purchase of Water Rights.

1. Non- Potable Reuse - A total annual cost for this strategy is estimated to be \$454,359 at a 3,020 acre-ft yield which comes out to \$150 an acre-ft.
2. Acquisition of Water Rights through the Purchase of Water Rights - A total annual cost for this strategy is estimated to be \$130,759 at a 304 acre-ft yield which comes out to \$430 an acre-ft.
3. Expanding Groundwater Wells - A total annual cost for this strategy is estimated to be \$297,592 at a 1,200 acre-ft yield which comes out to be \$214 an acre-ft.

There were no surveys sent in this category. It was assumed that manufacturing would pay what was necessary to finance their water needs.

### 9.2.5 Steam Electric Power

The Rio Grande Region is projected to have steam electric water supplies in excess of demand through the year 2020. After that point, demand will be slightly greater than supply, and relatively large steam electric water supply deficits will occur due to the location of available supply. Although the Rio Grande Region currently has no identified steam electric water demand needs, water shortages are projected to occur beginning in 2050 in Cameron County, in 2050 in Webb County, and in 2020 in Hidalgo County. Hidalgo County is projected to have shortages of 1,980 acre-feet in year 2020 and to continue thereafter through 2060 with a deficit of 15,183 acre-feet. Combined, the county-level steam electric power generation WUGs in Cameron, Hidalgo, and Webb counties are projected to have shortages of 11,215 acre-feet combined per year by 2050 and thereafter through 2060. Water management strategies considered potentially applicable to this need include acquisition of additional Rio Grande supplies, use of reclaimed water, and groundwater. It is recommended that all of the projected steam electric demands be

met through a combination of the three listed strategies. No surveys were sent to these entities. These strategies were considered to be financed through the steam electric power companies through the cities.

1. Non- Potable Reuse - A total annual cost for this strategy is estimated to be \$1,624,860 at a 10,800 acre-ft yield which comes out to \$150 an acre-ft.
2. Acquisition of Water Rights through the Purchase of Water Rights - A total annual cost for this strategy is estimated to be \$2,229,363 at a 5,183 acre-ft yield which comes out to \$450 an acre-ft.
3. Develop Local Groundwater - A total annual cost for this strategy is estimated to be \$85,769 at a 399 acre-ft yield which comes out to \$214 an acre-ft.

**ATTACHMENT 9-1**  
**SAMPLE LETTER TO WATER USER GROUPS**

SAMPLE LETTER SENT TO MUNICIPAL WATER SUPPLIERS IN JULY 2010

September 23, 2010

«Name»  
«Title»  
«WUG»  
«address1»  
«address2»

RE: Water Infrastructure Financing Survey

Dear «Sal»:

As part of Senate Bill 2 (SB 2, 77<sup>th</sup> Texas Legislature), the Rio Grande Regional Water Planning Group (RGRWPG) is required by the Texas Water Development Board (TWDB) to examine funding required to implement the water management strategies and projects that were identified and recommended in the Initially Prepared Plan.

Attached please find a survey to determine various issues to assist us in the planning and implementation of water management strategies for the region. The survey reviews the water management strategies outlined by the Initially Prepared Plan and we request your assistance to respond to several questions with regard to financing these strategies. This is a requirement of Senate Bill 2, and we must receive your response no later than July 30, 2010. You may either respond to the hard copy survey or the email version of the survey. You do not need to reply to both surveys.

I thank you in advance for your continued cooperation in the water planning process for our region. If you have any questions, please do not hesitate to call me at (956) 423-7409.

Sincerely,

Jacob White, P.E

**ATTACHMENT 9-2**  
**SAMPLE SURVEY FOR WATER USER GROUPS**

## Infrastructure Financing Survey Report

### 44: EAGLE PASS

As part of the regional and state water planning process, regional water planning groups recommend water supply projects for each of their respective regions. The purpose of this survey is gather information from your organization regarding how you plan to finance water supply projects recommended for the 2012 state water plan, and determine whether you intend to use financial assistance programs offered by the State of Texas and administered by the Texas Water Development Board (TWDB).

The TWDB has several funding programs for water projects identified in the 2012 state water plan. Funds are targeted toward: 1) construction of water supply projects, 2) planning and design and permitting for projects that have long development time frames meaning that construction would require 5-10 years of planning, design and permitting, and 3) projects that would be built with excess capacity intended to meet future water needs. These programs offer various attractive financing options such as subsidized interest rates, deferral of principal and interest during planning, design and permitting phase, partial deferral of interest and principal for those portions of the project which are optimally sized for future needs. Additionally, grant funding is available for those service areas which qualify as rural or economically disadvantaged. More information on these financial assistance programs (i.e., the Water Infrastructure Fund, the State Participation Fund, and the Economically Disadvantaged Areas Program) can be found at the TWDB website at:

[http://www.twdb.state.tx.us/assistance/financial/financial\\_main.asp](http://www.twdb.state.tx.us/assistance/financial/financial_main.asp)

Your cooperation and responses to these questions are crucial in helping the state in ensuring that our communities and our citizens have adequate water supplies. If you have any questions related to the financial programs offered by the TWDB or about the survey questions, please contact Jake White by phone at (956)423-7409 or by email at [jwhite@nrseengineers.com](mailto:jwhite@nrseengineers.com). If you have any computer or technology related problems with the survey, please contact Wendy Barron by phone at (512) 936-0886 or by email at [wendy.barron@twdb.state.tx.us](mailto:wendy.barron@twdb.state.tx.us).

### Section 1: Project Financing Information

For project(s) identified in the State Water Plan, the TWDB has funding available for different aspects of a project. The different programs available are:

- WIF-Deferred offers subsidized interest and deferral of principal and interest for up to 10 years for planning, design and permitting costs.
- WIF-Construction offers subsidized interest for all construction costs, including planning, acquisition, design, and construction.
- State Participation funding offers partial interest and principal deferral for the incremental cost of project elements which are designed and built to serve needs beyond 10 years.
- Rural areas funding offers grants and 0% interest loans for service areas which are not in a Metropolitan Statistical Area (MSA) and in which the population does not exceed 5,000. The service area must also meet the EDAP eligibility criteria.
- Economically Distressed Areas Program (EDAP) offers funding through grants and loans for service areas within a project which meet the EDAP eligibility criteria. Eligibility for the TWDB's EDAP requires that the median household income of the area to be served by the proposed project be less than 75 percent of the Texas median household income (\$39,927), as shown in the 2000 Census. EDAP eligibility also requires adoption of Model Subdivision rules by the appropriate planning entities.

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•State Participation funding offers partial interest and principal deferral for the incremental cost of project elements which are designed and built to serve needs beyond 10 years.

If you are interested in receiving funds from the above programs, please complete the remainder of the survey.

**Please enter only the amounts you wish to receive from TWDB program in the Project Costs fields and do not enter a specific project cost more than once.**

### Section 2: Projects

For each of the project(s) listed below, please enter only the amounts you wish to receive from TWDB programs in the 'Cost' field and the earliest date you wish to receive these amounts. In addition, the total amount entered into all five categories cannot exceed the total cost of the project. Each of the five categories corresponds to a funding program available at the TWDB. Each of the funding programs and categories are described below.

•Planning, design, permitting: Enter costs into the 'Planning, design, permitting' category if you want to participate in the WIF-Deferred program. The WIF-Deferred program offers subsidized interest and deferral of principal and interest for up to 10 years for planning, design and permitting costs.

•Acquisition and construction: Enter costs into the 'Acquisition and construction' category if you want to participate in the WIF-Construction program. The WIF-Construction program offers subsidized interest for all construction costs, including planning, acquisition, design, and construction.

•Excess Capacity: Enter costs into the 'Excess capacity' category if you want to participate in the State Participation program. State Participating funding offers partial interest and principal deferral for the incremental cost of project elements which are designed and built to serve needs beyond 10 years.

•Rural: Enter costs into the 'Rural' category if you want to participate in the Rural areas funding program. Rural areas funding offers grants and 0% interest loans for service areas which are not in a Metropolitan Statistical Area (MSA) and in which the population does not exceed 5,000. The service area must also meet the EDAP eligibility criteria.

•Disadvantaged: Enter costs into the 'Disadvantaged' category if you want to participate in the Economically Distressed Areas Program (EDAP). EDAP offers funding through grants and loans for service areas within a project which meet the EDAP eligibility criteria. Eligibility for the TWDB's EDAP requires that the median household income of the area to be served by the proposed project be less than 75 percent of the Texas median household income (\$39,927), as shown in the 2000 Census. EDAP eligibility also requires adoption of Model Subdivision rules by the appropriate planning entities.

<b>53 - BRACKISH WATER DESALINATION</b>		<b>\$73,423.88</b>
Planning, design, permitting	Cost: <input type="text"/>	Year: <input type="text"/>
Acquisition and construction	Cost: <input type="text"/>	Year: <input type="text"/>
Excess Capacity	Cost: <input type="text"/>	Year: <input type="text"/>

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Rural	Cost: <input type="text"/>	Year: <input type="text"/>
Disadvantaged	Cost: <input type="text"/>	Year: <input type="text"/>
<b>Total:</b>	<input type="text"/>	

<b>60 - ADVANCED WATER CONSERVATION</b>		<b>\$76,943.79</b>
Planning, design, permitting	Cost: <input type="text"/>	Year: <input type="text"/>
Acquisition and construction	Cost: <input type="text"/>	Year: <input type="text"/>
Excess Capacity	Cost: <input type="text"/>	Year: <input type="text"/>
Rural	Cost: <input type="text"/>	Year: <input type="text"/>
Disadvantaged	Cost: <input type="text"/>	Year: <input type="text"/>
<b>Total:</b>	<input type="text"/>	

#### Section 3: Contact Information

1. Name: \_\_\_\_\_
2. Phone Number: \_\_\_\_\_
3. Email: \_\_\_\_\_
4. Comments \_\_\_\_\_

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