

**Region M Regional Water Planning Group
Scope-of-Work for 3rd Round of Regional Planning**

Task Descriptions, Deliverables, and Budget Costs

Task 1: Planning Area Description

Subtasks

1. Update endangered/protected species list to incorporate changed conditions

Task Description

Funding requested for this individual task will be used to update the protected and/or endangered species list that was included in the previous regional water plan. Research will be performed to determine the status of state and national protected/endangered species located in Region M.

Deliverables

An updated list of endangered/protected species, similar to the last round of Regional planning, will be provided.

Budget Cost

\$2,620.00

2. Inclusion of information pertaining to the proposed border fence

Task Description

The proposed border fence, as proposed by the United State Government, will have a pronounced impact on the Region. This task will include compiling preliminary information in terms of border fence location and potential impacts to the region.

Deliverables

A summary of the proposed border fence will be provided as will a proposed location map.

Budget Cost

\$3,360.00

3. Include information on the Water Right Conversion Bill

Task Description

The Water Right Conversion Bill details the specific water right conversion method to be used when land is urbanized (taken out of agricultural use). This

specific task will include summarizing the Conversion Bill and including that information in the Regional Water Plan

Deliverables

A summary of the Conversion Bill will be provided in the Regional Plan.

Budget Cost

\$1,790.00

4. Include information on the Arroyo Colorado Watershed Protection Plan

Task Description

This task will include obtaining and summarizing the results of the Arroyo Colorado Watershed Protection Plan for inclusion in the Regional Plan.

Deliverables

A summary of work being performed and results obtained to date will be included in the Regional Plan.

Budget Cost

\$2,230.00

5. Expand Regional Plan to include information pertaining to historical significance of archeological, architectural, and cultural landmarks

Task Description

A large portion of the Region's existing water conveyance structure is eligible for inclusion in the National Register of Historical Places as well as well as being determined historically significant by the Texas Historical Commission. This task will include obtaining a listing of all water conveyance components in the Region that have historical significance in terms of archeological, architectural, and/or cultural components. This information will allow for state and federal agencies, in addition to individual water user groups in the region, to anticipate obstacles in implementing water management strategies due to potential negative impacts on historical components.

Deliverables

A list of all water conveyance components that have historical significance will be provided. In addition, suggestions on how to minimize impacts on these historical features due to improvements will be included in the Regional Plan.

Budget Cost

\$12,560.00

Task 2: Select Revisions of Population and Water Demand Projections

Subtasks

1. Meetings with WUGs/WWPs to discuss population and water demand projections

Task Description

This task will include conversations with individual WUGs and WWPs to determine the accuracy of population and water demand figures that were used in the previous Regional Water Plan. This action will allow each entity to provide direct input into regional water planning.

Deliverables

Discussions with individual WUGs and WWPs will provide updated water demand and population figures based on changed conditions. These changes will be incorporated into the Regional Plan.

Budget Cost

\$19,480.00

2. Update population figures for WUGs

Task Description

Based on the results of subtask 1 in this section, population figures will be updated.

Deliverables

Revised population figures for inclusion in the Regional Plan

Budget Cost

\$2,510.00

3. Revise water demand projections for WUGs and WWPs

Task Description

Based on the results of subtask 1 in this section, water demand figures will be updated for WWPs/WUGs throughout the region.

Deliverables

Revised water demand figures for inclusion in the Regional Plan

Budget Cost

\$2,510.00

4. Inclusion of entities not included in the previous regional water plan

Task Description

The only anticipated change, in terms of WUGs/WWPs, from the previous plan will be the inclusion of individual Irrigation Districts as WUGs/WWPs. The analysis of individual Irrigation Districts is being performed in the current planning cycle. This task will incorporate those findings into the Regional Water Plan, including the TWDB database.

Deliverables

Irrigation Districts as individual WUGs/WWPs will be included in the Regional Water Plan in terms of base water demands and water demand projections. The database will also be updated.

Budget Cost

\$1,890.00

5. Review of new water demand projections for Steam-electric

Task Description

Updated information will be provided by the TWDB. The regional planning group will review these figures and request revisions, should they be necessary.

Deliverables

Update the Regional Plan to address changes to steam-electric water demands.

Budget Cost

\$2,150.00

6. Clarify water demand and population figures for water providers who provide potable water to cities

Task Description

In the previous Regional Plan, population and water demand figures for Water Districts and Water Supply Corporations and the cities they serve were listed individually. Specifically, North Alamo Water Supply Corporation, East Rio Hondo Water Supply Corporation, Military Highway Water Supply Corporation, Valley Municipal Utility District No. 2, and Laguna Madre Water District had population and water demand projections, as did the cities they serve. This arrangement created confusion and, in some cases, double counting. It is proposed to list the population and water demands of cities and their residents who are served by Water Districts and Water Supply Corporations as subsidiaries of these Districts/Corporations as opposed to individual WUGs. This will allow the Regional Plan to more accurately establish population and water demand figures.

Deliverables

Decision documents will be modified to reflect the revisions, and water supply figures will be reorganized.

Budget Cost

\$4,660.00

7. Evaluate water demands of Ethanol production plants

Task Description

There has been much discussion regarding the water usage of Ethanol production plants throughout the Region. The water demand is expected to be great, and it is necessary to include this specific industry in the Regional Plan. This task will allow the region to properly plan for upcoming Ethanol production plants in terms of water demands to avoid future conflict.

Deliverables

Water demand projections for Ethanol Plants will be provided.

Budget Cost

\$5,580.00

Task 3: Water Supply Analysis

Subtasks

1. Update firm yield of surface water supply volumes due to changed water rights

Task Description

This task will incorporate the findings of the Surface Water Right Management Study (currently being performed) into the Regional Water Plan (including the database).

Deliverables

Revised surface water supply figures will be provided. The database will be modified accordingly.

Budget Cost

\$3,560.00

2. Update groundwater availability figures based on recommendations from the Groundwater Management Areas

Task Description

This task will incorporate the revised groundwater availability figures, as compiled by the Groundwater Management Areas within the region, into the Regional Plan.

Deliverables

Revised groundwater supply figures will be incorporated into the Regional Plan. The database will be modified accordingly.

Budget Cost

\$2,760.00

3. Update water supply figures due to contractual or infrastructure changes

Task Description

- a. It has been proposed to install a pipeline from Dimmit County, Texas into the region. This pipeline will provide raw water to users within the region. This will be a new source of water for the region.
- b. The Hidalgo Water Supply project is one in which water from drainage ditches in Hidalgo County will be recaptured and treated. This water supply could potentially serve water users in the region. This will be a new source of water for the region.

Deliverables

Revised water supply availability numbers for the Region will be provided. The database will be modified accordingly.

Budget Cost

\$5,020.00

4. Aquatic weed studies

Task Description

With such dependence being placed on the Rio Grande to provide raw water for users throughout the region, aquatic weed infestations in the Rio Grande have been a significant hindrance to water delivery efficiencies. Over the past years, cooperation between the United States and Mexico has resulted in the formation of an Aquatic Weed Task Force whose sole responsibility is to develop and implement methods to control aquatic weed infestations. This task will include obtaining information on specific aquatic weeds and their potential impact on raw water supplies to the region.

Deliverables

A summary of potential impacts to water supplies in the region will be provided in terms of current and projected impacts.

Budget Cost
\$2,580.00

5. Address potential impacts of climate change on regional water supplies

Task Description

In terms of water supply for the region, there is the potential for climate change to have an impact in the future. This task will look at historical climate data, as well as forecasted weather trends, to determine a worst-case scenario in terms of water supply for the Region.

Deliverables

A worst-case scenario for Region-wide water supply will be provided.

Budget Cost
\$4,380.00

6. Evaluate the San Felipe Springs water supply in terms of hydrology, current conditions, and the effect of groundwater withdrawal on Region M's water supply

Task Description

The San Felipe Springs system serves as a supply tributary to the Rio Grande. As more water is being withdrawn from the Springs, the quantity of water being supplied to the Rio Grande is inversely impacted. Much of the water being withdrawn from San Felipe Springs is groundwater. This task will analyze the potential impact of increased groundwater withdrawal from San Felipe Springs on Rio Grande inflows. It should be noted that current technology and modeling software does not allow for an accurate correlation to be formed between groundwater availability models and surface water availability models. Therefore, this task will evaluate potential impacts only. The main goal of this task is to identify a potential water supply conflict.

Deliverables

A summary of potential impacts associated with San Felipe Springs alluvial aquifer withdrawals, and their impacts on the Rio Grande, will be provided.

Budget Cost
\$13,940.00

7. Evaluate the potential pipeline from Falcon Reservoir to Matamoros, Mexico in terms of water supply changes

Task Description

Mexico is considering a pipeline from Falcon Reservoir to Matamoros, Mexico for municipal water use. This project could impact the amount of water available in the Rio Grande which could subsequently have an impact

on the amount of water the Region could expect to receive from Mexico in the future. Additional ramifications to this project could include impacts to water quality and down river supplies. This task will evaluate these potential impacts and provide a future water supply scenario based on the Falcon/Matamoros pipeline.

Deliverables

A description of the proposed project, along with water supply projections associated with the implementation of said project, will be provided.

Budget Cost

\$6,760.00

8. Evaluate projects being considered by Mexico in terms of 1944 Treaty compliance in conjunction with potential changes to water supply in the region.

Task Description

A strategy is emerging in Mexico to alleviate lower Rio Grande water users on the Mexican side of the Rio Grande by bringing in water from their reservoirs (La Cuchia on San Juan, etc.) as a trade off for water delivered by Mexico to the Rio Grande from the Concho system. Under the 1944 Treaty, Mexico is to provide from the Concho tributaries a minimum of 1,050,000 ac ft per annum on the average (i.e. the amount necessary to meet minimum deliveries from Mexico into the Rio Grande of 350,000 acre-feet per year as calculated by a five year average). If this becomes a reality, there is the potential that Rio Grande water users on the US side could see a decrease of 700,000 acre-feet of water per year in the future. An argument can be made that this violates the 1944 Treaty for several reasons including that the 1944 Treaty did provide for minimum flows to the Rio Grande from a Mexican source of supply. Even though this is the case, it is important to study the potential for decreased Rio Grande supply in terms of future water availability. Region M is in a unique position, as compared to the rest of the State, because the Region cannot totally control water supplies due to Mexico's involvement.

Deliverables

A description of the proposed project, along with water supply projections associated with the implementation of said project, will be provided. In addition, an evaluation of the project's compliance with the 1944 Treaty will be provided.

Budget Cost

\$6,760.00

9. Address the Water Right Conversion Bill in terms of WUG/WWP water supplies

Task Description

This task will evaluate changes to water supplies for individual WUGs/WWPs as a result of the Water Right Conversion Bill. As land becomes urbanized, water rights associated with that land are converted based on language in the Bill. Existing water supplies will not change as a result of this bill. However, the method in which water rights are sold and converted has changed.

Deliverables

A summary of the Water Right Conversion Bill, in terms of the transfer and/or sale of water rights and the potential impact on water supply transfers from agricultural to municipal users, will be provided.

Budget Cost

\$3,640.00

Task 4: Identification, evaluation, and selection of Water Management Strategies

Subtasks

1. Update WMS capital and annual costs

Task Description

Due to changed conditions associated with increases in technology and increases in the cost of raw materials, equipment, and services, capital and O&M costs for each WMS will need to be reevaluated.

Deliverables

Costs for all existing WMSs will be reevaluated and revised accordingly. The database will be modified accordingly.

Budget Cost

\$5,880.00

2. New WMSs for new WUGs and WWPs

Task Description

Due to the inclusion of individual Irrigation Districts as WUGs/WWPs, WMSs will need to be evaluated for these entities. This task will provide WMS recommendations needed to alleviate water supply deficits.

Deliverables

Water supply/demands will be evaluated for all new WUGs and WWPs. WMS recommendations needed to alleviate water supply deficits will be provided. The database will be modified accordingly.

Budget Cost
\$6,260.00

3. Revisions of groundwater WMSs due to revised groundwater availability

Task Description

Based on the recommendations put forth by the Groundwater Management Areas, the potential supply of groundwater for additional WMSs will be altered. This task will revise existing groundwater WMSs (groundwater wells and brackish water desalination) according to the revised water supply numbers.

Deliverables

Groundwater WMS implementation schedules and quantities will be reevaluated and revised accordingly. Revised firm yields for groundwater WMSs will be provided. The database will be modified accordingly.

Budget Cost
\$6,260.00

4. Inclusion of new WMSs

Task Description

- a. It has been proposed to install a pipeline from Dimmit County, Texas into the region. This pipeline will provide raw water to users within the region. This will be a new source of water for the region. This task will evaluate the potential for this pipeline as a WMS, water supply yield, cost, potential environmental impacts, and potential WUG/WWP implementation.
- b. Resaca restoration has the potential to increase water storage capability for a number of WUGs/WWPs in the region. This task will be to develop water supply yield, cost, potential environmental impacts, and potential WUG/WWP implementation.
- c. As water usage is transferred from agricultural users to municipal users, infrastructure needs are also altered. Specifically, the need for expanded reservoir storage can shift from one user to the other. This task will be to evaluate the feasibility of transferring reservoir storage from one entity to another. In addition, water supply yields, cost, and potential environmental impacts will be evaluated.

Deliverables

A full analysis of new WMSs will be provided in a format similar to the last round of Regional planning. In addition, WMS implementation schedules and WMS yields will be evaluated. Recommendations for WMS implementation will be provided. The database will be modified accordingly.

Budget Cost
\$15,660.00

5. Updates to individual WUG/WWP strategies based on changes to water demand and supply

Task Description

Should changes to water supply and demand figures impact an individual WUG/WWP, WMSs will need to be reevaluated. This task will analyze changes to water supplies and yields and develop/alter previous WMSs to meet the needs of the WUG/WWP.

Deliverables

Decision documents will be revised according to changes in water supply and demand figures for individual WUGs/WWPs. WMS implementation schedules and WMS yields will be evaluated and categorically included in the plan. The database will be modified accordingly.

Budget Cost
\$2,760.00

6. Establishment of alternative WMSs

Task Description

Recent changes to guidelines governing WMSs for individual WUGs/WWPs allows for alternative WMSs to be evaluated and included in the Regional Plan. This task will evaluate alternative WMSs for individual WUGs/WWPs.

Deliverables

Alternative WMSs will be evaluated and included in the Regional plan. The database will be adjusted accordingly.

Budget Cost
\$6,860.00

7. Evaluate WMSs for Ethanol Production Plants

Task Description

As previously described, there has been much discussion regarding the water usage of Ethanol production plants throughout the Region. The water demand is expected to be great, and it is necessary to include this specific industry in the Regional Plan. This task will evaluate WMSs needed to meet the water demand of such plants.

Deliverables

WMSs will be developed for Ethanol production plants. These WMSs will be included in the Regional Plan and the database.

Budget Cost
\$9,520.00

Task 5: Impacts of selected WMSs on key parameters of water quality and impacts of moving water from rural and agricultural areas

Subtasks

1. Address new WMSs

Task Description

For new WMSs, the impacts associated with such must be evaluated based on the criteria laid forth by the TWDB.

Deliverables

Writeups for new WMSs will be developed according to guidelines laid forth by the TWDB.

Budget Cost
\$2,050.00

2. Update impact of moving water from rural and agricultural areas based on the results of the current Irrigation District study

Task Description

Information obtained as a result of the Irrigation District study currently being performed by the Region must be analyzed in terms of the environmental and socioeconomic impacts. Results of the Irrigation District study will include data quantifying urbanization. This task will explain the impacts of urbanization in terms of water quality changes and other impacts associated with moving water from agricultural to municipal users.

Deliverables

A summary of impacts associated with Irrigation District urbanization will be included in the Regional report.

Budget Cost
\$2,970.00

3. Evaluate the impact of WMSs, in which alternative sources of water (groundwater and seawater) will be used in lieu of water from the Rio Grande, on Irrigation Districts

Task Description

The Region relies heavily on the distribution system of Irrigation Districts to provide irrigation water to agricultural users as well as raw water to municipalities and other water users. As alternative sources of water (groundwater and seawater) are developed for use by WUGs throughout the Region, there is the potential for decreased flows through the existing raw water distribution network. The impacts of such reduced flows need to be evaluated in terms of environmental and socioeconomic factors.

Deliverables

A summary of impacts of municipal WMSs on Irrigation Districts and other agricultural water users will be included in the Regional plan. These impacts will include loss of income, environmental impacts due to changes in distribution flows, and environmental impacts associated with potential conveyance system improvements. This specific task will be performed according to TWDB regulations and rules regarding Task 5.

Budget Cost

\$8,220.00

4. Evaluate the impact of WMSs, in which alternative sources of water (groundwater and seawater) will be used in lieu of water from the Rio Grande, on environmental flows

Task Description

As alternative sources of water (groundwater and seawater) are developed for use by WUGs throughout the Region, there is the potential for decreased flows down the Rio Grande. However, there also remains the possibility that additional water may be available for environmental flows. The impacts of these scenarios need to be evaluated in terms of environmental impacts.

Deliverables

An environmental flow evaluation will be performed in which changes in flow rates down the Rio Grande will be evaluated in terms of environmental impacts. This specific analysis has not been performed in the past. This evaluation will be included in the Regional report.

Budget Cost

\$8,340.00

Task 6: Water Conservation and Drought Management Recommendations

Subtasks

1. Update drought management recommendations based on changed conditions

Task Description

Update the section to address new WMSs for the Region. Additional work will include updating drought management recommendations, water conservation tips, and potential drought relief programs based on changes in water conservation rules and regulations for individual entities.

Deliverables

An updated Chapter 6 will be furnished. A revised water conservation plan will be provided. New WMSs will be summarized in terms of drought specific recommendations.

Budget Cost

\$9,980.00

Task 7: Description of how the regional plan is consistent with long term protection of the State's water resources, agricultural resources, and natural resources

Subtasks

1. Update based on changed conditions

Task Description

This task will revise recommendations regarding the protection of the State's water, agricultural, and natural resources. Drawing on new information proposed to be completed in Chapters 1, 2, 3, and 4, these recommendations will be altered based on changes in water supplies and demands. In addition, much work is proposed to be accomplished regarding individual Irrigation Districts. The impacts of such a change, and the data gathered during the evaluation, will be used to develop recommendations.

Deliverables

An analysis and summary describing the Regional plan to protect the State's water, agricultural, and natural resources will be provided based on the aforementioned changed conditions. Chapter 7 will be revised according to TWDB rules and regulations.

Budget Cost

\$6,400.00

2. Update based on new WMSs

Task Description

This task will revise recommendations regarding protection of the State's water, agricultural, and natural resources based on changes in the Region's WMS recommendations. These alterations will be based on changes in WMS allocation and overall usage. As individual WUGs/WWPs revise their

strategic plans, there is the potential for WMSs to change on an individual WUG/WWP basis. Therefore, impacts of these WMS changes on water, agricultural, and natural resources will also change.

Deliverables

An analysis and summary describing the Regional plan to protect the State's water, agricultural, and natural resources will be provided based on changes in WMSs. Chapter 7 will be revised based on TWDB rules and regulations.

Budget Cost

\$3,600.00

Task 8: Unique Stream Segments/Reservoir Sites/Legislative Recommendations

Subtasks

1. Potential revisions to recommendations for unique stream segments and/or reservoir sites

Task Description

The topic of unique stream/reservoirs will be revisited in the next round of regional planning. Specifically the areas around Laredo, Chicon Creek, and Brownsville will be evaluated.

Deliverables

A recommendation, whether to classify a reservoir/stream segment as unique or not, will be made.

Budget Cost

\$4,100.00

2. Update legislative recommendations

Task Description

Legislative recommendations will be updated and developed by the planning group in a similar manner as was performed during the last round of regional planning.

Deliverables

Legislative recommendations will be made in a similar fashion as was prepared during the last round of regional planning.

Budget Cost

\$10,660.00

Task 9: Report to Legislature on water infrastructure funding recommendations

Subtasks

1. The Regional Planning Group will update the assessment of funding needs based on changed conditions in the Region in terms of WMS implementation and all ancillary items.
- 2.

Task Description

The planning group will update its assessment of funding needs through a user group survey.

Deliverables

A report to Legislature will be provided in which a description of how affected entities propose to pay for WMS in the Regional plan.

Budget Cost

\$12,280.00

Task 10: Adoption of Plan

Subtasks

1. Administration, public participation, and board member travel

Task Description

In a similar fashion as the previous round of regional planning, this task will encompass all administration costs associated with plan implementation. These administrative costs include attending board meetings, preparing planning group meeting agendas, public notifications, and additional costs associated with the final report (printing, mailing, labeling, etc.) In addition, public participation efforts will be targeted towards informing members of the public, translating the final executive summary in Spanish, preparing and distributing monthly media advisories about planning group meetings, and the development of additional PR information including website updates. Finally, board member travel expenses will be included in this task.

Deliverables

One of the main deliverables will be the final report in English with an executive summary in Spanish. Additional deliverables include media advisories and website updates.

Budget Cost

\$108,740.00

2. Preparation of the Scope-of-Work

Task Description

This task is specifically associated with preparing the scope of work. Tasks include planning group meetings, review of planning group recommendations, cost estimating, task description writeups, and deliverables writeups.

Deliverables

A scope of work as submitted to the TWDB.

Budget Cost

\$10,000.00