

APPENDIX D
Methodology for Identifying Potentially Feasible WMSs

TO: Region F Water Planning Group

CC: File

FROM: Simone Kiel

SUBJECT: Methodology to Identify Potentially Feasible Water Management Strategies

DATE: March 6, 2018

PROJECT: CMD17216

The Regional Water Planning rules requires each region to develop and document the process to identify potentially feasible water management strategies (PFWMS). This process is in addition to the process set forth by the TWDB to evaluate each PFWMS. This memorandum presents the proposed process to be used by Region F.

For Region F, the identification process for PFWMS will follow the sequence below:

1. Identify entities with needs
2. Review recommended strategies in previous Regional Water Plan (RWP)
3. Review new studies/ reports
4. Determine if new or changed strategies are needed
5. Review strategy types appropriate for Region F
6. Contact entity for input
7. Contact RWPG representative for county-wide WUGs
8. Verify recommendations

As required by TWC §16.053(e)(3), and 31 TAC §357.34(c) the RWPG shall consider a specified list of strategy types. This list includes 24 water management strategy types that require screening as part of the process for identifying PFWMS.¹

While the TWDB list is comprehensive, not each strategy type is appropriate for every need, and some strategy types may not be appropriate for Region F water users. To determine whether a strategy is potentially feasible, the first considerations are:

- A strategy must use proven technology and must be technically feasible.
- A strategy should have an identifiable sponsor.
- A strategy must consider end use. This includes water quality, economics, geographic constraints, etc. For example, long transmission systems to move water for agricultural use is not economically feasible.
- A strategy must meet existing regulations.

The second consideration is whether a strategy would provide sufficient water to meet a projected need or a sizeable portion of the need. Considerations at this juncture include:

- Is there available existing supply that is not already allocated to another user?

¹ First Amended General Guidelines for Fifth Cycle of Regional Water Plan Development, April 2017. Exhibit C to Contract between TWDB and CRMWD, executed June 22, 2017.

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- Can new water be developed? If yes, identify the potential sources.
- Does the water quality meet the end use requirements? If not, can it be treated?
- Are there any technical considerations that would preclude the feasibility of the strategy type? For example, are there suitable geologic formations for aquifer storage and recovery?

Strategy types that will be reviewed for consideration as potentially feasible for Region F include:

- Water conservation
 - Review for applicability and consider for all WUGs with a need
 - Consider water conservation for all municipal WUGs
- Subordination
 - Consider for Colorado River Basin surface water users
- Reuse
 - Consider for WUGs with needs that generate a waste stream. This includes municipal, manufacturing and mining WUGs.
- Management of existing water supplies/System optimization
 - Consider for WUGs/WWPs that operate multiple water supply sources
- Conjunctive use
 - Consider for WUGs/WWPs that use or will use both surface water and groundwater sources
- Acquisition of available existing water supplies
 - Includes purchase of surface water and groundwater rights
- Developing regional water supply facilities or providing regional management of water supply facilities
- Developing large-scale desalination facilities for brackish groundwater that serve local or regional brackish groundwater production zones identified and designated under TWC §16.060(b)(5)
 - Consider for WUGs/WWPs that intend to develop large scale brackish groundwater for municipal use
- Voluntary transfer of water within the region using, but not limited to, contracts, water marketing, regional water banks, sales, leases, options, subordination agreements, and financing agreements
- Emergency transfer of water under TWC §11.139
- Reallocation of reservoir storage to new uses
 - Consider for reservoirs that are no longer being used for the permitted purpose
- Improvements to water quality
- New groundwater supply
- Interbasin transfers of surface water
 - This would likely be considered as part of a voluntary transfer of water strategy
- Brush control
- Precipitation enhancement
 - Consider for areas with a precipitation enhancement program
- Aquifer storage and recovery

There are several strategy types that likely are not appropriate for Region F water users. However, they may be considered if a project sponsor requests a specific strategy.

- Drought management. Drought management is an emergency measure and is generally not recommended for long-term supply.
- New surface water supply. There are limited opportunities to develop new surface water supplies in Region F. The one strategy in the 2016 RWP is no longer being considered by its sponsor.
- Enhancements of yields. The sources of water for yield enhancement are limited in Region F.

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Three strategy types identified by the TWDB are not appropriate for Region F. These include:

- Developing large-scale desalination facilities for marine seawater that serve local or regional entities. Region F does not have access to seawater.
- Cancellation of water rights. The water rights in the Colorado River Basin have no reliability except Lakes Brownwood and Ivie. Cancellation of water rights in Region F would not provide additional water.
- Rainwater harvesting. The average rainfall over Region F from west to east ranges from 11 to 30 inches per year. During drought there is very little rainfall. This is not a reliable strategy for Region F.