



MEMORANDUM

TO: Region C Water Planning Group
[NTD02182] T:\Task 4 – Water Mgmt Strategies\M_feasibility procedure(final).doc

FROM: Thomas C. Gooch, P.E. and Stephanie W. Griffin, P.E.

SUBJECT: Methodology for Screening Water Management Strategies

DATE: March 23, 2004

After completion of the 2001 regional water plans, the TWDB revised and updated the Regional Water Planning Guidelines to comply with SB2 legislation and clarify some requirements. One of the new requirements adopted by the TWDB is an open meeting presentation of the methodology that will be used to identify, screen and select water management strategies for a region. Specifically, 31 TAC Chapter 357(e)(4) states:

Before a regional water planning group begins the process of identifying potentially feasible water management strategies, it shall document the process by which it will list all possible water management strategies and identify the water management strategies that are potentially feasible for meeting a need in the region. Once this process is identified, the regional water planning group shall present it to the public for comment at the public meeting required by §357.12(a)(1) of this title (relating to Notice and Public Participation);

During the first round of planning, the Region C RWPG actively participated in the identification and selection of the water management strategies. It is anticipated that a similar process will be followed during this planning cycle. The proposed methodology for identifying and screening water management strategies is presented below. A previous version of this methodology was presented at the February 12, 2004, regional water planning group meeting. This version incorporates minor changes and will be presented to the Region C water planning group for approval on March 22, 2004.

Methodology for Screening Water Management Strategies

1. The consultants will identify strategies to provide additional water to the region. These strategies will include a review of each strategy type mandated by the TWDB and other strategies identified by the consultants, RWPG and public. The TWDB strategy categories include:
 - a. Water conservation and drought management
 - b. Wastewater reuse
 - c. Expanded use of existing supplies
 - i. System operation,
 - ii. Conjunctive use of groundwater and surface water,

- iii. Reallocation of reservoir storage
 - iv. Voluntary redistribution of water resources
 - v. Voluntary subordination of water rights
 - vi. Yield enhancement
 - vii. Water quality improvements
 - d. New supply development
 - i. Surface water resources
 - ii. Groundwater resources
 - iii. Brush control
 - iv. Precipitation enhancement
 - v. Desalination
 - vi. Water right cancellation
 - vii. Aquifer storage and recovery
 - e. Interbasin transfers
2. Strategies will be presented by category groups (see above) at a RWPG meeting for review and solicitation for RWPG and public input. The consultant will present a list of possible strategies in the category, recommendations for which would be considered potentially feasible, and reasons for the recommendations. The public and the planning group will be given an opportunity to add possible strategies and suggest changes to the recommendations for potentially feasible strategies in the time between planning group meetings. The RWPG will be asked to approve the potentially feasible strategies at the following RWPG meeting. The approved strategies will be evaluated in accordance with the TWDB guidance and will be included in the Region C water plan. The list of potentially feasible strategies for each category can be amended by the planning group at any meeting after the initial approval if new strategies emerge or there is a change in the status of a strategy.
3. The supplies generated from the approved potentially feasible strategies will be used to meet a regional or water user group "need". "Need" can include, but is not limited to:
- a. Shortage identified from supply/demand comparison using firm yields
 - b. Shortage due to established operation policies of water supplies (e.g., safe yield vs. firm yield)
 - c. Water quality issues
 - d. Establishment of an adequate reserve supply beyond projected demands (say 10%)

Suggested Screening Criteria

The following offers screening criteria that will be used to assess the feasibility of potential strategies. These criteria are guidelines. A strategy may be retained or dismissed at the discretion of the RWPG.

General:

1. Feasible strategy must have an identified sponsor or authority.
2. Feasible strategy must consider the end use. This includes water quality, distance to end use, etc. For example, long transmission systems with pumping are not likely to be economically feasible for irrigation use.
3. Strategy should provide a reasonable percentage of the projected need (except conservation, which will be evaluated for all needs).
4. Strategy must meet existing federal and state regulations, including environmental regulations.
5. Strategies must be based on proven technology.
6. Strategy must be able to be implemented.
7. Strategy must be appropriate for regional water planning.

By Water Strategy Type (as required in TWDB Guidelines):

WATER CONSERVATION

Water conservation must be considered as a strategy for every identified need. If water conservation is not adopted, the reason must be documented.

DROUGHT MANAGEMENT MEASURES

RWPG recommends that drought management water management strategies be implemented in response to drought conditions. These will be used to respond to drought conditions and provide a safety factor for water users. Drought management measures will not be adopted as strategies to meet long-range needs.

WASTEWATER REUSE

Reuse projects will be considered on a case-by-case basis. Both direct and indirect reuse will be considered as appropriate.

EXPANDED USE OF EXISTING SUPPLIES

Connection of Existing Supplies

The connection of existing supplies will be considered on a case-by-case basis. In general, supplies should be owned by the water group with a need for additional supply or available to that group for purchase or permitting.

System Operation

New or additional system operations may be considered if they are feasible and the owner wishes to adopt such strategies. The RWPG will include existing operating policies.

Conjunctive Use of Groundwater and Surface Water

The conjunctive use of groundwater and surface water supplies may be considered when groundwater supplies are available. Applicable groundwater conservation district rules will be considered for such conjunctive systems.

Reallocation of Reservoir Storage

The RWPG will consider reallocation of reservoir storage if the owner is amenable to reallocation and, in a case where reallocation in federal reservoirs is being considered (such as from flood to conservation storage), an appropriate and willing local sponsor can be found to sponsor a federal study.

Voluntary Redistribution of Water Resources

The RWPG will discuss the possible redistribution with the involved parties and come to a consensus on an approach. If the involved parties are not interested, the RWPG will not pursue this option.

Voluntary Subordination of Existing Water Rights

The RWPG will consider voluntary subordination of existing water rights if the involved parties are amenable to the strategy. Alternatively, the RWPG may recommend that the water right holder consider selling water under their water right to the willing buyer.

Yield Enhancement

The RWPG will consider yield enhancement projects as appropriate for the water source and identified need.

Water Quality Improvement

The RWPG will consider water quality improvement projects for municipal supplies that bring the existing water supply into compliance with state and federal regulations. General water quality projects may be considered if they improve the usability of the water source to help meet demands.

NEW SUPPLY DEVELOPMENT

Surface Water Resources

The RWPG will consider new surface water resources that can be permitted, provide a reasonable amount of supply to meet the identified need, are located within a reasonable distance of the end users, and are expected to provide water supplies at a reasonable cost.

Groundwater Resources

The RWPG will consider groundwater supplies in areas where additional groundwater is available.

Brush Control

The RWPG will consider brush control as a general regional strategy. Specific impacts and quantity

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of supply will not be evaluated unless there are available data from existing studies

Precipitation Enhancement

The RWPG will consider precipitation enhancement as a general regional strategy. Specific impacts and quantity of supply will not be evaluated unless there are available data from existing studies.

Desalination

The RWPG will consider desalination on a case-by-case basis.

Water Right Cancellation

The RWPG will generally not pursue water right cancellation as a means of obtaining additional water supplies. Instead, the RWPG will recommend that the water right holder consider selling water under their water right to the willing buyer.

Aquifer Storage and Recovery (ASR)

The RWPG will consider aquifer storage and recovery where the structure of the aquifer is such that this method is applicable. An ASR study must have already been performed to consider an area feasible for an ASR project.

INTERBASIN TRANSFERS

The RWPG will recommend interbasin transfers when necessary to transport water from the source to its destination. Interbasin transfers will be evaluated in accordance with current regulations.