

## **Goal and General Criterion for Regional Water Supply Plans**

The goal of the WRTAC is to help Tennessee's water systems become more sustainable, affordable, and reliable. Systems can in most, if not all, instances better meet this goal through regional planning and by implementing plans with regional partners.

Collaborating systems can obtain economies of scale not available to individual systems and identify and overcome constraints the participating systems face.\*

Therefore, the general criterion for acceptable regional plans is

whether the plan identifies and proposes a reasonable, collaborative approach to address the constraints the water systems face in becoming more sustainable, affordable, and reliable.

*Sustainable* means providing high-quality water in an environmentally responsible manner through developing necessary sustainable water supplies; minimizing electrical power consumption, greenhouse gas production, and chemical usage; detecting and repairing leaks; encouraging conservation; and addressing other factors involving environmental consequences.

*Affordable* means minimizing rate increases through minimizing the cost of all operations, from source to tap.

*Reliable* means meeting all the reasonably foreseeable challenges, ensuring source water protection, flood and drought resistance, adequate supply, storage, and transmission flexibility.

### **Common Constraints**

Since the goal of regional planning is to address the constraints on the water systems, they are the starting point. The constraints may be related to

- the source of water – it may be inadequate to withstand extreme drought or to provide for growth;
- the infrastructure of the system – the valves or transmission lines connecting adjoining systems or their storage or treatment capacity may be inadequate;

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\* We also recognize that regionalization and economies of scale may not aid in addressing certain issues, such as reducing unaccounted for water or replacing aging infrastructure. When the WRTAC makes recommendations about incentives for projects using regional plans, the committee should consider giving credit for non-regional projects that increase sustainability of systems when they are in these areas that economies of scale do not affect.

- financial resources – the system may be so small that it needs to join with other systems to gain economies of scale; or
- institutional limits—organizational or legal constraints on a system may limit its ability to address other constraints.

## **Approving Authority**

The Tennessee Department of Environment and Conservation is the approving authority and will serve as the lead agency for plan review. Other technical stakeholders for plan review and comment will include, but are not limited to, U.S Geological Survey, U.S. Army Corps of Engineers, U.S. Department of Agriculture – Rural Development, Tennessee Wildlife Resources Agency, Tennessee Valley Authority, Tennessee Department of Economic and Community Development, Tennessee Advisory Commission on Intergovernmental Relations and Tennessee Department of Agriculture.

## **What is a Region?**

The appropriate regional configuration will depend on the nature of the constraints the systems in the region face. Two factors that will most likely be involved if the constraints are related to the source of water will be (1) the watershed(s) for surface sources or the aquifer for ground water sources, and (2) the interconnections among systems. If the constraints are financial, the appropriate region may be based on the financial resources of the systems comprising the region.

Asking the following series of questions will help clarify whether a proposed region is likely to deal effectively with the constraints it proposes to address.

- 1) What are the constraints? Are there any constraints known to the reviewing or commenting agencies that the collaborating systems have not identified?
  - a) If the water source is a constraint,
    - i) and multiple systems share the same source, are all of those systems included in the proposed region?
    - ii) and only one system currently relies on that source, are neighboring systems with connections to more robust sources included as partners? If not, how will the source constraints be addressed effectively without including all systems that share the relevant source(s)?

- b) If infrastructure is a constraint,
    - i) Are all neighboring systems with connections to the constrained system included in the proposed region? If not, how will the infrastructure constraints be effectively addressed without including all neighboring systems in the proposed solution?
    - ii) Are all neighboring systems that are not currently connected to the constrained system proposed to be interconnected? If not, how will the infrastructure constraints be effectively addressed without including all neighboring systems in the proposed solution?
  - c) If the constraints include financial challenges, do the regional partners propose to obtain economies of scale by working together? If not, how will they effectively deal with their financial constraints individually?
- 2) How will each system in the region contribute to the solution?
  - 3) Are all systems included in the region that are likely to improve the sustainability, affordability, or reliability of the potential solution(s), as viewed by the reviewing or commenting agencies?
  - 4) Has the region stated valid reasons for not including each neighboring system that is not part of the proposed region?

These questions should be considered by the systems in formulating a region and they should be used by TDEC in determining if the basis for the region is acceptable.

Systems may need to address issues that will not be regional. For example, pumps may be needed in one part of the system or aging infrastructure may need to be replaced in another. However, the more comprehensively a system can address all of its constraints, the more likely the solution will necessarily involve the collaboration that is an essential element of a regional plan.

## **Required Regional Water Supply Plan Checklist**

The checklist is divided into two phases. The first phase provides a basic “benchmarking” of the planning process. It prepares all parties involved for a more thorough and technically elaborate planning effort only after a preliminary approval and acceptance of the planning process as a “regional” approach by the approving authority. Phase I should be conducted with information readily available from existing water system, district, municipal and federal databases. Phase I should be entirely achievable by water system or local government personnel with minimal technical guidance.

# Regional Water Supply Plans Approval Process **2013** for Tennessee

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## **1) Phase I / Preliminary Submittal**

The Phase I submittal should include documentation of the following:

- a) A plan for public input throughout the planning process, including strategies for identifying and reaching out to all appropriate stakeholders
- b) Description of the issues and constraints driving planning including but not limited to existing systems' water production capabilities, known water source limitations, interconnection capacities, existing agreements between utilities and fiscal condition
- c) Enumeration of the organizations involved and their interests in the outcome
- d) Projection of water demand out 20-30 years including assumptions about economic targets and population growth
- e) Initial list of alternatives that have been or will be considered and preliminary assessment of their utility
- f) Description of circumstances or other legal issues that may hinder planning or implementation
- g) Letters of support and/or memoranda of understanding among planning parties.

## **Phase I Approving Authority Response**

TDEC will receive and review the submittal. If the Phase I submittal is approved, TDEC will

- a) Approve initiation of the regional planning process
- b) Certify acceptance of the Phase I submittal to other relevant planning entities and agencies, including by posting notice on TDEC's website
- c) Suggest resources that might be available to assist in the Phase II planning process and in the eventual implementation of best alternatives and provide a TDEC contact and list of interagency contacts

## **2) Phase II / Technical Evaluation and Assessment of Alternatives**

At the completion of the regional planning process, documentation of the following must be submitted to TDEC:

- a) Identification and engagement of key stakeholders identified and engaged in the process of plan development
- b) Full assessment of the utility systems in the planning region including operational data (existing and historical raw water withdrawal patterns, existing treatment plant design capacities, commercial and industrial water use and estimates of non-revenue water) and financial strengths and weaknesses of the primary utility(s) in the region (current water rates, rate structures and the affordability of water for low-income ratepayers)
- c) Determination of the reliable yield of the existing water sources along with the methodology used to make that determination
- d) Demand projections based on population projections and historical water use for the defined region
- e) Effects of passive and active conservation or demand management measures on demand projection
- f) Unmet water supply need (difference between the projected demand and the reliable yield of existing sources)
- g) Engagement of the community in the determination and evaluation of alternatives
- h) Consideration and evaluation of all reasonable alternatives (including conservation and demand management) for sufficiency, cost, implementability, flexibility, affordability, raw and finished water quality, environmental benefits and impacts and any other relevant factors.

## **Phase II Approving Authority Response**

TDEC will receive and review all submittals. TDEC will involve other technical stakeholders in the review of submittals as outlined previously.

During a required public comment period, input will be requested from interested organizations and agencies including, but not limited to, Tennessee Association of Utility Districts, Tennessee Municipal League, environmental and conservation nongovernmental organizations, affected local governments and affected private citizens.

## **Process for Appealing a Regional Water Supply Decision**

Any regional water supply decision may be appealed to the Tennessee Board of Water Quality, Oil and Gas.