

15 June 2010

Memorandum

To: Ms. Erin Newberry

From: Milan J. Michalec
12 Brandt Road
Boerne, TX 78006

Subject: Comments on the Draft 2011 Region “L’ Initially Prepared Plan

Ms. Newberry,

In my experience as a Director on a Groundwater Conservation District, I find definitions are extremely useful when developing a District Management Plan and District Rules for the management of local groundwater resources.

In this regard, three basic terms form the basis of water planning. The key terms that must be defined are “available water”, “existing water supplies” and “drought”. Note there is a critical distinction between available water and existing water supplies.

In the 2007 State Water Plan, the TWDB provided a glossary of terms to include available water as “the maximum amount of water available during the drought of record, regardless of whether the supply is physically or legally available.”

The existing water supply was defined as the “maximum amount of water available from existing sources for use during drought of record conditions that is physically and legally available for use.”

Texas water planning requires both available water and the existing water supply to be managed under a worst case scenario – the drought of record. The TWDB defined this as “the period of time during recorded history when natural hydrological conditions provided the least amount of water supply. For Texas as a whole, the drought of record is generally considered to be from about 1950 to 1957.”

Whereas the 2007 State Water Plan was very specific, the Draft 2011 Region “L’ Initially Prepared Plan, Volume 1, is not so clear in discussing water supply analysis by introducing an additional term: groundwater supply.

3.1.1 Groundwater Availability

TWDB Guidelines for Regional Water Plan Development describe available groundwater supply as follows:

“The largest amount of water that can be pumped from a given aquifer without violating the most restrictive physical or regulatory or policy conditions limiting withdrawals under drought of record conditions. Regulatory conditions refer specifically to any

limitations on pumping withdrawals imposed by groundwater conservation districts through their rules and permitting programs.”

I recommend all these definitions be identified for inclusion in a Glossary of Selected Terms in the 2012 State Water Plan beginning with all 2011 Initially Prepared Plans.

Sincerely,

Milan J. Michalec
Director, Precinct 2, Cow Creek Groundwater Conservation District

Attach

Glossary, Water for Texas, 2007

2007
TEXAS WATER DEVELOPMENT BOARD (TWDB)
WATER FOR TEXAS - VOLUME II



Glossary of Selected Terms

- acre-foot:** volume of water needed to cover 1 acre to a depth of 1 foot. It equals 325,851 gallons.
- aquifer:** geologic formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs. The formation could be sand, gravel, limestone, sandstone, or fractured igneous rocks.
- availability:** maximum amount of water available during the drought of record, regardless of whether the supply is physically or legally available.
- brackish water:** water with total dissolved solids between 1,000 and 10,000 milligrams per liter.
- capital cost:** portion of the estimated cost of a water management strategy that includes both the direct costs of constructing facilities, such as materials, labor, and equipment, and the indirect expenses associated with construction activities, such as costs for engineering studies, legal counsel, land acquisition, contingencies, environmental mitigation, interest during construction, and permitting costs.
- conjunctive use:** the combined use of groundwater and surface water sources that optimizes the beneficial characteristics of each source.
- desalination:** process of removing salt from seawater or brackish water.
- drought:** term is generally applied to periods of less than average precipitation over a certain period of time. Associated definitions include *meteorological drought* (abnormally dry weather), *agricultural drought* (adverse impact on crop or range production), and *hydrologic drought* (below average water content in aquifers and/or reservoirs).
- drought of record:** period of time during recorded history when natural hydrological conditions provided the least amount of water supply. For Texas as a whole, the drought of record is generally considered to be from about 1950 to 1957.
- estuary:** bay or inlet, often at the mouth of a river, in which large quantities of freshwater and seawater mix together.
- existing water supply:** maximum amount of water available from existing sources for use during drought of record conditions that is physically and legally available for use.
- firm yield:** maximum water volume a reservoir can provide each year under a repeat of the drought of record.
- flood control storage:** storage in a lake or reservoir, between two designated water surface elevations, that is dedicated to storing floodwater so that flood damages downstream are eliminated or reduced.
- freshwater inflow needs:** freshwater flows required to maintain the natural salinity and nutrient and sediment delivery in a bay or estuary that supports their unique biological communities and ensures a healthy ecosystem.
- groundwater availability model:** numerical groundwater flow models used by TWDB to determine groundwater availability of the major and minor aquifers in Texas.
- groundwater management area:** area designated and delineated by TWDB as an area suitable for management of groundwater resources.
- infrastructure:** physical means for meeting water and wastewater needs, such as dams, wells, conveyance systems, and water treatment plants.
- instream flow:** water flow and water quality regime adequate to maintain an ecologically sound environment in streams and rivers.
- interbasin transfer:** physical conveyance of surface water from one river basin to another.
- major reservoir:** reservoir having a storage capacity of 5,000 acre-feet or more.
- needs:** projected water demands in excess of existing water supplies for a water user group or a wholesale water provider.