Regional water board assesses long-term needs

By CHRISTINE S. DIAMOND, The Lufkin Daily News

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In the year 2060, when a Angelina County resident turns on the tap water to fill a glass of water, will there be water there to fill it? If so, where will it come from and at what price?

These are all questions that the East Texas Regional Water Planning Group considers, calculates and prepares for — right down to where the last drop will come from 55 years from now. Then they will do it all over again five years from now. And five years after that.

During a regular monthly meeting of the East Texas Regional Water Planning Group in Nacogdoches this past Wednesday, the planning effort's project manager, Gary Graham, gave a presentation on long-term future water needs and sources on a county-by-county basis predicted for the 20 counties in Region I.

County information was assessed by projected needs for user groups such as steam electric, manufacturing, municipal, agricultural, etc. Water management strategies included use of existing ground water, using existing surface water, use of local supplies such as stock ponds, creating new projects such as reservoirs like the proposed Lake Columbia, voluntary redistribution, indirect reuse and conservation. Eighty percent of Lake Columbia's proposed 33,068 acre feet/year would be used by steam-electric companies, Graham's report showed.

Where practical, Graham said ground water would continue in its role as a major source — supplying an estimated 31,493 acre feet/year of projected needs.

However, the study says several counties are already near groundwater use capacity — including Angelina, Cherokee, Hardin, Nacogdoches, Orange, Shelby and Smith, Graham's report states.

As available groundwater dries up, Angelina County's future water strategy will shift to treated surface water piped in from Sam Rayburn Reservoir by the city of Lufkin. This transported-treated water "is expected to supply water for the Lufkin, Zavalla, Huntington, Four Way Water Supply Corporation, Angelina WSC, M&M WSC and some manufacturing needs," the draft report states. An "alternative strategy" is to expand groundwater supplies from the Carrizo-Wilcox Aquifer.

Total cost to build the water treatment plant that would draw surface water from the reservoir is estimated at $3.31 million and the pipeline's construction is estimated to cost $43 million, according to the draft study. Lufkin's proposed surface water plant would be expanded in “a series of phases to meet rising future demands" that would enable the city to supply water to service to surrounding suppliers.

Comparatively, the two-phase alternative strategy of increasing water supply from the aquifer would cost $509,476 in Phase I, and $1.02 million for Phase II.

Diboll's current water supply comes from the Yega Aquifer, which the board is proposing to increase supply availability to meet projected water demands through 2060 at a total cost of $1.4 million.

Four Way WSC's current water supply drawn from the Yega Aquifer would be redirected from the city of Lufkin's transported-treated surface water — which would cost $2 million.

Both Hudson and Hudson WSC currently draw from Carrizo-Wilcox aquifer and would increase their available supply to meet future demands at a cost of $1.72 million for the city and $1.53 million for the corporation.

Manufacturing needs in Angelina County are currently met through Carrizo-Wilcox Aquifer and groundwater sources and surface water.

"It is anticipated that growth will be supplied by the city of Lufkin and Temple-Inland, which is currently under contract with Angelina Neches River Authority for supply from Lake Columbia," the report states. "It is expected that Temple-Inland will use the Lake Columbia supply as it becomes available."

The cost of obtaining "raw water" from Lake Columbia through an ANRA contract could cost $34.5 million.

These projections and others were made on the assumption that all the assessed entities were already implementing conservation measures such as water-efficient plumbing fixtures as outlined in the 1991 State Water Efficient Plumbing Act; increased "thorough use of leak detection processes," and increased use of water efficient appliances — such as washing machines and dishwashers.

Additional water conservation strategies such as education, water conservation pricing and passive implementation of new water conserving clothes washers, in entities with a future water demand of 140 gallons per consumer day, could save as much as 1,896 acre feet/year of predicted future needs.

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