Estimates of Desired Future Conditions for Brazos Valley Groundwater Conservation District

Introduction

The Brazos Valley Groundwater Conservation District (BVGCD) has been working within Groundwater Management Area 12 (GMA-12) to develop estimates of desired future conditions (DFCs). This effort has occurred over the past approximately 18 months in cooperation with other groundwater conservation districts within GMA-12.

Considerations During Formulation of DFCs

The development of DFCs take into consideration previous estimates of groundwater availability within the BVGCD and surrounding counties provided by the Texas Water Development Board and the Region G Planning Group. The effects of pumping from the various aquifers were considered along with results obtained from the utilization of the Queen City/Sparta Groundwater Availability Model (GAM) to simulate the future effects of groundwater withdrawal, both locally and regionally. The effects of groundwater pumping on existing groundwater users were also considered in developing DFCs. The major aquifers of interest are the Carrizo-Wilcox, Queen City and Sparta with larger amounts of water available from the Carrizo-Wilcox aquifer.

Recommended Preliminary Desired Future Conditions

Desired future conditions were estimated for the Sparta, Queen City, Carrizo, Calvert Bluff, Simsboro and Hooper aquifers for the period up through year 2060. Groundwater model runs with the GAM were used as a tool in estimating the desired future conditions. The desired future conditions were estimated on an average drawdown basis for the BVGCD.

Sparta Aquifer

The average drawdown by the year 2060 of the hydraulic head in the Sparta aquifer within the District shall not exceed 13 15 feet when compared to the year 2000 average head.

Queen City Aquifer

The average drawdown by the year 2060 of the hydraulic head in the Queen City aquifer within the District shall not exceed 12 feet when compared to the year 2000 average head.

Carrizo Aquifer

The average drawdown by the year 2060 of the hydraulic head in the Carrizo aquifer within the District shall not exceed 47 feet when compared to the year 2000 average head.

Calvert Bluff Aquifer

The average drawdown by the year 2060 of the hydraulic head in the Carrizo aquifer within the District shall not exceed 106 feet when compared to the year 2000 average head.

Simsboro Aquifer

The average drawdown by the year 2060 of the hydraulic head in the Simsboro aquifer within the District shall not exceed 270 feet when compared to the year 2000 average head.

Hooper Aquifer

The average drawdown by the year 2060 of the hydraulic head in the Carrizo aquifer within the District shall not exceed 170 feet when compared to the year 2000 average head.

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