Item #5 – Presentation on Extension of Pumping to 2070 as it relates to Initial DFC’s

Board action during early to mid-2015 authorized the representative to the GMA 12 panel to put forward Desired Future Conditions for each of the aquifers that are the same as those adopted in 2010. The current DFC’s are valid through 2060. The GMA has been tasked with extending the pumping and DFC’s to 2070. This added pumping will affect the desired future conditions. If you want to keep the DFC the same, the added pumping causes the average decline of the aquifer (the DFC) to slightly increase.

John Seifert will give a presentation explaining how the pumping increase affects the DFC’s and the amount of increase for each aquifer. The presentation is a part of this file.
Update of Groundwater Modeling Results

Presented to:
Groundwater Management Area 12

December 17, 2015
Model Simulations Using Central Queen City-Sparta GAM

Described on February 25, 2015
- Predictive Scenario 1 – All Permitted Pumping 2015-2070
- Predictive Scenario 2 – Ramp up Permitted Pumping
- Predictive Scenario 3 – Update of PS1
- Predictive Scenario 4 – Update of PS2

Predictive Scenario 5
- Updated GMA12-7B Well File
- Historical and Some Predictive Pumping Updated
# Current Year 2060 MAGs (Acre-Feet)

<table>
<thead>
<tr>
<th>District</th>
<th>Brazos River Alluvium</th>
<th>Carrizo</th>
<th>Calvert Bluff</th>
<th>Simsboro</th>
<th>Hooper</th>
<th>Queen City</th>
<th>Sparta</th>
<th>Yegua-Jackson</th>
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## PS5 Year 2070 Pumping (Acre-Feet)

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<th>Simsboro</th>
<th>Hooper</th>
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PS5 – Sparta Pumping
Sparta Aquifer (Layer 1)
Average Drawdown – 1/1/2000 through 12/31/2070
PS5 – Queen City Pumping
Queen City Aquifer (Layer 3)
Average Drawdown – 1/1/2000 through 12/31/2070
PS5 – Carrizo Pumping
Carrizo Aquifer (Layer 5)
Average Drawdown – 1/1/2000 through 12/31/2070

- LPGCD: DFC: 47 Feet, PS5: 69 Feet
- POSGCD: DFC: 65 Feet, PS5: 66 Feet
- BVGCD: DFC: 47 Feet, PS5: 59 Feet
- MEI GCD: DFC: 55 Feet, PS5: 80 Feet

Map showing districts with color-coded areas:
- Brazos Valley GCD
- Fayette County GCD
- Lost Pines GCD
- Mid-East Texas GCD
- Post Oak Savannah GCD
PS5 – Calvert Bluff Pumping
Calvert Bluff Aquifer (Layer 6)
Average Drawdown – 1/1/2000 through 12/31/2070

- **LPGCD**
  - DFC: 99 Feet
  - PS5: 110 Feet

- **POSGCD**
  - DFC: 140 Feet
  - PS5: 148 Feet

- **BVGCD**
  - DFC: 106 Feet
  - PS5: 124 Feet

- **METGCD**
  - DFC: 70 Feet
  - PS5: 89 Feet

**Legend**
- **Brazos Valley GCD**
- **Fayette County GCD**
- **Lost Pines GCD**
- **Mid-East Texas GCD**
- **Post Oak Savannah GCD**
PS5 – Simsboro Pumping
Simsboro Aquifer (Layer 7)
Average Drawdown – 1/1/2000 through 12/31/2070

- **LPGCD**: DFC: 237 Feet, PS5: 256 Feet
- **PSGCD**: DFC: 300 Feet, PS5: 318 Feet
- **BVGCD**: DFC: 270 Feet, PS5: 294 Feet
- **METGCD**: DFC: 115 Feet, PS5: 134 Feet
PS5 – Hooper Pumping
Hooper Aquifer (Layer 8)
Average Drawdown – 1/1/2000 through 12/31/2070

- LPGCD
  - DFC: 129 Feet
  - PS5: 184 Feet

- POSGCD
  - DFC: 180 Feet
  - PS5: 204 Feet

- BVGCD
  - DFC: 170 Feet
  - PS5: 205 Feet

- METGCD
  - DFC: 95 Feet
  - PS5: 116 Feet

**District**
- Brazos Valley GCD
- Fayette County GCD
- Lost Pines GCD
- Mid-East Texas GCD
- Post Oak Savannah GCD

Scale: 0 - 100,000 Feet
Discussion

W. John Seifert, Jr., P.E.