Presentation on the Feasibility of Achieving the DFCs for the Yegua-Jackson Aquifer presented to GMA12

April 2, 2026

DBS&A
a Geo-Logic Company

Feasibility

- TWC Section 36.108(d)(8) - the feasibility of achieving the desired future condition

Feasibility

- 2010-2011 TWDB reviewed multiple petitions regarding the reasonableness of adopted DFCs in GMAs.
- Evaluation of whether or not an adopted DFC was physically possible was based on whether or not the DFC(s) could be reasonably simulated using the TWDB's adopted GAM for the relevant aquifer.

Feasibility

- This presumes that if a GAM simulation, which is based the physical laws of hydrology as incorporated in the mathematical model, can generate the DFC condition by implementing a future pumping scenario then the DFCs can be deemed to be physically possible and compatible.

Feasibility

- The GAMs are tools to assist in the understanding of groundwater flow systems.
- Have been demonstrated to contain error and uncertainty
- GMA12's past philosophy has been that DFCs are feasible if they can be generated by a GAM within a reasonable tolerance.

Feasibility

- "Reasonable tolerance" factors from previous planning:
  - GAM predictive uncertainty/error
  - Errors in starting 2000 or 2010 water level conditions
  - Errors in the aquifer hydraulic properties
  - Uncertainty in future environmental conditions (for example, recharge and rivers levels)
  - Uncertainty in future pumping rates and locations
  - Non-uniqueness of model calibration

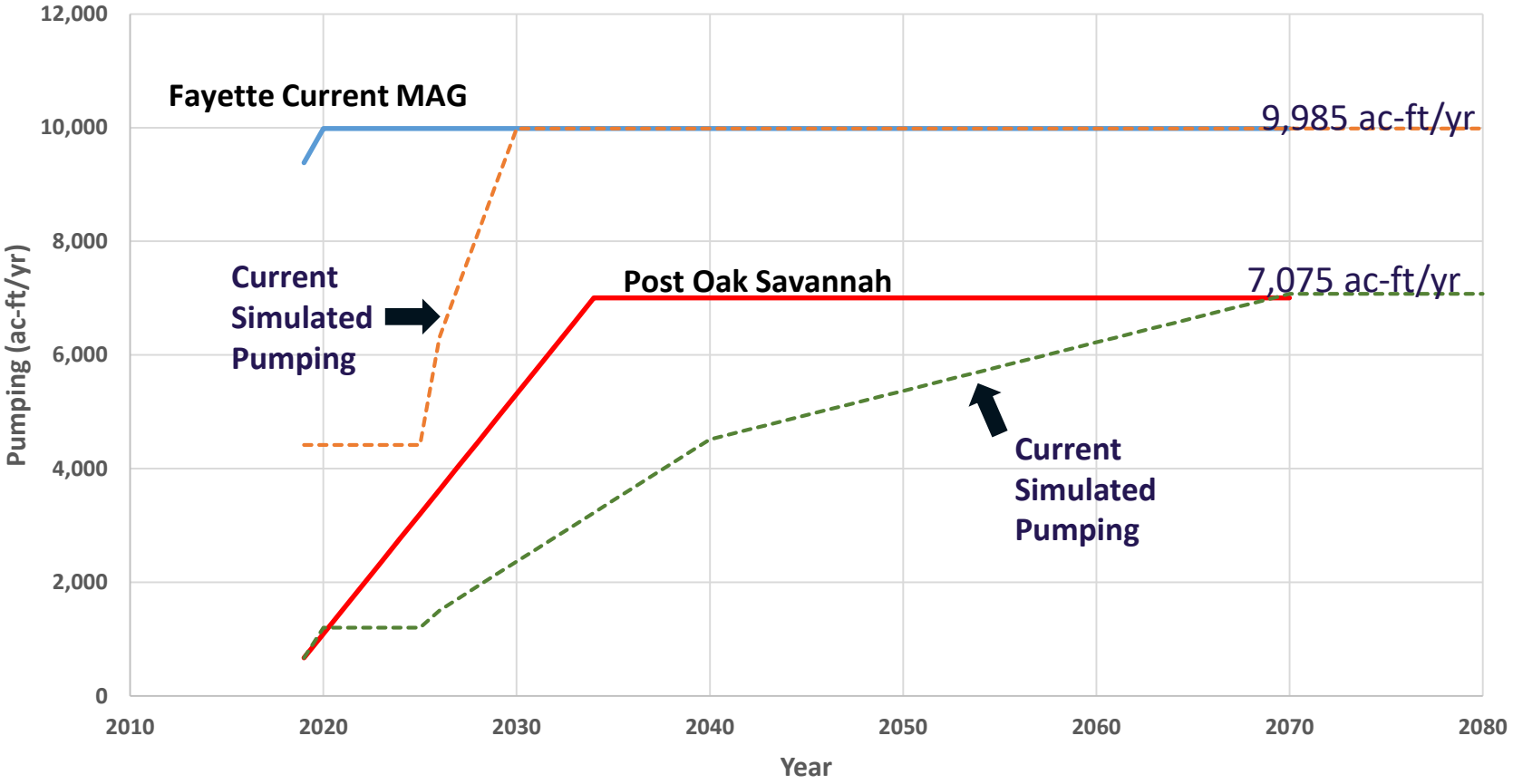
Yegua-Jackson Desired Future Conditions

- No changes from the GCDs from the 2021 adopted DFCs for the Yegua-Jackson

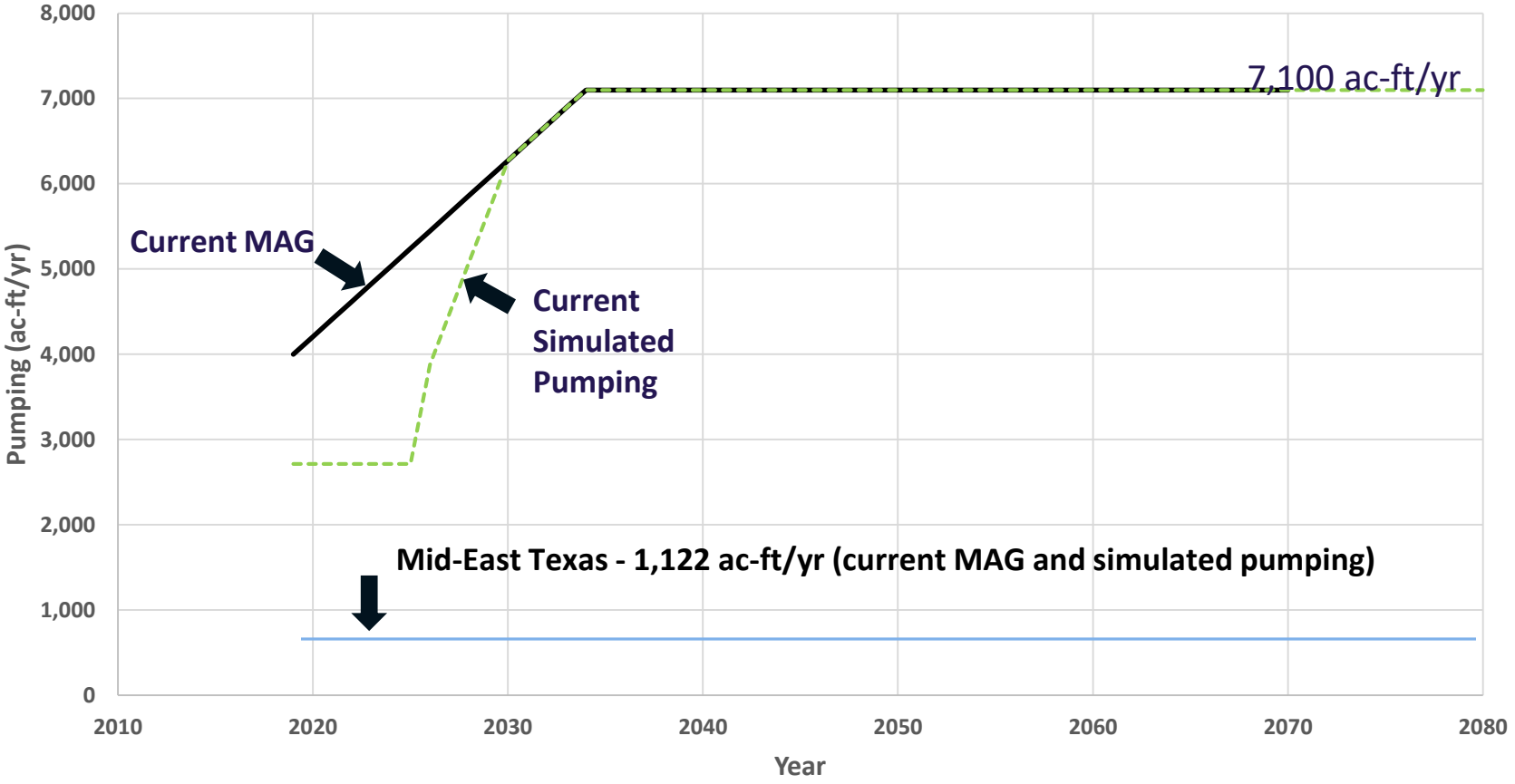
Groundwater Conservation District	DFC 2010 through 2069 Average Drawdown (ft)
Mid-East Texas	8
Brazos Valley	67
Post Oak Savannah	61
Lost Pines	--
Fayette	81

-- Declared non-relevant for purposes of joint planning

Fayette County and Post Oak Savannah Pumping



Brazos Valley and Mid-East Texas Pumping



DFC comparison

County	DFC	
	Adopted DFCs from Last Round (2019 - 2069)	Calculated DFCs for Current Round (2019-2079)
Fayette	81	83
Brazos Valley	67	68
Mid-East Texas	8	9
Post Oak	61	60

Calculated DFCs for current round use pumping numbers shown previously. Using the previously adopted DFC will result in changes to the MAG coming back from TWDB.

Comparison Of Volume of Pumping and Total Estimated Water in Storage from TERS

Groundwater Conservation District (GCD)	Total Estimated Water in Storage (acre-feet)	Total Predictive Pumping (2010-2080) (acre-feet)	Total Predictive Pumping as Percent of Total Water in Storage
Brazos Valley	30,000,000	416,811	1.4%
Fayette County	27,000,000	584,156	2.2%
Lost Pines	--	--	--
Mid-East Texas	15,000,000	79,671	0.5%
Post Oak Savannah	27,000,000	302,758	1.1%

-- = YJ Aquifer designated as non-relevant

END