# correlative rights (and wrongs)

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# Coupled Correlative Allocations for Groundwater Management in Texas: Overview, Examples, and A Hypothetical Conversion

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fair share

correlative rights

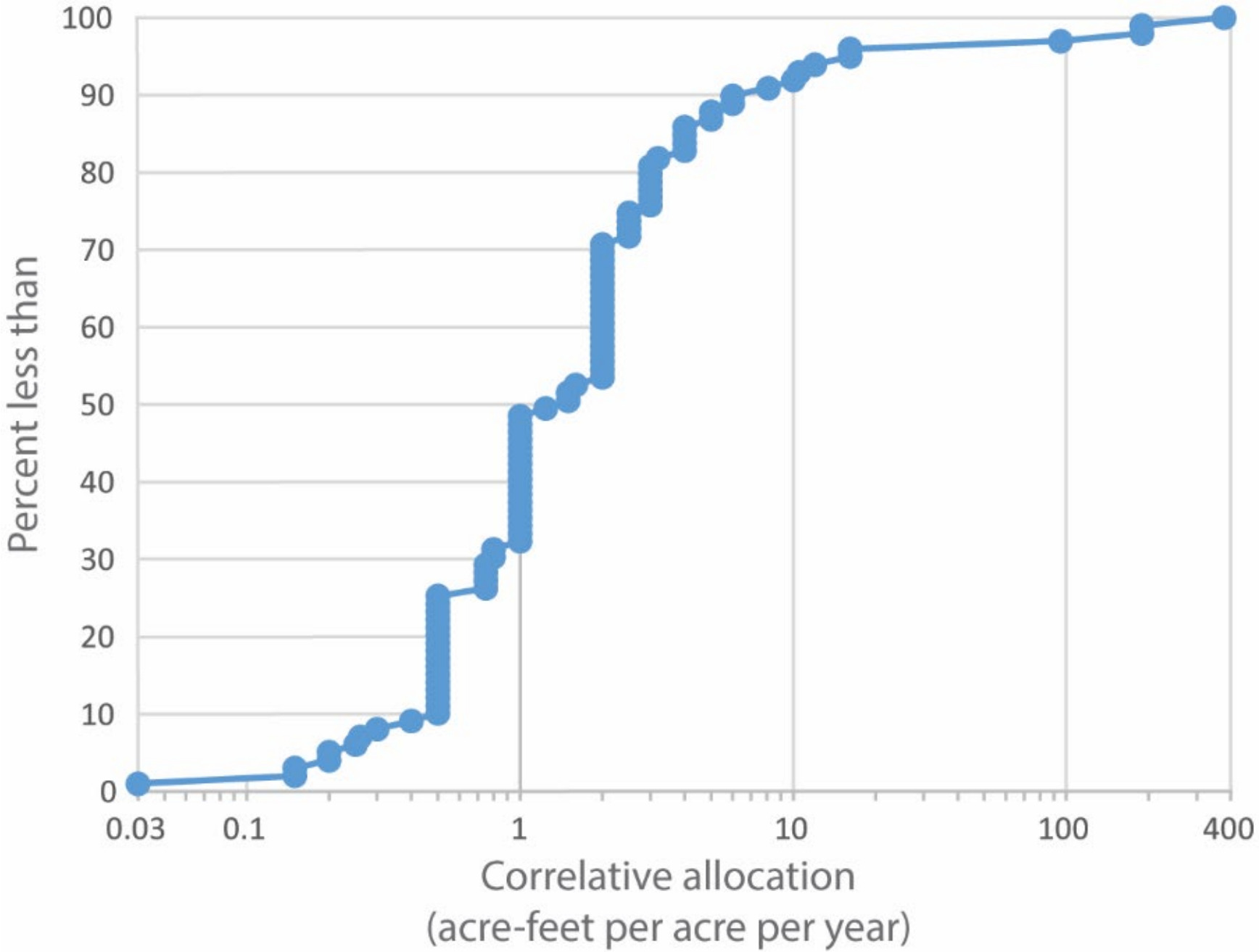
correlative allocations

# ~history

- High Plains Groundwater Conservation District:
  - In 1976, the district noted that, “The drilling and producing of large capacity water wells on small tracts of land has been a continuing problem within the District.”
- Panhandle Groundwater Conservation District
  - On May 26, 1977, the District limited the number of wells that could be drilled and produced on a segment of land as a function of well diameter and acreage.

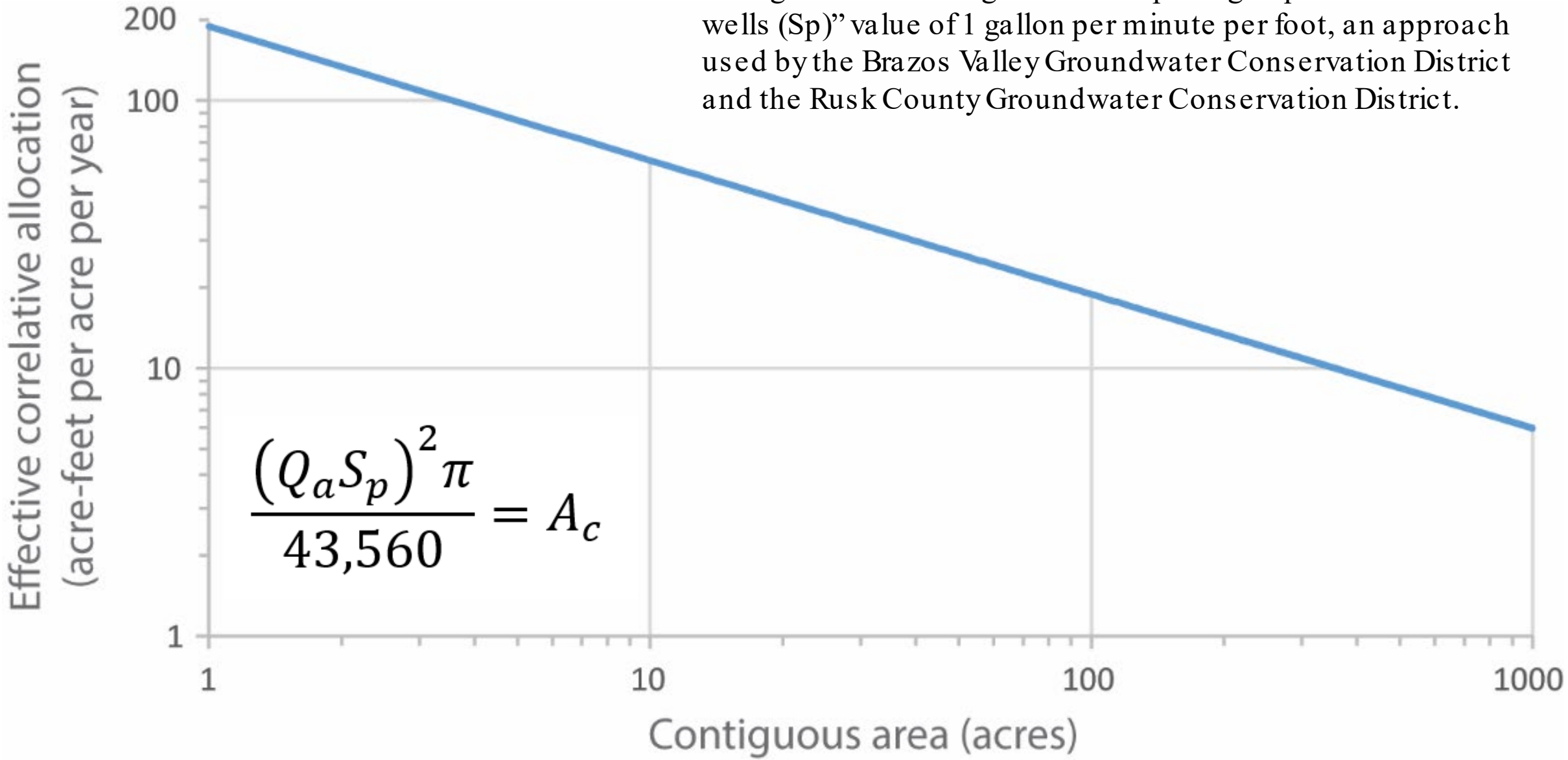
# now

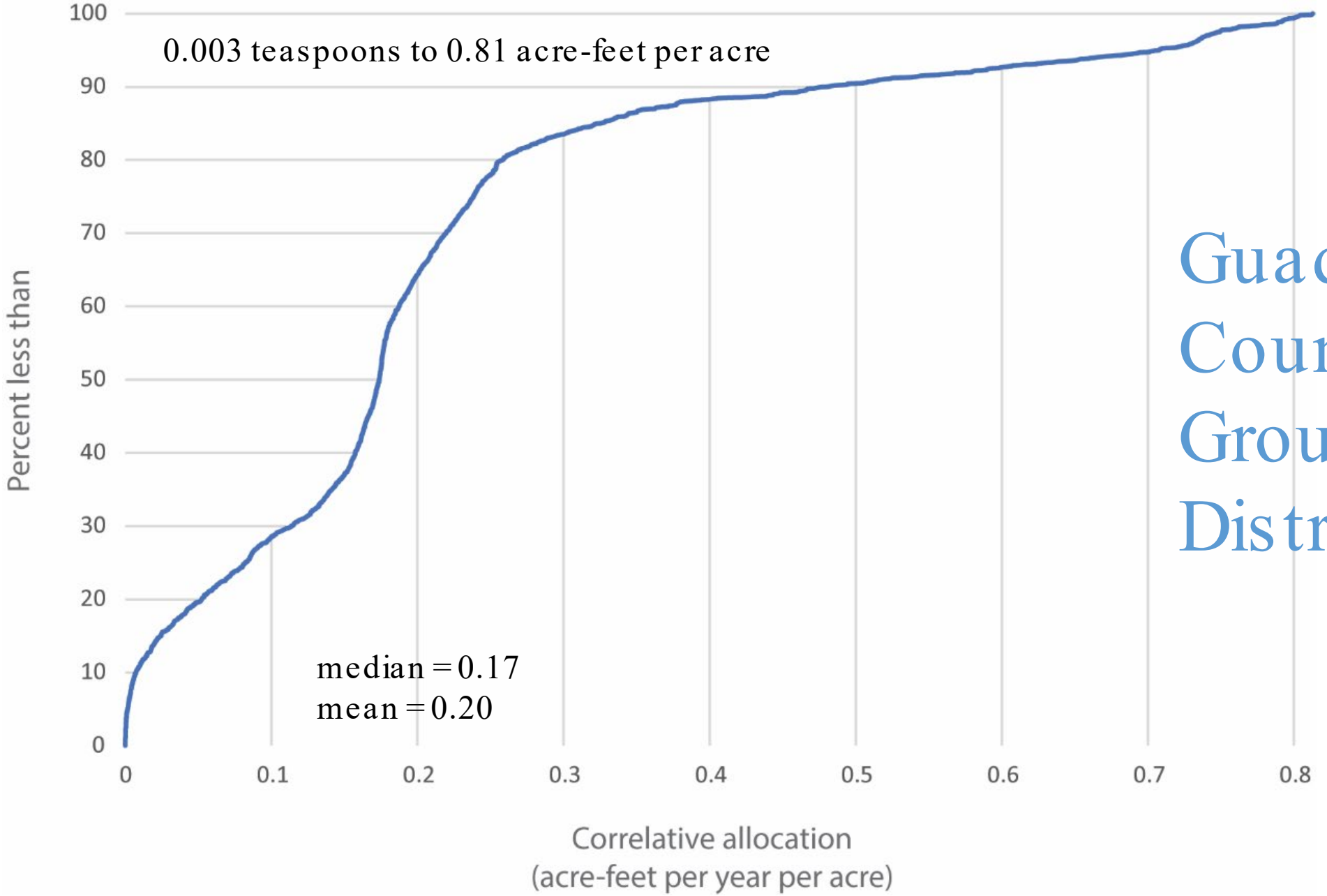
- about 60 percent of districts correlate groundwater production to surface acreage
- correlative allocations range from 0.04 to >90 acre-feet per acre per year
- the median correlative allocation is 1.5 acre-feet per acre per year
- ten percent of values exceed 8 acre-feet per acre per year




all districts

Effective correlative allocation for different amounts of contiguous area using a "district spacing requirement between wells (Sp)" value of 1 gallon per minute per foot, an approach used by the Brazos Valley Groundwater Conservation District and the Rusk County Groundwater Conservation District.






# Guadalupe County Groundwater District

# other "modifications" to a per-acre approach

- used as a maximum (?)
- used as a minimum (2)
- historic and non-historic use (1)
- doesn't apply to historic use (?)
- doesn't apply to public water-supply wells (1)
- certain retail water-supply wells allowed a larger allocation (1)
- depth and water quality (1)
- crop type (1)

(x) = number of districts

coupled correlative allocations

coupled to the desired future conditions

uncoupled correlative allocations

not coupled to the desired future conditions

# it's difficult to couple…

- Bandera County River Authority and Groundwater District:
- has a production limit of 1 acre-foot per acre per year
- If each landowner used this "right," they would pump ~500,000 acre-feet per year
- the managed available groundwater = 9,293 acre-feet per year
- a coupled allocation would result in 0.018 acre-feet per acre per year
- That's 0.01 gallons per minute (or 7.7 teaspoons per minute)
- that's hard to do the sock hop to…

Of the 59 districts
that use correlative allocations
in their permitting,
correlative allocations
are uncoupled
from the desired future condition
in 54 of them.

# examples of coupled (or near-coupled) correlative allocations

- Brewster County Groundwater Conservation District
  - uses an equation that considers exempt and non-exempt use
- Coastal Bend Groundwater Conservation District*
  - used to define a minimum
- Corpus Christi Aquifer Storage and Recovery Conservation District*
  - based on water flowing into the district; 0.04 acre-feet per acre
- Guadalupe County Groundwater Conservation District
- Post Oak Savannah Groundwater Conservation District
  - the “hair-cut” method

# challenges

- small allocations when coupled to desired future conditions
- sustainable allocations would be even lower
- changing a management approach

# opportunities

- all landowners have a defined right
- groundwater export may be more palatable
- creates a water market
- gives all landowners a fair share

# questions?

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