

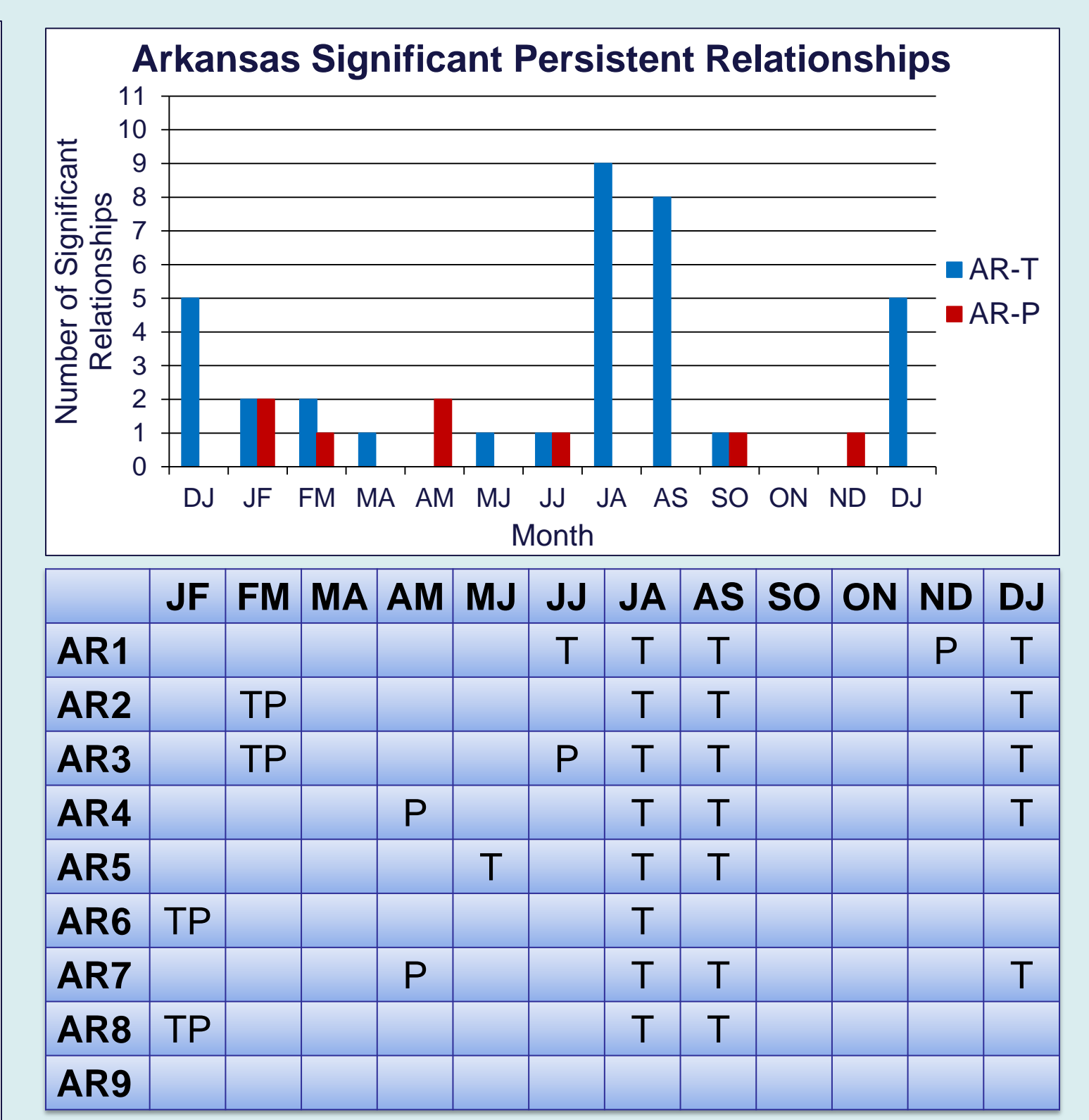
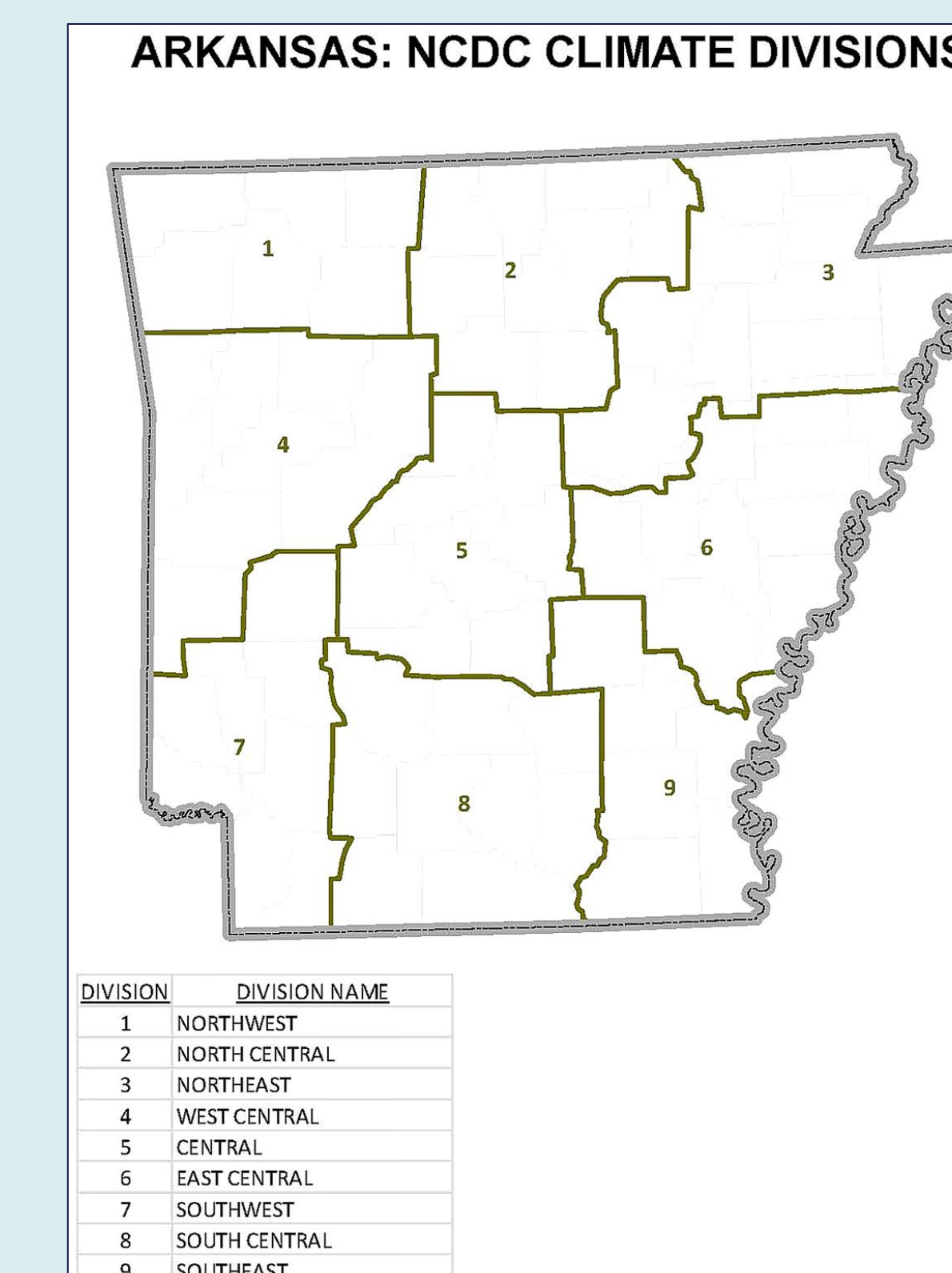
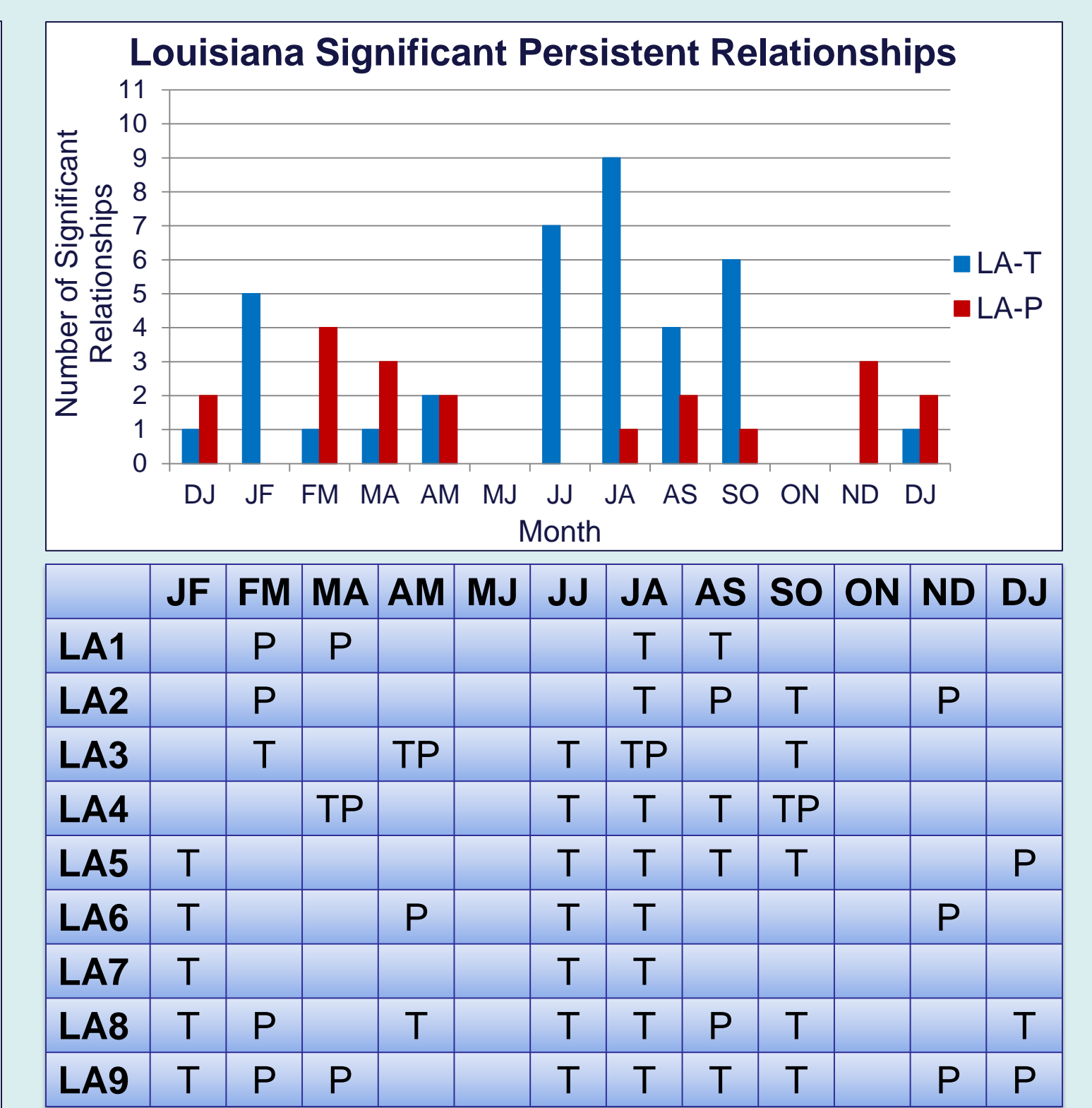
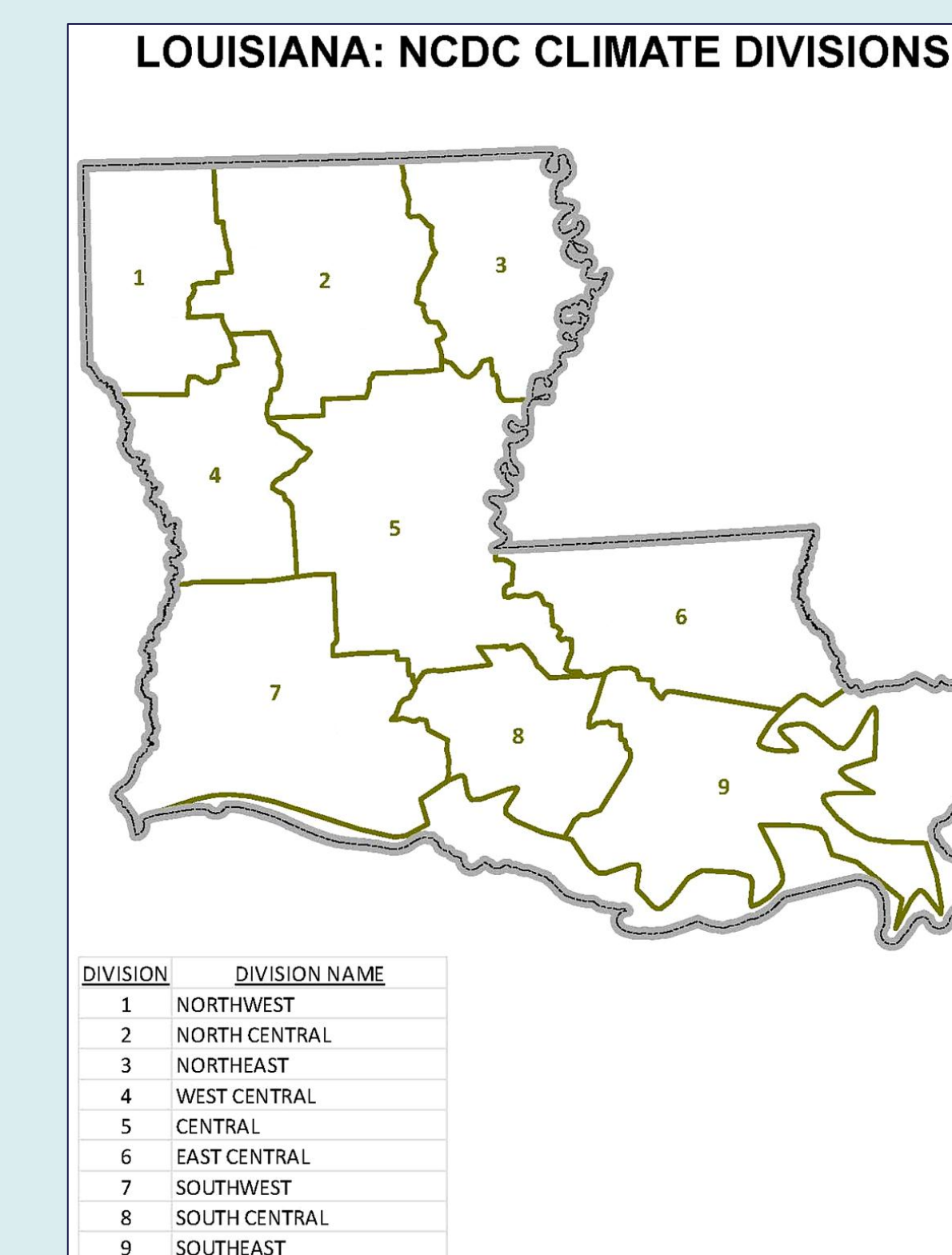
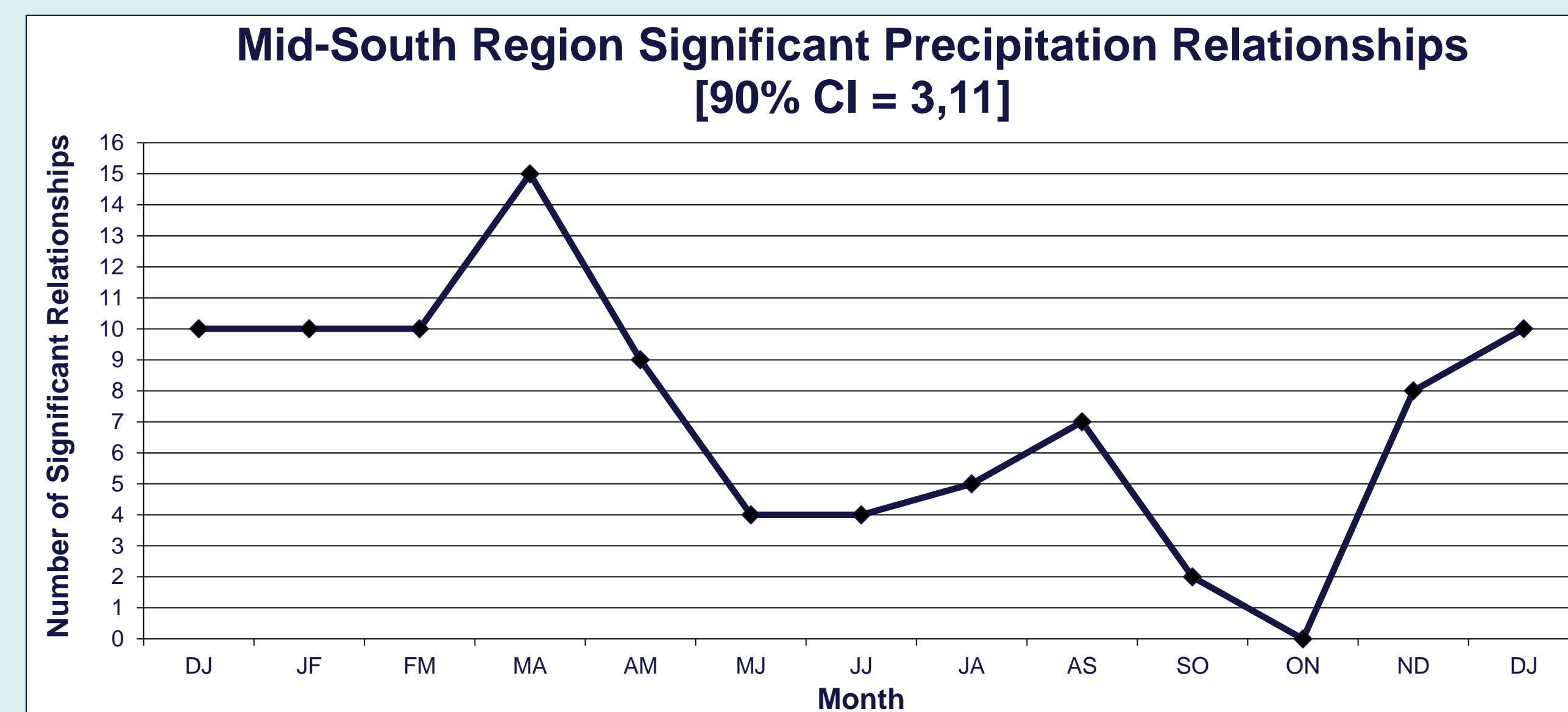
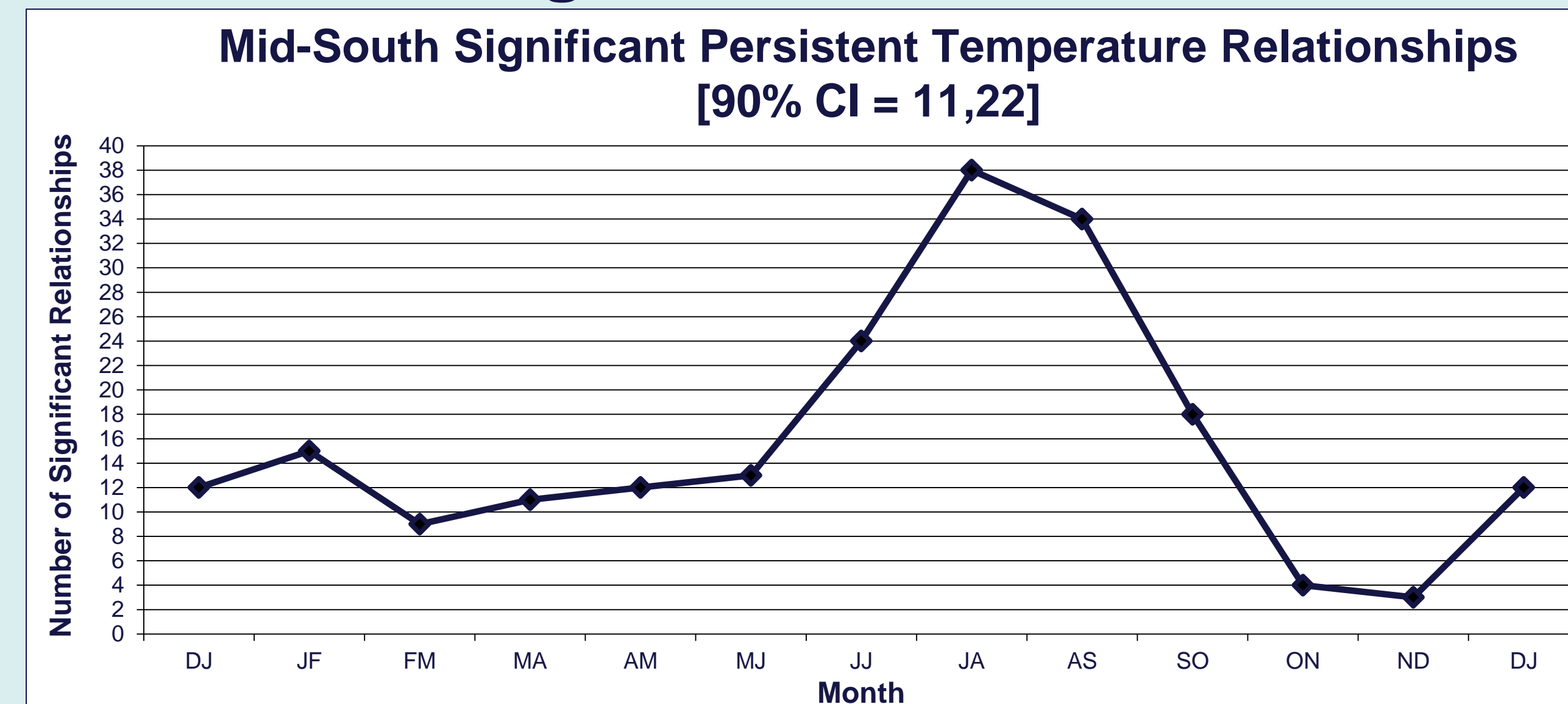
Climatological Persistence

- The tendency for temperature and precipitation conditions for one period to remain similar into the next
- Due to a lag in the change between weather regimes
- Occurs over the time of the dominant meteorological processes

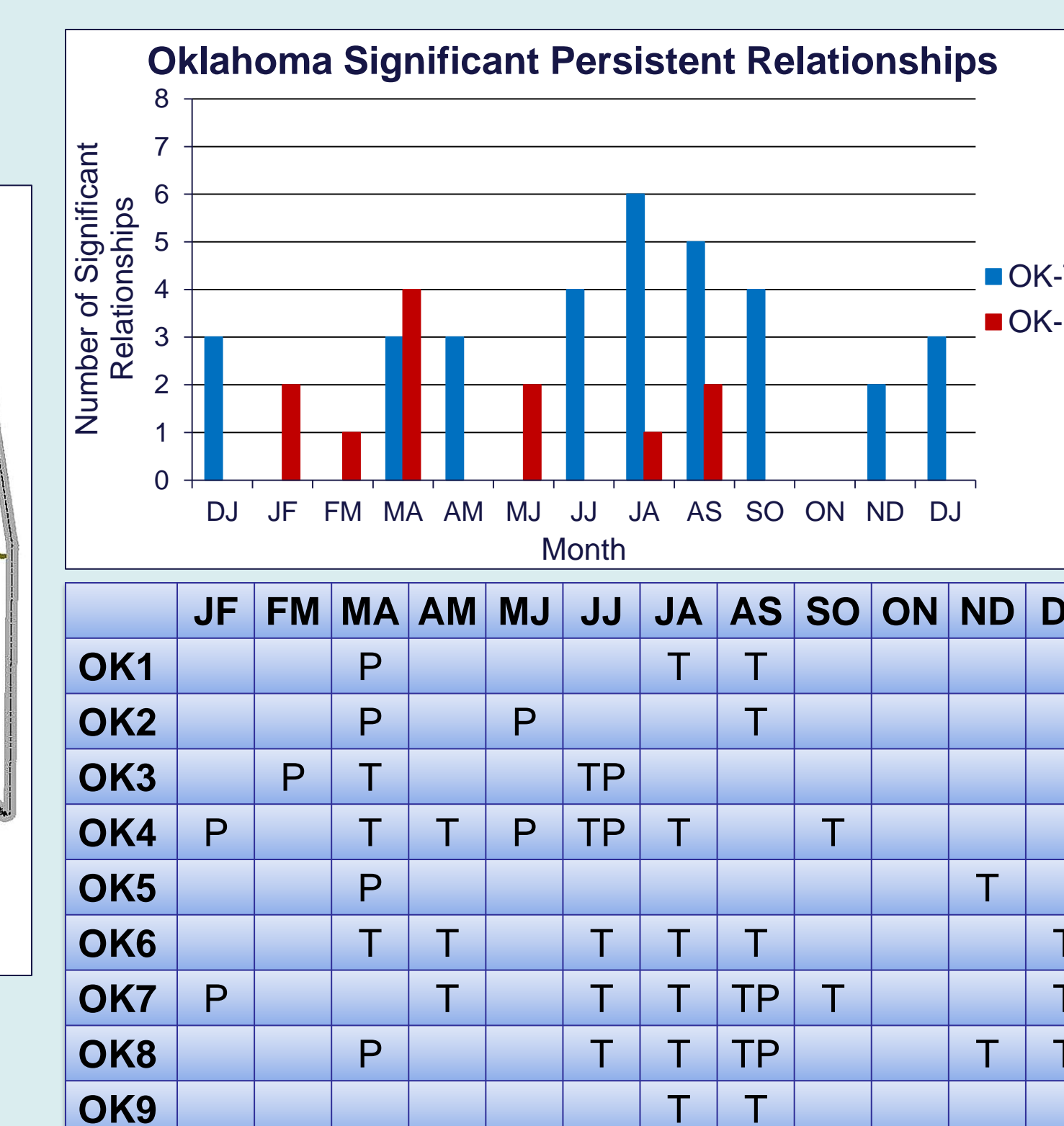
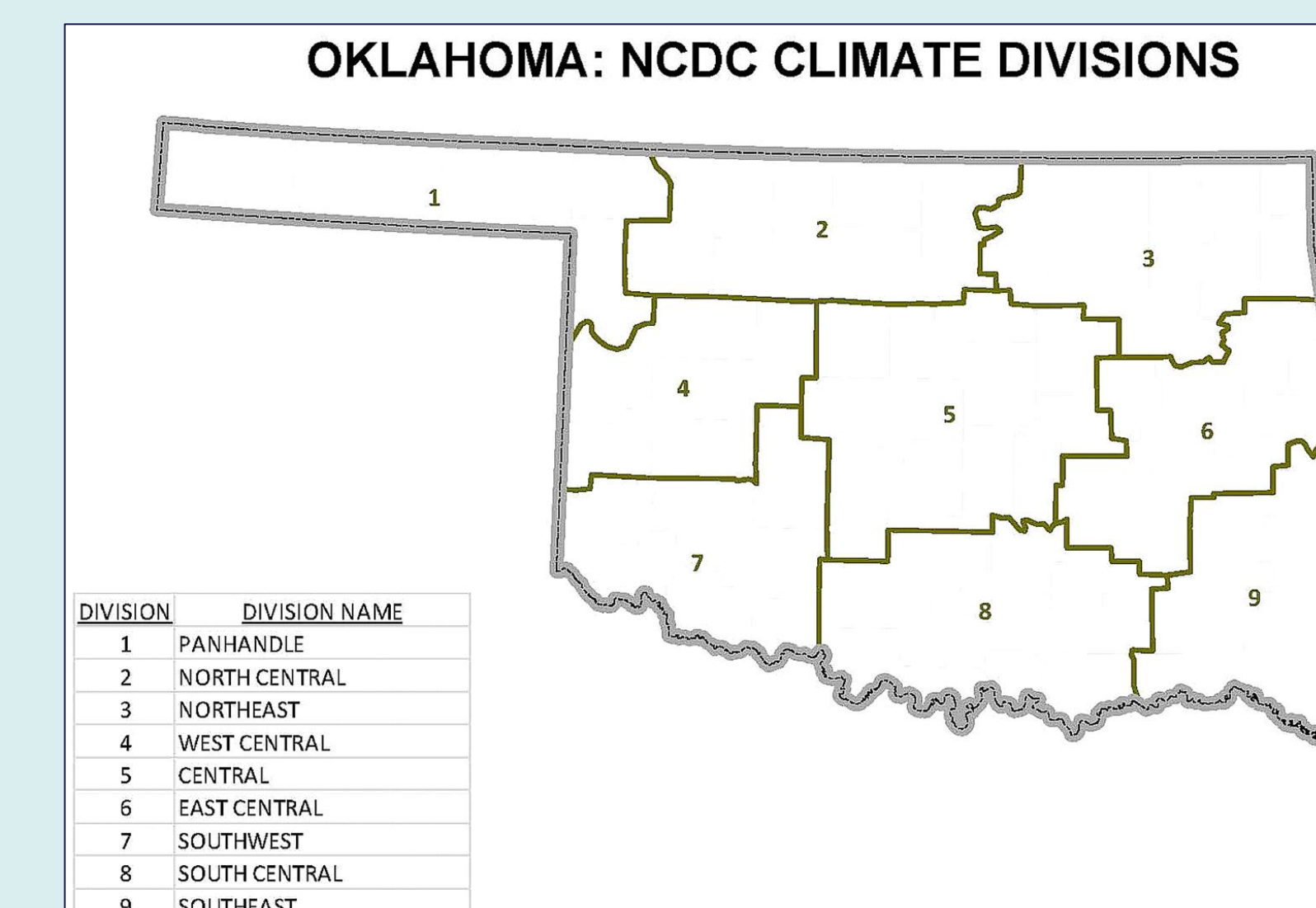
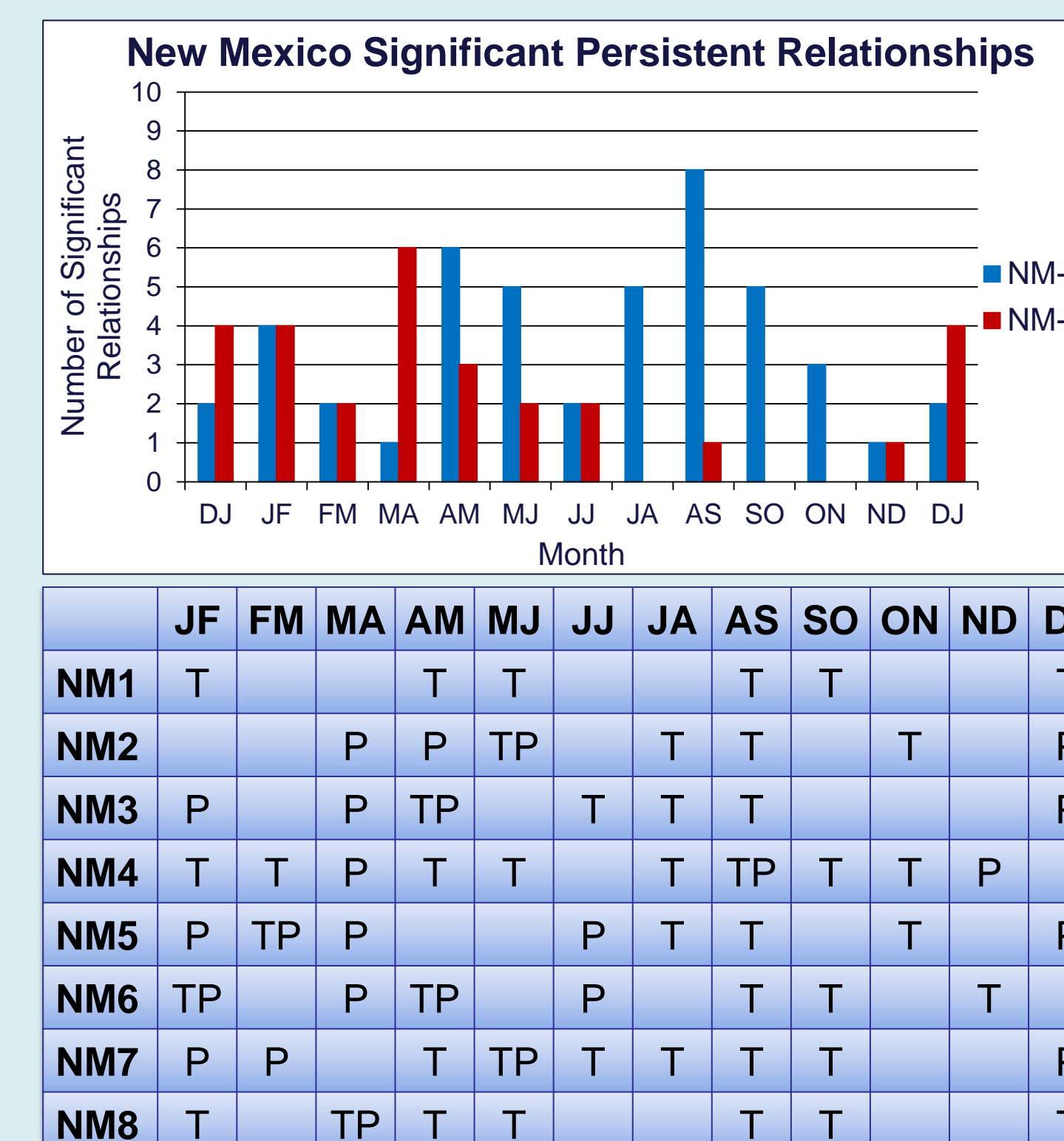
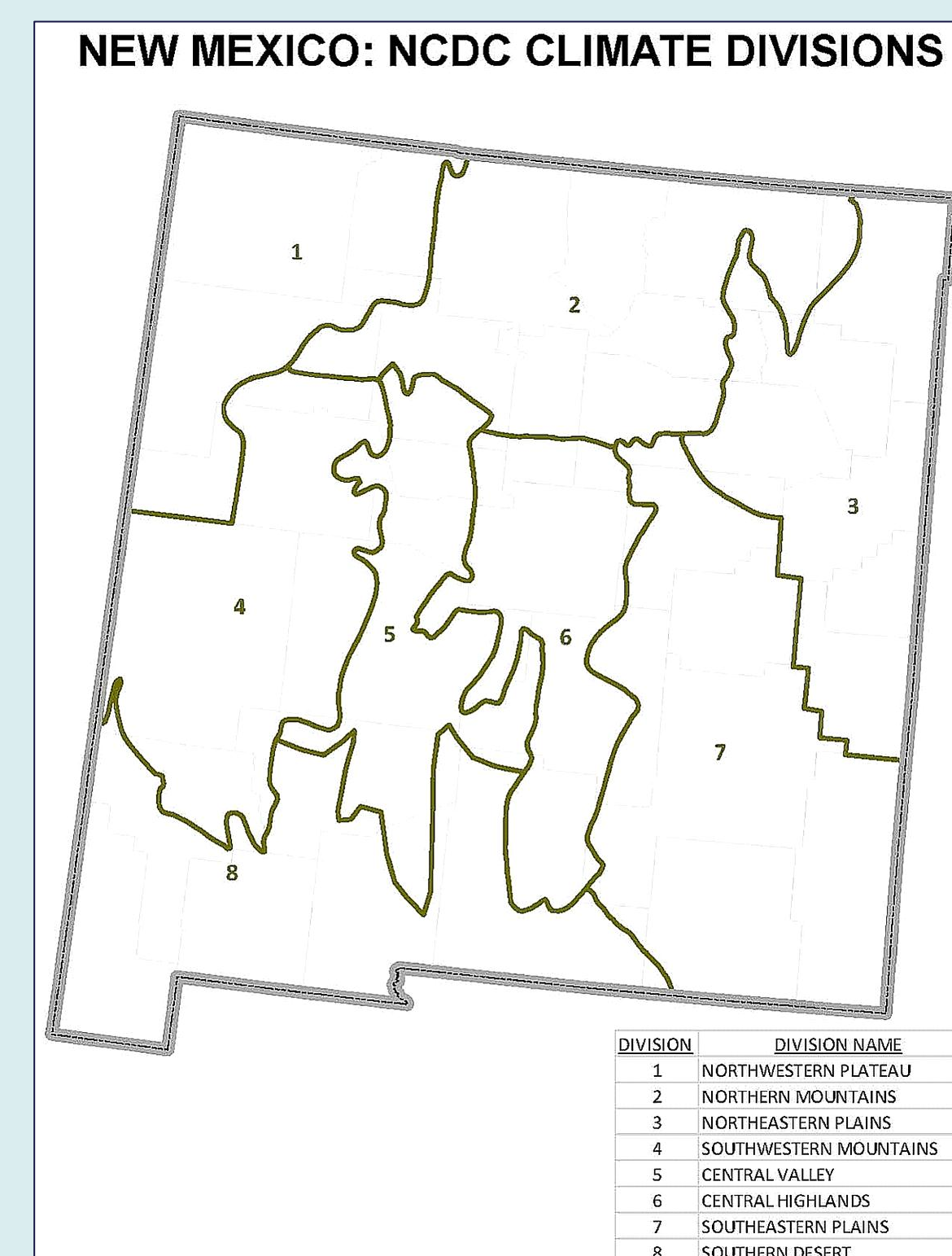
Data and Methods

- NM, TX, LA, AR, and OK climate divisions (45 total)
- POR 1950–2010
- Monthly mean air temperature and monthly total precipitation
- Divide each time series into three classes – above, near, and below normal by ranking
- Create contingency table showing the relative frequency of each class in the following month given the class of the initial month
- Statistical significance of contingency tables determined by Chi-square test with alpha = 0.1
- Twelve month-pairs (DJ–ND) for each variable

Regional Persistence



Statewide Persistence



Conclusions

Regional:

- Temperature persistence strongest in summer (JJ–AS) and weakest in late fall (ON, ND)
- Precipitation persistence strongest in early spring (MA) and weakest in fall (SO, ON)

Statewide:

- Patterns similar to regional
- TX and LA exhibit greater degree of persistence than NM, OK, and AR

