Where do I assess temporal autocorrelation…isn’t in from the model residuals?

glmer on annual data, including Year as a random effect, as well as river mile nested within reach as a random effect. As an alternative to nesting river mile within reach as a random effect, try aggregating your occurrence data to the reach level or just modeling the data from river mile 74.

Annual data is persistence – total days a given river mile was dry (so each river mile has an annual total dry)

Can use Isleta diversion, San Acacia diversion, San Acacia gage, and Otowi supply index

1. When I run correlations do I do it on a daily time step or annual since I will be using the annual for the model?
2. What do I use for annual? Min, Max, Mean, Median, some variance like SE or SD or total?
3. Model the daily distributions to see if mean explains the data? Can’t do this for Otowi

Work flow

1. Look at distribution of RM 74 and 152 alone (i.e. Poison, binomial)
2. Determine summary level of predictors
3. Run correlations among predictors
4. Chose predictors
5. Run glmer with Year as a random effect and river mile nested within reach as a random effect

Mod <- glmer(DaysDryRM74~Pred1+Pred2+Pred3+Pred4 +(1|Year), data=dat, family=poisson)

Mod <- glmer(DaysDryRM152~Pred1+Pred2+Pred3+Pred4 +(1|Year), data=dat, family=poisson)

Model runs

Null

Full = Isleta div (ID) + SanA div (SD) + Otowi (OT)

Red1 = ID + SD

Red2 = ID + OT

Red3 = SD + OT

Red4 = ID

Red5 = SD

Red6 = OT