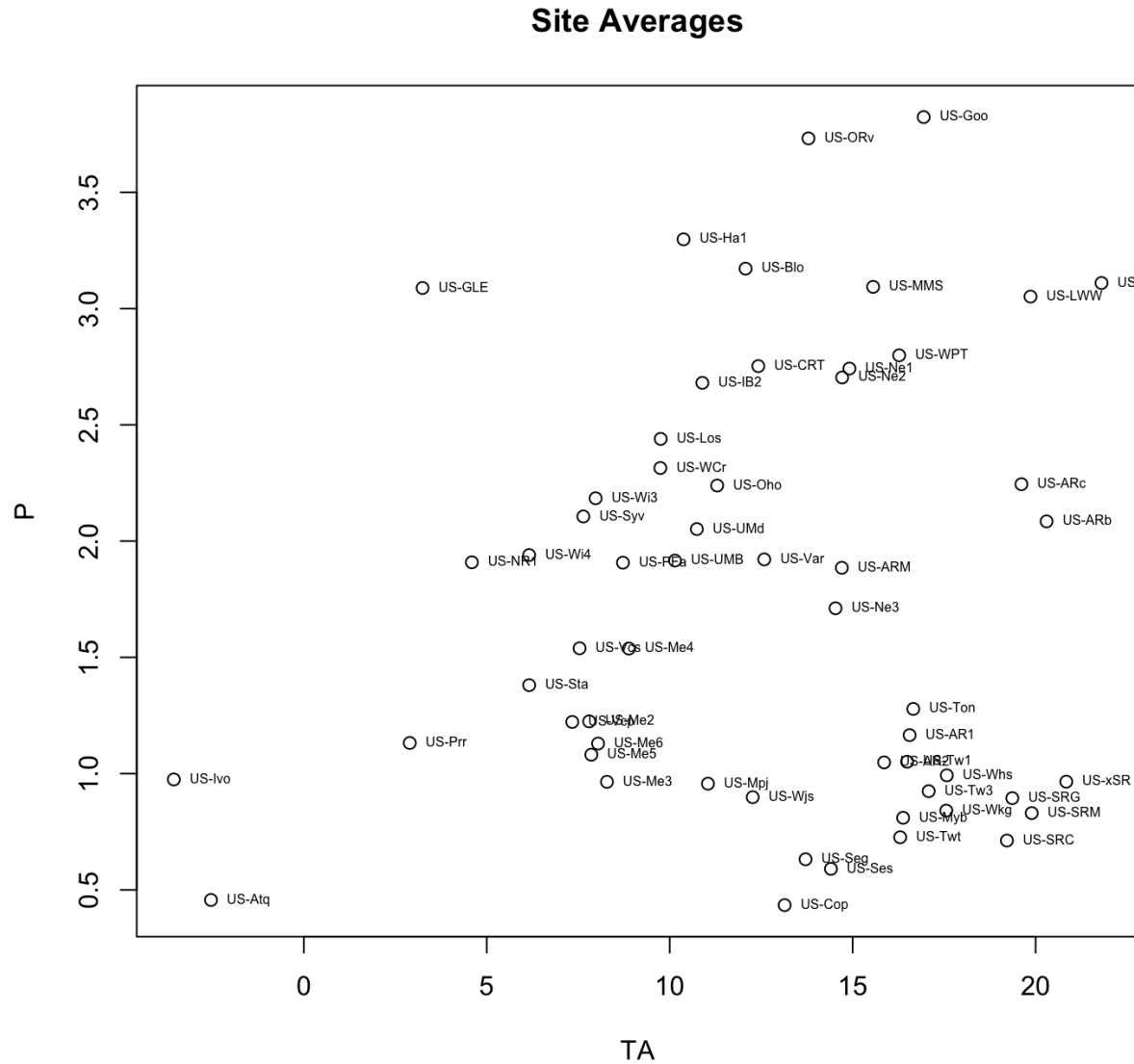
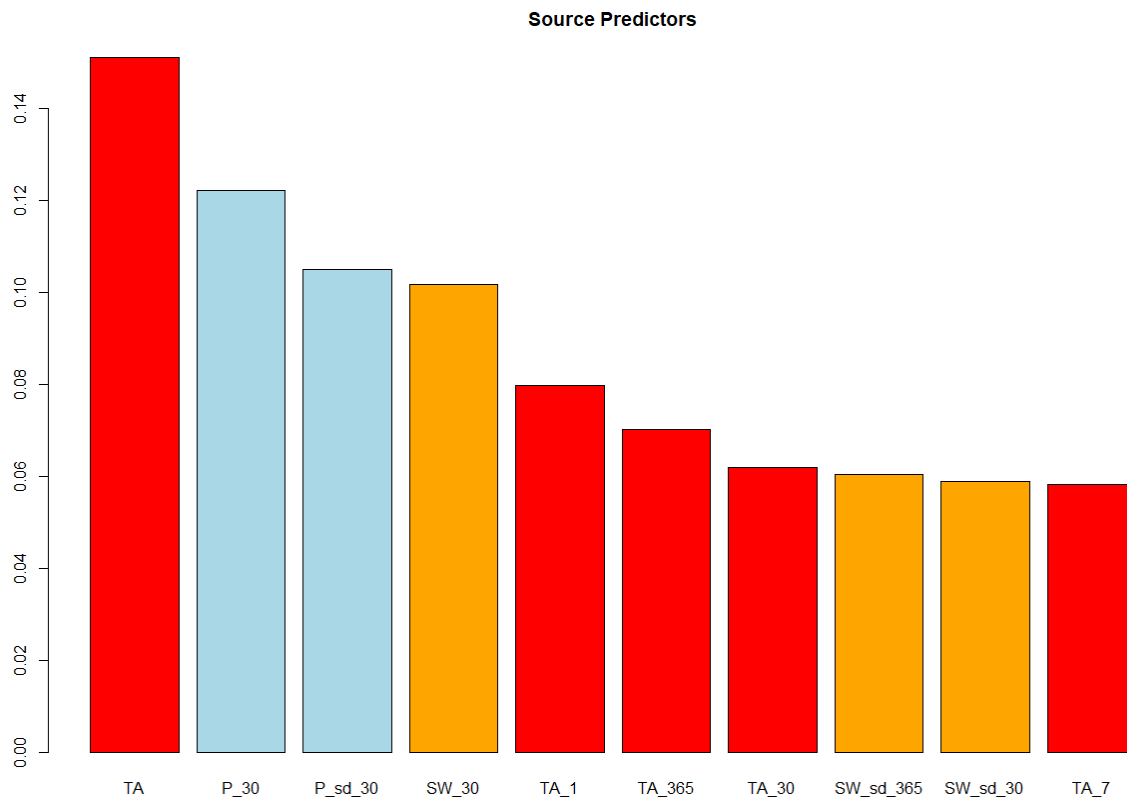


# Case12: Combined data strong source

Reminder of some site info:



Lets start with a barplot of the top predictors.

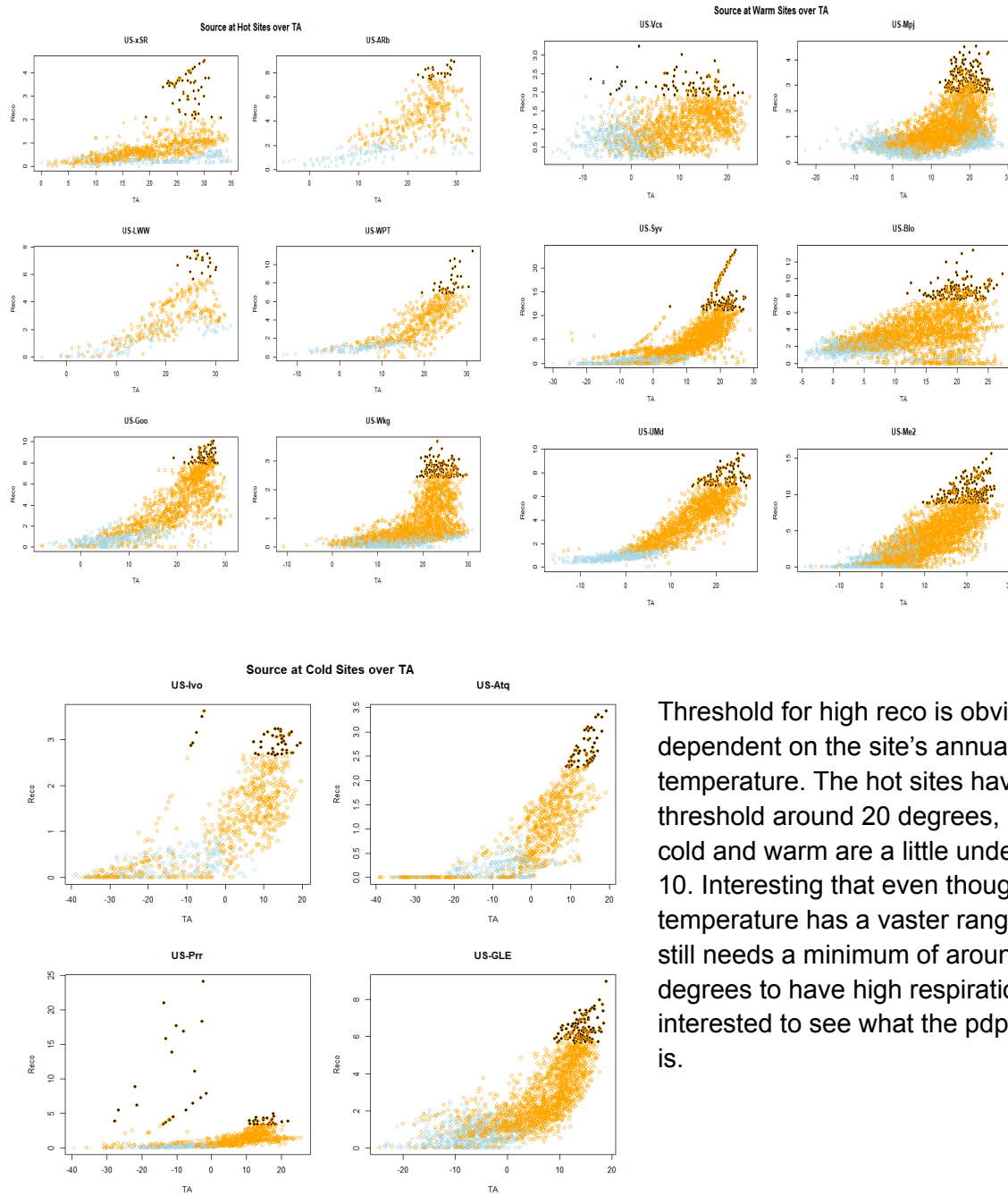


Obviously, temperature is very important here. Overall, the temperature variables have a higher VIMP than in the out of season, but lower rankings compared to other variables. In out of season, temperature variables dominate the top 5 spots, with one SW included. Here, we see that temperature has an even stronger impact, but precipitation also rises to be more important than many of the temperature variables. Precipitation was not important in the out of season! Beggins to question how important it will be in season alone.

There is also a slurry of current to old timescales, and mean and sd variables. Just a mix of everything going on.

Lets check out some pdp plots of these top predictors. For some reason, these just aren't working. In the process of trying to run them in Monsoon.

Instead, let's look at sources over temperature at different site temperature types. Have leniency with these because the average is based off of the data we have access to, so having an incomplete year can raise/lower the temp away from true average.



Threshold for high reco is obviously dependent on the site's annual temperature. The hot sites have a threshold around 20 degrees, while the cold and warm are a little under and over 10. Interesting that even though the temperature has a vaster range in cold, it still needs a minimum of around 10 degrees to have high respiration. I'd be interested to see what the pdp threshold is.

I find the importance of P<sub>30</sub> really strange because when you look at plots, every site has a different correlation between reco and p<sub>30</sub>. Some are obviously positive, others are negative. To me, this would imply its interaction/dependency with another var. I looked at these grouped temperature wise, and precipitation wise and they were all so random. I WANT A PDP. Just leads me to believe that they are site identifiers.

Okay so apparently the partial effects plots are different and hold the other values at a constant (possibly the mean?, this isn't confirmed). Marginal effects plots instead average over the whole thing. Here are my marginal effects plots. I want to recreate these for the other models to see if it causes any changes.

