Adult Summary

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July 27, 2016

##   
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':  
##   
## filter, lag

## The following objects are masked from 'package:base':  
##   
## intersect, setdiff, setequal, union

## Summarize Data

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Mean | Min | Max |
| forest | 79.15 | 0 | 100 |
| surfcoarse | 6.62 | 0 | 100 |
| temp\_mean\_summer\_1 | 17.74 | 15.21 | 21.66 |
| temp\_mean\_fall\_1 | 3.49 | -0.09 | 7.3 |
| temp\_mean\_winter | -1.77 | -7.99 | 2.87 |
| temp\_mean\_spring | 14.63 | 10.31 | 17.31 |
| prcp\_mean\_summer\_1 | 3.78 | 1.59 | 8.92 |
| prcp\_mean\_fall\_1 | 2.99 | 1.29 | 5.01 |
| prcp\_mean\_winter | 2.58 | 1.1 | 4.73 |
| prcp\_mean\_spring | 2.91 | 1.42 | 6.9 |

The West Susquehanna watershed contained 11220 nodes, comprised of 349 survey sites and 10871 stream reaches. Sites were survey in a total of 34 from 1981 and 2014. There were a total of 683 site visits with a mean of 1.9570201 and a range of 1 to 21 visits per site.

## Model Comparison

M\_num Model AIC delta\_AIC 1 4 Spatiotemporal 9408 0.0 2 5 Temporal + ST 9408 0.3 3 7 Spatial + Temporal 9583 174.9 4 3 Spatial 9588 180.2 5 2 Temporal 9783 375.3 6 1 Obs 9794 386.5 M\_num Model AIC delta\_AIC 1 5 Temporal + ST 9592 0 2 6 S+T+ST 9596 4 3 4 Spatiotemporal 9663 71 4 8 Spatial + ST 9666 74 5 7 Spatial + Temporal 9739 147 6 3 Spatial 9801 209 7 2 Temporal 9925 333 8 1 Obs 10048 456

gamma\_j gamma\_j gamma\_j gamma\_j gamma\_j

0.821919892 0.012826303 -0.262776241 0.091789557 -0.008616906 gamma\_j gamma\_j gamma\_j gamma\_j gamma\_j -0.158566184 -0.018304711 0.049351107 0.043013189 0.044592017 log\_theta\_st theta\_st rhot log\_theta mean\_N -1.845478360 0.157949746 0.592083347 0.000000000 36.686208316 gamma\_j gamma\_j gamma\_j gamma\_j gamma\_j 1.119523380 0.041897755 0.021569110 0.053742748 -0.679354487 gamma\_j gamma\_j gamma\_j log\_theta\_vec log\_theta\_vec 0.005152852 -0.010615599 -0.060144484 0.000000000 -2.051798408 theta\_st rhot theta mean\_N 0.128503594 -0.052835612 1.000000000 44.398315896

Compare values to where fall in relation to simulations