Analysis of loadings

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First, we'll read in the data files.

Figure out what proportion of total storm loading is contributed by the top 10% of storms:

The top 10% of storms contributed 92.4% of the storm loading at Eagle Creek, 81.3% of the storm loading at Otter Creek, and 95.8% of the storm loading at Joos Valley Creek.

Now we will use `rpart` to make a decision tree for major events.

```
n= 1326

node), split, n, deviance, yval
      * denotes terminal node

 1) root 1326 120.45850 0.101055800
   2) pstorm_max< 66.895 1175  13.83319 0.011914890
     4) sstorm_tot< 15.95 1143   1.99650 0.001749781 *
     5) sstorm_tot>=15.95 32   7.50000 0.375000000
      10) stream=eagle 20   0.00000 0.000000000 *
      11) stream=joosvalley,otter 12   0.00000 1.000000000 *
   3) pstorm_max>=66.895 151  24.63576 0.794702000
     6) pstorm_tot< 180.42 51  12.74510 0.490196100
      12) stream=eagle 20   0.00000 0.000000000 *
      13) stream=joosvalley,otter 31   4.83871 0.806451600
        26) stot_tot< 17.595 9   2.00000 0.333333300 *
        27) stot_tot>=17.595 22   0.00000 1.000000000 *
     7) pstorm_tot>=180.42 100   4.75000 0.950000000 *
```

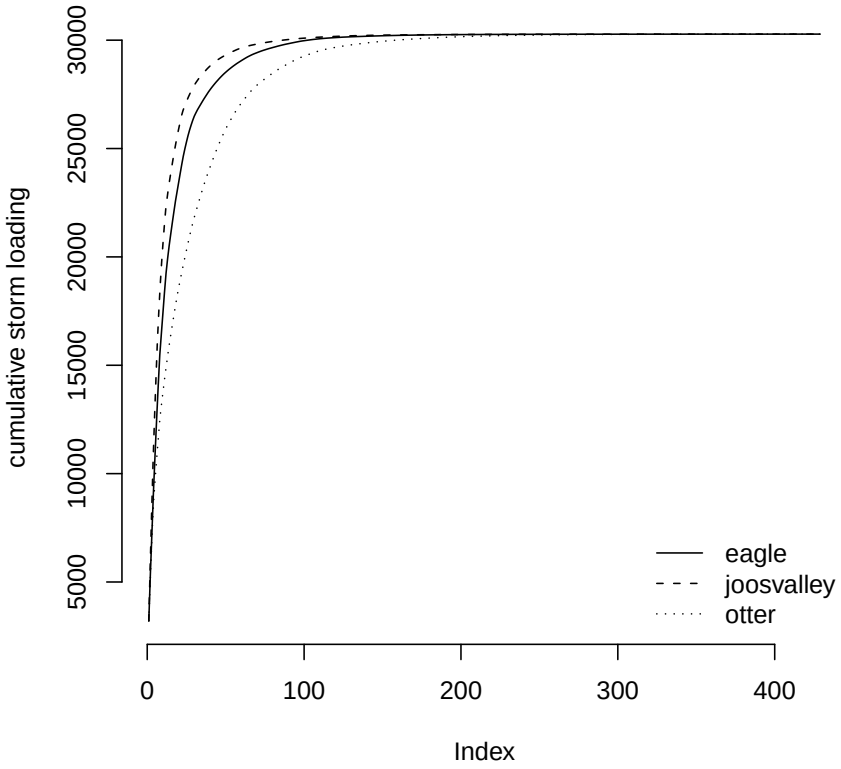

Figure 1: Cumulative storm loadings at the three creeks.