Figure S1. Location of clustered CAMELS catchments and level I ecoregions in the continental United States (Omernik and Griffith, 2014). Source: https://zutn.github.io/ Catchment-Classification/map.html. The clusters derived from the hydrological signatures by Jehn et al. (2020) largely follow to ecoregions in the United States. The 100th meridian is typically considered as the dividing climatic line in the United States, splitting the country into a semiarid west and a humid east. Clusters 3, 4, 5, 6, and 7 are mainly in the west, and Clusters 1 and 10 are primarily in the east. However, Clusters 2, 8, and 9 show approximately similar catchment numbers in both regions. Furthermore, catchments in the eastern half of the US form large spatial patterns of similar behavior; in contrast, catchments in the west are patchier.

Table S1. Properties of catchment clusters (Jehn et al., 2020)

Cluster	Number of catchments	Region	Dominating attribute
1	230	Southeastern and Central Plains	Aridity
2	101	Central Plains (with scattered catchments all over western US)	Green vegetation fraction maximum
3	7	Northwestern Forested Mountains	Fraction of precipitation falling as snow
4	52	Northwestern Forested Mountains and Florida	Precipitation seasonality
5	9	Northern Marine West Coast Forests	Forest fraction
6	18	Marine West Coast Forests	Aridity
7	23	Western Cordillera	Fraction of precipitation falling as snow
8	90	Great Plains and North American deserts	Precipitation seasonality
9	61	All southernmost states of the US	Aridity
10	52	Appalachian Mountains	Mean elevation