Canals

To quantify the amount of canalization within each watershed, we used the NHD flowline features in the high-resolution NHD dataset (U.S. Geological Survey et al. n.d. *a*). Flowlines represent the paths of flowing water throughout the dataset and are differentiated into a number of categories (i.e., Connector, Canal-Ditch, Pipeline, Stream-River, Artificial-Path, and Coastline). For this analysis we calculated the total length of the Canal-Ditch and Stream-River features within each watershed and calculated a canal index as,

$$\sum \text{Canal-Ditch features}_{(m)} / \sum \text{Stream-River features}_{(m)}.$$

References

U.S. Geological Survey, U.S. Environmental Protection Agency, USDA Forest Service, and other Federal, State and local partners n.d. a., NHDFlowline, U.S. Geological Survey, Reston Virginia <ftp://nhdftp.usgs.gov/DataSets/Staged/States/FileGDB/HighResolution/>.