

Checking the .ssn Object

Check each of these items in the .ssn object to ensure that it is properly formatted before importing it into R using the SSN package.

edges

- Is the edges shapefile named edges?
- Is there only one version of the OBJECTID and rid fields (i.e. cannot have OBJECTID *and* OBJECTID_1)?
- Are the rid values unique? Check the maximum rid value. It should be one less than the number of rows in the edges attribute table because rid values range from 0 to n-1.
- Does the segment PI value range between $0 \leq \text{segment PI} \leq 1$?
- Does the additive function value (AFV) range between $0 \leq \text{AFV} \leq 1$?
- Is the upDist > 0 for all segments and does it increase as you move upstream?
- Has a netID been assigned to each segment and are these values unique for each network?
- Has a field named Length been added to the edges attribute table and are the values equal to the Shape_Length field used in the Upstream Distance – Edges and Upstream Distance – Sites tools?

Observed and Prediction sites

- Is the observed sites shapefile named sites? Note that, the user specifies the name of the prediction sites.
- Is there only one version of the OBJECTID and rid fields (i.e. cannot have OBJECTID *and* OBJECTID_1)?
- Are all ratio values between $0 \leq \text{ratio} \leq 1$?
- Are the NEAR_X and NEAR_Y fields present in both the observed and prediction sites shapefiles?
- Do the observed and prediction sites shapefiles in the .ssn directory contain the same number of points as the original shapefiles used in the Snap Sites to Landscape Network tool?
- Does the additive function value (AFV) range between $0 \leq \text{AFV} \leq 1$? Do sites have the same AFV as the edges they reside on?
- Is the upDist > 0 for all sites and does it increase as you move upstream?
- Has every site been assigned a locID > 0 and are those values unique for each location? Multiple measurements at the same site should have the same locID, while measurements at other sites should have a different locID.
- Has a netID been assigned to each site, are all netID values > 0, and do the netID values accurately reflect the network the site resides on?
- Does each site have a unique pid > 0? Note that, pid values should be unique for every point in the observed and prediction sites shapefiles.
- Are the covariates (i.e. explanatory variables) that you plan to use in the spatial stream-network model also present in the prediction sites attribute table?

netID.dat files

- Is there a netID.dat file for each network? The number of netID.dat files should equal the maximum netID value in the edges attribute table.