

Irrigation in HSPF can be included in two ways, imposed as an external time-series (analogous to adding additional precipitation), or using a crop demand algorithm based on the AFSIRS model. The irrigation demand time-series was established by the SJRWMD Water Supply Planning group based on a separate run of AFSIRS, then tensioned to practice. Since the tensioning to practice could not be done easily within HSPF, a time-series of irrigation per polygon was developed that is imposed as an external source into HSPF.

Which dataset was used for tensioning to practice was based on availability of data. For SJRWMD and SWFWMD, actual metered data was used. For SRWMD, Georgia, Alabama and South Carolina the USGS county wide estimates were used.

The daily time-series was disaggregated to hourly and applied between the hours of 6 and 10 in the morning.

The irrigation types used to put the water into the correct part of the HSPF water balance are shown in Table 9-9.

Two time-series were developed for each irrigated polygon, one for irrigation supplied by groundwater and the other for irrigation supplied by surface water. The time-series that represented the irrigation supplied by surface water was also used to take the same amount of water from the local reach.

Additional detail about the development of the tensioned FSAID 1 project is provided in the documentation of the water use component of the NFSEG project.

Table 9-8. Monthly tensioning factors for NLDAS potential evaporation

Month	Factor
January	0.36
February	0.42
March	0.51
April	0.58
May	0.65
June	0.71
July	0.75
August	0.75
September	0.66
October	0.53
November	0.40
December	0.33