

Even though there are several ways to estimate the rating curve error (Dymond and Christian 1982), the USGS has established a subjective estimate of annual flow data quality established by a review of measured data, datum shifts, and other characteristics of the flow measurement station. Table 9-12 describes the USGS system of data quality estimation (Kennedy 1983). The USGS system provides a general site-specific estimate of error and there may be significantly more error where there are few flow measurements in the rating curve, for example at high and low flows. However, the USGS gives a single quality category for each water year of record.

Most USGS flow measurement stations in Florida are rated 'Fair'. An 'Excellent' rating for a station in Florida is very rare. A map illustrating the USGS assigned data quality for flow observations in water year 2009 is presented in Figure 9-17. For 2009 there isn't an 'Excellent' rated gauge in any of the HSPF models.

Literature Total Evapotranspiration Estimates

Evapotranspiration in HSPF is calculated for each of the land cover segments in each subwatershed. A literature review collected estimates of evapotranspiration ranges for the land cover classes included in the HSPF model.

Evapotranspiration values found in the literature review were used as reference values in the HSPF calibration process using PEST. This was performed in order to have adequate estimation for evapotranspiration in the model water budget. Table 9-13 presents the evapotranspiration values and their reference source.

HSPF MODEL DEVELOPMENT

The first step in development of a surface water model is to delineate the subwatersheds so that the calibration points represent outflow from a subwatershed. The delineation process at the same time establishes the stream network. The next step is to establish the areas of all the land cover PERLNDs, and IMPLNDs within each subwatershed.

Table 9-11. Percentage pervious land cover of directly connected impervious area

Land Uses	% Imperviousness
Low Density Residential (LDR)	5
Medium Density Residential (MDR)	10
High Density Residential (HDR)	20
Industrial and Commercial (IND)	50