



Figure 8.--Effect of datum errors on simulated daily mean discharge at Briarcliffe Acres gage (02110755).

selected wind speeds is shown in figure 9. Channel orientation in the modeled reach is 45 degrees. The maximum increase in simulated discharge occurs when the wind is toward 45 degrees, as measured from north; the maximum decrease occurs when wind is toward 225 degrees. Wind has no effect on discharge when it is toward 135 degrees or 315 degrees. For example, wind from 45 degrees at 5 mi/hr (miles per hour) increased simulated discharge approximately 60 ft³/s.

Wind was not considered in the model calibration and the simulations due to the paucity of data. In the Myrtle Beach area, average wind speed in each of the months of January, April, July, and October is approximately 3 mi/hr. The average wind direction for each of the months of January, April, July and October is 90, 24, 9 and 182 degrees, respectively. By using these average wind conditions and information in figure 9, the wind effect on mean daily discharge is generally less than 20 ft³/s. The model was also found to be sensitive to wind effect for the Highway 544, Myrtlewood, and Highway 9 boundary conditions. Future modeling efforts in the AICW need to include wind speed and direction in the simulation, especially if discharge data are to be used as input to a transport model.