**Cancun Weather at Risk:**

Of the two top trips, Cancun and Whistler, the trip to Cancun is particularly sensitive to weather, particularly rain. We analyzed the rainfall in Cancun for every day in February for the last 7 years. Because weather is autocorrelated, i.e., the daily weather is not independent of the previous day’s weather, we organized the data into three-day combinations to match the length of the trip. The simulation model randomly drew a three-day series from one of the 242 combinations of three-day series in order to preserve this autocorrelation in the simulation model.

The rainfall for each day was categorized into one of four categories:

* None
* Light 0- 4 inches
* Significant 4-8 inches
* Heavy > 8 inches

Based on our assessment of how we’d rate the Cancun trip given a day of rain of the three types, we arrived at values for each day of weather:

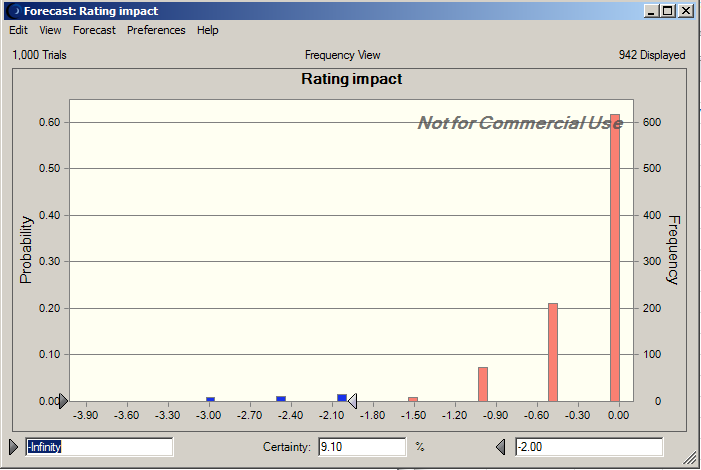
Light rain was worth -.5 points, significant rain -1.5, and heavy rain -2. We also tested out a less punitive system with: -.1 for light, -.5 for significant, -2 for heavy.

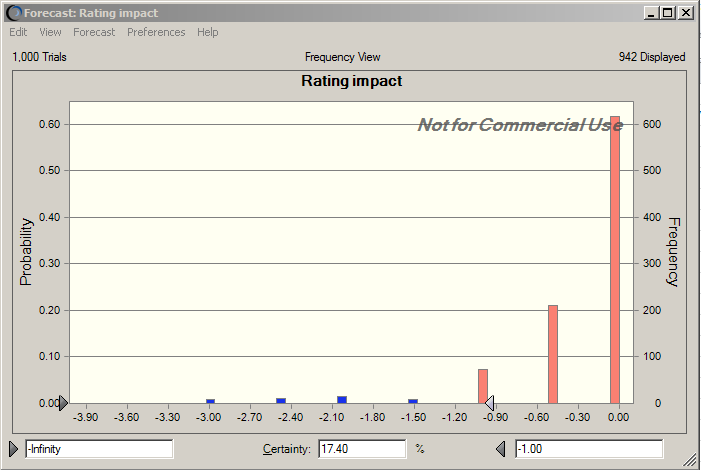
**This analysis produced expected outcomes of:**

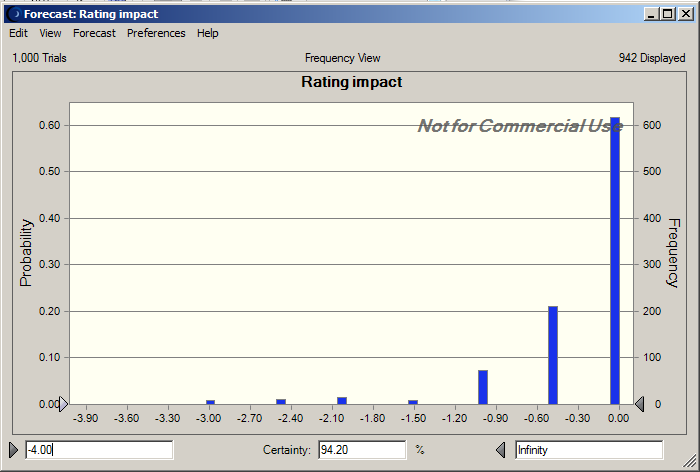
-.55 for the more punitive

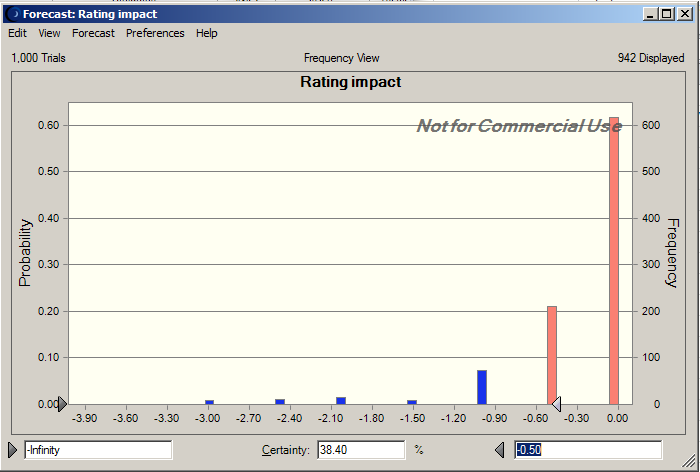
-.34 for the less punitive

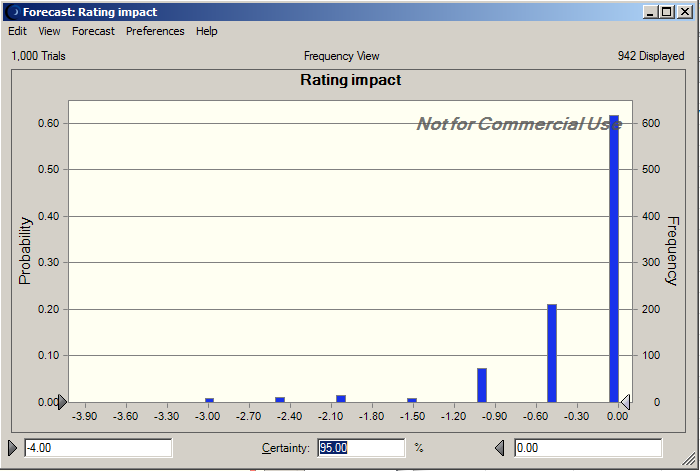
Below are the results from the analyses in the “Cancun Weather Sim.” Model, which were then entered into the “Optimal Trip Results” sheet.

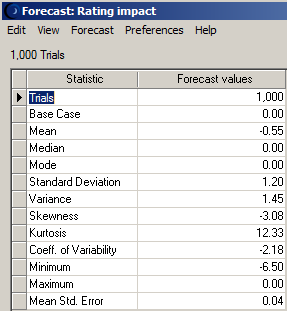


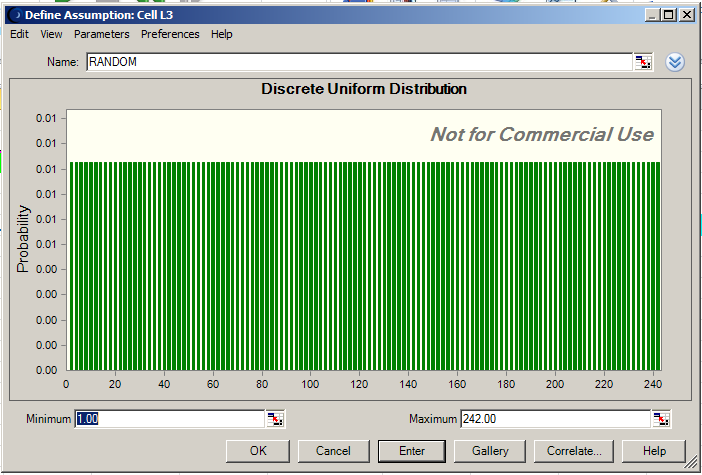










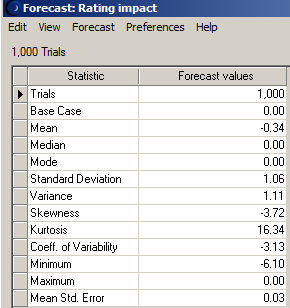


Lower value

-.1 for light

-.5 for significant

-2 for heavy



7.97% of -1 or worse decrease

7.90% of -2 or worse decrease

10.80% of -.5 or worse decrease