

962-92-1194

Joanna A. Bieri* (jab34@dana.ucc.nau.edu), Modeling & Simulation Lab, Department of Mathematics & Statistics, Northern Arizona University, Flagstaff, AZ 86011-5717, and **Catherine A Roberts** (Catherine.Roberts@nau.edu), Modeling & Simulation Lab, Department of Mathematics & Statistics, Northern Arizona University, Flagstaff, AZ 86011-5717. *Grand Canyon River Trip Simulator Project.*

A computer program called the Grand Canyon River Trip Simulator has been developed for use by managers at the Grand Canyon National Park. GCRTSim consists of a database and a simulator, as well as extensive analysis tools. The database will eventually contain approximately 500 trip diaries collected between 1998-2000. These diaries report all stops for activities and camping along the 226 mile Colorado River corridor within the purview of the National Park Service. The simulator provides users with the opportunity to set up prospective launch schedules for rafting trips and to run simulations using these artificial launch calendars. Both the trip diary database and the results of the simulations can be analyzed using extensive graphing tools. The analysis can provide insight into the impacts of rafting traffic on the treasured resources along the Colorado River corridor. This talk will give an overview of the project, emphasizing the statistical and mathematical analysis employed in the development of the simulation model. (Received October 02, 2000)