

**Pollution and Its Effects on the Santa Fe River**

New Mexico

Super Computing Challenge

Final Report

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ATC

Team Members

Sabrina A. Cook

Alicia Sandoval

Teachers

Su Gibbs

Irene Lee

We have both lived in Santa Fe, New Mexico for a very long time and it's come to our attention that the Santa Fe River was named America's most endangered river in 2007. As good citizens we were both very concerned about the river, so we decided to base our project on that. One of us (Alicia) went to river with her science class with middle school (Santa Fe School for the Arts and Sciences) and ran tests on the river. Because of the data collected over the two year period of time (2009-2011), we realized how just badly our river was doing and that if we didn't work on improving its conditions we might not have a river in the near future.

We used the data we already had collected to create a model in StarLogo TNG that would show how the river would be affected by humans on a small section of the river off of West Alameda and in between Mesa Verde and Alto St. We chose this location because it seemed to have the most human interaction because this section of the river is next to a park, medical center and a shopping center as well as a several small neighborhoods.

The results of our model were varied because the Santa Fe River is currently not a living river so it only runs during some summer months and when the reservoirs upstream overflow due to excessive runoff in the spring; this variable was also factored into the model.

The data has been gathered and with the use of Python are creating a table to show our results. Conclusive results are pending.