

New Orleans Case Study:

The city of New Orleans, Louisiana was one of the areas devastated by Hurricane Katrina in August 2005. The bustling city was flooded as the levees protecting the city failed. The flood waters filled the streets with almost every imaginable type of contamination. Fuel, chemical, and biological products combined to make what some people referred to as a “toxic soup”.

Although the chemicals and fuel made the water dangerous to walk through, it was the biological contamination that made the water hazardous to drink. When the levees failed, the sewage treatment plant flooded and released raw sewage into the streets.

The *E. coli* levels in the water were measured to be 45,000 times the acceptable limit for swimming in a lake or pond. In fact, one scientist demonstrated the extent of the contamination by holding a vial of pond water up to a black light. The pond water produced a very faint glow as a result of the biological contaminants in the water. When he repeated this experiment with water taken from the flooded streets of New Orleans, the vial glowed fluorescent yellow.

The number of people who became ill as a result of drinking the contaminated water or even walking through the water is unknown. It is estimated to be in the thousands though. There were five deaths attributed to *Vibrio vulnificus*, a form of cholera. These five people were elderly. Their deaths are linked to the water. It is probable that many more people died as a result of consuming the water but the actual number will never be known.

Sources:

- <https://archive.epa.gov/katrina/web/html/>
- <http://content.time.com/time/nation/article/0,8599,1102029,00.html>
- <http://abcnews.go.com/Health/story?id=1101220>
- https://en.wikipedia.org/wiki/Effects_of_Hurricane_Katrina_in_New_Orleans