

Is the Bronx River Watershed Healthy?

The Bronx River is a famous landmark in Westchester County and more specifically Bronxville. The river has sparked some intense controversy over the course of many years. In the river, there is a lot of dirty pollutants such as coke bottles that are just thrown into the river. So the underlying question is, how can we conserve the river and make it healthier and safer? This is why we are carrying out our extensive research on whether or not the Bronx River is healthy. From this research, a lot of these answers have been concluded but there is still more experiments to be conducted before we as a community can attempt to make the river healthier and cleaner for all. Furthermore, I want the river to become healthier because I like to fish and because of the conditions of the watershed, I can not really do that. Also, I feel like the river can be another source of fun and relaxation but due to these poor ecological and environmental conditions, that can not be possible just yet. Moreover, through data and observations as well as research, we will find out if the Bronx River watershed is truly unhealthy and what the factors are that lead to a polluted environment.

A watershed is an area or ridge of land that separates waters flowing to different rivers and basins. Furthermore, in a watershed, there are many sources of life such as fish, plants, good bacteria and algae. It also contains clear water in order for life to exist in this environment. In watershed you can also see birds and other mammals such as racoon adapting to this environment. The benefits of a healthy watershed is that it utilizes rainwater and snow to keep the streams on a healthy water level. The variety of

plant species in a healthy watershed filter the rain and snow melt to make a healthy environment. Watersheds, if they are healthy, also can help in terms of a reduction in the erosion of soil. It also helps the species of plants to grow by providing nutrients they need to grow. Furthermore, another way to see if the Bronx River is a healthy watershed is to calculate the biodiversity index. According to Mrs. Bastone's class data, there are 10 species in the area and there is a total of 75 individuals in the area. So once I found that out, I used 10 species in the area divided by 75 individuals in the area and my final answer was 0.13 so from calculating this data, we can infer that there is not a lot of biodiversity in the Bronx River. Biodiversity is essential in a healthy watershed and from my calculations and data, this is another example of why this river is an unhealthy watershed.

In the macroinvertebrate lab activity, I did research on the dragonfly and its significance to the environment. One of the key aspects of the dragonfly is that they eat the larvae of mosquitos and biting flies. This makes our environment healthier and more enjoyable because there would be less biting insects. Mrs. Bastone's class research concludes that there are no dragonflies visible in the Bronx River. This important aspect to maintaining a healthy environment is missing. Therefore, this is one example of why the Bronx River Watershed is not healthy. Student evidence found in 2015, shows 22,500 bacteria of enterococci were found in the Bronx River. Enterococcus is found in human feces. Obviously, having human feces in a watershed is a sign of an unhealthy system. Furthermore, another piece of student evidence that the watershed is not a healthy water source is that the pH level is way below normal and this is from the most

recent data at all of the sites on the Bronx River. Also, the conductivity when it was last measured was below 150 uS/cm. This certain number is the minimum to support the diverse aquatic life and since it is below 150, we can infer that the aquatic life in the river is non-existent. Also, aquatic life is essential in a healthy watershed and therefore, this piece of data collected by the students is another example of why the watershed is unhealthy.

Through research, evidence, examples, observations, and data made during this Bronx River research, it is evident that the watershed is unhealthy and not clean. Moreover, I learned that it is important that our watershed is healthy because then we can make our environment a better place for all of the citizens. Before writing up this essay, I knew that the river was not clean and polluted but, I did not know about the watershed and the macroinvertebrates and more specifically, its significance on the conditions of the river. Through this research, I hope that people can take a glimpse into this astonishing data. From there, we can make change happen on our river because if we have a healthy watershed then we will have a healthy environment.