

Letter to the editor; nutrient pollution essay examples

[Technology](#), [Development](#)



Development, industrial and residential is an aim in sought by cities in their development aims. Development of industrial plants leads to a creation of wealth in the city while residential development causes an increase in the living space of the city benefitting the residents with reduced housing costs due to increased supply.

These developments however, do come with their own costs that may prove expensive if left unchecked. The current endeavor by the city of developing up to a thousand housing units by the end of the year is a commendable effort towards reducing the housing shortage plaguing the city currently. However, the current sewage disposal plan is poor, with a majority of the effluents discharged finding their way into the lake. An increase in the number of housing units served by the sewer line will further the strain already evident on the lake.

A study conducted on the lake water samples showed a serious level of pollution mainly from the sewage deposits there. With both the domestic and the industrial sewage sources depositing into the lake, the samples showed pollutants indicating both an industrial and residential origins. The high level of nutrients such as phosphorous and nitrogen indicate the possibility of a boom in algae and phytoplankton populations. While they produce food for the food chain in the lake, an unmitigated increase may have a detrimental effect on the normal trophic interactions with increased algae and phytoplankton populations leading to death of higher life forms such as fish. After the expiry of their lifetimes, the algae sinks at the bottom of the lake where they decompose using up oxygen, which reduces the amount of dissolved oxygen in the water, and may cause the death of life forms such as

fish. Data obtained from the lake indicates a correspondence between the algae levels, with the fish population in the lake, with an increase in the algae causing a corresponding decrease in the fish populations.

Increased sewage deposition in the lake, has also witnessed increased levels of heavy metals such as lead and mercury, these pointing to the burgeoning industrial sector in the town. In 2010, for instance, the amount of mercury in the water samples collected from the lake, were insignificant. In July of this year however, mercury levels in the lake water have raised dramatically attributed to the growth of the manufacturing sector in the town. An increase in these chemicals will cause their accumulation in the trophic levels up the food chain from their uptake by the algae and the planktons. Heavy metals accumulate in the tissue of their host, and each successive trophic level inherits higher concentrations of the pollutants. We, being at the top of the food chain, consuming fish from the lake will be a health hazard.

Measures should be taken to reduce the strain of pollution on the lake, by developing alternate sewage processing handling and disposal plants.

Further dumping of sewage into the lake promises to yield a depleted resource, not useable on any meaningful manner.