

Nitrogen

Nitrogen is an essential nutrient for plant and animal growth. In excess, nitrogen negatively affects the health of aquatic systems. Extreme concentrations of nitrogen can lead to hypoxic conditions in which no oxygen is left in the water for plants and wildlife. Surpluses of nitrogen come from agricultural outputs (fertilizer, animal waste) and urban outputs (sewage, water treatment plants); these trickle into a watershed with the downstream movement of runoff over nutrient dense surfaces.

Problems

Excess nitrogen overstimulates the growth of aquatic plants and algae. Algae uses up all the oxygen in water and then decomposes, leaving fish without air or food. What is left is a water body or stream that can no longer sustain life.

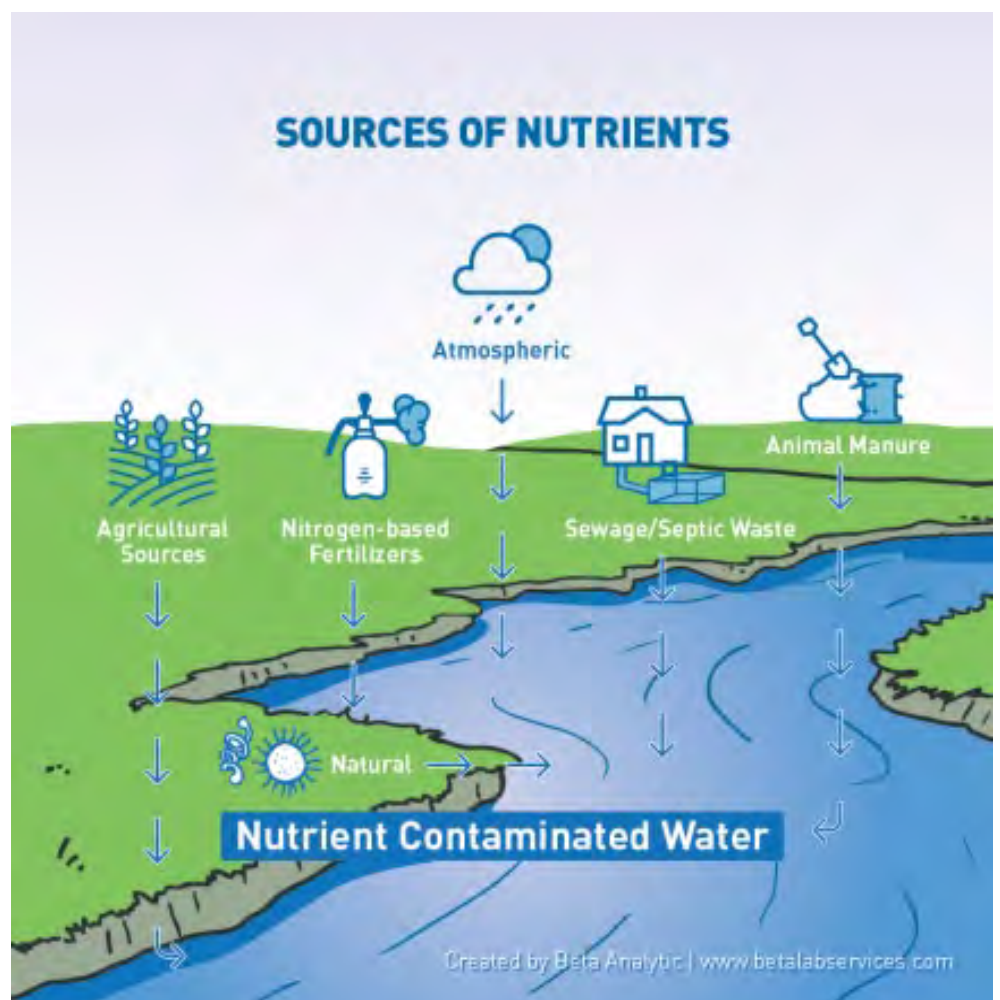
Nitrates in our drinking water are unhealthy for human consumption and can restrict oxygen from entering the bloodstream. Most of the drinking water in the United States comes from subsurface water which are at risk due to nitrogen inputs, well draining soil, and a high ratio of cropland to woodland.

With human and environmental health at risk, it is essential to have a better understanding of our local watershed.

Solutions

Wastewater management plans have biological, chemical, and physical solutions to protect our fresh water from contaminations found from human and animal sources.

Vegetated areas, engineered pathways and blockades, and chemical treatments near sensitive water or contaminant sources are clever ways to reduce nitrogen loading.



Nitrogen in water (BETA Analytic, 2019)

