Process	N	P
Fixation	N can be fixed from N_2 gas by some bacteria. N is not as often limiting phytoplankton growth in estuaries.	P is not gaseous. There is a very small proportion of phosphine (PH_3, a volatile P compound). Therefore, P has no atmospheric deposition contribution.
Oxygen consumption	N metabolisms normally use oxygen such as nitrification	P metabolisms do not use oxygen.
Denitrification	N can be removed from aquatic systems by denitrification, which converts NO_3^- to N_2O and N_2.	No P exists in the gaseous form, so there is no real process of P removal from water
Settling and burial	N can adsorb to suspended sediments, but this process is not strong. Absorbed N easily returns to the water column before the suspended sediment settles to the bottom.	P has a strong ability to adsorb to suspended sediment and settle to the riverbed. This process (burial) can remove P from the water column.
Toxicity	NH_3 with high concentration can be toxic for fishes	P is nontoxic in an aquatic system