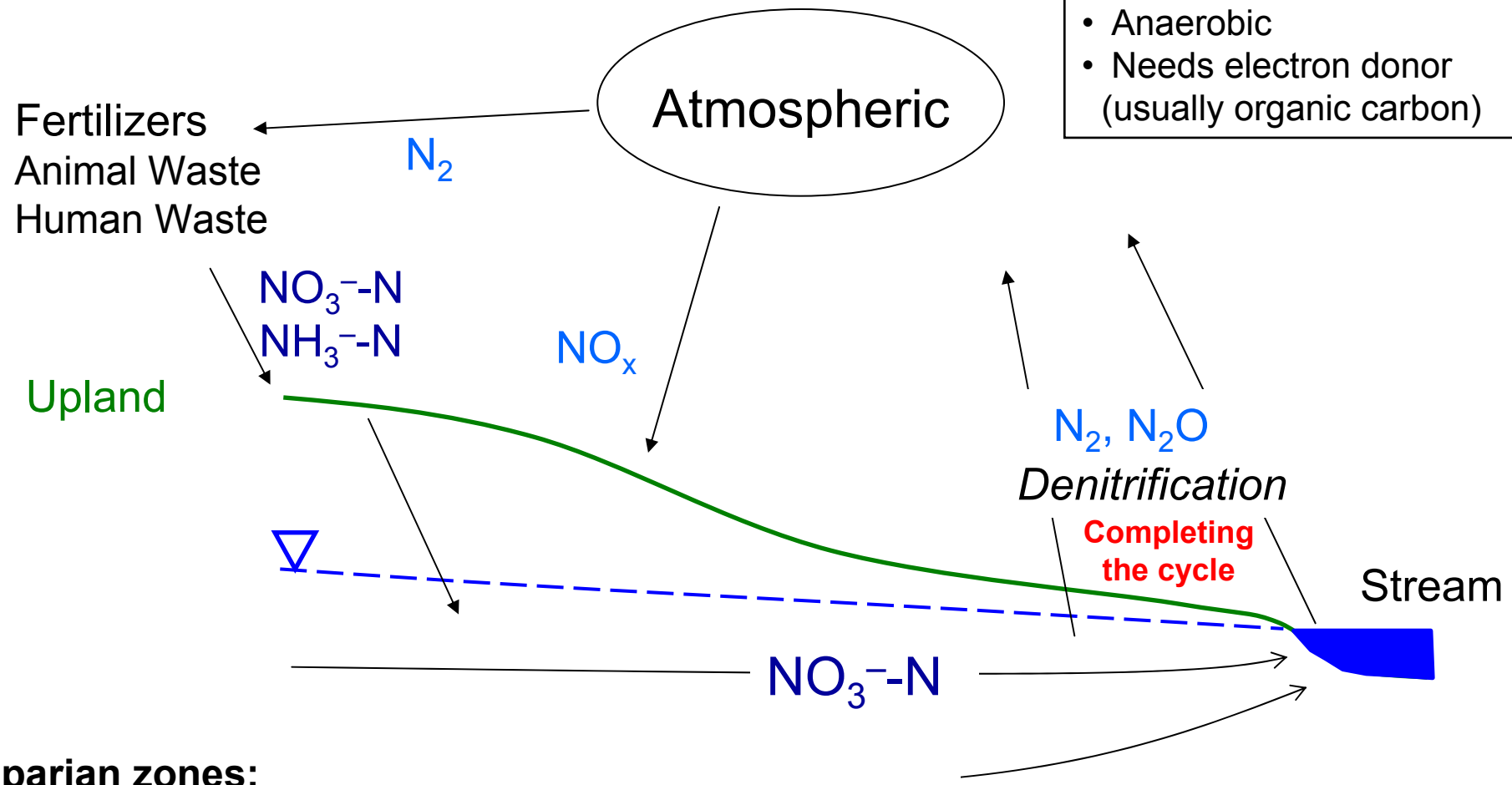
Riparian areas can function as ground water denitrification "hot spots" on the landscape

Microbial Denitrification

$NO_3 \rightarrow N_2O \rightarrow N_2$

- Anaerobic
- Needs electron donor (usually organic carbon)



In riparian zones:

Water tables approach soil surface → anaerobic conditions

Subsurface carbon enrichment

- organic soils
- buried horizons, reflecting fluvial processes