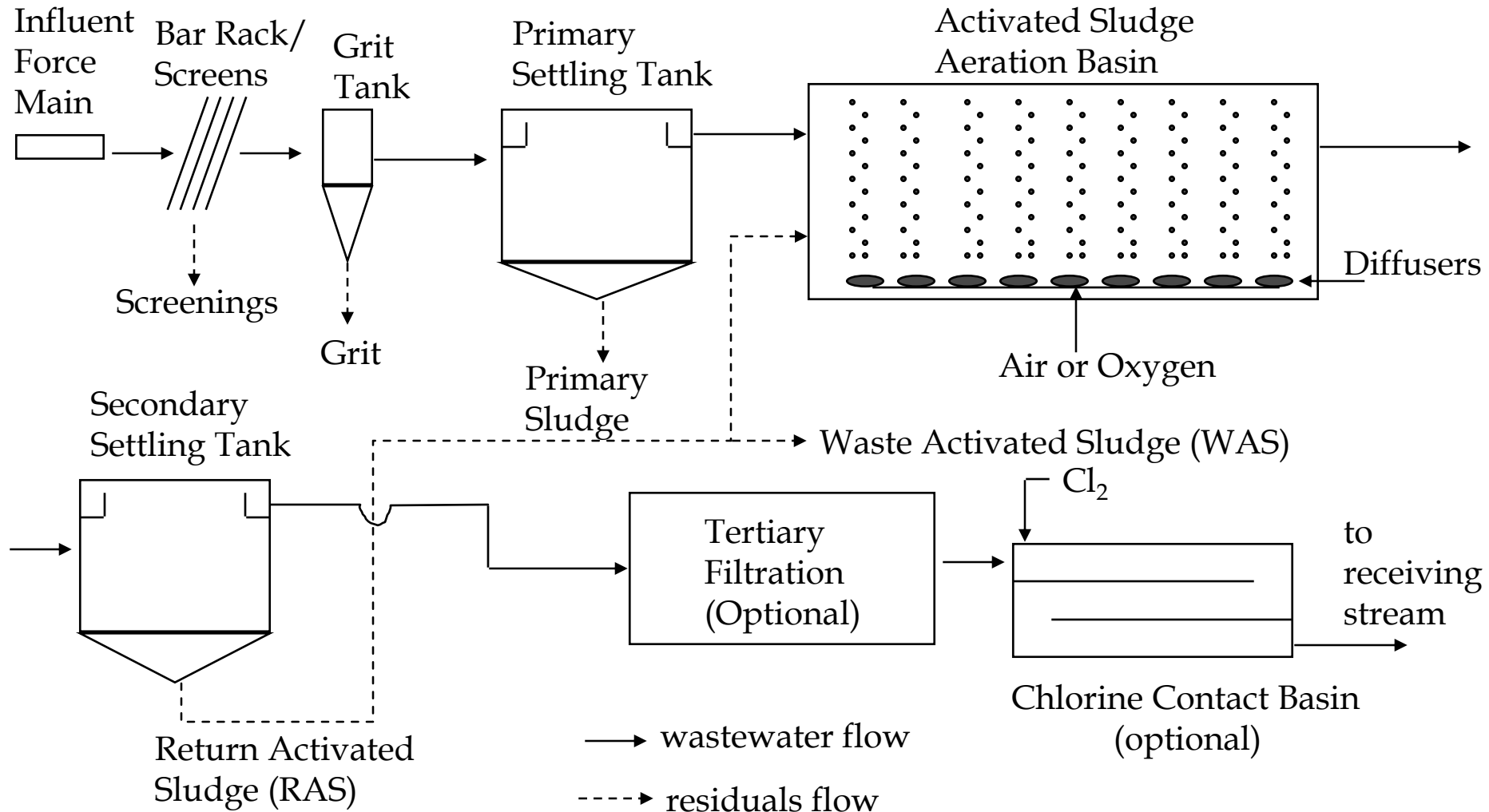
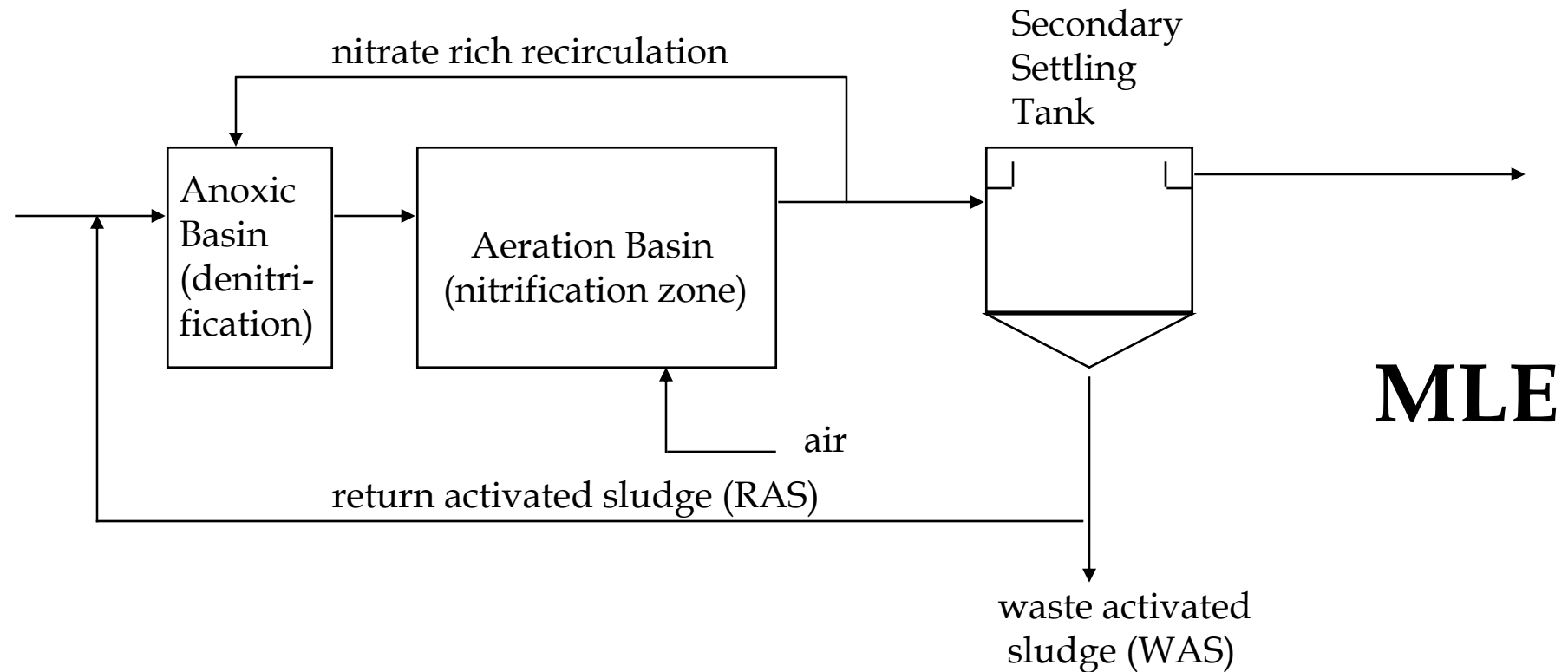


Activated Sludge Wastewater Treatment Plant

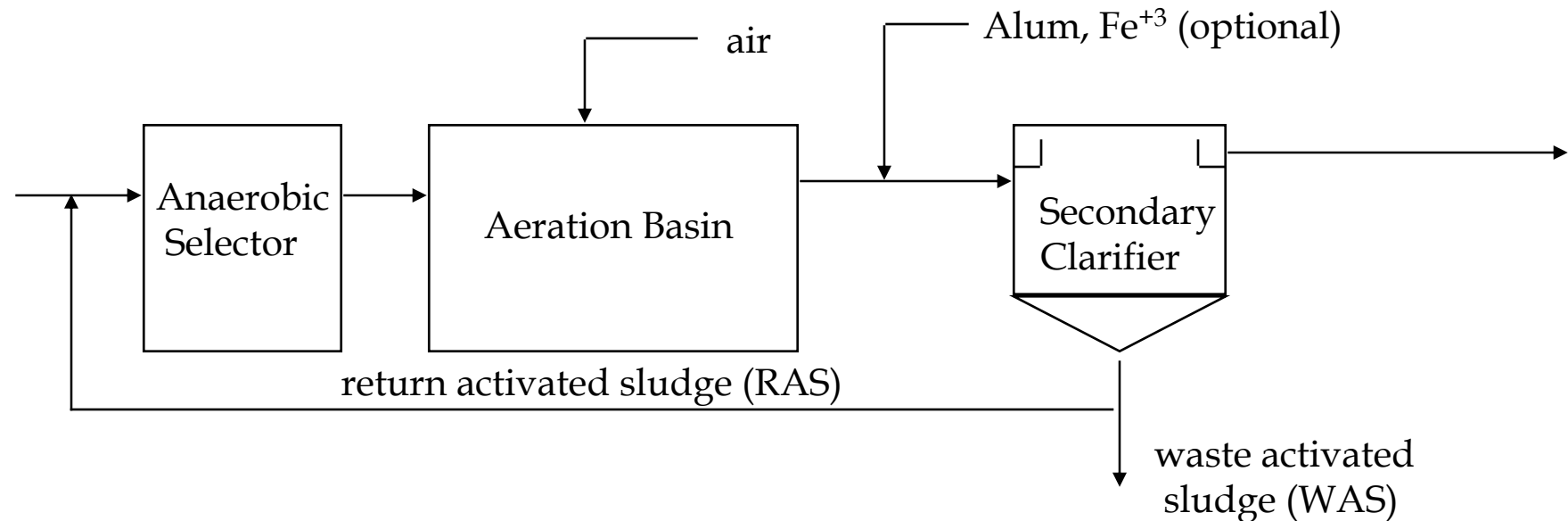


Nitrification/Denitrification Activated Sludge System



Process	TEA	C - Source	Energy Source	End Products
N_____	O ₂	CO ₂	NH ₃	NO ₃ ⁻ H ₂ O CO ₂
D_____	NO ₃ ⁻	carbonaceous BOD	carbonaceous BOD	N ₂ H ₂ O CO ₂

Biological Phosphorus Removal/ Activated Sludge

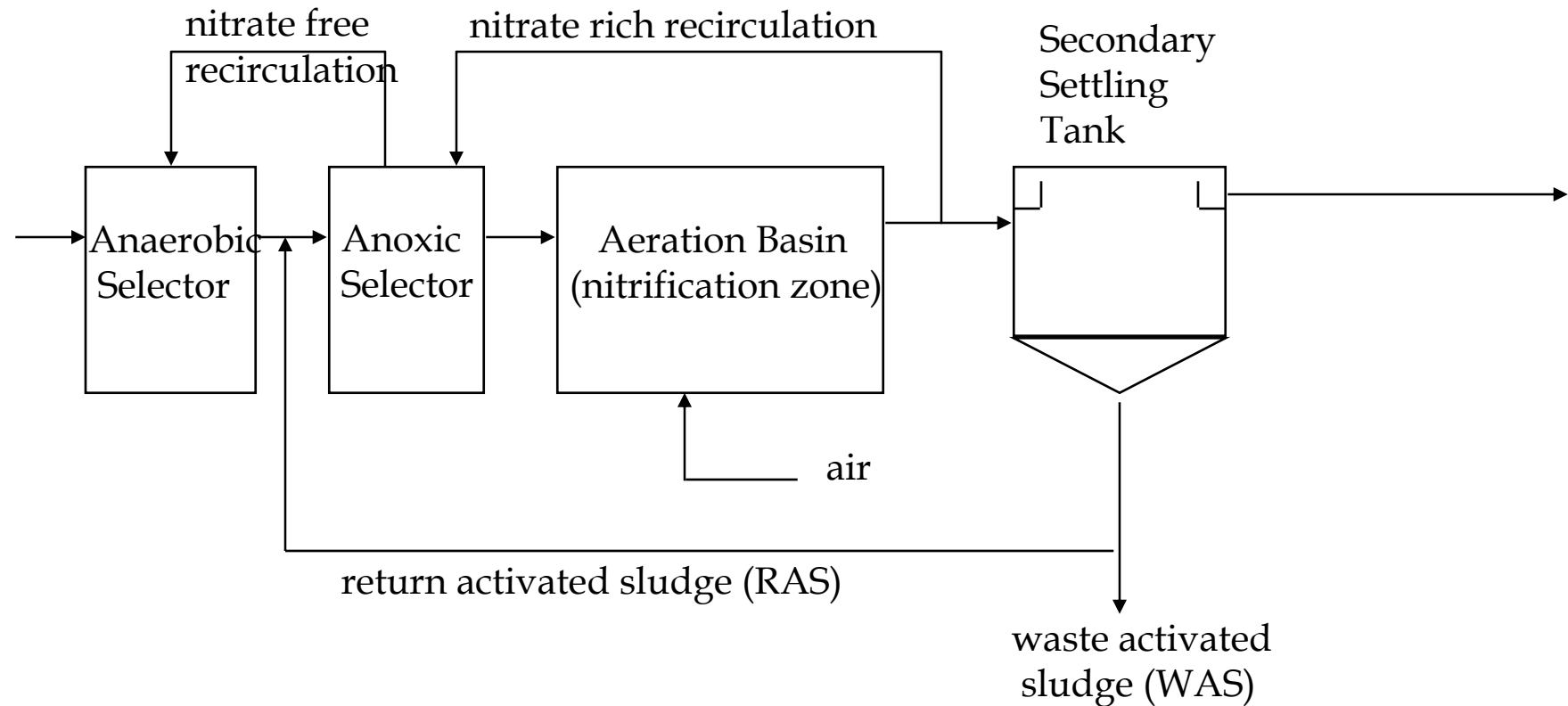


Phosphate Storage "Battery"

Anaerobic Selector	Aeration Basin
Release of p_____	Uptake of phosphorus
Uptake of a_____	Formation of phosphorus storage granules (up to 7% P)
ATP → ADP	ADP → ATP

A/O

Biological Phosphorus & Nitrogen Removal



Virginia I_____ Plant (VIP)