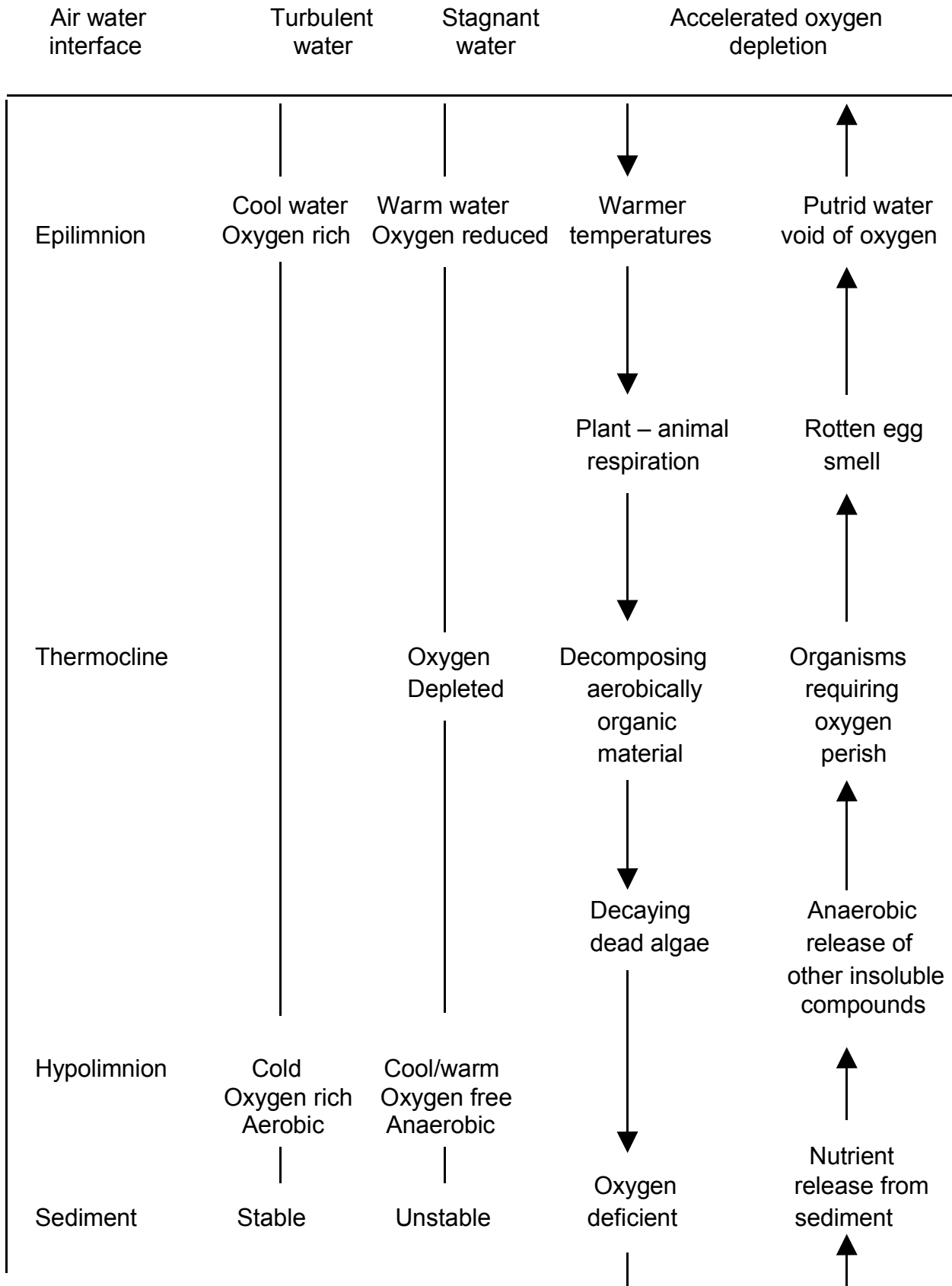


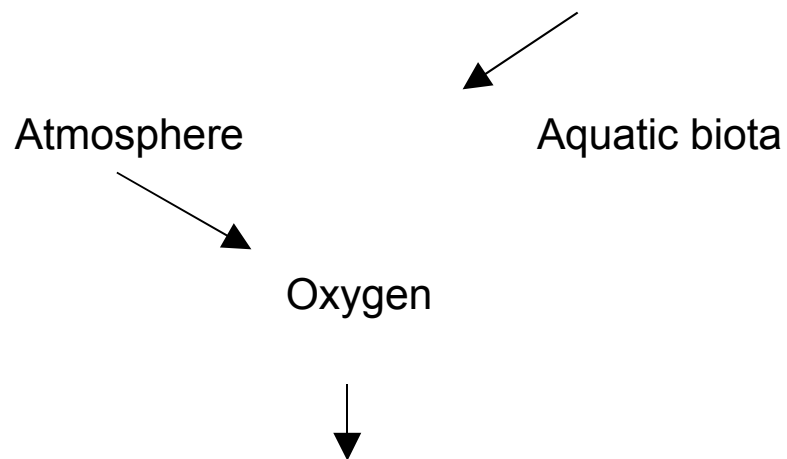
# A healthy lake system requires adequate oxygen

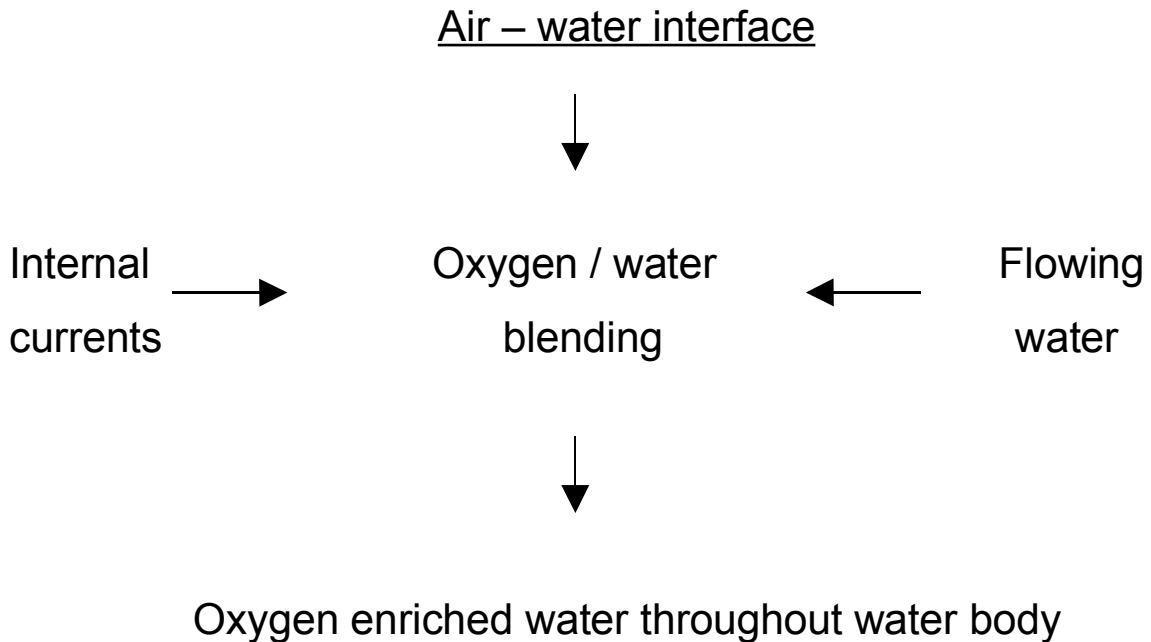


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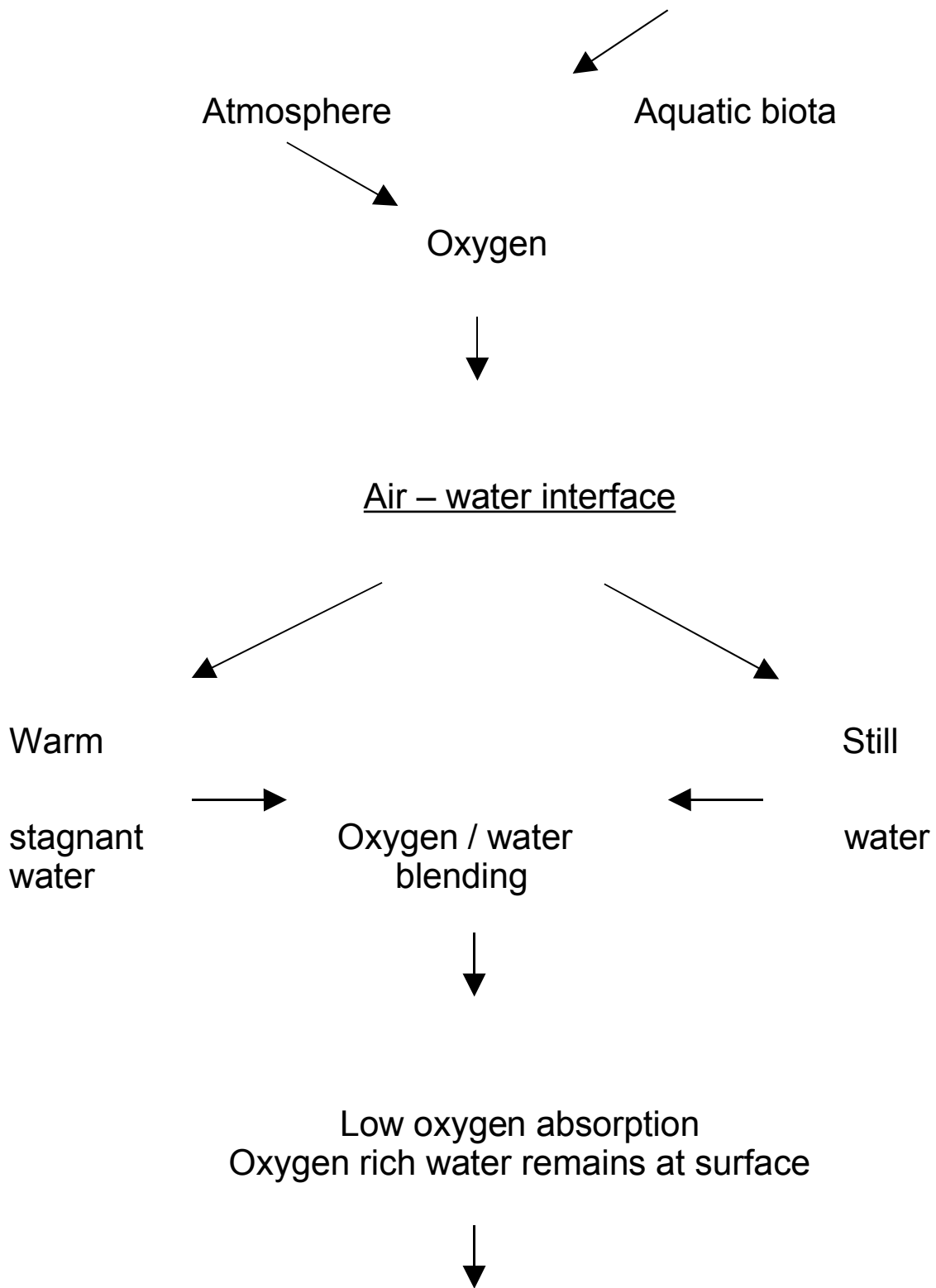
## Attributes – Dissolved Oxygen

- Dissolved oxygen refers to the volume of oxygen that is contained in water.
- Oxygen enters the water by the transfer of oxygen across the air water interface.
- Once absorbed oxygen is blended throughout the water body by water flow and/or internal currents.

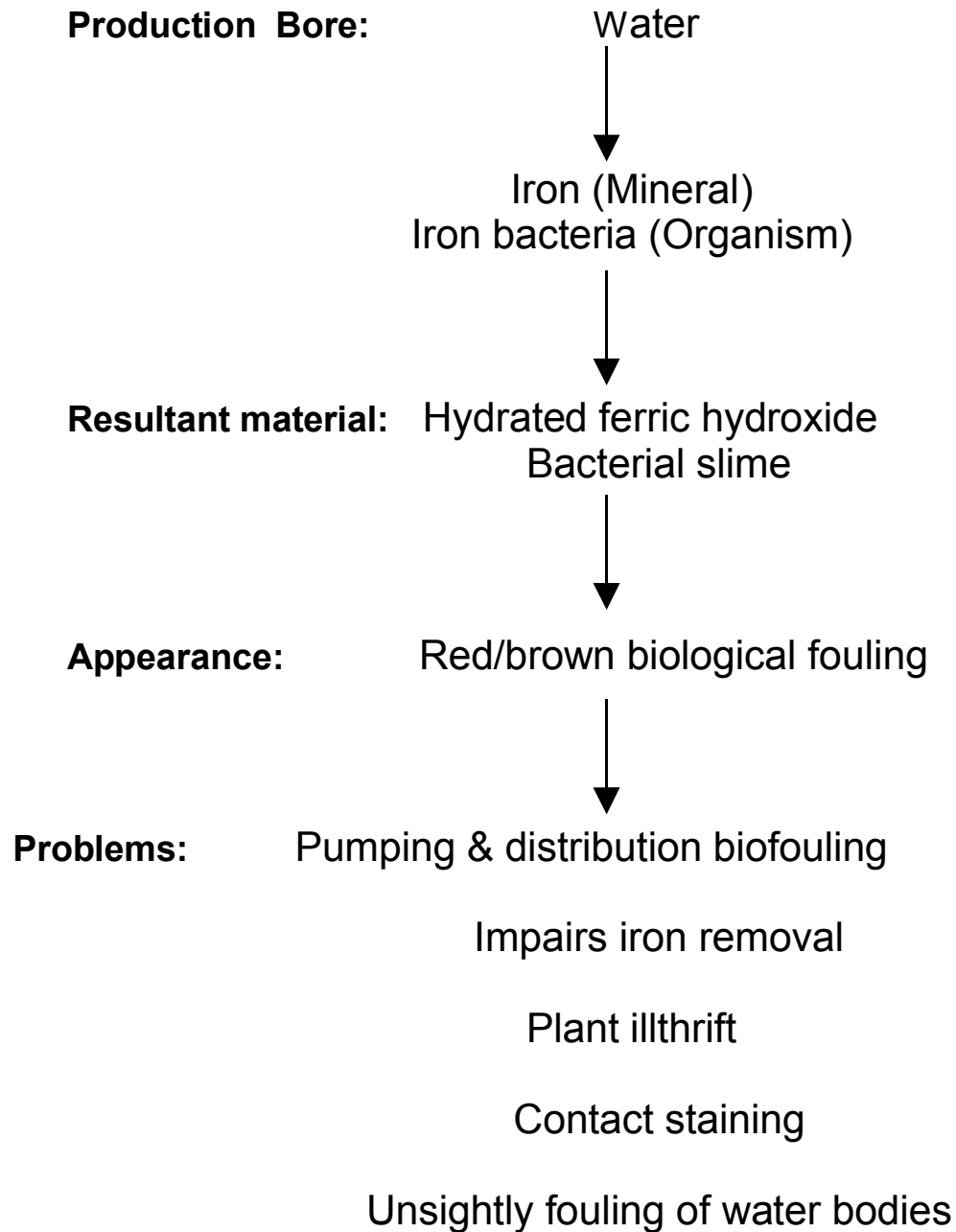




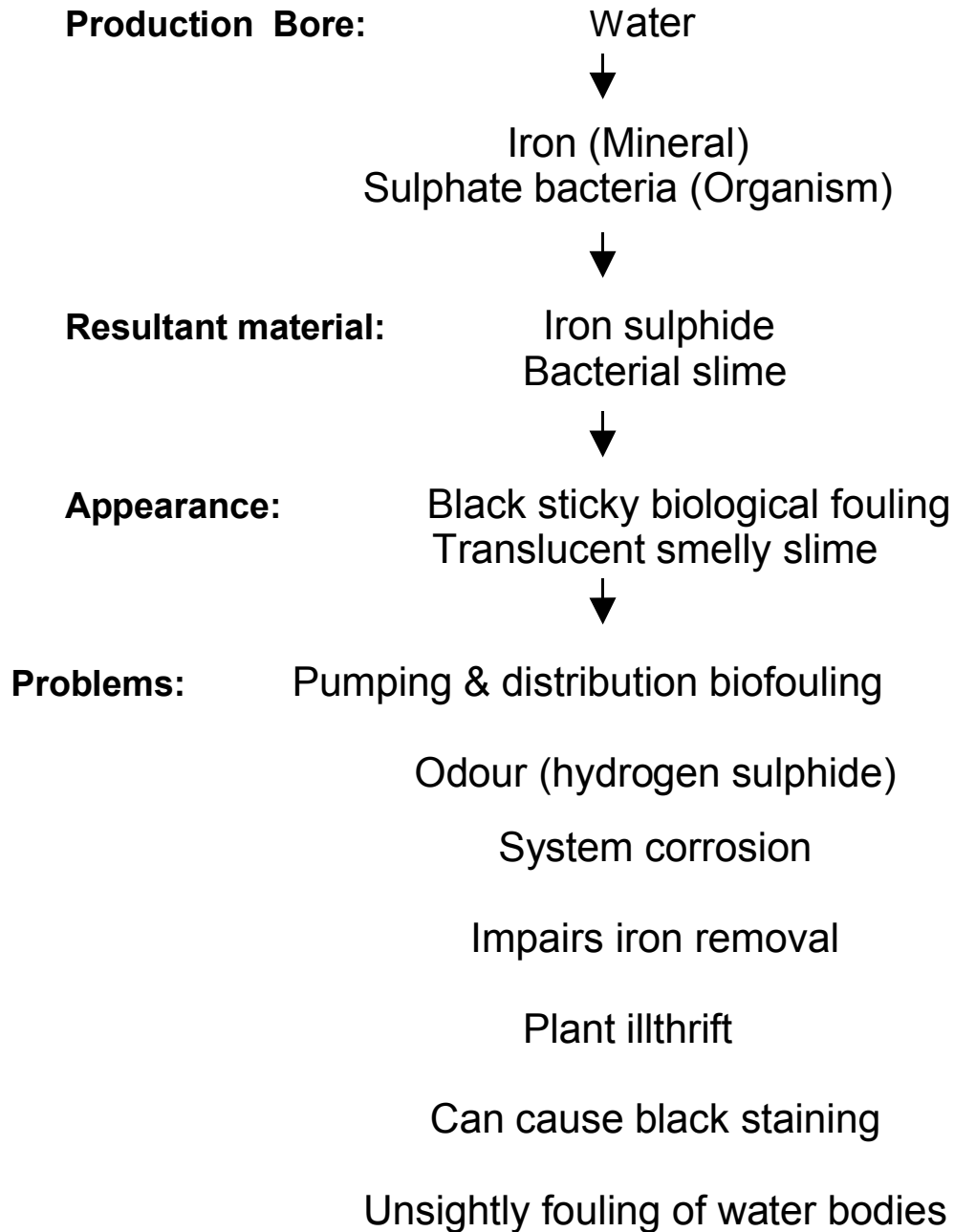
- Because stagnant water undergoes less internal mixing, oxygen rich water stays at the surface.
- Warm water holds less oxygen than cold water.
- Freshwater holds more oxygen than saltwater.



**LOW** dissolved oxygen throughout water column  
Iron Bacteria (IRB) impact on water body



# Sulphate Bacteria (SRB) impact on water body



# Sulphate & iron bacteria combine with nutrient to cause biofouling in the lake water column

## Production Bore:

Water



Iron (Mineral)  
Sulphate bacteria (Organism)  
Phosphorous  
Nitrogen



## Resultant material:

Iron sulphide  
Hydrated ferric hydroxide  
Bacterial slime  
Phosphorous  
Nitrogen



## Appearance:

Rusty orange buoyant odouress material  
impregnated with phosphorous &

nitrogen



## Problems:

Iron has a very good nutrient retentive ability and will harbour the P&N from within the water. This in itself is not a bad thing. However because of the slimes added buoyancy, the material will not settle to the bottom of the water body, but rather floats throughout the water column providing both a habitat and nutrient source for algae.