

Wetlands and Drains

Ideal Conditions for Nitrogen Removal



Wet Tropics
Major
Integrated
Project

Basic Self-Assessment Guide

SOIL COLOUR

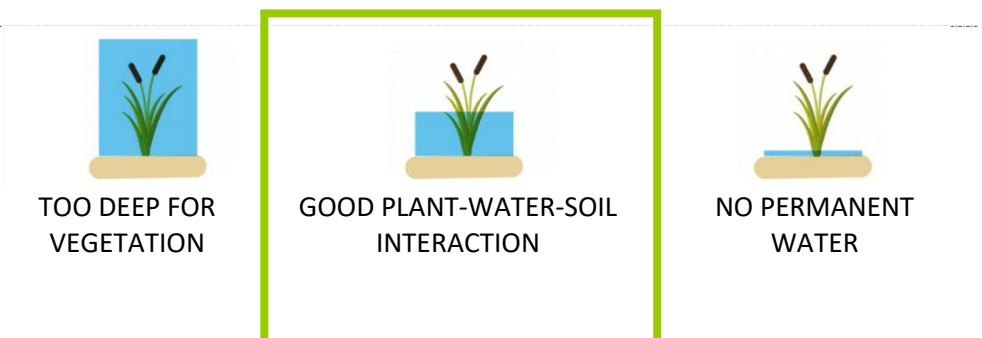
To provide a food source for the denitrifying microbial community, there must be sufficient carbon or organic matter in the soil.



SOIL CONTAINS ORGANIC MATTER / CARBON

WATER DEPTH

Denitrifying microbes in the water need vegetation in their habitat to live. Deep water will not support enough plant biomass, and without permanent water the microbes will not be present all year round.



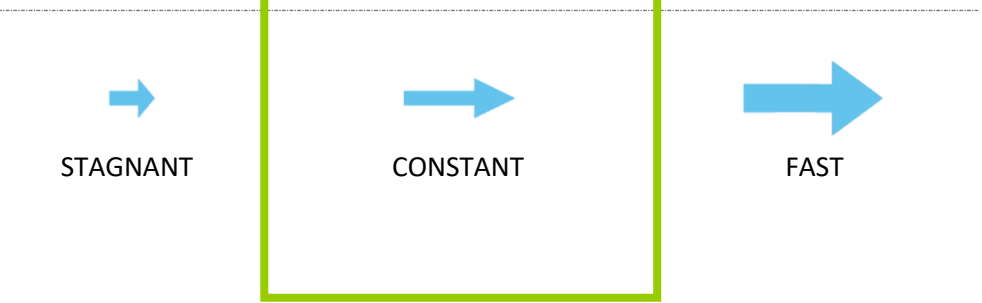
PLANT COVER

Vegetation is an essential part of the ecosystem that supports denitrifying microbes. Not enough and it will not support the microbial community. Too much will impact on the hydrological flow and the area's ability to move water.



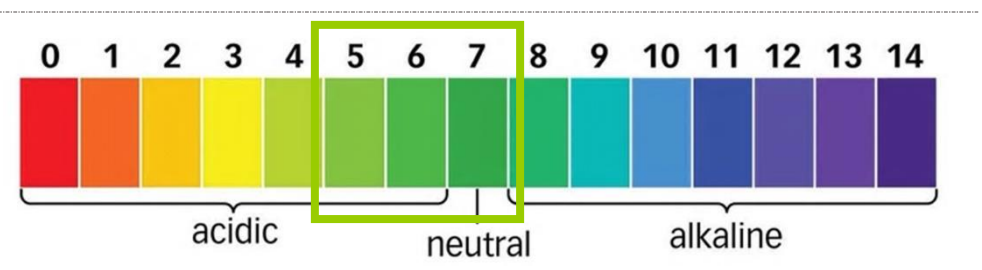
WATER FLOW

Water must move through the environment at a constant speed. If the hydrological flow is too fast, the microbes will not have enough time to denitrify the water. Too slow, and the water becomes anoxic, resulting in elevated toxic ammonia levels.



WATER pH

The water pH in wetlands can support different plant and microbial life. A pH of 5-7 will create ideal conditions for a denitrifying microbial community.



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