

Supplementary Material

Quantification of Ammonium Release from an Aging Free Water Surface Constructed Wetland To Improve Treatment Performance

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The following supplementary material is included: **Fig. S1** Microcosms from Run 1 after detritus substrate addition and a microcosm from Run 3 after detritus and source water addition, **Table S1** Nitrogen content of detritus substrate in microcosms prior to experiment initiation.

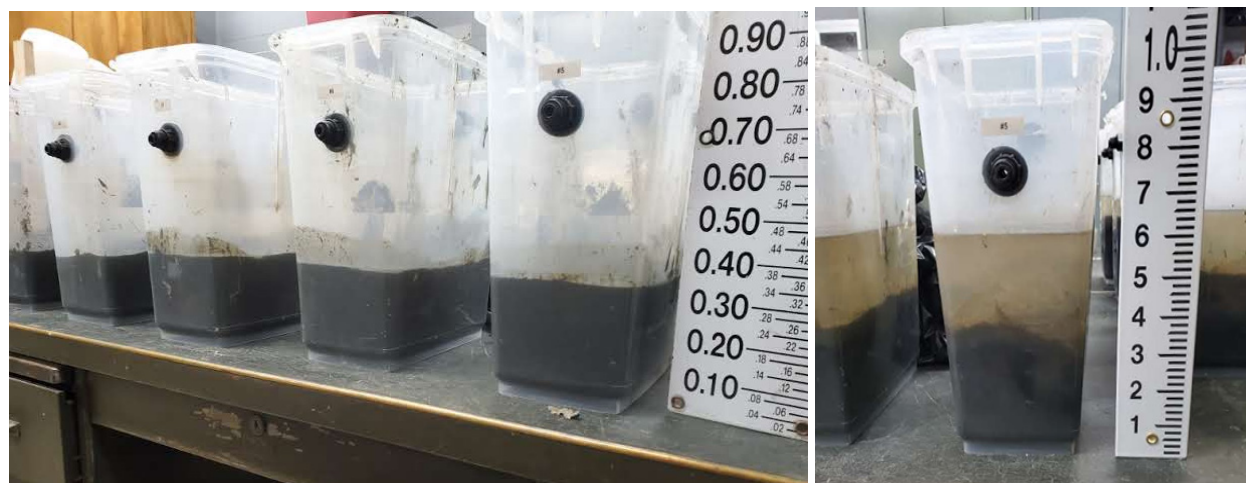


Fig. S1. Left: Microcosms from Run 1 after detritus substrate addition. Note that the depth of the detritus is approximately 9 cm (0.3 ft). Right: A microcosm from Run 3 after detritus and source water addition.

Nitrogen content in detritus substrate

The amount of nitrogen within the detritus was estimated using the nitrogen content, substrate bulk density, and the estimated volume of substrate in each microcosm. The detritus substrate was added while still moist to preserve microbial communities within the substrate. Therefore, the weight of the substrate added to the microcosm was a wet weight. To obtain the dry weight of the detritus in the microcosms, the substrate bulk density (0.17 g/cm^3), obtained in a previous sample of detritus, was multiplied by the approximate volume of substrate in the microcosm (10 cm x 13 cm x 20 cm). This estimated dry weight of 0.5 kg was then multiplied by the average nitrogen content in the detritus.

Table S1 Nitrogen content of detritus substrate in microcosms prior to experiment initiation

Experimental Run	Nitrogen content (mg/kg-DW)	Estimate of N in microcosm substrate (g)
1	7270	3.6
2	5950	3.0
3	3824	1.9