

Effect of pH on Metal Accumulation and Sequestration in Duckweed (*Lemna minor*) – Proposal

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Abstract. Duckweed (*Lemna minor*) has been shown to be very effective at removing and sequestering most metals from surface waters. However, past studies were conducted at near neutral pH. It is unclear what effect, if any, moderate to extreme pH values, both acidic and basic, will have on bioaccumulation of metals in duckweed. This proposal consists of three parts to help answer this question. The first step is to determine the pH range over which duckweed has positive or no growth under otherwise normal nutrient conditions. Second, is to compare the bioaccumulation of metals (Cd, Cr, Cu, Ni, Zn) over the range determined in part 1. Finally, field samples need to be tested and analyzed to determine if laboratory observations can be extrapolated to practical applications. Given duckweed's hardy nature and widespread endemism, it is hoped that this research can lead to a useful and practical method of treatment for metals-laden wastewaters.

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