

Lake Puckaway

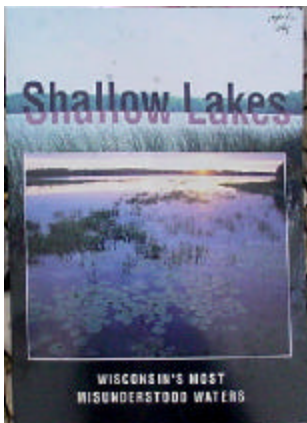
PROTECTION & REHABILITATION DISTRICT

Water Clarity- The Battle of the Plants

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Have you ever noticed the, clear algae-free water standing over carpets of submerged lake plants like watercelery? Like grass on your lawn, submerged aquatic plants anchor lake soil and utilize fertilizers that cause algae blooms. Without the "grass", excess fertilizers, nitrogen and phosphorous, are released, the soil erodes, and algae grows.

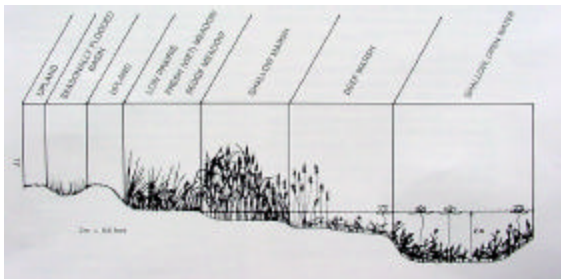
In shallow lakes like Puckaway, *aquatic plants are the key to clear water*. Algae and rooted aquatic plants compete with one



another for space and nutrients. Watercelery, bulrush, and water lotus are just some of the names on a long list of algae-fighting aquatic plants in Lake Puckaway. Algae are the principle components of cloudy water. Where rooted

plants are absent, the water is often cloudy because the algae grow better. Lake sediments, not anchored by plants, can erode and contribute to cloudy water.

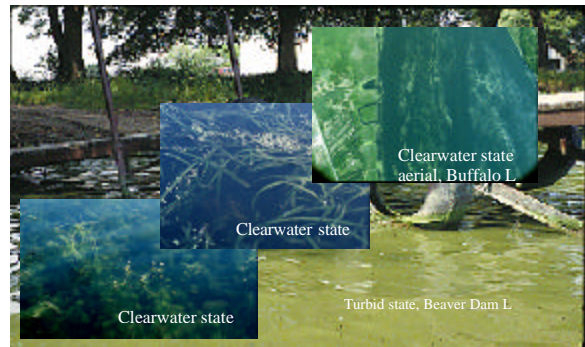
Algae come in various sizes and shape, but all are rootless and without leaves. Although



some forms are very visible, others are microscopic and will impart a green "pea soup" color to the lake water. Our management decisions will influence which competitor "wins". Many shallow fertile lakes,

like Lake Puckaway, are under constant threat of shifting to a turbid algae dominated condition. This shift has happened in the past to lakes like Buffalo, Beaver Dam, and Fox. This "alternate state" as it has been called, happens when the lake flips over from a dense aquatic plant lake to a dense algae growing lake with turbid water. Human or natural factors like carp, massive storms, heavy pollution, excess waves, fluctuating water levels, and fishery imbalances can flip a lake from plants to algae.

One challenge in maintaining clear water on Puckaway is to maintain a "resilient" plant community that is stable and bountiful. Taking the aquatic habitat for granted now can lead to bigger problems later. Maintaining "resilience" means encouraging rooted aquatic plants of all kinds. More plants means more resilience and stability.



Drawbacks? Yes. Boat access may be restricted in some areas. Plants may crowd shorelines. However, the benefits of good fishing, bountiful wildlife, and clear water make some compromises worthwhile.

