



CANDLEWOOD LAKE AUTHORITY

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Public Hearing – February 23, 2009 **Environment Committee**

Testimony Submitted by Larry Marsicano
Executive Director, Candlewood Lake Authority

In Support of

HB 5465 – AN ACT CONCERNING PHOSPHORUS IN DETERGENTS

Phosphorus and nitrogen are the nutrients that control primary production in aquatic ecosystems, regulating the level of algae growth in a system. Nitrogen is normally the limiting nutrient in marine environments and phosphorus the limiting nutrient in freshwater systems. Both are observed naturally in waterbodies and are necessary for a balanced aquatic ecosystem. However, additions of anthropogenic sources of phosphorus and nitrogen in aquatic systems can have deleterious effects causing taste and odor problems in reservoirs, anoxic conditions, noxious algae blooms (some of which produce phytotoxins), fish kills, and other conditions that detract from the values we associate with water resources.

There has been considerable research conducted in Connecticut and elsewhere confirming that our freshwater resources are becoming more eutrophic (nutrient enriched). In lakes, these changes are characterized by increases in phosphorus levels, which increase algal growth, reduce water column transparency, and increase biological oxygen demand in the water. This shift was observed in the lake fossil records from Candlewood Lake (and other CT lakes) and corresponds with the post World War II growth that occurred here and in many other places. Starting in the 1950s phosphorus levels began to increase and by the early 1980s the effects of cultural eutrophication were becoming exceedingly apparent.

The Candlewood Lake Authority and others began promoting use on non-phosphate laundry detergents back then and fortunately the rapid decline in the lake's water quality stopped. Most of the residents around the lake continue to only use non-phosphate detergents. And as the economic laws of supply and demand might predict in our more environmentally conscious world, most major producers of laundry detergent produce a non-phosphate product.

It is important to note that many homes areas around lakes in Connecticut are dependant on on-site sewage disposal or septic systems. This means that in those areas wastewater from laundry washing machines discharges to the septic system. Research has shown that phosphorus in the detergents used in those laundry and dishwashing machines, as well as nutrients in other waste discharges, can migrate from septic system leaching fields through the soils and to water resources, even on sites considered suitable to on-site sewage disposal systems. That is why it is important to reduce the amounts introduced into watersheds. This bill proposes to do just that.

As the Executive Director of the Candlewood Lake Authority, as well as the Vice President of the Connecticut Federation of Lakes, I strongly support the passing of HB 5465 – An Act Concerning Phosphorus in Detergents and commend the bill's developers and introducers.