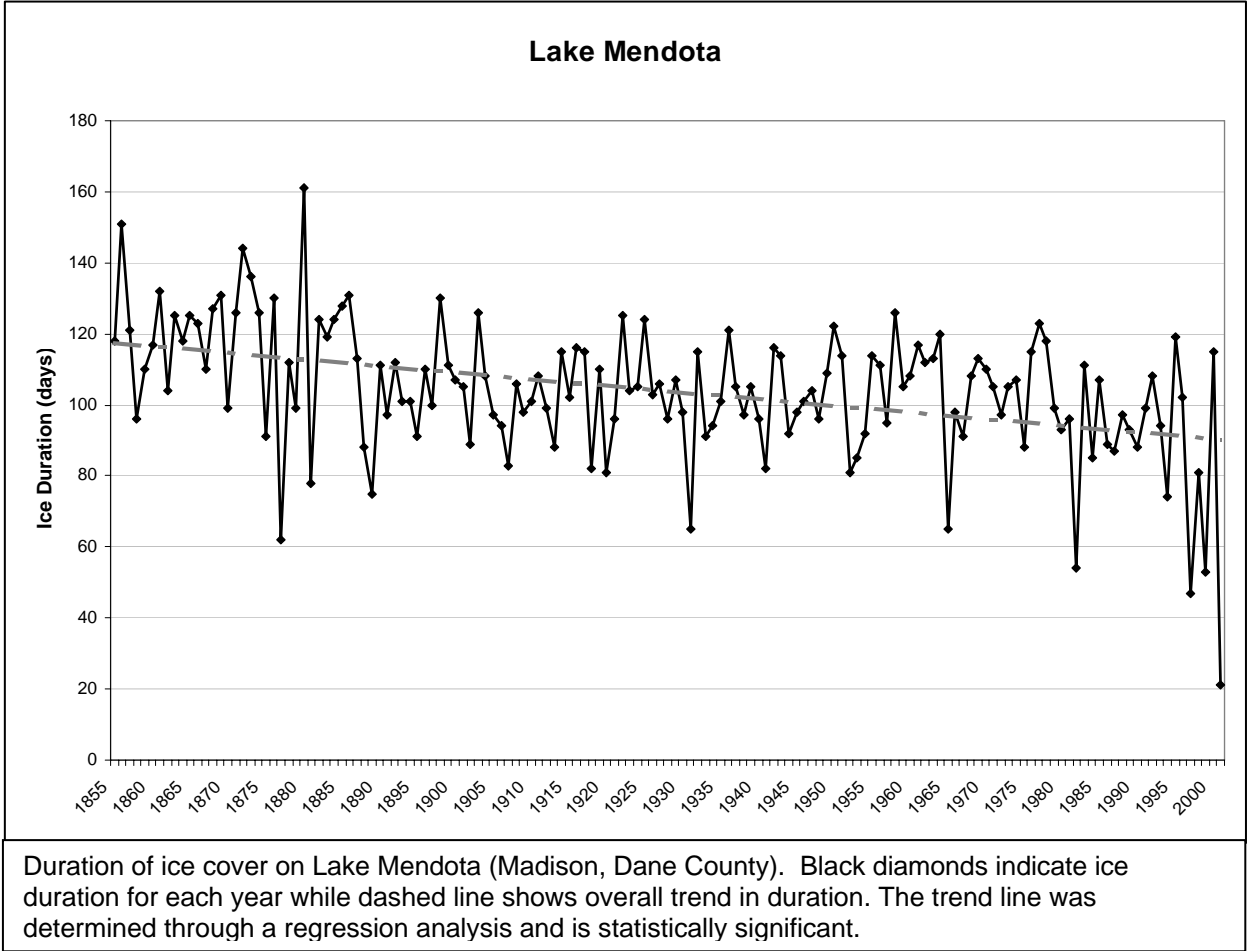


Long-term climate trends have the potential to drastically change the Pool ecosystem. Data presented in the Monitoring Results section indicate that mean summer water temperature is increasing. While important to remember that twelve years is a short period of time to establish a long-term trend, it would be prudent to discuss possible impacts to the Pool if the climate becomes warmer.

Potential evidence of this shift in climate can be found in ice-duration data collected from lakes around the state. Lake Mendota, located in Madison, has these data for almost 150 years. The duration of ice cover, or days between ice in and ice out, shows a steady decline over this period. Lakes Monona, Kegonsa, and Wingra, also in Madison, all show similar patterns. An analysis of ice duration on seven other Wisconsin lakes found that two others had similar patterns of decreasing ice duration. The other five did not show a significant trend.



These mixed results do not conclusively point to a shift in climate conditions but do provide examples of lakes in our state that may be affected by climate. It is important to realize that climate may not be the only factor influencing the shortened ice season on the lakes around Madison. Urbanization or other watershed impacts may also be playing a role. Lakes by themselves are complex ecosystems but the added impact of human-related activities makes them even more so.

With a warmer climate, fish species that tolerate warmer water temperatures, like members of the bass and panfish family (centrarchids), may thrive and outcompete those species needing cooler water temperatures, like walleye (percids). Aquatic plant communities may also shift to include more warm-water species. As the ecosystem shifts in terms of species composition, invasive species may find an easier time finding a foothold in the Pool.

A warmer climate may also result in reduced water levels as more moisture evaporates due to the warmer temperatures and reduced periods of ice cover. Experts predict that extreme weather events—droughts, floods, storms—will be more frequent and more intense. A host of other potential impacts are possible but will only be known for sure with more research and time.

For more information on global warming and possible climate changes, you can visit one of the following web pages.

Union of Concerned Scientists (UCS)

http://www.ucsusa.org/global_environment/global_warming/index.cfm

UCS, Wisconsin specific information

<http://www.ucsusa.org/greatlakes/pdf/wisconsin.pdf>

(Adobe Acrobat Reader needed to view this link)

UCS, page of global warming related links

http://www.ucsusa.org/global_environment/global_warming/page.cfm?pageID=546