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May 30, 2003

Urgent / please do not delay delivery

Itasca County Planning Commission/Board of Adjustment

Itasca County Board of Commissioners

Grand Rapids, MN

Dear Sir or Madam:

I am a professional limnologist, scientist and professor. I have been a summer resident of Itasca County for 52 years and my family has called it home for over a century. I work on a day-to-day basis with cities, counties and states who have failed to enact timely and sufficiently restrictive shoreland zoning regulations and so watch them pay a steep price in lost revenues, fines, restoration costs, and mitigation expenses. I urge you to avoid approving zoning regulations that diminish protection of lake water quality and especially urge you to specifically exclude Planned Unit Developments from the zoning framework.

Although the concept of dense developments of residences using common shore footage may seem economically attractive to the county in the short-term, experience has shown that counties rarely can expend the resources to adequately police and regulate these developments. The net effect, therefore, is a significant increase in impact on the lake resource which ultimately engenders federal or state intervention and eventual major mitigation and restoration costs. It is also important to remember that excellent water quality and its recreational and economic benefits, once lost, can rarely be restored. Even huge restoration efforts cannot return lakes to their original water quality.

The case of Clear Lake, Iowa, illustrates a few of these points. In 1900, Clear Lake had about the same mid-summer water clarity as Wabana Lake. It seemed like a huge resource that could absorb a lot of recreational development. Cerro Gordo County allowed PUDs and other nutrient sources to proliferate because they seemed great ways to increase revenue and economic development. Water clarity in Clear Lake now averages around a foot, bluegreen algae blooms are constant, bacteria warnings are posted at beaches, local revenues depend on DNR bacteria reports, and the people of the county are trying to raise the \$16 million (\$32 million by some estimates) it will take to fix the lake. There is enough phosphorus in the groundwater and sediments of the lake that they will be lucky if they can increase water clarity to 2-3 feet after spending all that money!

I read the minutes of your May 12 meeting with interest. I would like to underscore some statements made and make some corrections to a few others:

- Art Norton is right that lake water quality is directly impacted by watershed development. The North American Lake Management Society meetings I am sure

he attends are centered on people trying to figure out ways to undo the impacts of too much development. What they would give to be in a position to avoid it before it happens!

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- Screening houses from the lake in cluster developments does not change the impact of people and boats on the lake. Habitat destruction occurs from boating and high use-rates. Septic systems set back from the lake only mean the phosphorus takes a longer time to get to the lake. It will get there. No free lunch.
- Itasca County lakes are very sensitive to degradation. Once you are able to measure degradation, it is likely to be too late to restore water quality. Polluted groundwater continues to flow to a lake for decades after septic systems are removed. Nutrient rich sediments continue to be stirred up every time the wind blows or a boat speeds through the shallows. Nutrient rich soils erode whenever the rain falls. Watersheds have a longer memory than our lifetimes.
- Both people who own shoreland and those who simply visit Itasca County lakes benefit from protected water quality. A measure of this is that the people who go camping at Clear Lake or make day trips to it are willing to pay nearly as much for improvement of water quality as residents.
- Limnologists have known for 40 years that lakes' water quality declines directly as the number of people in the watershed increases, that the changes occur slowly and can be irreversible, and that lakes like those in Itasca County are particularly susceptible to degradation.
- Gravel extraction should not be done within shoreland areas. Suspended solids and dust can transport huge amounts of nutrients and degrade lake resources. Gravel is found in lots of places. Lakes with good water quality are not.
- One of the most lucrative forms of recreation in the United States is the non-consumptive enjoyment of nature. Even Iowans rank this as the most valuable activity around lakes. The value of peace, quiet, and unspoiled beauty should never be underestimated. This industry was worth \$30 billion in the US in 1996; \$383 million in Minnesota. Economic use is NOT about the number of people you can squeeze into a watershed; it's about the quality of the environment that people are willing to pay to enjoy.

In summary, there is plenty of limnological and economical data that supports careful restriction of shore and watershed development around excellent and sensitive lakes like those in Itasca County. The most responsible course is to disallow residential PUDs and other high density uses in lake watersheds. The next county zoning ordinance should make sure that shore and watershed development is conservatively regulated to ensure continued high water quality for the generations to come.

Sincerely,

John A. Downing, Ph.D.
Professor