ASK THE EXPERTS

If you have a question about water related issues, riparian rights, and/or lakes and streams, etc., let us know by email or snail mail.

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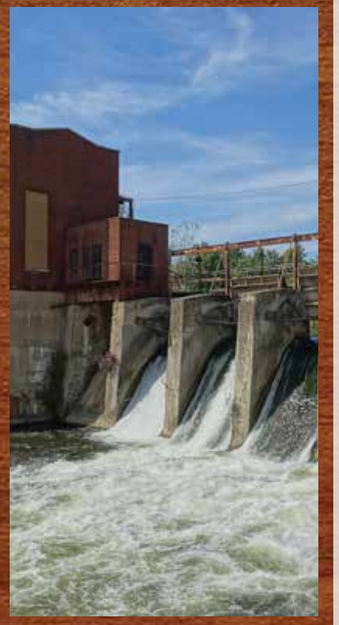
Stanton, MI 48888



The Old Pucker Street Hydroelectric Dam in Niles, Michigan

Question: Can a lake association or the local government raise or lower the level of our lake via a dam, impoundment or pump?

Answer: In general, no, not without a court order. MCL 324.30701 et seq. provides a procedure whereby a county circuit court can set lake levels for an inland lake in Michigan. The process (via a lawsuit) is initiated by either citizen petition or action by the county board of commissioners. The circuit court judge decides whether or not to set a lake level or levels, and if so, at what elevation(s). Typically, the court holds at least one public hearing so that all of the affected parties can be heard.

Attempting to maintain, raise or lower a lake level without a court order presents significant liability potential to the local government or persons who attempt to manipulate the water level. If the level is raised too high without a court order, the owners of properties subject to flooding could potentially have a damages claim against the municipality or individuals who raised the lake level. Conversely, if the lake level is maintained too low artificially, a similar damages lawsuit could be pursued based on wells going dry, decreased recreational opportunities and similar claims. There are a few situations, however, where a local municipality or a lake association could lawfully maintain lake levels without a court order. That would be true if a municipality owns and controls the entire lake or a lake association created by deed restriction is expressly given the authority to maintain the lake level.

Over the years, court lake level orders have become more sophisticated. Lake levels set by court order 40 or 50 years ago typically have only one lake level set year round, which often proves ineffective. Today, courts will often set two lake levels – one for the summer season and one for the winter. Even for those lake levels, a court will typically specify a range of elevations. In most cases, the court orders the county drain commissioner to operate the dam, impoundment or augmentation well involved. A person who wrongfully interferes with the apparatus maintaining a lake level set by court order could be held in contempt of court, face criminal penalties and could also be liable for damages. The court normally also imposes a special assessment on the benefitted properties to fund the costs of controlling lake levels.

Of course, setting lake levels can often be challenging for the court involved. Some people prefer high lake levels (including boaters and farmers), while other groups prefer lower lake levels (such as riparian property owners whose properties or basements are potentially subject to flooding). For more information regarding this matter, please see the earlier article by Cliff Bloom in the fall 2000 issue of *The Michigan Riparian* magazine.

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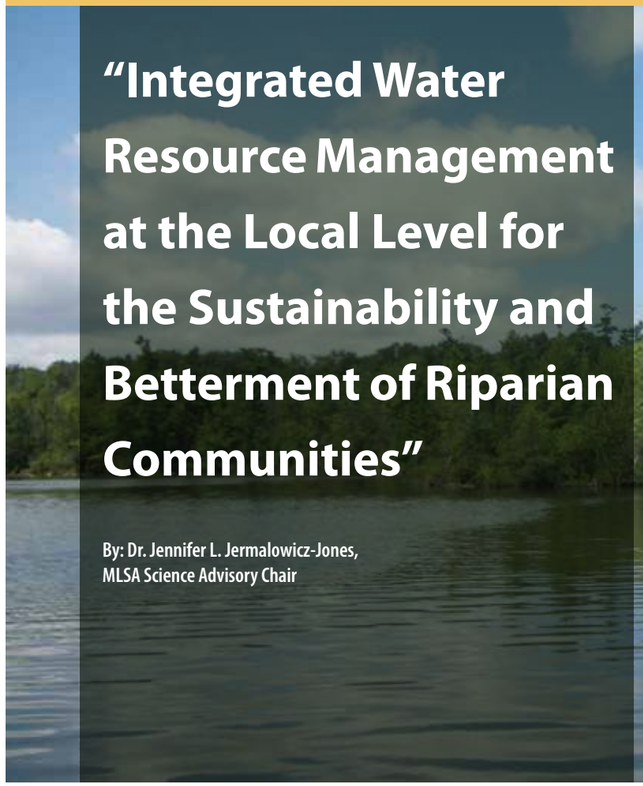
Our experts include our riparian attorney, a biologist, a limnologist, an engineer, a college professor and a state agency official. They look forward to responding to your question.



"Integrated Water Resource Management at the Local Level for the Sustainability and Betterment of Riparian Communities"

By: Dr. Jennifer L. Jermalowicz-Jones,
MLSA Science Advisory Chair

INTRODUCTION:

Betterment may be defined as an improvement or increased value of a property because of improvements beyond mere repairs or as an improvement that adds to the value of a property or facility (Webster 1989). It is critical that the creation of metrics for the determination of betterment be developed in an effort to achieve sustainable interactions between citizens and the resources that are exploited for enjoyment and sustenance. Events such as progress have been at the forefront of discussions regarding betterment and sustainability because progress is often associated with economic growth, but may proceed to levels that are not suitable to sustainability or betterment, especially when applied to ecological or natural systems (Norgaard, 1994). Furthermore, it is also critical that progress be monitored to measure its impact on resources that are vulnerable to degradation or depletion and rendered unsustainable.

The development of riparian communities around inland lakes throughout the United States serves as an excellent model of progress and betterment for the people but not necessarily a favorable model for sustainability or betterment of the lake ecosystems. First, the major threats to inland lakes, including developmental pressures, non-point source pollution and water quality degradation, and invasive species must be defined. Additionally, the property values associated with lakeshore residences have been shown to significantly decline with increased impairments to the lakes (Boyle et al., 1998). Lower property values also have a negative impact on the revenues of the municipality which consequently leads to declines in the amount or integrity of the services offered to the citizens and ultimately a decline in the betterment of the community.

Attainment of betterment by a local populous that resides on inland lakes should necessarily strive to complement both the path to progress and well-being and betterment of the water resource itself in an attempt to provide a long-term, sustainable mutualism between the community and the lake. Although the perspectives or world views regarding the concept of betterment are likely to differ among the population, the general agreement is that a resource provides a state of well-being or value to the individuals and allows

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"Integrated Water Resource Management at the Local Level for the Sustainability and Betterment of Riparian Communities"

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for an increase in the quality of life. Thus, there is a strong inter-dependency of both subjects for the preservation of a sensitive water resource to continually yield the many recreational and socio-economic attributes that are inherent with its presence. Such a feat may be accomplished through the development of a local water resource framework which includes riparians, local stakeholders, and municipality officials, along with careful analysis of the water resource condition and vulnerabilities. Addition of this approach to the field of Integrated Water Resource Management will be valuable and perhaps universally applied to other riparian communities who strive for progress along with protection and sustainability of the indigenous water resources. Furthermore, the cooperation of lake citizens, lake scientists, various branches of government, and the integration of economic impact valuation studies further emphasizes the power that a multi-disciplinary approach can contribute to the betterment of a local area with regard to progress and sustainability of both the community and the aquatic ecosystem.

THREATS TO INLAND LAKES FROM INCREASED DEVELOPMENT

Aquatic ecosystems such as lakes, streams, rivers, and ponds are highly susceptible to degradation in water quality due to their proximity to nutrient and sediment sources and demand for public recreation and survival. In a 2007 report, the United States Environmental Protection Agency (USEPA) determined that by 2002, nearly 47% of lakes and reservoirs in the United States had significant impairments. The nearly 11,000 inland lakes of Michigan are an essential resource to the recreation and tourism economy of Michigan, with over $15 billion dollars per year generated in the state (Stynes, 2002). Unfortunately, the ecological and human health impairments to inland waters are not often realized until the system is in serious distress and the route back to ecological balance may be difficult at best. During pre-development times for year-round lakefront living, qualitative data was transformed into quantitative knowledge in an attempt to make valuation determinations of resources in the absence of obvious metrics (Cobb and Douglas 1928); however, with dramatic increases in development since that period, quantitative data on valuation is abundant and utilized for resource impact studies.

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A study of lakefront communities in Seattle, Washington by Brown and Pollakowski in 1977 analyzed market sales data between 1969-1974 and shoreline proximity data to conclude that property values declined with distance from the lake. This finding further strengthens the argument that the water resource provides significant value to riparian communities and thus is a functional component in the process of betterment achievement. It is therefore critical that rapid detection of environmental factors which may threaten this value be discovered and mitigated to avoid a deviation from the goal of betterment. Several studies have been documented to show this negative association between development and water quality and resultant property values in Michigan and other states. Minnerick (2001) noted that the townships of Gerrish and Lyon in Roscommon County, Michigan, increased by 246% and 185% respectively, between 1970 and 1990. Both of these townships contain the formerly pristine Higgins Lake, which has experienced increased shoreline development and water quality impairments such as increased chlorides, nitrogen, phosphorus, and turbidity, and the onset of invasive species such as the exotic aquatic plant, Eurasian Watermilfoil (*Myriophyllum spicatum*) which all impaired recreation, lowered biodiversity, and decreased property values. In an attempt to further elucidate the relationship between water quality and property values, Leggett and Bockstael (1999) analyzed multiple variables suspected to impact such values through the assessment of numerous water quality monitoring stations along the western shoreline of Chesapeake Bay (Anne Arundel County) which were established in zones where abundant waterfront transactions occurred. Hedonic regression analysis revealed that property values in areas with high fecal coliform contamination were lower and that waterfront owners were favorable towards payment for the concomitant reduction in coliform quantities. Another relevant study involved the review of 1,205 lakeshore property sales from lake communities in Minnesota lakes within the jurisdiction of the Mississippi Headwaters Region (Krysel et al., 2003). The study demonstrated the importance of water clarity in the retention of high property values. Furthermore, it was estimated that a one-meter difference in the loss or gain of water clarity was all that was necessary to have measurable impacts on the waterfront property values of the studied Minnesota lakes, with millions of dollars at stake. How can riparian communities attempt the goal of betterment as progress in developing communities is evident and lakes are continually facing environmental pressures from much needed development?

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