

**Eagle Spring Lake  
Management District**

P.O. Box 196  
Eagle, Wisconsin 53119

September 17, 2009

Wisconsin Department of Natural Resources  
C/O Jennifer Jerich  
141 NW Barstow Street, Room 180  
Waukesha, WI 53188

RE: Eagle Spring Lake Water Level – Docket # IP-SE-2007-00496

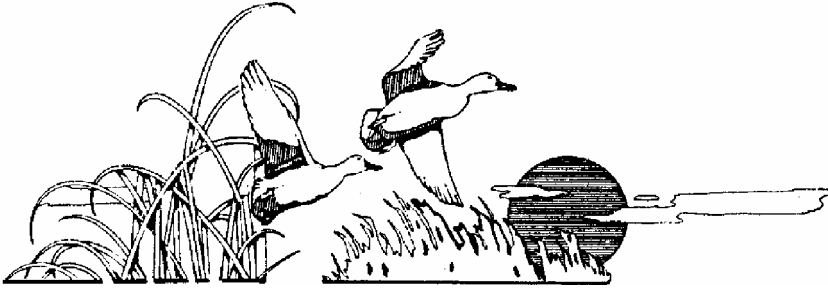
Dear Jennifer,

Please find enclosed the Eagle Spring Lake Management District's review of the Wisconsin Department of Natural Resources Environmental Assessment – Docket # IP-SE-2007-00496.

If you have any further questions, please contact Thomas A. Day –  
Chairperson for Eagle Spring Lake Management District at (262) 594-3231.

Sincerely,

Gina Krause  
Bookkeeper/Administrative Assistant  
Eagle Spring Lake Management District  
(262) 594-3583



Eagle Spring Lake  
Management District  
P.O. Box 196  
Eagle, WI 53119

**Eagle Spring Lake Management District's Review of the Wisconsin Department of  
Natural Resource's Environmental Assessment – Docket # IP-SE-2007-00496**

After extensive review of the Department Environmental Assessment (EA), we offer the following comments:

1. Project Summary – Page 1 Paragraph 1

Water levels held for approximately 50 years (Attachment #51):

SEWRPC reviewed aerial photos back to 1941 (68 years) and determined essentially that the current water levels of Eagle Spring Lake have remained unchanged for that entire period.

A review of Attachment #51:

On February 8, 1926, the Public Service Commission entered an order for the lake level of Eagle Spring Lake to be held at elevations of between 98.50 (maximum) and 98.30 (minimum), relative to a fixed bench mark. Data from Attachment # 51, covering the period from 1919-1953, documents an actual range of 98.10 – 98.96 (average 98.68). Because water levels were consistently above the ordered level, by resolution (see Exhibit A), the Eagle Spring Lake Advancement Association, Inc., on July 18, 1954, requested the PSC to change the minimum operating level to 99.10 “and the maximum level should be such reasonable height above said minimum level as the Commission shall fix”. The P.S.C. on October 14, 1954 (re)set the levels at 99.10 to 98.80 (corresponding to a staff gauge reading of 9.14 – 8.84). Data from Attachment #51, covering the period from 1958-1966 reflects an average water level of 99.31 (n = 14 and all above the revised maximum of 99.10).

The data from 1967 through 1995 reflects an average elevation of 99.56, essentially the midpoint of our request to acknowledge the 9.4 to 9.7 staff gauge operational range. It should be noted that in approximately 1966 significant structural work was done to the Wambold Dam probably resulting in the removal, replacement and likely resetting of the staff gauge. In addition, as you point out over the years, the Mean Sea Level (MSL) elevation equivalent of the lake surface has changed as a result of survey errors.

Our point relative to the above is that the various water level orders and their associated datum have not been consistent with the actual historical/current water levels. The District is asking to bring the “ordered” datums into conformance with actual current and past water levels, as documented by the aerial photographs.

Consistent with the above point, the EA makes several statements that conclude that the effects of “higher water levels” on changes that might have or might not have occurred on Eagle Spring Lake, although there is little or no scientific proof for those statements. In most or all cases, the “higher water levels” are not likely a cause and lower water levels are by no means the appropriate solution to the issue.

**Page 1, paragraph 3**

A further comment on Attachment #51 relates to “The Maintenance of Current Water Level requires a Wisconsin Licensed Professional Engineer to certify that no structure changes are needed to meet state dam safety standards.”

As an attachment to this document, we have included correspondence dated 4/29/2000 to K. Margovsky which includes K. Wood’s Wambold Dam Structural Investigation Report dated 4/3/2000. Please note Mr. Wood’s assessment: “In general, the dam is in very good condition” and “In conclusion, Wambold Dam is currently a very stable structure, even with increased lake storage”. That these conclusions remain valid is substantiated by the performance of the impoundment during the exceptionally high flows in the Mukwonago River experienced during June 2008, and by the fact that the impoundment was able to retain an additional volume sufficient to protect the downstream Phantom Lakes dam when that structure was faced with over-topping.

**4. Manipulation of Terrestrial Resources – Page 3**

“Period extending back in time to at least 1960 (see attachments 2-10)”

Attachment #2 goes back to 1941.

**7. Emissions and Discharges – Page 3**

“A short-term change (decrease) in stream discharge would be expected during the initial period of implementations, as a volume of water equivalent to the proposed increase in lake volume would be retained behind the Dam.”

No change would occur because we are already within the requested operating range of 9.4 – 9.7.

## 11. Groundwater – Page 9

“The southern bays support a well balanced, dense native plant community. The heavy native plant growth prevents the mixing of water compared to less vegetated portions of Eagle Spring Lake.”

If you are referring to Jacks Bay and Mary's Bay, we question your rationale for plant growth influencing temperatures. These are two finger Bays, somewhat isolated by the local topography from mixing by wind, with slow-no-wake restrictions, and less influence from groundwater inflow and Mukwonago River flow compared to other areas of Eagle Spring Lake. While floating-leaved aquatic plants such as lily pads could contribute to a lack of wind mixing, these would have little impact on groundwater inflow.

## 12. Biological Environment

### Aquatic Plants – Page 10 – Last two paragraphs

Your conclusion from examining Attachments 2-10, “demonstrates that the percent coverage of emergent vegetation has decreased over time“, is not correct. Attachments 2-10 were from March – April time period before the emergent plants developed in the spring of the year: April 2007, April 2005, March 2000, April 1995, and Spring of 1990, 1980, 1970, 1963, 1950, and 1941 (source: Waukesha County Land Information System - - <http://maps.waukeshacounty.gov/imf/sites/waukesha/html/metadata/Orthophotography.htm>). Some of the aerial photos reflect ice on the lake surface.

“The Department contends that the open water areas where much of the fast boating occurs is not in a clear water condition.” “Episodic turbidity has been a problem within this Lake, which has been primarily caused by high speed boating activities at weekends.” “Wind resuspension of sediments along with the presence of bottom-feeding fishes (i.e., carp) that facilitate this process by reducing the erosion resistance of the sediment may also be contributing to the periodic turbidity problem”.

Very briefly, the above comments are an over simplification of what is going on in Eagle Spring Lake. Carp are not a factor as they relate to this area and situation and one DNR fisheries person has in the past agreed with this statement. We have observed episodic turbidity resulting from wind - - even with no boating activity. Groundwater flow, marl deposition, pH fluctuations, water temperature, and the density of emergent and submergent plants are all factors that we have found to influence turbidity both positively and negatively. We have reemphasized that, particularly in the last couple years, with more abundant precipitation, we have observed improved water clarity resulting from the interactions of most of the factors mentioned above. This is in direct contrast to the preceding drought period culminating in diminished water clarity in 2003 and 2004. On page 10, you characterize our lake as “the clean-water macrophyte dominated ecosystem”. This appears to be a contradiction.

“In response to increasing carp numbers throughout the late 1980’s, Eagle Spring Lake became the site of the community “carp out” that was conducted annually between 1990 and 2001.” There are no data to support increasing carp numbers.

Our recollection was not that we were concerned about an increased carp population but that we recognized that carp could become a problem. Hence, our “carp outs” which raised money for lake management projects, brought the lake community together and focused attention on carp. In 2009 we have again focused attention on carp i.e. commercial removal and two \$1000.00 tagged carp.

We will have more to say on the fish issue later in the Environmental Assessment, but suffice to say in no way do we feel current /past water levels have contributed to our fish issues. If the water levels were a factor why are we seeing improvements now?

### 13. Cultural Environment

#### a. Land Use

“Waukesha and Walworth Counties have updated their shoreland zoning regulations and attendant maps to preclude further loss of wetlands in the shoreland areas.”

Lowering the lake water level by 6.5” could result in a loss of 12.6 acres of wetlands. Would this be a violation of County shoreland zoning?

#### b. Social/Economic – Page 14

We agree with you that “at times the level of use is inappropriately high for the waterway”, but we do not agree that water skiing is allowed “throughout the lake including in relatively shallow areas.” We have many slow-no-wake areas and time restrictions designed to manage water skiing and related boating activities, as well as defined boating lanes designed to protect high quality stands of native aquatic plants that recreational users are encouraged to use. In addition, we have proposed additional restrictions but the necessary dialogue between the ESLMD and DNR never developed.

Additionally, in this section you do not acknowledge the Wisconsin Department of Natural Resources (WDNR) in the development/completion of the first draft submitted to you by Southeastern Wisconsin Regional Planning Commission (SEWRPC), and the WDNR’s data primarily serves as the basis of the first draft of the Environmental Assessment put together by SEWRPC. You were significantly involved in the draft Environmental Assessment.

## 15. Physical – Page 15

### Increase water level order – (third bullet)

“The increased water level would ... increase the potential for flooding of basements of those few homes located upstream of the dam. It has been reported that one house south of the public recreational boating access site has a frequently running sump pump; the Board of Commissioners of ESLMD also note that similar conditions apply to other homes near the public recreational boating access site and surrounding the embayment locally known as Jacks Bay.”

You infer that a “frequently running sump pump” and homes around the lake in low lying areas are adversely affected by the current water levels. That is not true. The conditions discussed above were examples of homes constructed too close or within the current water table. With groundwater levels very high right now, the sump pumps are operating at an increased frequency. This is not related to the current lake or surface water levels.

### Maintain Water Level Order

“The ... decrease of 0.56 feet in depth would not significantly affect the overall depth.”

We disagree. 0.56 feet is approximately 15-18% of our average water depth and that is significant.

“There would be minimal streambed erosion of sediments beyond what is already occurring.”

The SEWRPC [draft] of the Environmental Assessment (page 19) disagrees with the above statement essentially stating “there is an elevated probability that streambank erosion would increase in response to a drawdown primarily due to an increased streambank height that will be more susceptible to drying out and more exposed to freeze/thaw cycles.”

As stated previously, we don't believe the science supports your speculation that a lower water level “may provide some relief to high groundwater levels directly adjacent to the lake including parcels that have been reported to have frequently running sump pump.”

The remainder of this Section (15) has considerable misrepresentation/interpretation of what the Lake Districts concerns are with a lower water level, and lacks supporting references/factual information to support the various statements.

In summary – nobody can accurately predict what Eagle Spring Lake would become if the water level was reduced by 0.56 feet. We do know what Eagle Spring Lake is, at the current water levels. The unknowns should be a concern to all of us.

## 16. Biological

You suggest increased water temperatures/stratification, the low number of Northern Pike and the loss of two intolerant minnow species on our current water levels without specific facts or references that support that position. In fact SEWRPC in their draft E.A. provided data and rationale for temperature differences. In addition, Dr. John Lyons has stated that the disappearance of the two minnow species between the 1958 – 1989 and 1990 – 2005 studies is more likely due to watershed-related development influences as opposed to water levels, stating that similar situations have occurred on other lakes.

The Northern Pike issue has always been a mystery on Eagle Spring Lake. Surveys and fishing have never found significant Northern Pike between May and fall, but ice fishing results contrast to the previous mentioned period. Local speculation is that the Northern Pike migrate to the deeper water of Lulu Lake and return to Eagle Spring Lake in the winter. As for spawning even Sue Beyler has pondered why Northern Pike spawning success doesn't appear to be significant. It is not related to water levels because we have had a significant presence of Northerns during periods in the last 68 years and currently we are on an upside for Northern Pike based on ice fishing observations. More to the point, there has never been a Northern Pike spawning study.

The Environmental Assessment attempts to minimize the possible loss of 12.6 acres of wetland should the water level be dropped. The loss of wetlands throughout the state is an issue no matter what the acreage. Why isn't the loss of even ½ acre in our watershed just as significant?

Here again you suggest the bass, bluegill, and carp issues on high water levels. There is no mention of past liberal fish limits, fishing pressure/success in the 1950s -1970s, the clear cutting management practices from 1985-1995 to counter a major infestation of Eurasian Water Milfoil (loss of forage fish due to weed harvesting), and marl turbidity issues particularly during a drought period as likely issues reducing spawning success and the fishes' abilities to feed normally, thus lowering growth rates.

Once again we will make the point that all evidence points to a fisheries recovery and its occurring with "higher" water levels.

We strongly disagree with the following statements on page 17 for reasons already stated:

"There will be no loss in fish habitat from maintaining the permitted water levels."  
"Higher and more stable water levels may enhance spawning success for common carp." "The 12.6 acres of exposed lake bed will vegetate with emergent plant species such as bulrush or pickerel weed."

In fact the more likely scenario for each of those statements will result in negative impacts. These are speculative and the science does not appear to support the statements.

22. Significance of Risk

- a. "The full impacts of maintaining higher water levels on this system are not fully understood", or "assessed" (page 1).

Quite the contrary, we have 68 years of history and volumes of information to guide us in the management of our current lake levels as opposed to starting over with lower lake levels.

- b. As to speculation on dam failure. Again we have 68 years of managing water levels. Most recently during the June 2008 flood event we were able to hold water back in order to assist a perilous situation at the Village of Mukwonago Dam. In addition, we are very close to completing our requirements for an emergency spillway capacity to meet the 500 year flood requirement.

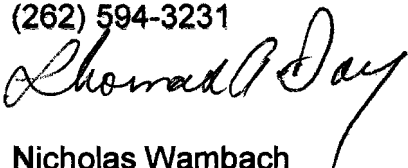
In conclusion, the Eagle Spring Lake Management District has shown a willingness to pursue fluctuating water levels and additional slow-no-wake areas in order to enhance all aspects of the ecology of Eagle Spring Lake and its watershed *within the context of its lake management planning efforts*, and will continue to do so. However, the time is long past for the lake water level order to be made consistent with the historical documented water levels (local gauge readings of 9.4 – 9.7).

For any clarifications, contact any of the Eagle Spring Lake Management District Board Members or resident John Mann.

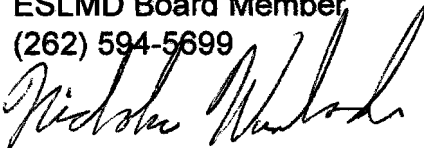
Sincerely,

Eagle Spring Lake Management District Board Members & John Mann,

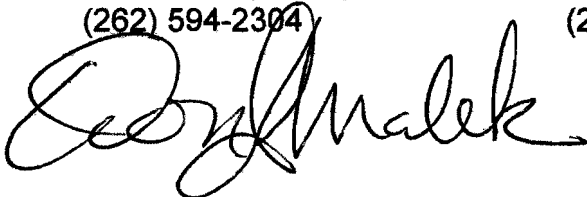
Tom Day  
ESLMD Chairperson  
(262) 594-3231



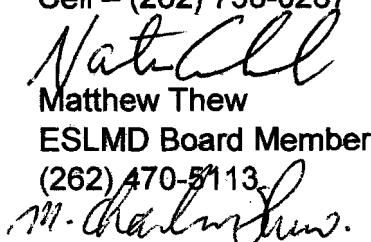
Nicholas Wambach  
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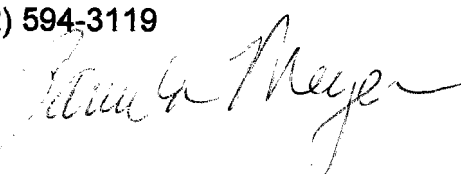
Don Malek  
Town of Eagle Representative  
(262) 594-2304



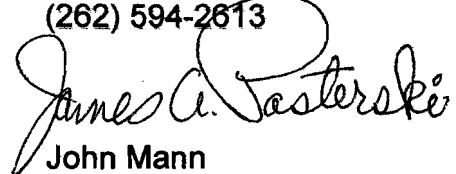
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