7/10/89

COPY TO ALL HOMES ON LAKE.

IF YOU FEEL MORE TESTING SHOULD BE DONE PLEASE ADVISE ONE OF THE LAICE ASSOCIATION BOARD MEMBERS.

Dennis

Illinois State Water Survey

Telepbone (217) 244-0868
Analytical Chemistry Unit
2204 Griffith Drive
Champaign, Illinois 61820-7495

July 7, 1989

Dennis Lewis, Treasurer
Cherry Hills Lakeowners Association
2411 Cherry Hills Dr.
Champaign, IL 61821

Dear Dennis:

There has been some question and concern as to the safety of the Cherry Hills Lake for swimming, fishing, etc. The Association was considering hiring a firm to sample the lake water and perform analyses upon the water. On behalf of the Water Survey, I offered to perform some tests upon the lake water before expensive testing was begun.

Since our laboratory does not have the instrumentation to perform organic analysis (for pesticides and herbicides), my intent was to test for related parameters that may be indicative of agricultural activity. I also hoped to persuade another agency to perform the pesticide/herbicide analysis for us. Water samples were collected from each end of the lake for a nitrogen analysis in our laboratory, a bacteria analysis by the Illinois Department of Public Health, and a possible pesticide/herbicide analysis.

Our laboratory found a concentration of about 8.5 mg/L of nitrate (NO_3)at each end of the lake. This is below the limit of about 45 mg/L established by the Environmental Protection Agency if the lake were a public drinking water supply.

The Illinois Department of Public Health sets aside minimum sanitary requirements for public bathing beaches. Their standard states that a coliform index over 1000 per 100 ml, or a fecal coliform count over 100 per 100 ml in any 2 consecutive samples shall be considered as a guide for requiring additional investigation. Although our lake does not qualify as a public bathing beach, IDPH agreed to perform bacteria analyses for us. They found total coliforms of 40 and 100 per 100 ml and fecal coliforms of 30 per 100 ml at each end of the lake, well below the above stated limits.

My efforts to get a pesticide/herbicide analysis performed on the water weren't a great success. I was forced to rely upon a colorimetric method that was useful only in determining triazine herbicides (i.e., Atrazine, Simazine, Propazine). Although the results indicated positive for a substantial amount of triazine (over 0.5 mg/L), the manufacturer of the test recommends that all positive samples be confirmed by approved methodologies.

I think the nitrate and bacteria tests, while below the limit, indicate that some potential exists for contamination of the lake by unwanted elements. The herbicide test, if accurate, definitely indicates contamination. However, if we stop to think about it, it shouldn't be surprising that these kinds of things are found in the lake. The entire subdivision is surrounded by farm activity, the subdivision itself used to be farm ground. Most of us probably put fertilizers and week killers on our lawns that run into the lake. And there have been instances of oil and paint and whatever else running into the lake from the inlet tiles.

ENR A Division of the Illinois Department of Energy and Natural Resources

As far as additional testing goes, I'm not sure that it is feasible to pay a private laboratory to monitor our lake water for toxic materials. A recent advertisement in a trade magazine offers testing for 101 elements, compounds, contaminants, and water quality indicators for $245.00 (if we collect and mail the samples). The problem is that these tests are not inclusive of all known toxics, and the quality of the lake is bound to change seasonally so that sampling would probably have to been done 4 times a year to be meaningful.

I hope this information is of some help to you and the rest of the board. Perhaps the best advice one could give in this situation would be to "swim at your own risk". If we can be of further assistance, please let us hear from you.

Very truly yours,

Brian W. Kaiser

Brian W. Kaiser
Associate Chemist
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llj