

Appendix K

Beaver Dam Lake Management District Newsletters

Water Quality

For anyone who is interested in the results of past water quality testing, the Self Help Program has now put them on the DNR webpage. You may access the results at:

<http://www.dnr.state.wi.us/org/water/fhp/lakes/selfhelp/index.htm> then click "Lake Data". Follow the links to Barron County and Beaver Dam Lake.

Every lake in the State that does testing is on the site, so it's very interesting to compare Beaver Dam Lake to others. Our lake is among the best in Barron County.

The DNR web site itself is very interesting. There is a wealth of information there. Try it sometime.

the north end of Norwegian Bay. Just past the north boat landing you will see an orange gate on the right side of the road. Enter here and drop off your leaves in the big pile. The City will burn them for you.

Save these directions for future use!

Leaves and plant material – Bring to the City Dump – Don't burn them!!

The City of Cumberland has a public area you can drop off your leaves and other organic plant materials. You can actually dump the leaves, reuse the bags or boxes etc. for the next trip.

The "Dump" is on the north side of Norwegian Bay. From Highway 63, turn at Odden's Nursery and head east. At the "T", turn left for one short block. Take the first right and you are heading east again along

Around The Home

Many sources of our water pollution originate right at our homes. For example, fertilizer and pesticides applied to lawns can wash into ditches and storm sewers and then directly to the lake. Remember, if it helps your lawn grow, it will also promote growth in the lake!

Similarly, leaves and grass clippings naturally contain nutrients such as phosphorus and nitrogen. If grass and leaves are raked to the curb, or into the lake, the nutrients they contain goes into the water and promotes algae and weed production. Leaving a buffer zone of plants or natural cover instead of

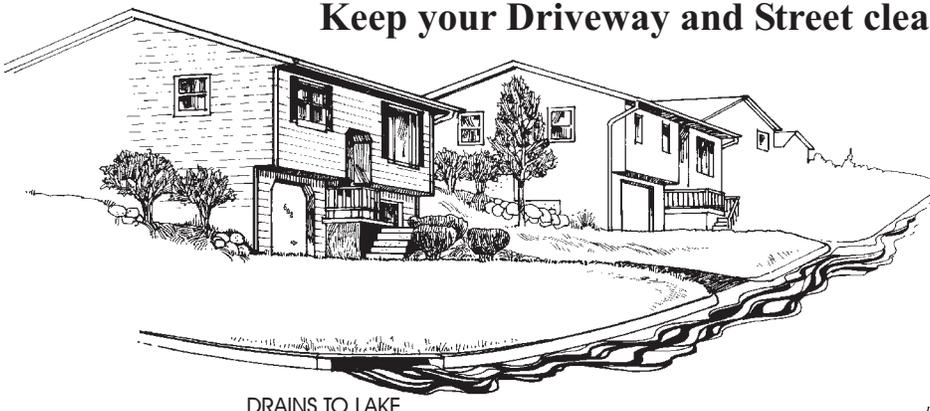
mowing right down to the waters edge can help filter out these nutrients

The practice of burning these yard wastes not only releases air pollutants, but the ashes can pollute the lake, as well, if carried away by runoff waters.

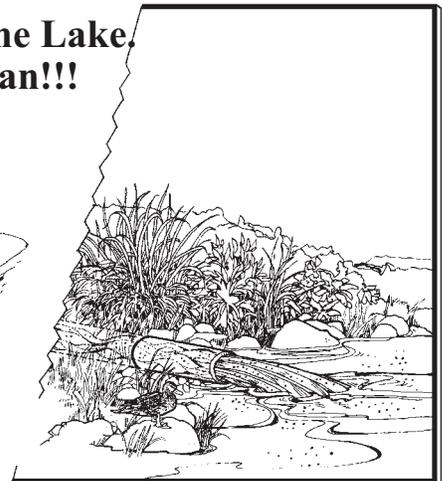
The connection between auto maintenance and water quality can be very serious and direct. Anything that drips from a motor vehicle onto pavement - oil, gasoline, brake fluid, antifreeze - can quickly be flushed into the lake with a rainstorm. These chemicals are toxic to aquatic life.

Keeping our lake healthy and reducing algae blooms is every body's responsibility!

All Streets of Cumberland wash into the Lake. Keep your Driveway and Street clean!!!



DRAINS TO LAKE



K-1

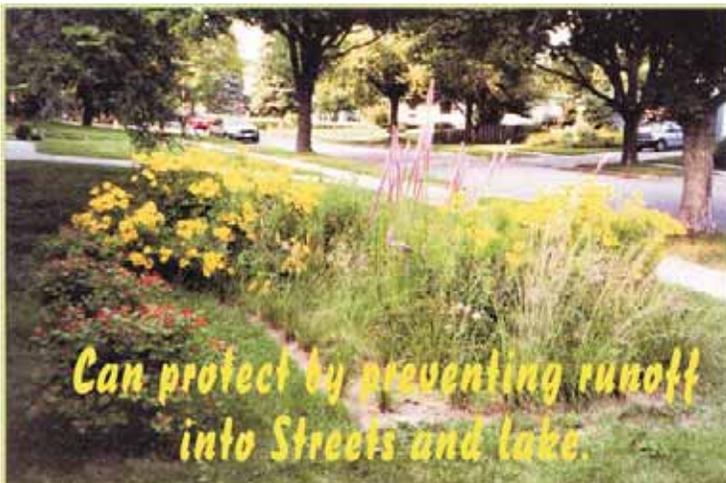
Beaver Dam Lake
Management District
P.O. Box 232
Cumberland, WI 54829

RAIN GARDENS

Rain gardens slow and retain water moving through your yard, allowing sediment and pollutants to filter out before reaching the lake via the storm drains. All storm drains empty into your lake

They are designed to use native plants that are tolerant of wet conditions; they can be attractive additions to your yard.

For more information, contact us for a brochure.



Obituary

Patricia, Lake



Lake Patricia, age 12,830, after a long and grueling battle with contaminated runoff. Patricia is survived by 9,999 lakes and hundreds of rivers and streams. An active member in the aquatic community, Patricia contracted damaging amounts of algae due to high phosphorus levels given off by leaves and grass clippings that entered her system. In lieu of flowers, loved ones are asked to rake or sweep leaves from nearby streets and stormwater drains, and to mulch or compost this fall.



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Library Lake Restoration to Be Studied

Beaver Dam Lake Management District has created a subcommittee to do a research study on the feasibility of restoring Library Lake back to its originally condition.

The prime mission and goals of the directors of the Library Lake Restoration Project is providing the Beaver Dam Lake Management District with information to move forward with the restoration project. This will be accomplished with several agencies working hand in hand to create a feasibility study to include the following areas.

Watershed Management Plan to correct the eight inlets to Library Bay from the surrounding streets.

Park Planning to develop a gateway or entrance from the lake to downtown...thinking of boat traffic access, snowmobile access, handicap fishing, walking paths, farmers market, picnic area and a beautiful City Municipal Park to enhance the Island City of Cumberland.

Cost Effective Budget thru available grants, Wisconsin League of Municipalities, Stewardship thru the DNR, Park Development, Dept. of Agriculture, Dept. of Tourism, Aquatic and Invasive species grants, Department of Transportation, Army Core of Engineers and taxation.

Ecology & Restoration Effects thru sediment study, contour maps, etc.

Retail & Economic Development thru better access to the bay. This will help promote the downtown area, coffee shops, cafes, bars, gas stations, the new library and new movie theater. We feel it will also help attract more business for banks, the medical community, churches, etc.

Tourism is actually Wisconsin's 3rd largest industry. It is vital to the economic growth of Cumberland. It is a clean industry and source of stable employment for many of Cumberland's residents and over 100 million dollars of traveler's expenditures in Barron County alone.

Beautification leaves very long-lasting impressions. When approaching downtown Cumberland, people would enjoy the beauty of the lake, our greatest asset, instead of a weed choked bay. Restoration would encourage people to think about why they are traveling further north when they could

already be at their cabin when they arrive here.

Property Values will rise with the bay being restored. With the Internet, lake home buyers are coming into the area educated on lake quality and many other issues. If the bay was restored, additional docks and possibly a boat slip and gas station could be added that can be reached by boat. This would increase lake shore values because it is what vacationers and home owners are looking for.

Letter from the President

Last July Dan Warner presided over the 2007 Annual Meeting of the Beaver Dam Lake Management District, just as he had for many prior years. Dan and Gidget have moved out of the district, so I am your rookie new president. I have to thank Dan and the other commissioners for having a smooth running organization as I come on board.

The District provided me with the opportunity to attend new commissioner training at the Wisconsin Association of Lakes (WAL) Convention this spring, and I was impressed by how well Beaver Dam Lake District is organized in regard to law, projects and communications, as I talked with other lake commissioners.

There have been many accomplishments in the past year, some of which are written up in other articles in this newsletter. Our Water Quality Study is complete, and we are not losing ground anywhere on that issue. We continue to chemically treat Eurasian Water milfoil and are seeing real progress in limiting

We as directors know this will be major process, but with a determined mission and the support of the community we will be able to accomplish our goals.

the areas where it is at nuisance level. Boat monitors are at our landings to educate boaters about the dangers of spreading Eurasian water milfoil. The District supplied the money and the DNR Fisheries crew supplied the labor and expertise to install 50 new half-log structures to provide better habitat for small mouth bass. DNR also stocked 7000 walleyes last fall. Improving Library Lake is the charge for a new committee, which has representation from the Lake District, City of Cumberland, Chamber of Commerce and other citizens.

At our Annual Meeting at Cumberland Middle School on Saturday, July 12 at 9:30 AM. Professor Michael Bozak of UW Stevens Point will present the results of a three-year walleye spawning study on Beaver Dam Lake. Members of the Library Lake Committee will also share their progress and plans. Our business meeting includes elections and passage of the budget. I certainly encourage you to attend.

Dave Evenson, President

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Water Quality Study

The following is the Executive Summary Report of the Water Quality Study as received from Barr Engineering. To see the entire report, go to our web site www.beaverdamlake.org

The Beaver Dam Lake Management District completed a water quality study during 2007 to determine current conditions and to determine whether or not changes have occurred since the 1990's when a similar study had been completed. This report discusses the results of the study and recommendations based on an analysis of the study results.

The 2007 water quality of the seven sample locations within Beaver Dam Lake varied, depending upon location, from oligotrophic (low nutrients, crystal clear) to hypereutrophic (extremely high nutrients, extremely poor water quality). Details follow.

**Beaver Dam Lake
(main body of lake)
C1, C2, C3** Excellent water quality – varied from oligotrophic (low nutrients, crystal clear) to borderline oligotrophic/ mesotrophic (low nutrients, crystal clear/moderate nutrients, good water quality)

**Cemetery Bay
C4** Poor water quality – varied from eutrophic (high nutrients, poor water quality) to hypereutrophic (extremely high nutrients, extremely poor water quality)

**Norwegian Bay
C5** Poor water quality – varied from oligotrophic (low nutrients, crystal clear) to hypereutrophic (extremely high nutrients, extremely poor water quality)

**Library Bay
C7** Reasonably good water quality – varied from mesotrophic (moderate nutrients, good water quality) to eutrophic (high nutrients, poor water quality)

The West lake locations noted better water quality than East Lake locations. Deeper locations on the West Lake noted better water quality than the shallower bay areas of the West Lake. East lake location, Cemetery Bay, noted much poorer water quality than Norwegian Bay.

A comparison of water transparency values during the period of record indicate 2007 water transparency values were higher (better water

transparency) at C-1, C-2, and C-3, approximately the same at C-6 (Rabbit Island Bay) and C-7 (Library Bay), and were lower (poorer water transparency) at C-4 (Cemetery Bay) and C-5 (Norwegian Bay). The better water transparency at C-1, C-2, and C-3 appears to be due to the dry 2007 climatic conditions which reduced stormwater runoff to the lake. The poorer water transparency at C-4 appears due to internal loading of phosphorus released from the lake's sediments which resulted in increased algal growth.

The dry 2007 climatic conditions further exacerbated the water quality impacts of internal loading since reduced water flow through the lake caused the phosphorus released from the sediment to build up and stay within the lake. The poorer water transparency at C-5 appears to result from decaying vegetation following 2007 treatment for Eurasian watermilfoil. The decaying vegetation appears to have increased the lake's phosphorus concentration and stimulated algal growth within the lake. It should be noted that the success of the 2007 Eurasian watermilfoil treatment program within Norwegian Bay has greatly reduced the need for treatment in subsequent years. Future data will provide a more representative estimate of water quality changes occurring within Norwegian Bay over time.

Testing Results

For anyone who is interested in the results of current or past water quality testing, (including the testing for the above report), they are accessible on the DNR webpage. You may access the results at:

<http://dnr.wi.gov/lakes/CLMN/> then click "Reports and Data" on the left part of the page. Follow the links to Barron County and Beaver Dam Lake.

Every lake in the State that does testing is on the site, so it's very interesting to compare Beaver Dam Lake to others. Our lake is among the best in Barron County.

The DNR web site itself is very interesting. There is a wealth of information there. Try it sometime.

Don't forget our web page: www.beaverdamlake.org

Keep up with the meeting dates, agenda and minutes from previous meetings, as well as treatment maps, on-going projects, etc.

