

The Lakesider.....Spring 2007

The Annual Newsletter of the Lake Mitchell Improvement Board.

Lake Mitchell Improvement Board

4830 East M-55
Cadillac, MI 49601
info@lakemitchell.org

Lois Poag
President
Representative At-Large

James Dean
Vice-President
City of Cadillac Representative

Ray Mayer
Treasurer
Cherry Grove Township Representative

Dave Foley
Secretary/Newsletter editor
Selma Township Representative

Mike Solomon
Wexford County Drain Commissioner

Larry Copely
Wexford County Commission

Lake Mitchell Association Officers

Bill Noonan
President

JoAnn Engels
Vice-President

Marty Chapo
Treasurer

Terry Meech
Secretary

**Website of the Lake Mitchell Improvement Board:
www.lakemitchell.org**

Lake Mitchell Improvement Board tentative meeting dates for 2007:

- Monday, May 7 5:30 PM
- Saturday, June 9 10:00 AM
- Saturday, July 8 10:00 AM
- Saturday, July 21 10 AM
- Monday October 1 5:30 PM

All meetings are held at the Cherry Grove Township Fire Hall on M-55. Contact us at info@lakemitchell.org.

All who own property on or adjacent to Lake Mitchell are members of the Lake Mitchell Association which has its annual meeting on Saturday May 26 at 10 A.M. at the Cherry Grove Township Fire Hall on M-55.

Read about Lake Mitchell news and Improvement Board work on our website www.lakemitchell.org . Check out the website to find the following information:

- Photographs of Lake Mitchell wildlife and events
- Archived minutes of Improvement Board meetings.
- Listing of spraying and weed harvesting dates.
- 30 Years on Lake Mitchell – A look back.
- Lake Mitchell Wildlife
- Additional Information on purple loosestrife, fishing, weed control, green belts, invasive species, and seawalls.

Join our email list and save us the \$2 it costs to copy, print, and mail the newsletter. Last year that amounted to more than \$1000. Read The Lakesider online so we don't have to mail you a hard copy. Email us at info@lakemitchell.org, and we will add your email to our list which numbers over 160.

Those on our email list will be notified when the newsletter is online, which is about three weeks before it is mailed. In addition we alert you to harvesting, chemical treatment, and board meeting dates. The email list will not be sold or offered to anyone and will only be used for Lake Mitchell Improvement Board and Association business.

If you have a question or a concern for members of the Lake Mitchell Improvement Board, you may contact us at info@lakemitchell.org.

What is the difference between the LMA, LMIB, and LMAC?

The Lake Mitchell Improvement Board is composed of six appointed members who oversee the distribution of the annual budget which comes from assessments paid by those owning lakefront or lake access property. The current board is composed of the following members:

- Lois Poag – President, Representative At-Large
- James Dean – Vice President City of Cadillac Representative
- Dave Foley – Secretary, Newsletter editor, Selma Township Representative
- Ray Mayer – Treasurer, Cherry Grove Township Representative
- Mike Solomon - Wexford County Drain Commissioner
- Larry Copley - Wexford County Commission Representative

All who own property on or adjacent to Lake Mitchell are members of the Lake Mitchell Association and are invited to attend the annual meeting to discuss concerns about Lake Mitchell. Current officers of the Lake Mitchell Association include:

- Bill Noonan – President
- JoAnn Engels – Vice-President
- Marty Chapo – Treasurer
- Terry Meech – Secretary

The Lake Mitchell Action Committee was created to do research on problems facing Lake Mitchell and address concerns raised by Lake Mitchell Association members. Formed in August 2006, the committee, chaired by Dave Foley, established goals and pursued these projects:

- Developed plan to have tournaments redistribute bass throughout the lake opposite from the weigh-in site.
- Procured township resolutions asking that use of phosphorus fertilizers within 500 feet of Lake Mitchell shoreline be halted.
- Submitted two \$95,000 matching funds grants to Natural Fish and Wildlife/ B.A.S. S. Foundations.
- Developed a resolution which was accepted by Michigan United Conservation Clubs (MUCC) and will be presented at MUCC state convention in June and from there will move to consideration by Michigan legislature. The resolution creates a milfoil stamp that would be purchased annually (\$10 for residents/ \$20 for non-residents) and displayed on all motorized boats. Proceeds to be used for treatment of Eurasian milfoil in Michigan's inland waters.
- Thoroughly researched other options for dealing with milfoil including Houghton Lake's use of Sonar, using the rotovator to cut weeds, introduction of weevils.
- Explored alternatives to assessments as source of funds including State Parks, County Commission, millage, hotel tax, townships, legislative support, milfoil stamp, and boater registration increase.
- Developed working relationship with Lake Cadillac Association and Cadillac City Manager to foster cooperation in dealing with common problems facing Lake Mitchell and Lake Cadillac.
- Did extensive Internet research to learn how other boards deal with problems in their lakes. Committee members included Tom James, Jim and Nan Vick, Jack Dudick, Larae Peters, Al Anderson, JoAnn Engels, Jim Kenyon, Alan McColl, Vi Springer, Mike Engels, Bob Miller, and Ron Moelker.

STEWARDS OF YOUR MONEY

Assessments

After sending notices to those with lakefront or deeded access to the lake, a public hearing was held on January 13, 2007. After nearly two hours of discussion with the seventy people in attendance, the Lake Mitchell Improvement Board approved raising the assessment to the following level for the years 2007 to 2009:

	No. Assessment Units	2007-2009 Assessment
Lakefront	1.0	\$275/year
Backlot	0.5*	\$138/year
Commercial	2.0	\$550/year
*Backlot unit was also raised from .25 to .50.		

This higher assessment will yield approximately \$188,000 which will be needed to deal with the approximately 450 acres of Eurasian milfoil that was growing in Lake Mitchell last year. In 2006 we treated 138 acres and harvested 50 acres; the sudden increase in the presence of milfoil last year necessitated the increase in assessments.

2006 Financial Record	
Beginning cash balance 12/31/05	\$10,955
Plus assessments	\$63,375
Plus bank interest	\$533
Plus transfer from Cherry Grove TWP. To be repaid	\$3000
Less expenses detailed	-\$77,171
Ending cash balance	\$692

2006 Expenses	
Professional Management licensing (DEQ permit)	\$1350
Chemical Treatment (aquatic plant control)	\$48,482
Harvesting (aquatic plant control)	\$11,000
Progressive Engineering	\$7,000
Shoreline Cleanup	\$6,250
Newsletter/Website	\$1498
Insurance	\$735
Audit	\$465
No Wake signs/lake inspection	\$391
Total Expenses	\$77,171

2007 Budget	
Aquatic plant control	\$153,500
Inspections and Oversight	\$12,000
Weed Pick-up	10,000
Information Dissemination	2,500
Administration & Contingency	10,000
Total Annual Cost	\$188,000

The Fishing Report – 2007

DNR continues to plant walleye

Although electric shocking surveys conducted in November of 2005, failed to show any traces of that year's fingerling planting, a few anglers caught small walleye indicating that some fish survived. This spring 7.5 million walleye fry were released at several points around Lakes Mitchell and Cadillac; fry are about the size of a grain of rice. While many may have ended up in the stomachs of pan fish, it is hoped that some will eventually become adults.

The DNR secured twenty thousand walleye, averaging four to five inches in length, from hatcheries in October and November in 2006. This planting may be more successful than earlier efforts because the larger walleye may escape most panfish. In addition, bass, which readily prey on walleye, tend to become less active when water temperatures cool in the fall. Walleye plantings will continue in 2007 with ½ inch fingerlings in the spring and then, if they are available, 4-5 inch fish in the fall. Probably the biggest obstacle to reestablishing a walleye fishery is the huge population of bass. A Wisconsin biologists' study to determine which among pike, muskellunge, walleye, as well as large and smallmouth consumed the most immature walleye, found that largemouth bass consumed significantly more walleye than the other game fish.

Longtime residents of the lakes will recall that prior to about 1990, there was not a significant largemouth bass fishery. However as the numbers of largemouths increased in the 1990s, walleye catches decreased. The largemouth's propensity to prey on young walleye may make it difficult to maintain quality fishing for both species in the same lake.

What about bass tournaments?

Most of us associate bass tournaments with the roar outboard engines screaming across Lake Mitchell at dawn on weekend and holiday mornings, followed shortly thereafter by the appearance of bass boats off the end of your dock. From their boat decks, tournament anglers toss plastic worms under, and occasionally on top of, docks and boats. While it may be disconcerting to see folks so close to your shoreline, they are breaking no law and their presence is a boon to our local economy. Yes, the fish they extract from spawning beds or under your dock won't be returning; they will travel in the angler's aerated live well to the weigh-in where they will quickly be weighed and then released. Most of these fish swim away, although the vast majority are now several miles from where they started their day.

How a tournament works. Bass tournaments impose strict rules on participants. No live bait can be used. Absolutely no alcohol can be consumed. All game laws must be observed meaning that no more than five legal-sized bass may be taken by each angler to the weigh-in. There is an incentive to keep fish lively since points are subtracted at the weigh-in for dead or dying fish. After the weigh-in, all fish are released; tournament fishermen never keep fish for their own use. Most weigh-ins take place in Lake Cadillac, and even when weigh-ins are conducted on Lake Mitchell, at Pilgrim's Village or the State Park, no fish are ever returned to the north or west end of Lake Mitchell. Research studies conducted with tagged bass at tournaments show that about 2/3 of all bass released after a weigh-in will stay in the vicinity of their release point for months.

What is being done to return and redistribute bass in Lake Mitchell? To try to maintain a natural distribution of bass in our lakes, the Lake Mitchell Action Committee has implemented the following plan based on Part 459 of the Michigan Fisheries Laws, which states that fish must be returned to the lake that they are caught in. In the spirit of this law 50% of all bass taken to a weigh-in must be released in the opposite lake from which they were caught. Fish released in Lake Mitchell will be returned at one of five locations along the north and west shore of the lake. Each tournament will only use one release point, since each tournament would be assigned a different release point. At the end of season, records will show a roughly even redistribution of tournament caught fish. Permanent signs stating the law about the non-transfer of fish will be posted at Kenwood Park, City Dock, and both ends of the canal as well as the Lake Mitchell State Park boat landing. During this year the members of the Lake Mitchell Association will be at weigh-ins to help facilitate compliance with the law and DNR Conservation officers will occasionally stop in at tournament weigh-ins to make sure fish are being redistributed. We are looking for volunteers to help us with this project. If interested contact Dave Foley at info@lakemitchell.org

2007 Aquatic Weed Control

The Improvement Board's stated objectives for aquatic weed control, in order of priority are stated as follows:

- 1) Control Eurasian milfoil in the main part of the lake.
- 2) Remove vegetation that hinders boaters' access to the lake.
- 3) Clear thick weeds away from ends of docks.
- 4) Provide roadside pick up for weeds.

To meet these objectives the Board held a public hearing on January 13th for the purpose of raising the property owners' assessments and getting feedback from members of the Lake Mitchell Association.

The Board's plan for aquatic plant control in 2007:

1. In June 2007, approximately 450 acres of milfoil will be treated.
 - A. 2-4-D will be used in all areas that are more than 250 feet from shore. (2-4-D cannot be used within 250 feet of any shallow wells.)
 - B. For milfoil and nuisance plants near the shore, Renovate and Reward chemicals will be used. For more information see "Chemical Treatment and Harvesting Procedures."
2. In addition to chemically treating the thick vegetation in the coves, harvesting will be done in late June to remove the vegetation near docks and to provide navigation paths so boats can enter and exit the coves. As the harvesters cut the weeds, they will collect them so the weeds do not pile up and clog these waters. For more information see "Chemical Treatment and Harvesting Procedures."
3. The shoreline cleanup program will continue to operate starting the week before Memorial Day and ending the week after Labor Day. For more information see "Shoreline Cleanup"

Other Options explored by the LMAC:

1. Introduction of weevils – The introduction of milfoil-eating weevils into Lake Mitchell is under consideration. Although there have been some dramatic successes, introducing weevils does not guarantee that milfoil will be controlled. Areas where weevils are introduced cannot be chemically treated or harvested for several years until it can be determined if the trial was successful. Because weevils, which are poor fliers, must overwinter along the shores of the lake, they must find cover such as brush, woods, or ground littered with leaves. Lake Cadillac introduced weevils in certain areas in 2006; the results of that planting will have some bearing on whether they will be introduced into Lake Mitchell. Although there is interest in planting weevils, this option will more likely occur in a couple years.
2. Using Sonar herbicide (fluridone) To find out about Houghton Lake's experience with Sonar, Tom James and Dave Foley met with Dick Pastula, Secretary of the Houghton Lake Improvement Board, and collected much information relating to the treatment. In 2001 more than 50% of Houghton Lake's 20,000 acres was covered with Eurasian milfoil. To qualify for a DEQ permit, a substantial part of the lake must be overrun with vegetation. To be successful, Sonar must be applied to the entire lake. On April 23, 2002 the lake was treated with Sonar killing most of the vegetation in the lake. That summer there were few weeds in the lake and the fishing was excellent. In 2003 most of the native vegetation returned but almost no milfoil. In the succeeding years, milfoil gradually returned and was treated with 2-4-D. In 2006 442 acres of milfoil was treated. However, the Houghton Lake fishery is in trouble. It is theorized that during 2002 when there was no vegetation, the predator-prey balance between fish was disrupted. This resulted in an overabundance of small pike and a significant reduction of walleye, bass, and panfish. In addition the fish, without weeds for protection from anglers, were over harvested. While the Sonar treatments may have enabled the milfoil to be controlled, the fishery has suffered serious, if not irreparable, damage.
3. The rotovator –Jack Dudick did extensive research on the rotovator, a mechanical device that carves several inches into the lake bottom to uproot plants. The Rotovator is being used in some Western lakes and while it does eliminate milfoil for two years, it only cuts two to three acres a day, at \$1000 to \$2000 per acre, and requires permits that may be impossible to procure.

Weed Wars: The Milfoil Strikes Back

The Problem- In 2005, 150 acres of milfoil was treated; last summer the acreage tripled to 450 acres. In addition there was a significant increase in weed growth in Little Cove, Franke Coves, near Teal Court, and Hiawatha Court. By June 29, 2006 the Lake Mitchell Improvement Board had spent almost all of the \$63,000 annually received from the property owners' assessments chemically treating milfoil as well as the nuisance weeds near shorelines, in addition to harvesting 50 acres in Little, Big, and Franke Coves. There was no money left for additional chemical treatments and harvesting that normally occurred in mid-July; three hundred acres of milfoil in the main part of Lake Mitchell received no treatment at all.

Boat surveys by Progressive Engineering and members of the Improvement Board were conducted in Lake Mitchell in July and August to determine how many acres of Eurasian milfoil were present. At the Improvement Board's October meeting, Pam Tying from Progressive Engineering estimated the cost of treating 450 acres of milfoil and doing a single harvest of the coves in 2007 to be \$188,000.

On January 13, 2007 a public hearing, attended by 70 Lake Mitchell Association members, was held at the Cherry Grove Fire Hall. At that meeting the Improvement Board raised assessment unit from \$100 per unit to \$275 per unit and doubled the back lot assessment from ¼ unit to ½. Commercial lots were assessed at two units. The new assessment will yield approximately \$188,000 which will meet the estimates for the 2007 cost of maintaining the aquatic vegetation control program.

MUCC supports milfoil stamp resolution raising hope of legislative action

While researching fund raising options for Lake Mitchell's milfoil problem Al Anderson, a member of the Lake Mitchell Action Committee, discovered that the state of Maine requires all motorized boats to purchase an annual milfoil sticker (\$10 for residents/\$20 for non-residents). With that in mind, Dave Foley drafted a resolution outlining the creation of a similar program for Michigan and he and Al presented their resolution at the Region II conference of the Michigan United Conservation Club (MUCC) in Gaylord in February.

The MUCC gave the resolution a strong endorsement. In June the resolution will be presented at the state conference at Sault Ste. Marie. Officers of MUCC feel the resolution has a good chance to win support at the state conference whereupon it will become part of the MUCC legislative agenda. If the milfoil stamp becomes law with more than 9 million motorized boats in Michigan and perhaps another million or so non-resident motorized boats visiting our state, the proceeds from a milfoil stamp might generate \$12-15 million dollars for use in the treatment of milfoil in Michigan's inland lakes and waterways.

Shoreline Cleanup

The Lake Mitchell Improvement Board will again provide roadside pickup of weeds. Weed hauling begins May 21 and continues through September 7. Aquatic weeds need to be removed from the lakeshore by the property owner and put on the edge of the road. Only aquatic vegetation will be picked up.

There is no hotline to call; the weed hauler will collect aquatic vegetation according to the following schedule:

- **Monday - Section 1#** - Canal north to the roller rink.
- **Tuesday – Section 2#** - Roller rink along West Lake Mitchell Drive checking all lakefront roads and courts ending with the Camp Torenta loop.
- **Wednesday – Section 3#** - Canal south and west including all roads with lake front property to end of Sunrise Point Road.
- **Thursday and Friday** - Days for collecting weeds not picked earlier in the week.

Lake Mitchell Chemical Treatment and Harvesting Procedures

Each year Professional Lake Management, following the guidelines stipulated on a permit issued by the Department Of Environmental Quality, chemically treats parts of Lake Mitchell based on recommendations resulting from boat surveys conducted on Lake Mitchell by Progressive Engineering AE limnologists. Members of the Lake Mitchell Improvement Board, and occasionally, Lake Mitchell property owners, accompany Progressive Engineering staff on these boat surveys.

The boat surveys occur in early June and the chemical treatment follows about ten days later. Follow-up surveys and treatment may occur in July. The following three products are used for chemical treatment on Lake Mitchell:

1. 2-4-D, which kills milfoil, is a systemic chemical meaning that it kills the entire plant, roots and all. Because of the presence of shallow wells this chemical must be used no closer than 250 feet from the shore.
2. Trichlopyr, with a brand name of Renovate, is also a systemic chemical, and is used near shorelines. While it may be used within 24 hours to water established lawns, it shouldn't be used on plants until the treated area has been tested.
3. Reward is another chemical that does not have a well setback restriction, but it is a contact herbicide, rather than a systemic one. This means it kills only the portion of the plant that it comes in contact with. It is commonly used near shorelines.

All chemicals have a 24-hour restriction on swimming.

Harvesting in shallow waters

Because milfoil spreads by fragmentation, chemical treatment is the primary means of controlling that plant. Once the plant has been killed by chemicals, then harvesters can be used on the dead milfoil and other nuisance vegetation. Harvesting is used where native plants are so dense as to cause problems for boating. This means that a lane will be cut so people can get their boats from their docks to open water. Because harvesters are too big to maneuver between docks and need 18" to 2' of water to operate, not all weeds will be cut. In addition DEQ regulations forbid the cutting blades from digging into the bottom muck as that, according to the DEQ, would be dredging. The DEQ also stipulates that at least 20% to 40% of the littoral zone (meaning along the shore) be left vegetated to provide habitat for fish.

Without harvesters to cut and remove plants, shallow areas would be rendered unusable for recreation. However harvesting does not eliminate weeds permanently; during peak growing season, mature plants may appear in harvested areas within a few weeks after a cutting.

Do harvested weeds float away to the shore around Lake Mitchell?

As harvesters cut weeds they are fed onto a conveyer belt that carries them to a collection bin. When the bin's capacity is reached, the harvester returns to shore and off loads the weeds onto a dump truck which carries the weeds to an area farmer who uses the weeds for mulch. Every effort is made to insure that weeds cut by the harvester do not escape and float to other parts of the lake. Most floating vegetation has been cut by motor props, dropped by anglers, and is the result of the natural or chemically induced die-off of plants.

Harvesting usually occurs during the last week of June. Property owners are encouraged to visit Big, Little, and the Franke Coves to observe the harvesting.

A native plant, naiad, grows in the deeper waters of the main lake. Its presence, as floating mats of weeds on top of the water, prompted the establishment of the Lake Mitchell Improvement Board in 1989. It is an annual plant, which dies and breaks off in late summer and floats to shore.

Loosestrife-eating beetles introduced into Lake Mitchell

Big Cove is ringed by thousands of purple loosestrife plants whose beautiful, but unwanted magenta flowers create a real threat to the health and survival of that wetland shoreline. Wetlands are the most biologically diverse productive component of our ecosystem. Numerous species of plants, birds, mammals, reptiles, insects, fish, and amphibians rely on healthy wetlands for their survival. However when purple loosestrife gets a foothold, the habitat where fish and wildlife feed, seek shelter, reproduce and raise young, quickly become choked under a sea of purple flowers.

The most effective biological control is through the introduction of the Galerucella beetle. Several dozen of these loosestrife eating beetles were collected by Dave and Cyndy Foley near Petoskey in June and placed on Big Cove plants. By summer's end, some plants had been destroyed but studies show this project takes 3-15 years to knock out strong infestations of loosestrife. The Improvement Board will continue this program by returning to Petoskey this year in June to collect more beetles. The beetle collection is coordinated by the Tip of the Mitt Watershed Council.

Prevent Swimmer's Itch: Do not feed the ducks

The parasite that causes swimmer's itch uses ducks and snails as hosts before infesting humans. Children often are most affected because their skin may be more sensitive, and they spend time playing in shallow water where the swimmer's itch parasites are more concentrated.

Infected swimmers may notice red spots within a half-hour of leaving the water. These spots may enlarge for the next 24-30 hours and may itch for a week. Toweling off may help. Others find protection by applying baby oil before swimming or taking a shower after leaving the water.

By not feeding ducks, not only will you help prevent the spread of swimmer's itch but, if fed, ducks (and geese) will congregate in that area leaving copious amount of duck poop on lawns and docks.

More information about swimmer's itch is found on our website.

Zoning change may affect Lake Mitchell property owners

On February 7, 2007 the Wexford Board of County Commissioners approved an amendment to the Lake Mitchell Overlay which stipulates that no more than 33% of one's property on Lake Mitchell may be covered by an impervious surface. "Impervious Surface" means surface material incapable of being penetrated by water and includes the foundation lines of buildings, paved parking and drives, bricks, pavers, patio blocks or other surfaces which does not allow water to penetrate.

Prior to new construction, reconstruction, remodeling or other construction activity including paved parking, drives, sidewalks or any impervious surface, the lot owner is required to obtain a grading and drainage permit showing that drainage as a result of construction activity, is not directed toward or directly into Lake Mitchell or onto adjacent properties. Rain gutters, directing runoff into French drains, collection crocks, reverse crowns for paved driveways, or other acceptable methods of controlling run-off from the building site shall be used. The most effective method of control to be determined by the Wexford County Soil Erosion and Sedimentation Control Officer. Permits may be obtained through the Wexford County Building Department, 401 N. Lake Street in Cadillac.

Township resolutions oppose use of phosphorus fertilizers

In February, Selma and Cherry Grove Township Boards passed a Township Resolution opposing the use of fertilizers containing phosphorus within 500 feet of Lake Mitchell. The resolutions resulted from presentations made by Jim and Nan Vick, property owners on Lake Mitchell, who after researching resolutions and ordinances used in counties, cities, and townships, in Michigan and Minnesota, drew up guidelines for their proposal. The resolution provides an exemption from the phosphorus-free provision if soil samples taken to the Michigan Extension Office on Lake Street, show a phosphorus deficiency or during the first season that a new lawn is established. Soil studies show that virtually all hard ground area around our lake has a natural abundance of phosphorus.

Where can I get phosphorus-free fertilizer?

- The 13th Street Market and Helsel Bruce Tree Farm Nursery (779-1414) located on the corner of 13th Street and M-115 has phosphorus-free fertilizer available.
- Grahek's Greenery (775-9362) on 515 East 13th Street also has a four-step fertilizer program that are all phosphate-free.
- Home Depot – On west side of 131 near Boon Road.
- McBain Co-Op – 101 N. Pine Street in McBain

What is the problem with phosphorus?

Phosphorus is a key ingredient in lawn fertilizers. The wonders it can do for your lawn may be even greater when it leaches into the lake. In a lake, phosphorus stimulates the growth of aquatic weeds and algae. The presence of phosphorus may turn sandbars into weed beds, cover gravel beds with slime and waving mosses, and cloud clear water with an over abundance of microscopic plant life. More plant life produces more dead plant material and the accelerated decay of plant matter robs the water of oxygen supply. Meanwhile the phosphorus accumulates in the decayed material and continues to stimulate growth at higher and higher rates.

What can you do to keep phosphorus out of our lake?

On fertilizer packages there are three numbers, the middle number indicates phosphorus content. The numbers 30-0-4 on a package of fertilizer indicates there is no phosphorus. This would be an excellent choice. When contracting lawn care services such as Trugreen or Chemlawn, insist that they use phosphorus-free products. Encourage your neighbors not to use phosphorus fertilizers as well.

Test your soil before fertilizing. If you must use a fertilizer, use a non-phosphorus fertilizer and a slow-release nitrogen source. The slow-release nitrogen will allow less of an impact on the lake since only two applications, spring and fall are required. One pound of phosphorus could result in over 500 pounds of wet algae.

To combat invasive species clean boats before launching

It is quite likely that Eurasian milfoil first rode into Lake Mitchell on a boat. It probably was nothing more than a fragment wound in a propeller or twisted onto the frame of a boat trailer. But once in the lake, in a matter of years, it had created thousands of plants.

Although no zebra mussels have been found in our lake, we need to be vigilant in our inspection of boats entering the lake to keep those tiny snails out. The Michigan Sea Grant College program offers the following suggestions for protecting our lake: 1) INSPECT your boat and your equipment and remove all weeds from your trailer propeller, anchor, and any other place found on your boat. 2) DRAIN all water from the boat motor, bilge, live well, and bait buckets on dry ground. 3) DISPOSE of leftover bait in a trash receptacle, not in the water. 4) RINSE your boat and all fishing equipment with hot tap water, OR thoroughly dry your boat outdoors for at least five days before traveling to a new lake or stream. 5) TEACH and help others to do the same.

Lots of rain results in high lake levels

Rainfall in the Cadillac area in 2006 was significantly higher than historic levels Wexford County Drain Commissioner Mike Solomon reported. The Cadillac Waste Water Treatment Plant which keeps daily precipitation records measured 42.97 inches for the year which is the second highest annual amount recorded in the last 25 years. This was only exceeded by 1985's 47.27 inches. The long term average annual amount is 32.38 inches from 1951 to the present. Solomon observed this is almost a third more rain in a 12 month period and the months of January, May and October were in the top 5% probability level for rainfall in that particular month. That means that in any 100 year period, there might only be 5 years in which rainfall might exceed these levels. That has to be a rare occurrence to have three months with that high a rainfall in one year, Solomon said.

When you have that much rainfall you are just going to have higher lake levels and there is little that anyone can do about it. The Clam River dam has been wide open since October and there has been little change in lake levels of Lake Cadillac and Mitchell. Solomon noted we have roughly 3700 acres of water between the two lakes and a watershed area of 34,000 acres or 53 square miles. It takes a long time to drain off that much water through the Clam River which is relatively narrow in the upper reach. Competing with the water from the lakes is about 6 million gallons of water per day from various groundwater clean-ups in the City and the Cadillac Waste Water Treatment Plant. Solomon plans to keep the dam located near the High School and Sound Garden fully open throughout the winter. Our wetlands are full of water and groundwater systems are being recharged which is good in the long run, observes Solomon, but in the short run high lake levels will continue.

Other Wexford County lakes also have high water levels. This indicates at least a sub-regional recharge of groundwater levels. Stoneledge, Berry, Woodward and Meauwataka lakes all are well above normal fall levels. Pleasant Lake is flowing over the control structure into the Ball Drain which flows to the east and outlets into the Clam River in Haring Township. Usually Pleasant Lake is 12 to 24 inches lower than the present level in late fall or early winter.

So for now we have extremely high lake levels, but hopefully they will come back down to a more normal level by spring.

Cormorants appear on Lakes Mitchell and Cadillac

In recent years cormorants have been seen in the area, these large fish-eating birds often can be seen sitting on pilings near the old Naval Reserve Building on Lake Cadillac or swimming in the lakes. Frequently they will stand spread-eagled and swim low in the water, but are distinguished from loons because of the upward angle of the head and bill.

Fish make up a major portion of their diet and an adult bird weighing four pounds will consume about a pound of fish a day. During their time in Michigan, roughly from mid-April until late September, an adult bird may consume 150 pounds of fish.

Among the Les Cheneaux Islands in Lake Huron and near Beaver Island in Lake Michigan thousands of cormorants roost. Recreational and commercial fishermen have noticed a significant reduction of perch and bass and attribute that to fish-eating nature of cormorants.

Although the few birds residing here probably do not effect the lakes' fish populations, should the birds become numerous, we may have a problem.

Operate Personal Watercraft Responsibly

Michigan DNR personal watercraft regulations

While most operate their Wave Runners responsibly, those who race close to shore, docks, and other boats frustrate and anger lake users. **PWC's must be operated at slow no-wake speeds under these conditions:**

- Within 150 behind boats other the PWCs.
- In less than 2 feet of water.
- All watercraft must be operated at slow no-wake speed within 100 feet of docks or rafts, marked swimming areas, people in the water, moored or anchored vessels, and shorelines.

Fisherman become especially irate when Jet Skis and Wave Runners operate their watercraft in the evening. **Michigan Law makes it illegal to run personal watercraft in the last hour before sunset or before 8 AM.**

2007 Personal Watercraft Boating Hours			
<u>Date</u>	<u>Begin</u>	<u>End</u>	<u>Sunset</u>
May 1	8:00 A.M.	7:44 P.M.	8:44 P.M.
May 15	8:00 A.M.	8:00 P.M.	9:00 P.M.
June 1	8:00 A.M.	8:17 P.M.	9:17 P.M.
June 15	8:00 A.M.	8:26 P.M.	9:26 P.M.
July 1	8:00 A.M.	8:29 P.M.	9:29 P.M.
July 15	8:00 A.M.	8:23 P.M.	9:23 P.M.
Aug. 1	8:00 A.M.	8:07 P.M.	9:07 P.M.
Aug. 15	8:00 A.M.	7:47 P.M.	8:47 P.M.
Sept. 1	8:00 A.M.	7:19 P.M.	8:19 P.M.
Sept. 15	8:00 A.M.	6:53 P.M.	7:53 P.M.

To report unsafe or illegal PWC or boating activities call Wexford County Sheriff at 779-9211 or DNR at 1-800-292-7800.

A complete listing of boating regulations is listed on our website and at the DNR and Sheriff offices.

I would like to compile a history of the Lake Mitchell area including photos, stories, and other data on the settling and development along the shoreline. If you wish to contribute or can help find sources of information, please email info@lakemitchell.org Here's a chance to share information about what was happening here forty, fifty, sixty, or hundred years ago. For Historical Facts About Lake Mitchell, visit our website.

Quick Facts about Lake Mitchell & Lake Cadillac

- Size of lakes: Lake Mitchell - 2,496 acres ; Lake Cadillac - 1,150 acres
- Maximum depth: Lake Mitchell - 22 feet; Lake Cadillac - 30 feet
- Lake Mitchell mean depth – 8.5 feet
- Lake Mitchell flushing rate 1.06 years -complete exchange of water.
- Water clarity: Lake Mitchell – 5-8 feet
- 10.4 miles to circle Lake Mitchell on a bike or in a car
- 7.1 miles to circle Lake Cadillac on bike (7.2 in car)
- Acres of milfoil identified in 2005: Lake Mitchell -118 acres; Lake Cadillac -200+ acres
- Length of canal: .3 mile
- Average date lakes freeze 1974-2005 – last week of November.
- Average date lakes become ice free 1974-2005 – second week of April
- The lakes at 1289 feet above sea level are among the highest in the Lower Peninsula.
- Lake Mitchell is in the Muskegon River watershed. Years ago Pete Smith paddled from Lake Mitchell down the Clam River, into the Muskegon River and on to Lake Michigan

Lake Mitchell Improvement Board
 203 Peninsula Drive
 Cadillac, MI 49601