



Agenda

Village of Chenequa Lake Management Committee Meeting
Tuesday, July 16, 2024 at 10:00 a.m.
31275 W. County Road K, Chenequa, WI 53029

Tuesday, July 16, 2024 at 10:00 a.m.

This is official notice that a meeting of the Chenequa Lake Management Committee will be held on Tuesday, July 16, 2024, at 10:00 a.m. in the Village Hall Training Room. The following matters will be discussed, with possible actions:

- 1) Call to order
- 2) Approval of March 28, June 5, and June 26, 2024, minutes.
- 3) Wake Boating Feedback.
- 4) Review and consider action / recommendation Pier Ordinance Status:
 - a) Review Minnetonka Sliding Scale.
 - b) Review distribution of lake lot frontage.
 - c) Formulate a recommended sliding scale for lot line offset based on lot lake frontage.
 - d) What if pre-existing boathouse?
- 5) Review and consider action / recommendation pier permit application:
 - a) Discussion of what is reasonable to ask from applicant.
 - b) How much should be asked of applicant seeking variance?
- 6) New business:
 - a) More on electric shock drowning: any recommendations?
 - b) Lake level measurement, communication, continuous monitor
- 7) Items for future meetings.
- 8) Propose next meeting date.
- 9) Adjourn

Respectfully submitted by:
Deanna Braunschweig, Clerk-Treasurer

Requests from persons with disabilities who need assistance to participate in this meeting or hearing should be made to the Village Administrator with as much advance notice as possible. It is possible that members of and possibly a quorum of members of other governmental bodies of the municipality may be in attendance at the above-stated meeting to gather information. No action will be taken by any other governmental body except by the governing body noticed above.

NOTICE OF POSTING TO VILLAGE HALL BULLETIN & WEBSITE

Village Clerk posted this agenda on Friday, July 12, 2024 by 3:00 PM

www.chenequa.org
Phone 262-367-2239

Minutes Lake Management Committee 3/28/2024

- 1) **Call to order:** The meeting was called to order at 2:10 p.m.
- 2) **Attendance:** Villavicencio, Manegold, Hansen, Lincoln, AGehl, Braunschweig, McNear Absent: FSeidelSr.
- 3) **Proposed pier regulation:** The proposed pier regulation including establishment of a pierhead line and dimensional regulation was reviewed. Addition of a second site visit by the Forester and a permit closeout after completed was discussed, language will be added. Legal remedy and citation/fine timing were discussed. Forty-five days to fix a pier out of compliance before the fine starts will be added. We have purposely left out language about numbers of piers per lot, this could be added to an ordinance later. Cody L shared conversations he had with Lake Como/Geneva and Town of Waterford re their pier permitting process. A motion was made to present the pier regulation ordinance to the Village Board in April, motion by Hansen seconded by Gehl, unanimous vote by the quorum to move ahead.
- 4) **Wakeboats:** No new business other than JS article where legislators are asking UW to study wakeboats on WI lakes. Will discuss overall feedback of guidelines feedback at June meeting. Cody shared the color coded bathymetry map he has been working on, the QR code linkup is in process.
- 5) **Aerators:** No new business.
- 6) **Runoff:** Discussion was had about management of runoff on both newer and older properties given the amount of hardscape on properties. Permeable paving, stormwater management could be encouraged in things like the “Welcome Booklets” from the Village taking cues from Friends of Beaver Lake.
- 7) **“Welcome booklets”** from Friends of Beaver Lake and the Village were discussed, we will obtain these. Certainly any pier regulation could be added, wakeboat guidelines in but also encouragement re permeable paving, thoughtful storm water management.
- 8) **Adjourn:** The meeting was adjourned at 3:10 p.m.
- 9) **Next meeting will be:** Wednesday June 5, 2 p.m.

Respectfully submitted, D. McNear

Minutes of the Lake Management Committee 6/5/2024

Minutes approval of 3/24 minutes deferred to June 26 meeting.

Present: Villavicencio, CManegold, JHansen, FSeidel Sr., CLincoln, DMcNear

Absent: AGehl

The meeting began at 2:05 p.m.

The Committee with a quorum met with the Village Attorney Tom Gartner to review the redlined first draft of the pier regulation ordinance. Members brought their specific questions/ concerns and the following topics were discussed.

- Best way to give PLYC as riparian owner of the island flexibility as to pier length and size going forward.
- OHWM exists for lots on perimeter of lake, does not exist for island. Ordinance will state no pierhead line is created for the island.
- If legally built/placed the piers/swim platform of PLYC would be pre-existing. If not legally built or if they choose to remodel or enlarge outside of DNR guidelines they would need a permit and variance from Board of Appeals.
- Changes to Village pier/public landing are not anticipated.
- Discussion of “plans”, extent of plans vs application. “Plans” section will be removed. Application only required, to be designed.
- The offset is 12 feet off the lot lines. No structure including lifts in that area TBD.
- Lighting mention: any lighting on a pier must comply with Chenequa Building Code 5.24. We discourage pier lighting but cannot put that in the ordinance language, unenforceable.
- DNR loading platform size is 200 square feet. Discussion re is this enough for large family groups? You can apply for a DNR permit and Chenequa variance if you want and can justify larger. You can also put in another pier.
- Discussion of definition of multilevel pier. The Committee wishes to prevent two story multilevel piers, both roofed structures and roofed structures that can function as a deck. The only roofs on a pier can be over a slip e.g. Shore Station cover.
- Wharf style/marina style piers discussed: defined as running closely parallel to the shore with slips off of it. Complaints re width/lot frontage ratio, how much shoreline is covered, in the case of permanent piers forever. No consensus on this. Could prevent them, or pull them out into deeper water. Ecology of lake at shore an issue here. Will re-visit.

The meeting ended at 3:55 p.m.

Respectfully submitted,

DMcNear



RESIDENTIAL DOCKS, STRUCTURES, & WATERCRAFT

Lake Minnetonka

Lake Minnetonka is a great natural resource and the Lake Minnetonka Conservation District (LMCD) manages lake use to preserve the Lake, promote safety, and enhance the experience of all Lake enthusiasts. A summary of the regulations regarding docks, structures and watercraft is provided as a guide for residents, realtors, and installers. Following these standards will minimize the negative impact to the lake and promote positive neighbor relations. View the complete LMCD codes and contact the LMCD regarding unique situations.

ADDITIONAL RESOURCES

Land Use

Cities may have additional regulations.

Shoreline Improvements & Dredging

MCWD regulates shoreline stabilization, landscaping, wetlands, and dredging at www.minnehahacreek.org.

Aquatic Plant Management

MN DNR regulates and permits mechanical or chemical aquatic plant management at www.dnr.state.mn.us/apm

Master Water Stewards

Freshwater Society certifies citizens to optimize shoreline improvements, www.freshwater.org.

Lake Minnetonka Conservation District
5341 Maywood Rd, Mound, MN 55364
lmcd.org | 952-745-0789 | lmcd@lmcd.org

[LakeMinnetonkaConservationDistrict](https://www.facebook.com/LakeMinnetonkaConservationDistrict)

[LakeMnkaCD](https://twitter.com/LakeMnkaCD)

FINDING THE LINES

929.4 Ft Ordinary High Water Line (OHW). The 929.4 OHW may be different from the shoreline depending on the water level in the lake. When a site survey is required, the 929.4 OHW measurement should be specifically requested. This is the basis of dock and storage requirements. The Lake water level can be found at www.minnehahacreek.org.

Extended Side Property Lines. First, be sure you own or have rights to the shoreline. When needed, a property survey will indicate the side property lines. If a survey is not available, property markers/stakes may exist and can be used to determine the side property line. The extended side property line is when the side property line on land is extended into the lake. This is important in determining the required setbacks from adjacent properties. In cases where the property is curved or unusual, the LMCD will help determine the extended side property lines.



PERMITS / LICENSES

Annual permits/licenses are generally not required for single family residential properties. However, there are some situations where a permit or license is required as listed below:

- License to store five or more watercraft, under certain circumstances allowed by code. Examples include residential properties with or sharing 226 feet or more of 929.4 OHW shoreline, homeowner associations, shared docks, etc.
- Permit for installation of permanent docks, installed using machine driven pilings.
- Permit for dock extension during declared Low Water Conditions
- Nonconforming use permit for docks/moorings in existence since 05/03/1978



VARIANCES

A variance from the code may be requested by a property owner if a practical difficulty exists such as conflicting dock use areas or shallow water. Variances should be registered with the County property records since they are conditions on the property. In many situations, property owners work with each other to adjust side setbacks and avoid the need for variances. (LMCD code 6-5.01.)

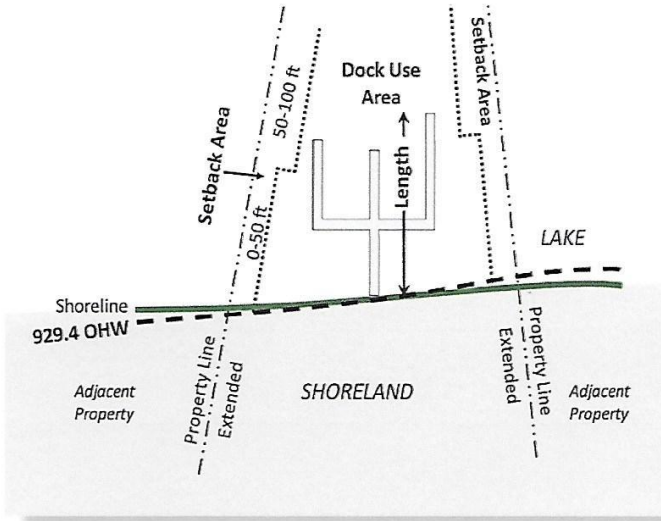
DOCKS, DECKS, AND PLATFORMS

Docks, decks, and platforms may exceed 8 feet in length or width, but not both. Ex. 8 ft x 12 ft, but not 9 ft by 12 ft. Docks moved between lakes or waterbodies must be dried out for 21 days to help prevent the spread of aquatic invasive species. Permits are required. Visit the MN DNR website for more information.

RESIDENTIAL DOCKS, STRUCTURES, & WATERCRAFT, CONT.

LOCATION (AUTHORIZED DOCK USE AREA)

Docks, structures, watercraft, and other items must be located within an authorized Dock Use Area, determined by setbacks from the extended side property lines and length into the lake. The *Dock Use Area Illustration* provides an example of a typical dock use area. A neighboring property owner may allow a dock/watercraft to encroach into the side setbacks under certain conditions. Some uses are allowed if the property/site has not been replatted, subdivided, combined or otherwise changed since a certain date. For unusual lots or shoreline, contact the LMCD..



Dock Length

Shoreline	Feet
Equal to shoreline	Up to 100 ft
40 to 60 ft and in existence on 02/05/1970	60 ft
40 ft or less	First reach to 4 ft water depth, max 60 ft

Setbacks

Condition	Feet
Dock length 0-50 ft	10 ft
Dock length 50-100 ft	15 ft
Shoreline 50 ft or less; if in existence on 2/2/1970	5 ft, if no neighbor access impaired
Slip opens into adjacent property (side opening)	Depth of slip; min. 20 ft
Canopy fabric exceeding 30 inches vertically	20 ft

WATERCRAFT TYPES & DENSITY

The number of watercraft (called restricted) that can be stored at a property is based on the measurement of the shoreline at the 929.4 OHW. This includes personal watercraft, runabouts, cruisers, pontoons, fishing boats and similar. The following watercraft (unrestricted) are not included in watercraft density calculations if not stored on or above the water such as a lift:

- 16 ft or less in length without a motor
- 16 ft or less with a motor 10 hp or less (manufacturer specs and regardless if operational)
- 20 ft or less without a motor and propelled solely by human power. Ex. Canoe, kayak, paddleboard



BOAT LIFTS

Boat lifts may be used as long as they fit within the authorized dock use area and meet any existing variances. An overhead, fabric cover that is an integral part of a boat lift is not a canopy if the vertical height of the fabric cover does not exceed 30 inches.

WATERCRAFT DENSITY CALCULATIONS

The number of watercraft that can be stored at a property site is determined as follows:

1. 1 watercraft per 50 feet of continuous shoreline regardless of ownership (1:50 ft Rule), or
2. 2 if the site was in existence on 08/30/1978 regardless of ownership (more if allowed by the 1:50 ft Rule), or
3. Any property may have up to 4 if all the following conditions are met:
 - single family residence, legally subdivided and adjoined to shoreline property,
 - exclusive dockage use by site's owner,
 - all restricted watercraft owned by and registered to persons living on site, and
 - all applicable code requirements met, or
4. 5 or more by obtaining a license if lake and code conditions can be met.

Lake Minnetonka Conservation District
5341 Maywood Rd, Mound, MN 55364

lmcd.org | 952-745-0789 | lmcd@lmcd.org

LakeMinnetonkaConservationDistrict

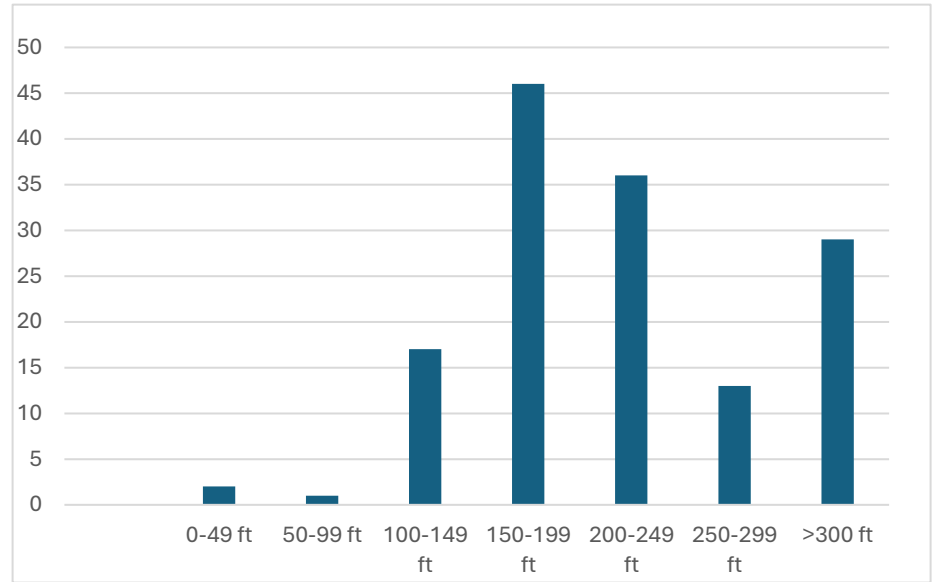
LakeMtnkaCD

Distribution of Pine Lake
Frontage per lot

frontage
per lot

Frontage Feet	#
0-49 ft	2
50-99 ft	1
100-149 ft	17
150-199 ft	46
200-249 ft	36
250-299 ft	13
>300 ft	29

N=144



Nonconforming=<150 ft- 20 so 14%



DRAWINGS OF PROPOSED ACTIVITY SHOULD BE PREPARED IN ACCORDANCE WITH SAMPLE DRAWING

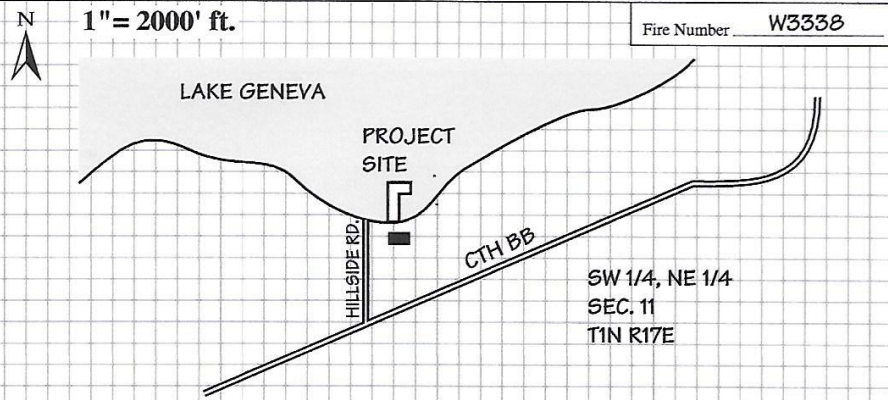
Location Sketch (Indicate scale.) Show route to project site: include nearest main road and crossroad.

PIERS
SAMPLE DRAWING

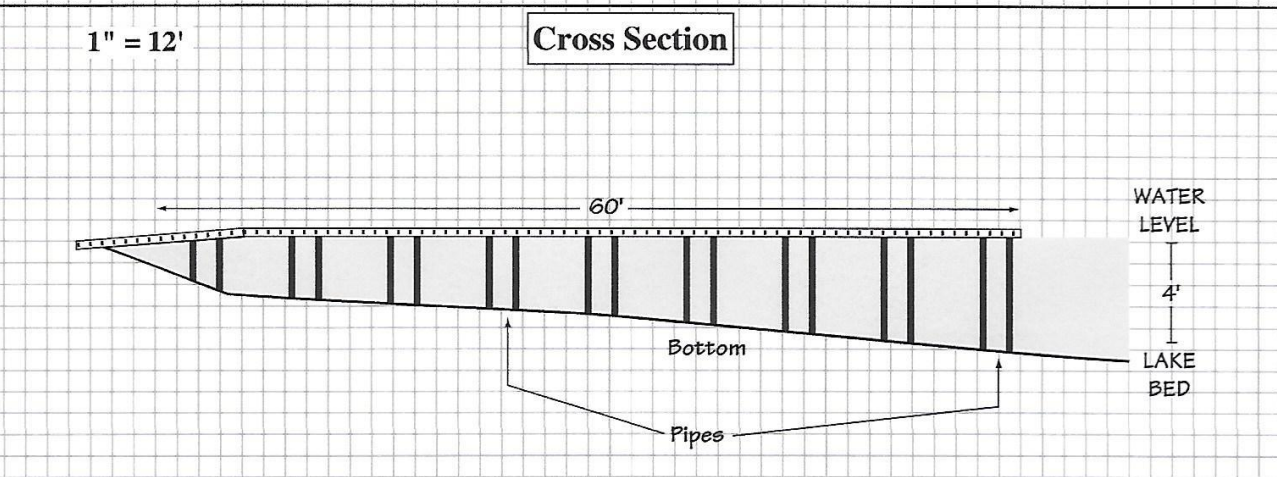
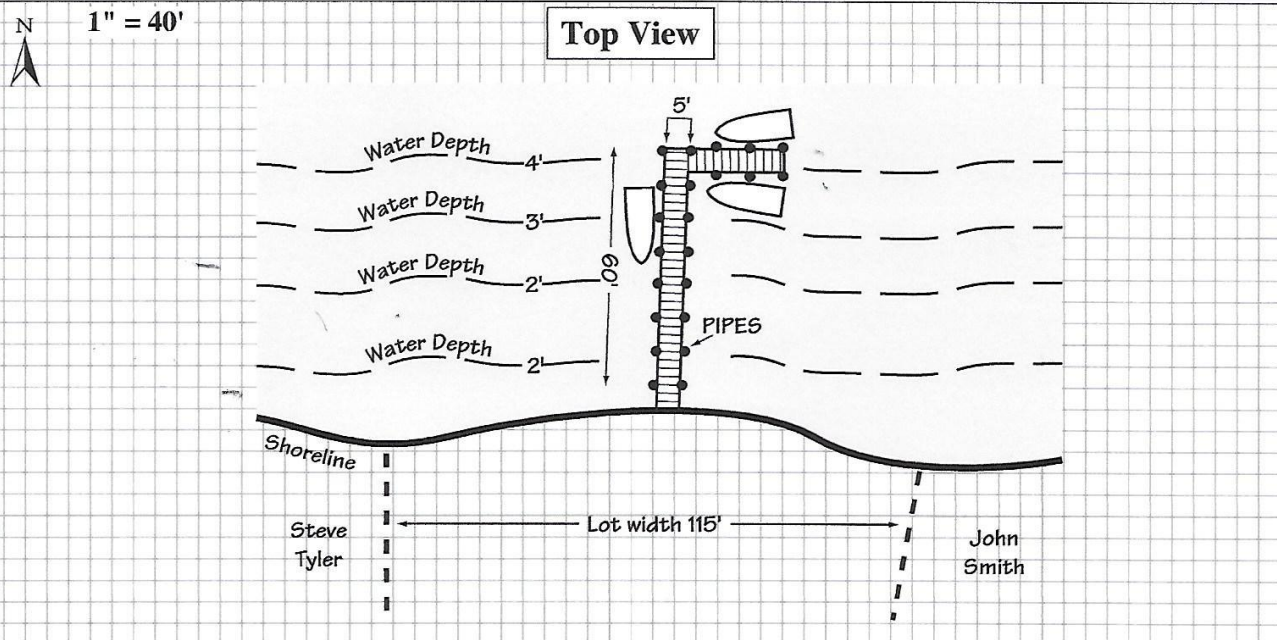
Proposed Materials:

16 pipe supports

Pier deck planks are 2"x8"x5'



Project Plans. (Include top view and typical cross sections. Clearly identify features and dimensions or indicate scale.)
Use additional sheets if necessary.



“Electric Shock Drowning” A Silent & Unexpected Killer

From the Emmet County Building Inspection Department

Shoreline erosion issues have been in the news for months. There is another danger that is related to the rise in water levels in our lakes that is equally or more important to be aware of. There is the potential of a silent danger that can't be seen, can't be heard and has no odor. That silent danger is known as “Electric Shock Drowning” (ESD). ESD can occur anytime there is source of electricity in or near the water.

Monitoring of the lake elevations has indicated that the rise in water levels will continue at least through 2020, setting record highs for the great lakes water levels. With those rising lake levels, it is even more important to become educated on how electricity can be present in the water.

Through increased public awareness, the public can avoid of the dangers of electric shock drowning. This article is written and provided to educate property owners and the general public on this silent but deadly danger. Electric Shock Drowning can happen to anyone. No one is exempt.

Electric Shock Drowning is a term used to describe a cause of death when swimmers are exposed electric currents in the water. When electrical current is present in the water, that current will find any body to which it can connect to as a ground. The effects of electricity in the water can be minimal to a swimmer or the effects can be disastrous. Minimal effects can be as simple as a slight tingling sensation if the electrical field is low in current. When the electrical current is stronger, effects can include complete loss of muscle control, which can paralyze the body, causing the swimmer to lose the



ability to move, and then drown due to the lack of muscular control.

Electric shock drowning is not limited just to lakes, docks, piers and marinas. Similar dangers can exist on public and private properties where swimming pools, spas and hot tubs are present too. Care should be taken anywhere water and electricity are present to avoid the potential of electric shock.

Studies have shown that the main cause of electric shock drowning near rivers, streams lakes and other open bodies of water is faulty electrical wiring and/or components on docks, piers and boats. Faulty electrical wiring and equipment can include frayed wires, loose connections, damaged electrical components, etc.,. When faulty or damaged electrical wiring and/or components are present on boats, docks or piers,

electrical current can easily leak enter the surrounding water.

Additionally, rising lake levels are causing electrical wiring and components to be too close to the water, or worse yet, in the water. Electrical components in or too close to the water also allow electrical leakage into the surrounding lake area. Electrical current can also travel through and between any wiring, electrical components, or grounded metal parts on boats, docks and piers. All of these potential sources of leakage can cause an electrical field to be created in the water surrounding the source of the power. The size and intensity of the electrical field varies depending on the amount of electricity that is being leaked into the water.

Those who are under the impression that ESD doesn't really happen should think again. The following paragraph details observations by Emmet County inspection staff during an electrical inspection in December 2019 at a property located in Emmet County. On December 20, 2019, two inspectors from the Emmet County Planning, Zoning and Construction Resources office performed inspection of electrical safety devices that had been installed on the electrical services for three private docks in Emmet County. It is important to note that the electrical devices were installed in a code compliant manner, which means the minimum safety



standard known as the electrical code had been met. Upon visiting one of the docks, four Canadian goose carcasses were observed. One carcass was on the dock, and was partially eaten by area shore birds. Another partial carcass was observed on shore in a similar condition. Two other goose carcasses remained mostly intact and were lying on the shoreline rocks and partially in the water. The Michigan Department of Natural Resources (DNR) was contacted and informed of the observations at the site. DNR officials visited the site that same day, and recovered the two carcasses that were mostly intact. The remains of the two geese were sent to the DNR Wildlife Disease Laboratory in Lansing, Michigan for analysis. The necropsy report details where the birds were found; the condition of the birds when recovered; and the probable cause of death. The probable cause of death noted in the reports stated "electrocution."

It could be debated that these geese may have fallen victim to other wildlife in the area such as eagles and hawks. The necropsy reports indicate that there was no sign of attack by other wildlife. The reports indicate that the condition of the internal organs aided in the determination that paralysis from electrocution had caused their demise.

The warning signs posted were of no help to the geese, but they serve as strong warning to humans. What took the lives of these geese could just as easily happen to family, friends and loved ones. Electrical current in the water is not particular on who or what it follows or connects with. Anyone, whether human, pet or wildlife, can be affected if an electrical field is present in the water.

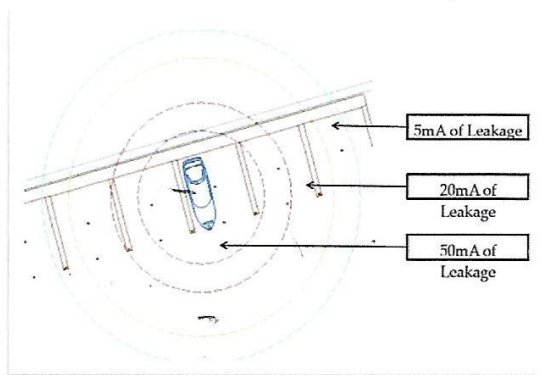
Code compliant installations, as well as continued maintenance of electrical systems and components are necessary for the safety of all, including those in and around the water. Electrical Installations in Michigan are required to comply with the 2017 National Electrical Code (NEC). Article 555 of the 2017 NEC provides the code requirements for electrical installations in and around docks, piers, wharfs, marinas, etc. These requirements apply to private residential docks as well. The electrical code is only a minimum safety standard that must be met for electrical installations. Therefore the code provides nothing more than a minimum standard of safety. When an installation has been completed in a "code compliant manner", on electrical systems and components near or on the water, swimming near and around a dock, pier, or marina, is still not allowed due to the potential for electrical current to be present in the water. Per NEC Article 555, a partial list of requirements that apply include:

- 1) "Electrical components must be provided with over-current protective devices such as ground fault

protection not exceeding 30 milliamps (mA).” This electrical code requirement provides a minimal amount of protection for electrical systems and components installed in areas near and around water. Having 30 mA protection does not take away the potential for electric shock drowning. At 30 mA the amount of electrical current remains high enough to disable or kill a person, persons and even wildlife.

The Electric Current Effect Chart on the right contains information compiled by OSHA. The data indicates various levels of milliamps (mA) and the effects on the human body for each of the amounts shown. Even minimal amounts of electricity can have a negative effect. As little as 1 mA of electrical current in the water can be felt as a tingling sensation in the body. As little as 6 mA of electrical current in the water can cause loss of muscular control. 30 mA of protection, which is the electrical code required amount of protection, can cause extreme pain, respiratory arrest, and/or severe muscle contractions, and death is possible.

Underwater Electrical Field Example



The source of the electrical leakage creates the electrical field in the water. The more powerful the electrical field is at the source, the further that electrical field can extend from that source.

2) “Electrical components, receptacles and connections are to be elevated to heights at least 12 inches above the high water line for fixed docks and piers; and at least 12 inches above the deck of floating docks and piers.” Failure to follow this requirement places electrical wiring and components too close to the water, and possibly in the water as the lake elevation rises. This allows electricity to enter the water and become a danger.

3) “Permanently mounted safety signs are required to be installed to give notice of electrical shock hazard risks to persons using mooring facilities or swimming near a boat dock, pier or marina. The signs shall be clearly visible from all approaches to a dock, pier, marina or boatyard facility. The signs shall state

“WARNING — POTENTIAL SHOCK HAZARD — ELECTRICAL CURRENTS MAY BE PRESENT IN THE WATER.”

Electric Current Effect Chart

Current (mA)	Probable effect on human body
1	Perception level. Slight tingling sensation. Still dangerous under certain conditions.
5	Slight shock felt; not painful but disturbing. Average individual can let go. However, strong involuntary reactions to shocks in this range may lead to injuries.
6-16	Painful shock, begin to lose muscular control. Commonly referred to as the freezing current or let-go range.
17-99	Extreme pain, respiratory arrest, severe muscular contractions. Individual cannot let go of an electrified object. Death is possible.
100-2,000	Ventricular fibrillation (uneven, uncoordinated pumping of heart). Muscular contraction and nerve damage begin to occur. Death is likely.
2,000+	Cardiac arrest, internal organ damage, and severe burns. Death is probable.

It is important to note that following the minimum requirements of the code does not eliminate the potential for electric shock drowning. For that reason, the electrical code requires signage to be installed. Those considering swimming in posted areas need to be aware of the danger and comply with the signage. If a sign is posted that states “Do Not Enter The Water”, “Do Not Swim in This Area”, “Potential Electric Shock Hazard” or other signs exist with similar messages, people need to take the message seriously. That signage is posted to prevent injury and save lives.

Property owners with electrical service provided at private docks, as well as municipalities with public docks, must be aware of this silent danger and take the appropriate steps to mitigate that danger as much as possible. Code compliant installations are just the beginning of the safety process. Ensuring that all installed electrical components are located well above the high water mark, and adjusting the height of electrical components should the water levels rise above those previously set as high water marks is a major element of a safe installation. Installing better than code right from the start is just that, better. Owners have a responsibility to maintain their docks in a safe manner. Continual inspection is a necessary part of that maintenance and should be conducted by a qualified

electrician. Monitoring of boats and their electrical systems connecting to the electrical systems at docks, piers, marinas, etc is also necessary.

The first instinct of many and the worst thing that one can do is to jump into the water to aid another. Doing so makes both you both susceptible to ESD. If the electrical service is nearby, turn it off, then call 911 to report the emergency. You can throw a life saving device such as a floating ring to the victim. If available reach out with a pole or hook type device, but only if that device is not a metal material that can transfer electricity. For a person swimming, should you start to feel a tingling sensation in your body, swim as quickly as you can away from the dock, pier or marina. Swimming away takes you out further from the electrical field source.

Electric shock drowning can affect anyone. Caution and care should be taken at any dock, pier or marina facility, whether public or private. Public and private dock, pier and marina owners need to hire qualified electricians to perform electrical system installations; to perform safety inspections; and to provide maintenance of electrical systems and components at their facilities, keeping those electrical systems and components in a safe and good working order. Marina owners need to remind boat owners of the need for the boat owner to take the responsibility for having the electrical systems on their vessels inspected and maintained regularly. Private dock owners have the same responsibility as well.



Owning a private dock does not change the minimum safety requirements. The code requirements for public and private facilities are the same. According to David Rifkin, the co-founder of the Electric Shock Drowning Prevention Association, "as of July 2019, there have been at least 98 reports of electric-shock drownings in the USA since 1986".

Educating the public about ESD is key to saving lives. Property owners and the general public need to be aware of the danger of electric shock drowning. There can be hazardous electric fields in the water at private and public docks, piers and marinas, spas, swimming pools and hot tubs.

Numerous websites, organizations, articles and news stories can be found online on this subject by simply performing an internet search of "electric shock drowning". A number of websites available contain personal stories about loved ones who have been taken by this silent danger. Some of those websites include:

www.michigan.gov/dnr

www.electricshockdrowning.org

www.esfi.org/electric-shock-drowning

www.nfpa.org

www.boatus.com/seaworthy

Through proper inspection, maintenance, and installations completed in at least a code compliant manner, or better yet, better than code; through the education of property owners plus the general public on the dangers and the potential for Electric Shock Drownings when an electrical field is present in the water, lives can and will be saved. There is no visual warning or other clue that water may be electrified. You or your loved one may not know until it is too late. Know the danger, take precautions, and prevent serious injury or death from occurring.

WARNING!

Potential Shock Hazard

Electrical currents may be present in the water. These electrical currents can be harmful or lethal.

www.electricshockdrowning.org

Lake Nagawicka Watershed

Slow-No Wake

City of Delafield municipal code 19.04.3.b.4:

When the water level of Nagawicka Lake rises to a level of 10 inches or more above the maximum permitted water level then the entire lake shall be considered a restricted area designated as "SLOW - NO WAKE" and no person shall operate any watercraft at any location on the lake in excess of 3 mph nor in excess of a speed which creates a wake, whichever is less. The "SLOW - NO WAKE" designation shall remain in place until the water level recedes to a level that is less than 8 inches above the maximum permitted water level.

As of 07-08-2024 at 13:10:00 the lake level is approximately 889.98 feet MSL. This is 6.60 inches below the Slow-No-Wake level

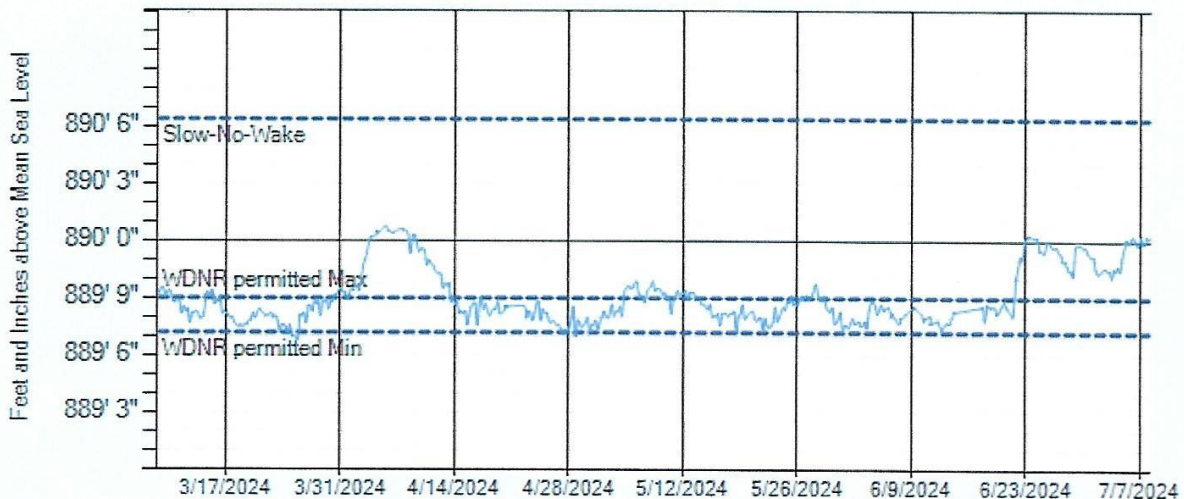
The lake is currently under Normal rules.

New data is available every 10 minutes. Press the Refresh button to see the latest data.

[Refresh](#)

Lake Level History

Start graph data: 4 months ago ↕



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[Refresh](#)

Lake Level History

Start graph data: 1 month ago

