

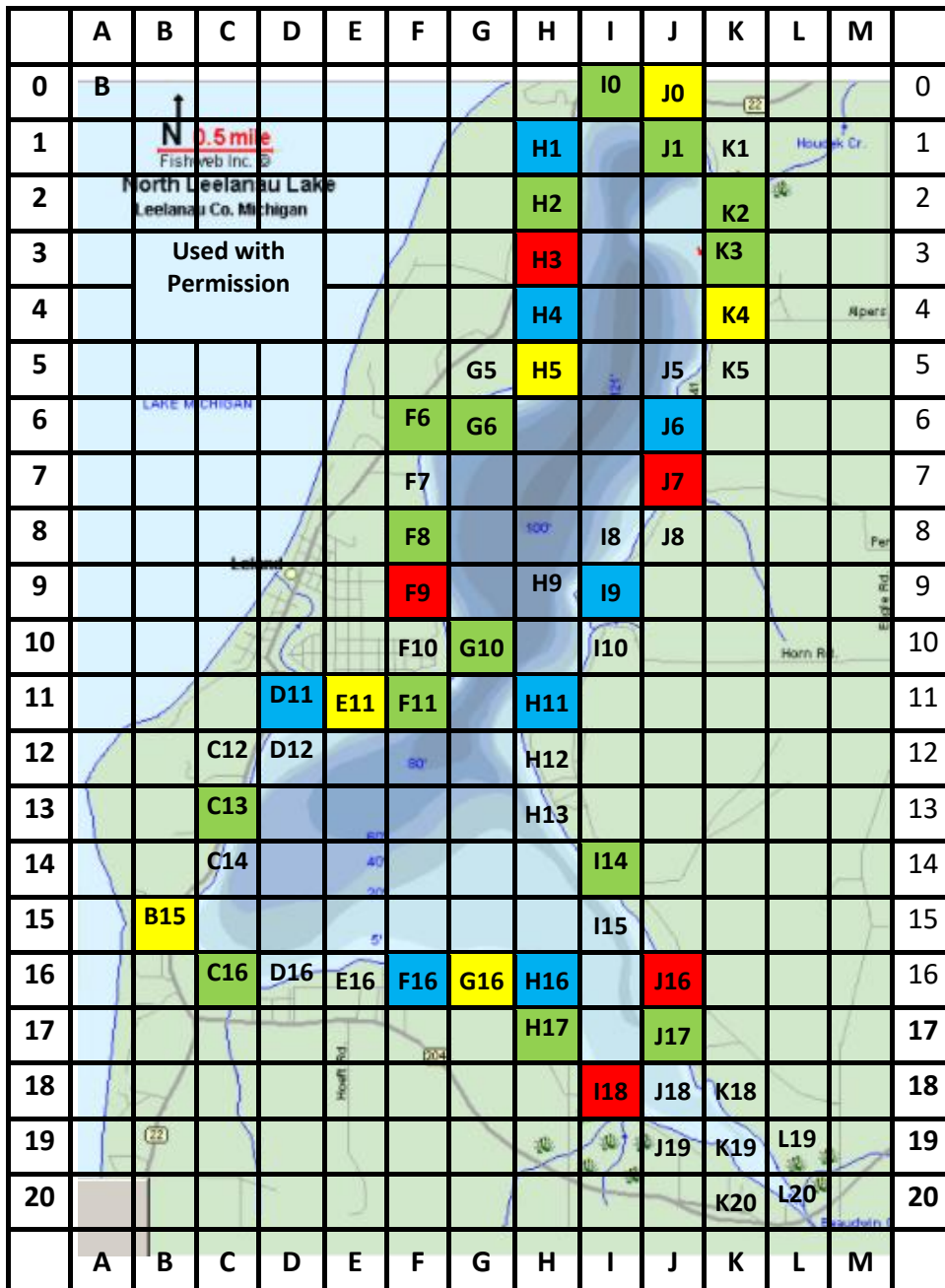
North Lake Leelanau Swimmers' Itch Reports Through 8-3-2020

Key to # Cases in Each Quadrant			
1	2	3	4 or more

Swimmers' Itch Summary Statistics					
			Worst severity from each report		
Lake	# Reports	# Cases	Mild	Moderate	Severe
North Lake	77	213	17	41	19
South Lake	42	153	5	30	7

North Lake Familiar Locations

Schneiders Beach (H17); Leland-Chandler St (D11); Leland-4th St. (E11); Nedows Bay(F9); Celebration/Cemetery Pt. (H5); Suelzer Park (K3); Porter Landing Horn Rd End (J6), Wardens Pt (H11).



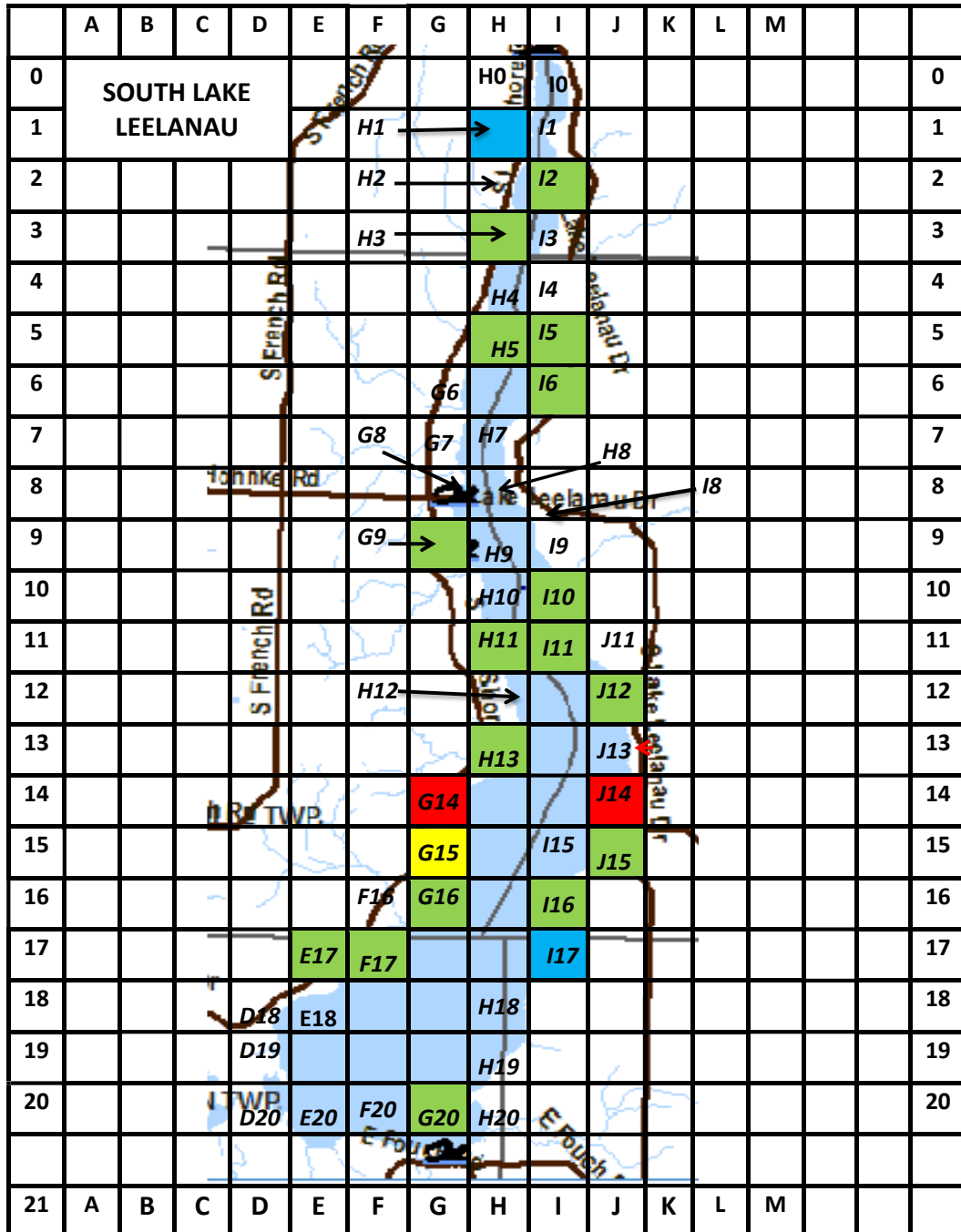
South Lake Leelanau Swimmers' Itch Reports Through 8.3.2020

Swimmers' Itch Summary Statistics					
Lake	# Reports	# Cases	Worst severity from each report		
			Mild	Moderate	Severe
North Lake	77	213	17	41	19
South Lake	42	153	5	30	7

Key to # Cases in Each Quadrant			
1	2	3	4 or more

South Lake Familiar Locations

L. Leelanau RV Pk (G6); Centerville Twp Pk-Honke Rd (G8); DNR Boat Ramp (G9); Kelenski Pt (H13); Leelanau Pines CG (G16); Solon Twp Pk (F17); Perrins Landing (G20); Bingham Twp Park (J14); Merbert Crk. Mouth (I10); Fountain Pt. (I1); DNR Boat Ramp S of Hwy 204 (I0)



North Lake Leelanau Swimmers' Itch Report Comments Through 8/3/2020

The severity index is color coded for easy determination: blue-mild (1-10 papules), yellow-moderate (11-100 papules), red-severe (greater than 100 papules). If respondents provided names or addresses, they have been deleted from the comments to protect your privacy.

Quadrant	Date	# Swimming	# W/ Itch	Severity	Comments
B15	06/20/2020	4	4	Moderate	N Manitou Trail. Grandkids playing at and near shoreline.
B15	07/01/2020	10	10	Severe	N Manitou Trail Leland Adults and kids got the itch in 1-3 feet of water.
B15	07/11/2020	8	3	Mild	We swam all week and no one got it until the 11th. The wind seemed to be blowing in, but not sure what the difference was.
C13	07/05/2020	8	11	Moderate	At Fudgie beach and the large sand bar
C16	07/11/2020	6	6	Moderate	We went in the AM in the very sandy shallow sandbar that stretches from the corner of the quadrant way out into the lake. We went in once prior this year in the afternoon but for a much shorter time and were okay. We typically use a different part of the lake and have never gotten it before.
D11	07/28/2020	2	1	Moderate	Early evening went swimming at the end of Grand Street in Leland. Awakened with the itch on arms, legs and trunk of body.
D11	06/28/2020	4	2	Severe	Fudgie Beach swimming - also spent time at sand bar north of the narrows on west side of the lake, so may have contracted it there, but kids said there was cloudy / strange looking water along the shore at Fudgie Beach.
E11	07/03/2020	4	1	Mild	Standing in shallow water in the morning with onshore breezes- what do I expect?
E11		7	3	Moderate	Closer to the public dock- rarely waded out past ~3ft.
E11	07/06/2020	2	2	Severe	Swimming at the road end for about 5 minutes before both kids started to nearly immediately start to itch. Pulled the kids and got them showered with little improvement, sever rash head to toe on both kids with the one on my two year old continuing still for over a week.
F6	07/03/2020	4	1	Moderate	Only swam for 20 mins at a time, about 20-30 ft from shore. Got in the water about 4 times. Moderately windy day. Was wearing and reapplying sunscreen, toweling off in between swims.
F8	07/01/2020	2	2	Moderate	Country Club Commons , Leland. Our grandkids were swimming off our dock in the late afternoon.
F9	06/28/2020	3	2	Moderate	Wind was blowing water toward the shore. Swimming inside the dock area at Nedows Bay.
F9	06/29/2020	8	7	Moderate	Nedows Bay/LYC dock. Not in the shallow areas for more than 2 minutes
F9		3	3	Severe	We were at Nedows Beach next to the yacht club.
F9	06/28/2020	7	7	Severe	Neadow's Beach - all swimmers got some, and daughter that was in water most (over course of 3 hours) got it most severe. Most swimming occurred around dock (not near beach).
F9	06/28/2020	7	7	Severe	Nedows Beach. The little girl that lives next door came with us. She is absolutely covered head to toe in welts. We counted 40 welts just on ONE forearm. They are in her hair, covering her legs, arms, stomach, back, neck and even some on her face.
F9	06/29/2020	3	2	Moderate	Playing mostly in the shallow water during the morning. Live right next to the yacht club.

F9	06/28/2020	4	1	Mild	My granddaughter was between raft and the Yacht Club. She has always been more susceptible than most people. I'm not sure if anyone else got the itch that day. Also my nephew 6 houses North of Nedows got a mild case late June.
F9		5	2	Moderate	Person who got itch the worst was swimming in the shallower water w kids. Timing was afternoon.
F9	07/01/2020	3	3	Severe	Cottages on lower Juniper Trail.
F9	07/21/2020	3	2	Severe	Nedows beach, three children swimming. One child didn't show any symptoms, another was itchy but no bumps, the third was itchy and developed severe case of bumps. Severity was likely related to longer time period between swimming and subsequent shower.
F11	07/23/2020	2	2	Moderate	Grand street outlet town of Ieland
F16	07/05/2020	9	3	Moderate	About 150 feet from shore, on the northern side of the sandbar.
F16	07/02/2020	1	1	Moderate	i went into the lake up to my knees to assist someone in a kayak. It was around 8am sunny and the water was warm. I usually put on sun tan lotion. It usually helps against swimmer's itch. The beach is in a cove area.
G6	07/16/2020	5	4	Moderate	They were swimming 10' off the end of the pier. We have never gotten the itch out there. Ducks have been prolific this season. 3606 N Manitou trail
G10	06/26/2020	3	3	Mild	On the north side of Brady point. Haven't seen much duck action except for a female with 4 ducklings that are active along the shoreline north and south of the point very early in the morning and very late at night.
G16	07/02/2020	4	1	Severe	E Mary Jane Lane.....swimmers were right at shore in a sandy area protected by rocks
G16	07/08/2020	4	1	Moderate	E Mary Jane Lane.....swimmers were right at shore in a sandy area protected by rocks
G16	07/09/2020	4	2	Mild	E Mary Jane Lane.....swimmers were right at shore in a sandy area protected by rocks
H1	07/02/2020	2	1	Moderate	I believe near the dock on front of our home at the north end of the lake. Our home is at 4825 N. Manitou. It could also have occurred on the sand bar near H17 where we were swimming for quite a while. But I believe it's more likely near H1.
H1	07/13/2020	4	4	Moderate	At our dock, E Yellow Birch Lane, NW wind. We spent too long in the shallow water with two little girls and we paid the price, excruciating for the girls, tears, etc. Also, we have a merganser family near our dock.
H2	07/08/2020	6	3	Moderate	Along the shore in the shallow water, docked a rental pontoon and swam Bout 2 hours in knee deep water
H3	06/27/2020	1	1	Severe	I swam the lakeshore north from our dock on N. Manitou Tr (H3) up to the last dock before the silver birch area. I felt itching as I neared the turnaround, and once I got back to my dock was on fire. Took nearly 10 days for spots/bumps to disappear. There is also a family of Merganser ducks along our shoreline.
H3	07/04/2020	7	6	Moderate	N Manitou Trl W
H3	07/09/2020	4	3	Mild	
H3	07/17/2020	2	2	Mild	N. Manitou Trail.
H4	07/05/2020	1	1	Severe	Swam shoreline from our dock south to Cemetary and back. Used Itch Cream as preventative prior to swim, made no difference.
H4	07/04/2020	4	2	Moderate	We were anchored off the cemetery. Played frisbee and floated on tubes. Then went tubing around the north lake at slow speed ending with a deep water swim. Never have I had this before

H5	06/22/2020	5	2	Moderate	Cemetary point
H5	07/04/2020	2	2	Mild	West side of the box. Mild case of spots. However, an all over torso itchy feeling w/ no spots. Been swimming in the lake for over 30 years, never had an itch like this with no spots.
H5	07/04/2020	3	3	Mild	Floating in water or standing in 3/4 feet deep. All sandy with no snails seen or felt. Approximately 70 feet from shoreline
H11	07/06/2020	2	2	Moderate	Wardens Point. North facing And I saw female merganser and 11 chicks on July 7
H11	07/25/2020	1	1	Severe	Just south of Warden's Pt. I was in the shallow water working on my dock for a couple of hours. Bad choice, paid dearly for it!
H16	07/02/2020	8	2	Moderate	Kids were playing and swimming at the Sandbar and 2 ended up peppered in spots.
H16	07/05/2020	2	2	Moderate	Itch was found closer to shore
H17	06/28/2020	1	1	Moderate	We were anchored off along with at least 15 other boats throughout the day. I swan in neck deep water For about 25 minutes and 2 hours later bam
I0	06/21/2020	2	2	Severe	North lake "long dock beach".
I9	06/19/2020	4	4	Moderate	We were in the sand bar (shallow) located directly West of the 4th lake cottage northeast of the point in quadrant i9.
I9	07/15/2020	1	1	Moderate	I was swimming off the dock at Porters point. About a day later I noticed several clusters of itchy bumps all over my legs and ankles.
I18	06/20/2020	2	2	Moderate	North Popp Rd Next to Twp park...there is currently family of Mergansers in our area.
I18	06/20/2020	2	2	Mild	North Popp Rd, east of Twp park. There is a family of Mergansers present on this shore line.
I18	06/27/2020	3	2	Mild	North Popp Rd east of of Twp park.
I18	07/04/2020	2	2	Moderate	North Popp Rd, east of twp park
J0	06/20/2020	4	1	Moderate	North Shore line
J0	07/04/2020	8	4	Severe	North Shoreline West corner
J0	07/11/2020	1	1	Moderate	My husband was in the was in the lake at the end of our dock.
J1	07/20/2020	3	3	Severe	In the shallow area of the north end of the lake. We were extremely itchy all over our body and then got bumps the following day and continued to be itchy.
J6	07/04/2020	2	2	Moderate	Porters landing. Got it while putting in dock.
J6	07/02/2020	2	2	Severe	Reporting for grandsons' cases at son's cottage, N. Lake Leelanau Dr. They and adults have continued to get itch bites since then.
J7	06/25/2020	5	1	Mild	N lake leelanau dr, all within 50 feet of the shore
J7	06/28/2020	6	3	Moderate	Swimming within 50 yards of shore. 5 year old child has moderate spots everywhere. 2 adults have mild spots.
J7	06/29/2020	3	2	Mild	2 adults with mild spots. Started swimming atleast 20 yards off shore and went out deeper. Was not in shallows
J7	07/03/2020	6	5	Moderate	Lake leelanau dr. started over 20 feet from shore and went out from there. Everybody had swim itch on for the lower body but didn't make much of a difference
J7	07/04/2020	6	5	Moderate	N lake leelanau dr, swimming starting around 20 feet out. had swim itch cream on
J14	07/03/2020	4	3	Moderate	We were at J14 but the drop down menu didnt allow me to select. we stayed within 20 yards of shore at the toanship park. We were there 90 minutes
J16	07/01/2020	1	1	Moderate	North lake leelanau drive 10-15 ft past dock. Swimming "laps"

J16	07/03/2020	2	1	Mild	She was floating on tubes in the water and got the itch on our back end.
J16	06/30/2020	2	1	Mild	She was sitting on the dock with her feet in the water and got it on her ankles. She also got it on her legs from swimming.
J16	07/11/2020	2	2	Severe	The swimmer out of the float is covered from chest to feet plus arms. Over 100 hundred spots that are like blisters and they itch bad. The person in the float spots came a day later and so far are from the knees down and then in a few other spots throughout the body. Very miserable. We are visiting so we had no idea about the lake having problems.
J16	06/06/2020	6	6	Severe	We have tried it all. Nothing works to prevent this, aside from staying out of the water entirely. :(
J17	07/07/2020	1	1	Moderate	Swam out away from shore. Evening swim.
K2	07/03/2020	5	5	Mild	We are just south of Seltzer Park and all the grand children and my son, his wife and my daughter got cases of the itch!
K3	06/28/2020	6	4	Severe	Swimming just north of the boat launch, getting in and out of the boat. Itching started before leaving the lake and is now covering my legs and lower torso, with the worst case of swimmers itch I've ever experienced.
K4	06/18/2020	1	1	Moderate	We live a few houses north of Alpers on the lake. I was working in very shallow water, readying a diving raft to launch. Had water shoes on. About 30 minutes. Got about 40 spots. During the launch, swimming and diving in 6 1/2 feet of water, got no more spots. Exposure ~ 20 minutes.
K4	06/27/2020	7	6	Moderate	We are north of Alpers road and south of Seulzer Park on N Lake Leelanau Drive. This year we have lots of bumps but they are less itchy than in the past.
K4	07/06/2020	2	1	Mild	N. Lake Leelanau Drive. Mostly chest deep water. Swimming approximately 5 PM.

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E17	06/26/2020	3	3	Moderate	Between Solon twp. park and Garvins cottages.
F17	06/29/2020	6	6	Moderate	
G9	06/20/2020	1	1	Moderate	While loading boat on boat ramp.
G14	06/30/2020	1	1	Moderate	Glazier Beach. Main body area affected was my legs and a few on my back.
G14	06/19/2020	3	2	Mild	Swimming near the shore.
G14	06/19/2020	3	3	Severe	swimming at the end of the dock. Glazier-Persik Beach.
G14	06/21/2020	4	4	Severe	Glazier Persik Beach
G14	07/03/2020	6	6	Severe	Property on Glazier-Persik private beach (S. Glazier Beach Drive)
G14	06/19/2020	10	7	Moderate	We live on S glazier beach. There is a farm above us and this spring it was overcrowded with pigs goats and chickens. At least 100 seagulls would eat the grains from the livestock then spend their nights on the lake. There was increased duck activity. I'm concerned there is an increased nitrate level in our cove and better habitat for the snails. We have never had swimmers itch since we moved here. Copper sulfate was used in our cove until it was banned. Please advise.
G14	07/06/2020	5	4	Moderate	Several homes along glazier perziak beach. We are about 7 homes from the north
G14	07/04/2020	3	2	Moderate	Glazier Beach
G14	07/02/2020	5	5	Severe	We were swimming at Glazier Beach. All 5 of us had at least 50 bites from a few hours of swimming.
G14	07/08/2020	5	5	Moderate	None of us got swimmers itch in the eleven years we've owned our house. Now that we have no permit to treat the water, we and renters on both sides have been affected. Grandson 7 years old. 270 bites; his father 119. He's choosing not to swim. Five year old 20 spots. Two adults 25 spots. What is the Lake Associations plan? How is money donated for swimmers itch being spent? Can association help us get a permit to treat water against swimmers itch again, so our visitors can enjoy the lake?
G14	06/30/2020	9	9	Moderate	Down the street from polish heritage farm. Young children swimming daily had legs completely covered in spots and were in tears over the itching. Adults and other children also had moderate level spots with less itching.
G14	07/06/2020	13	13	Severe	Glazier Beach
G14	07/10/2020	2	2	Moderate	Glazier Persik Beach
G14	07/11/2020	2	2	Moderate	Glazier Persik Beach
G15	07/02/2020	3	2	Moderate	S Glazier Beach Dr. We were not swimming. We were mostly wading in water to get on or off of our jet ski. We had eruptions of the itch on days before and after the reported date.
G15	07/01/2020	4	2	Moderate	South end of Bilman's Beach. 7401 S. Beach Front Street
G15	07/09/2020	3	3	Moderate	Glazier Persik Beach. Swimming at the end of the dock in the afternoon with an off shore wind.

G16	06/19/2020	4	4	Moderate	Location was Sandbar south of solon park. I did dry of. Immediately but still broke out almost instantly. My daughter was swimming day before and was not infected until her swim on the 19th.
G20	07/03/2020	2	2	Moderate	Timberlee Hills beach house. We both got it the weekend of the 3rd of July and the preceding weekend. The first weekend was just a few spots, the weekend of the 3rd involved numerous spots on both of us.
H1	06/23/2020	5	3	Mild	1 mile south of Lake Leelanau
H1	07/01/2020	6	3	Moderate	Cottage across from Fountain Point at Linguar Rd.
H3	07/04/2020	2	1	Mild	S Lake Shore Dr. 2 feet deep
H5	06/29/2020	3	8	Mild	At The Sandbar just south of the narrows where the yellow house is. We were there for about 2 hours. Standing in the water.
H11	07/15/2020	1	1	Moderate	On skyline drive, working near shore throwing rocks up that fell. Got itch up to knees and elbows, any area under water. We are not getting the itch out further
H13	07/04/2020	4	1	Moderate	Glazier-Persik Beach. I was kneeling in the shallows and now I itch a lot.
I2	06/29/2020	4	4	Moderate	We are at the end of Simon rd. Water was warm and it was windy and blowing in towards shore. The kids and I all got it. I was wading and most spots were on the legs. The kids swam and got it all over.
I5	07/04/2020	11	8	Moderate	Sandy Ridge Road
I10	07/01/2020	4	4	Moderate	We are on the south side of the quadrant on East Melissa Dr., Our 4 grand kids all got it swimming in shallow water. We had a pair of Merganser ducks here quite often in the spring. We had the same thing happen last year.
I11	07/21/2020	1	1	Moderate	E. Melissa Drive.
I16	07/03/2019	3	2	Moderate	South east end of the lake, walked in the shallow water of our beach with toddler for 5 minutes around 10 am, spots showed up within 12 hours.
I17	07/03/2020	3	2	Moderate	South east end of the lake, walked in the shallow water of our beach with toddler for 5 minutes around 10 am, spots showed up within 12 hours.
I17	06/28/2020	10	4	Severe	S. Lakeview Rd
I18	07/02/2020	2	1	Mild	S Lakeview next to the Owls Nest Red & White boathouse
J12	06/17/2020	4	2	Moderate	I'm not sure if I put the correct number. We were at the beach on Park Rd. My son got a few spots, my daughter was covered.
J14		5	3	Moderate	Near Park Road, Bingham Township Park, just south of it.
J14	06/25/2020	3	3	Moderate	Lake Leelanau Dr. approximately 1/4 mile north of the Bingham Rd launch.
J14	07/04/2020	6	6	Severe	South of the bingham boat launch. everyone is getting it every day. many stopped swimming
J14	07/08/2020	3	3	Moderate	My husband and I didn't get it as bad as our 13 year old son. We also went on Sunday July 5 and our son was the only one who got it that day. We had never had it before so we thought it was mosquito bites. The water was SO nice and warm!!
J15	07/02/2020	8	5	Moderate	Three lots south of the Bingham boat ramp- The people infected were swimming both in very shallow water and a bit deeper.