

Fw: Proposed Sewage Collection System Portage and Bear Lakes

Matt Fournier <mfournier@dhd10.org>

Mon 3/6/2023 3:47 PM

To: Stephanie Jacobs <sjacobs@dhd10.org>

Cc: Michael Kramer <mkramer@dhd10.org>; Kevin Hughes <khughes@dhd10.org>

FYI

From: Matt Fournier <mfournier@dhd10.org>**Sent:** Tuesday, November 19, 2019 4:40 PM**Subject:** Re: Proposed Sewage Collection System Portage and Bear Lakes

Good Afternoon [REDACTED],

In getting back to you on your followup questions I have copied your questions below. My responses are in bold type.

1. In the first item you removed the condition of septic system sizing (tank volume and drain field size).
Wouldn't a septic system that is smaller than what code requires be considered as a system that does not meet code?

A system that is smaller in size (yet not in a state of failure) would be considered not to meet code. However, if functioning properly, would not be a threat to public health, groundwater, or surface water. For this reason I excluded systems in this category from the definition for the purpose of considering the need for a sewer system.

2. Does the current code used by the DHD #10 have different size standards than what was allowed under the old code (A quick scan on the web I didn't produce the old code)?

I have attached a copy of the sections of the "Manistee-Mason District Health Department" sanitary code that apply to sizing. The code was adopted April 29th of 1981. The greatest difference is in required tank size. The old code call for 750 gallons for a 1-2 bedroom home, 1000 gallons for a 3 bedroom home, and 1200 gallons for a 4 bedroom home. Our current code required 1200 gallons for 1 3 bedroom and 1500 gallons for a 4 bedroom home. 250 additional gallons is required for each additional bedroom over 4. Drainfield sizing is similar to current code when comparing the medium sand soil texture found around Portage and Bear lake. Current code would require 175 sq ft per bedroom. The old code was not as straight forward. 225 sq ft would have been required for a 1 bedroom home, 340 sq ft for a 2 bedroom home (170 sq ft per bedroom), 450 sq ft for a 3 bedroom home (150 sq ft per bedroom), and 560 sq ft for a 4 bedroom home (140 sq ft per bedroom).

*****Please see attached*****

3. Your local code allows for "code deviations" as approved by the Health Officer. Has the HD allowed deviations from this code for systems around the lakes?

Yes we have allowed deviations from the code with conditions. Deviations are more often granted for isolation from the septic system to the owners well than from the septic system to the lake. Reductions in the isolation to surface water require the use of advanced treatment systems which are designed to lower the biochemical oxygen demand (BOD) of the sewage before disposal into the soil. The reduction in BOD is our justification for reducing the isolation required to surface water.

4. Based on the photos and reports from others around the lakes, it appears that many of the systems around the lakes would not meet the current code requirements of 48" from the bottom of the drain field to groundwater, or the seasonally high water table. Is that a fair statement?

That is a fair statement. I would estimate that in cases of flooding around the perimeter of a mounded drainfield the stone is only isolated 24 inches from the seasonal high water table at this time.

- 5 The E coli tables you sent indicate the presence of measurable levels of E coli at every location at some time throughout the season, some much higher than contact levels. Do you feel some of the reported E coli levels could be attributed to the septic systems around the lakes?

I feel that septic systems are a possible source. Agricultural runoff may also be a contributing factor. For sites 6 and 7 on Portage Lake (the two streams) I have sampled during Winter and early Spring. The levels of E.coli are much lower that what we see in the summer after the population increases and agricultural activity begins.

- 6 Do you think a sewer collection system around the lakes would help improve the long term health of the lake and the health, safety and welfare of those using the lakes?

There is no doubt, from a public health standpoint, that eliminating the use of on-site septic systems around any lake would likely improve outcomes for the lake and help to safeguard public health against potential contamination.

7. With the high percentage of mounded systems around the lakes, do you feel this indicates areas that are not well suited for the use of septic systems?

Lakefront homes, on average, have issues with high water table. Areas with high water table are by definition not well suited for the use of on-site septic systems.

8. Has DHD#10 every required a septic system to be replaced as a result of point-of-sale inspections?

The goal of the point-of-sale program is to educate potential home buyers on the status of the existing well and septic system. We only require replacement if a failed septic system is observed during the inspection.

I hope I was able to answer your questions clearly. If anything more comes to mind after reading my response feel free to contact me at any time

Matt Fournier RS
EH Supervisor
District Health Department No 10
Telephone: 231-309-8945

Sent: Thursday, November 14, 2019 11:09 AM

To: Matt Fournier <mfournier@dhd10.org>

Subject: RE: Proposed Sewage Collection System - Portage and Bear Lakes

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Matt,

Thank you for your time in preparing this response, Matt. It is much appreciated. I understand these are general answers that would require an assessment to get definitive answers. At this point, we are not looking to complete or have an assessment completed. From the response I have a couple of questions:

1. In the first item you removed the condition of septic system sizing (tank volume and drain field size). Wouldn't a septic system that is smaller than what code requires be considered as a system that does not meet code?
2. Does the current code used by the DHD #10 have different size standards than what was allowed under the old code (A quick scan on the web I didn't produce the old code)?
3. Your local code allows for "code deviations" as approved by the Health Officer. Has the HD allowed deviations from this code for systems around the lakes?
4. Based on the photos and reports from others around the lakes, it appears that many of the systems around the lakes would not meet the current code requirements of 48" from the bottom of the drain field to groundwater, or the seasonally high water table. Is that a fair statement?
5. The E coli tables you sent indicate the presence of measurable levels of E coli at every location at some time throughout the season, some much higher than contact levels. Do you feel some of the reported E coli levels could be attributed to the septic systems around the lakes?
6. Do you think a sewer collection system around the lakes would help improve the long term health of the lake and the health, safety and welfare of those using the lakes?
7. With the high percentage of mounded systems around the lakes, do you feel this indicates areas that are not well suited for the use of septic systems?

Has DHD#10 ever required a septic system to be replaced as a result of point of sale inspections?

Thanks again, Matt



From: Matt Fournier mfournier@dhd10.org

Sent: Wednesday, November 13, 2019 3:07 PM



Subject: Proposed Sewage Collection System Portage and Bear Lakes

Dear 



I hope I can provide some insight into your questions regarding the status of onsite sewage systems around Bear and Portage Lake in Manistee County. The questions are difficult to answer definitively as we have not completed assessments of all properties surrounding the lakes. Last week I drove the perimeter of both lakes and will provide you with my takeaway.

1. Do over 50% of the septic systems fail to meet applicable health department standards?

Sizing requirements aside, I can attest that any system permitted and installed within the last several decades would have been held to very similar standards as exist today. I feel it is very likely that more than 50% of the lake front systems have been installed or replaced within the last 30 years. The isolation requirement to seasonal high water table was 48 inches in the Mason/Manistee sanitary code that was in effect prior to 2008 at the time the current DHD#10 sanitary code was adopted. The current code also requires 48 inches of isolation to the seasonal high water table. Systems installed under the last two sanitary codes would have had to meet health department standards at the time of installation. Conditions may have changed since the time of installation; this will be explained in the next section.

2. What light can the local health department shed on the need for sewage collection and treatment?

Although many of the lakefront systems have been replaced with mounded systems that properly isolated the drainfield from the water table at the time of installation, recent fluctuations in the water table have likely changed the equation. During my travel around Portage Lake in particular I observed mounded systems surrounded by water in flooded yards. The majority of the mounded systems were 4 feet tall. If we assume the flood level is the current water table, these systems would only be isolated 24 inches above the water table today. I have attached several pictures as documentation.

3. Have beaches ever been closed?

Beaches on Bear and Portage Lake have never been closed due to bacterial contamination. Water is sampled bi-weekly for bacteria during the months of June, July, and August each year. I have attached the results of this sampling for reference.

You will notice that sites 6 and 7 on Portage Lake have greatly elevated bacterial counts. These sites are streams that flow into the lake and not from the lake surface water. Samples from the surface water of Portage Lake located just outside of the outlet of these streams do not show elevated bacteria. The source of elevated bacteria in these streams has not been determined, however, it has been confirmed that bacteria counts decrease as samples are collected upstream.

4. What evidence can be included to support the violation of a health and safety standard?

We have not received complaints regarding failed septic systems in the areas of Bear and Portage Lake. Failed systems are generally identified by the property owner and repaired or replaced under permit from our department within a reasonable time frame.

We have no record of any failed septic system discharging into Bear or Portage Lake.

5. You should include some representative documentation from the health department, or at least some documentation on what they have.

Documentation on the construction and nature of all onsite septic systems permitted through our department are available as public record from any of our offices.

If you have any additional questions please feel free to contact my office directly at any time.

Matt Fournier, RS
Environmental Health Supervisor
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