



Christina Stacey <cstacey@portlandmaine.gov>

Records of final sign-off on HHE-200

17 messages

Christina Stacey <cstacey@portlandmaine.gov>
To: "Lawson, Brent" <Brent.Lawson@maine.gov>

Tue, Nov 1, 2022 at 3:28 PM

Hi Brent,

Does the state maintain copies of the LPI approval and final sign-off on an HHE-200?

There was a community septic system installed on Cliff Island (Portland) in 2014 that we have most of the records for -- the design, DHHS variance approval, third party inspection letter, etc. But I can't find a copy of the HHE-200 with LPI approval and final sign-off, which is concerning. The HOA is proposing to hook up several more houses to the community system.

Thanks for any help you can provide.
Chris

--

Chris Stacey - Permitting Manager
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389 Congress St.
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Lawson, Brent <Brent.Lawson@maine.gov>

Tue, Nov 1, 2022 at 4:58 PM

To: Christina Stacey <cstacey@portlandmaine.gov>, "Pugh, Alex L" <Alex.L.Pugh@maine.gov>

We usually get them before the inspection process but the municipality must keep that record and documentation of the signed off inspection.

Since this is a community system it may be an engineered system.

I have included Alex Pugh who handles engineered systems and will probably ask you for more information.

Brent

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From: Christina Stacey <cstacey@portlandmaine.gov>

Sent: Tuesday, November 1, 2022 3:29 PM

To: Lawson, Brent <Brent.Lawson@maine.gov>

Subject: Records of final sign-off on HHE-200

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.

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Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

Pugh, Alex L <Alex.L.Pugh@maine.gov>

Thu, Nov 3, 2022 at 8:43 AM

To: "Lawson, Brent" <Brent.Lawson@maine.gov>, Christina Stacey <cstacey@portlandmaine.gov>

Christina:

Sorry, we don't have any records of engineered systems on Cliff Island

[Quoted text hidden]

Christina Stacey <cstacey@portlandmaine.gov>
To: "Pugh, Alex L" <Alex.L.Pugh@maine.gov>
Cc: "Lawson, Brent" <Brent.Lawson@maine.gov>

Fri, Nov 4, 2022 at 4:07 PM

Hi Alex,

Thank you for looking into this. I am attaching the documentation I have of this system, which according to the HOA is in place and has been used since around 2014. Attached are the HHE-200, the plan sheets, the DHHS approval letter, a city memo, and the third party inspection letter.








It seems like there is plenty of evidence that this system went through the whole process, and even in our permit tracking system we have evidence that we approved a subsurface wastewater permit and did inspections. But I cannot find a copy of the HHE-200 with the LPI approval, and of course it's concerning that you don't have any file on this at all. Unfortunately the two city staff who would know the most about this no longer work here.

Any thoughts on how to proceed, particularly with the applications to add some additional dwellings to the system?

Thanks,
Chris

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7 attachments

-  **DHHS approval.pdf**
96K
-  **HHE200 updated 1-6-14.pdf**
2620K
-  **Engineer inspection letter 2014.pdf**
6291K
-  **11161-C1_1,REV2,062513.pdf**
264K
-  **11161-C1_2,REV3,062513.pdf**
357K
-  **11161-C2_1,REV2,062513.pdf**
411K
-  **Memo.pdf**
726K

Pugh, Alex L <Alex.L.Pugh@maine.gov>
To: Christina Stacey <cstacey@portlandmaine.gov>
Cc: "Lawson, Brent" <Brent.Lawson@maine.gov>

Mon, Nov 7, 2022 at 2:11 PM

Christina,

I have added your documents to our file of engineered systems. Jim Jacobsen had filed them somewhere, but not in the files that I inherited a year and a half ago. There is more in these documents than the DWP usually gets, so that is great. It looks to me that the City sent the attached memo about the same time that Jim Jacobsen sent the approval. Might you find some of the documents that you are looking for at the City's Corporation Council's Office? Or possibly the Public Services Department? I see that a letter verifying substantial compliance with the approved system design was asked for. This would be a good place to start the decision of more properties using the disposal system.

-Alex Pugh

From: Christina Stacey <cstacey@portlandmaine.gov>
Sent: Friday, November 4, 2022 4:07 PM
To: Pugh, Alex L <Alex.L.Pugh@maine.gov>
Cc: Lawson, Brent <Brent.Lawson@maine.gov>
Subject: Re: Records of final sign-off on HHE-200

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.

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Christina Stacey <cstacey@portlandmaine.gov>
To: "Pugh, Alex L" <Alex.L.Pugh@maine.gov>
Cc: "Lawson, Brent" <Brent.Lawson@maine.gov>

Wed, Nov 9, 2022 at 1:36 PM

Hi Alex and Brent,

Thank you for hand-holding me a bit through this situation. I just want to be sure we are doing our due diligence with the six houses to be added to the system. My remaining questions:

1. I was viewing the letter from Mark Hampton to Tom Greer as an attestation to substantial compliance, but this actually needs to be from a PE, correct? I did find a "pre-approval" letter from Tom Greer (attached), but not a post-construction letter from him.
2. I think that any version of the HHE-200 that includes LPI signature may be lost for good, but I do have notes in our permit tracking system that this was issued and inspected by city staff. Is that acceptable as proof that the city approved the HHE-200 and inspected it? What is the "Certificate of Approval" that Jim Jacobsen's finding #5 is referring to?
3. I assume the city's primary task is to confirm that the receiving disposal field is adequately sized for the six new houses, in addition to the existing houses that are using it. Should Mark Hampton have addressed this question in his new HHE-200's, or in an addendum? Or is it entirely up to the city to confirm and document the figures?

The disposal field was entirely constructed on private property, and DPW is working with them on allowing extension of the sewer lines through city ROW's, so I'm not worried about legal issues.

Thank you again,
Chris

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2 attachments



Pre-approval Engineer Response.pdf
962K



Participant Map.pdf
1530K

Pugh, Alex L <Alex.L.Pugh@maine.gov>
To: Christina Stacey <cstacey@portlandmaine.gov>, "Lawson, Brent" <Brent.Lawson@maine.gov>

Wed, Nov 9, 2022 at 1:50 PM

Chris:

Regarding the past practices of the inspections, etc. I suspect that an engineer is the one to write the City about compliance. We don't generally get these letters, so I don't know what they look like.

As to the assessment of how much more flow can be added to the system, I would be happy to work with you to make sure that it appears to be appropriate. Should I look at any specific documents that you sent me to start to get up to

speed?

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Christina Stacey <cstacey@portlandmaine.gov>

Thu, Nov 10, 2022 at 10:42 AM

To: Michele DeFrance <mdefrance@portlandmaine.gov>, Charles Jarrett <cjarrett@portlandmaine.gov>

This is to loop you guys in on some background of the Cliff Island community system. We need to verify that the receiving disposal field has enough capacity to accommodate the 6 houses that are being added to it. Alex Pugh at the state has offered to help assess this, if we have any difficulties.

I am going to reach out to the association contact and Mark Hampton to find out how many houses were previously connected. Attached is a spreadsheet of the original intended participants in the community septic field -- I was not able to find any HHE-200's from the 2014 period confirming who actually hooked up to it. All of the documents we have pertaining to the septic field are found in the P-drive under CBL 109A C004 (corrected from original CBL of 109A C001).

I do not think it is necessary to try to get new engineer documentation of the disposal field, although I will ask Mark if he has anything else in his records. Although our records are crap, I think there's enough evidence in the P-drive and UI to show this system was permitted and inspected. Not to mention that it's been in use for 8 years already.

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 **Cliff Island Association Septic Participants.xlsx**
9K

Michele DeFrance <mdefrance@portlandmaine.gov>

Thu, Nov 10, 2022 at 11:17 AM

To: Christina Stacey <cstacey@portlandmaine.gov>

Cc: Charles Jarrett <cjarrett@portlandmaine.gov>

Chris, thank you!

The State will have info on this. Do you want to reach out (or have me reach out) to Brent?

Regards,
Michele

[Quoted text hidden]

--

Michele DeFrance
Plan Reviewer/Code Enforcement Officer/LPI/CFI-I
Permitting and Inspections Department
[389 Congress Street](#)
[Portland, ME 04101](#)

Christina Stacey <cstacey@portlandmaine.gov>

Thu, Nov 10, 2022 at 12:10 PM

To: Michele DeFrance <mdefrance@portlandmaine.gov>

Cc: Charles Jarrett <cjarrett@portlandmaine.gov>

That is why I originally reached out to Brent and then Alex in this thread. Unfortunately it seems their records are worse than ours because they didn't even know that there was an engineered system on Peaks. So I think we will have to go on what we have in our files and systems.

I emailed Walt Swift (Cliff Island Septic Association contact) and Mark Hampton today to get whatever additional info they have, and will report back to you once they respond.

[Quoted text hidden]

Charles Jarrett <cjarrett@portlandmaine.gov>

Thu, Nov 10, 2022 at 12:19 PM

To: Christina Stacey <cstacey@portlandmaine.gov>

Cc: Michele DeFrance <mdefrance@portlandmaine.gov>

Sounds good, standing by.

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--

Charles Jarrett

NFPA CFPE/ CFI-II
CEO/ LPI/ Plans Reviewer
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City of Portland
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Christina Stacey <cstacey@portlandmaine.gov>
To: "Pugh, Alex L" <Alex.L.Pugh@maine.gov>

Thu, Nov 17, 2022 at 4:43 PM

Hi Alex,

I am following up in hopes of just a bit more assistance and feedback!

I got some detailed information from the septic system association about this system and its history. Attached is a spreadsheet of all properties that are either already connected, proposed to be connected now, or may be connected at some point in the future (color coding key at the bottom). The disposal field was supposedly designed to accommodate all of these properties, with the exception of two: 25 Wharf Rd and 31 Church Rd. All properties are single-family residential properties, with the exception of an assembly hall and a retail establishment. These two commercial properties were never connected.

The association president, Walt Swift, also provided the attached documentation of monthly flow rates, which he believes should demonstrate that the disposal field has more than adequate capacity for the 6 homes to be hooked up now. He explained the gathering and analysis of this data as follows:

I prepared the analysis of data. At some point in the project, we determined that flow meter measurements from the main pumping tank would be cumbersome, and instead decided to measure flow rate by collecting data each month on the hours of operation of each pump. We used the hours of operation, together with the flow characteristics of the pumps (which give flow rate in gallons per minute) to determine the approximate number of gallons pumped during the month.

The electric control box has a meter for each pump that indicates the number of hours of operation for each pump. We manually record the hours on or about the 10th of each month which gives us the hours of operation for the number of days elapsed from the prior reading - this gives us the gal/day figure for that interval. The information is useful, but not precise. At some times, both pumps operate simultaneously - when this happens, the total flow is less than the predicted flow rate that is calculated by adding the number of hours of operation. As a result, our recorded and plotted data are much larger than the actual flows.

We chose this method with the expectation that if we saw flows that were anywhere near the design flow rate for the system, we would spend the time and effort to install flow meters, to improve the accuracy. But - the flows never came close to the design rate, and in fact they are only high during winter months when only one or two of the properties are occupied. We attributed this to heavy leakage into the system during excessive rain periods.

We have since checked earlier results by examining the hourly power meter readings that are recorded by Central Maine Power. These readings confirm that the pumps are operating well below 20 % of design flow rate.

I'm attaching some other historic records that he was able to provide, in case they are of any interest.

It seems like the preponderance of information supports a finding that the disposal field should be able to support the 6 additional dwellings (5 of which were part of the original design), but I am far from an expert at this, and there are certainly many holes in the record. Please let me know your thoughts and whether you think we should be asking for additional documentation.

Thank you again for your time,
Chris


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4 attachments



18 Griffin Lane HHE-200 Appl.pdf
3043K

 **Cliff Island Association Septic Participants Updated.xlsx**
12K

 **Flow Rate Documentation.pdf**
139K

 **CISSA Complete Record.pdf**
18318K

Pugh, Alex L <Alex.L.Pugh@maine.gov>
To: Christina Stacey <cstacey@portlandmaine.gov>

Fri, Nov 18, 2022 at 5:53 AM

Chrstina:

I'll take a look at these attachments. I am concerned about the idea of **heavy leakage into the system during excessive rain periods** . I f there is leakage in, wouldn't there be leakage out?

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Christina Stacey <cstacey@portlandmaine.gov>
To: "Pugh, Alex L" <Alex.L.Pugh@maine.gov>

Fri, Nov 18, 2022 at 8:12 AM

I was wondering about that too...

[Quoted text hidden]

Pugh, Alex L <Alex.L.Pugh@maine.gov>
To: Christina Stacey <cstacey@portlandmaine.gov>

Mon, Nov 21, 2022 at 10:42 AM

Good Morning Christina:

It looks like there might be capacity for these 5 homes with little problems. It might help to use the following method to confirm the actual number of gallons per day (using the summer flows)

This is from Chapter 241, Section 4

G. WATER USE DATA

1. Use records: The design flow may be calculated from appropriate water use data, provided the following procedures are used:
 - (a) Acceptable records: Data is collected from billing records of the service provider or from water meters certified to be accurate within 2 percent;
 - (b) 1 year minimum: Continuous records over a period of at least ~~one~~ 1 year, or operating season (or other period acceptable to the Department) are utilized;
 - (c) Like establishments: Records from the applicant's facilities or from a like establishment are utilized.
2. Adjustments for peak days: The average daily flow utilized for design purposes must be adjusted for peak flow days as follows:
 - (a) Daily monitoring: If water use records are recorded on a daily basis, the 80th percentile value calculated using standard statistical methods must be used for the design flow;
 - (b) Weekly monitoring: If water use records are recorded on a weekly basis, the 85th percentile value calculated using standard statistical methods must be used for the design flow;

(c) Monthly monitoring: If water use records are recorded on a monthly basis, the 90th percentile value calculated using standard statistical methods must be used for the design flow; and

(d) Quarterly monitoring: If water use records are recorded on a quarterly basis, the 95th percentile value calculated using standard statistical methods must be used for the design flow.

(e) Other Methods: In the event a system designer demonstrates that an alternative method for calculating a design flow based upon water use data is at least as effective as the methodology described in Sections 4(G)(2)(a) – (d), the Department may approve such alternate method.

Based on this 90th % of the actual flows, I think you will find that there is room for these applicants.

Please ask them to better determine the discrepancy for the water appearing in the winter months.

[Quoted text hidden]

Christina Stacey <cstacey@portlandmaine.gov>
To: Charles Jarrett <cjarrett@portlandmaine.gov>

Mon, Nov 21, 2022 at 10:44 AM

Here is what I got back from Alex Pugh at the state re: Cliff Island Septic. Let me know what you think.

----- Forwarded message -----

From: **Pugh, Alex L** <Alex.L.Pugh@maine.gov>

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Christina Stacey <cstacey@portlandmaine.gov>
To: Charles Jarrett <cjarrett@portlandmaine.gov>

Mon, Nov 21, 2022 at 10:53 AM

Updated participants list attached.

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 **Cliff Island Association Septic Participants Updated.xlsx**
12K