Debra Thompson

From: Chandra Thornburg
Sent: Tuesday, January 21, 2020 5:01 PM
To: joe viehnicki; Petersburg Pilot
Cc: Stephanie Payne; Stephen Giesbrecht; Assembly; Erica Kludt Painter; Theresa Craig; Debra Thompson; Chris Cotta; Sam Jackson; Justin Haley; Jody Tow; Chrystine Lynn; Ivan Gil; Elizabeth Buschmann; Facility Specialist1
Subject: 1/21/20 Pool Update

Good Afternoon,

At this time there are three main issues with reopening the pool. The HVAC system, the pool leak, and the heat exchangers. Sam Jackson, Justin Haley, Chris Cotta, and Colin Perry have put multiple hours into this project to diagnosis the situation. I cannot thank them enough for everything that they have done to help rectify the situation.

HVAC System:
We have been awaiting Fleet Refrigeration to finalize some soldering on our HVAC system. They came in last week and fixed the majority of the leaks. When the system was turned on last Friday there were roughly 4-5 more leaks detected. Fleet came in this evening to check on the leaks and will return tomorrow morning to work on them. These leaks are all on the HVAC 1 unit that directly maintains the air temperature to the pool. Sam turned on HVAC 2 this afternoon, which heats a portion of the pool deck and the lobby area. At this moment it is working and we are monitoring the situation. If this continues to work throughout the night we will re-open the upstairs cardio mezzanine area tomorrow morning.

Our goal is to get this system up and running temporarily. There are too many breaks in the HVAC Coil 1 system for it to last any length of time. These coils are made to order and have a two month manufacturing window. Each coil costs approximately $8,000 to purchase. We need two coils.

The Lap Pool Leak:
Yes there is a plan in how to approach the leak from the pool. There have been multiple suggestions on ways to determine where the leak is coming from internally and from external pool repair companies.

Here is a list of the diagnosis ideas that we are working on. We received these from Evoqua Water Technologies last Wednesday, the actions taken are in red (I have been out on vacation and these are some, not all, of the items that have been accomplished while I was away):

1. Verify that water is not leaking past your backwash isolation valves and out to waste when the circulation system is on.
    a. Cody started working on this and adjusted valves on 1/6 & 1/7. He also analyzed the autofill controls and timed their usage. It was determined that these are not the issue.
2. Inspect the hydrostatic relief valves (if they were installed at your pool). They are usually located in the bottom of the main drain sump boxes below the grates and should only be inspected when the main circulation system is turned off. Ensure the caps are securely closed and there is no damage (**See number 3 - this could also be dye tested**)
    a. Last Wednesday and Thursday two members of staff and myself dove down to the bottom to test out this valve and determined that it was secure and in place.
3. Complete a static test to determine the loss rate. Turn off the circulation system and let everything equalize. Fill a bucket of water about ½ way and then tie it to a rail or ladder so it is partially in the water. This will ensure the evaporation rate due to temperature is accounted for. Mark your starting point on a wall or measure from a known elevation (tile line or similar marker). Let everything sit for 12- 24 hours and the record the loss. This will also rule out the gutter system if the water level drops to the normal equalization point and

doesn't go down any further. It is also important to note that if the leak is related to the circulation system, it will usually slow down when the system is off. A second test could be done with the circulation system running, but the autofill off to see if the loss rate is the same or worse.

   a. This is what we worked on over the weekend. The pool loss approximately 22 inches over these days. This afternoon Justin and Stephanie procured water pumps to empty the pool past the lighting level so that we can further investigate the lighting theory, see more below.

4. Dye test all returns and piping. **With the circulation off and after the pool has equalized, use some food coloring loaded in a plastic syringe as an indicator to see if there is any noticeable water movement when applied underwater around the return lines or drain piping.** If it is a slow leak, this may or may not work, but it is an inexpensive method to try to narrow down the source of the issue.
   a. Justin and staff completed this last Thursday and Friday. There did not appear to be leaks from any sources.
5. Inspect the surge tank. This can be a visual inspection or dye test. Check around the pipes coming in and out of the surge tank underwater.
   a. Cody did this prior to leaving on 1/9. He also rebalanced the float valve in the surge tank to ensure that the autofill device was working properly.
   b. On this day, he also met with Mike and Blake from the Water plant to determine where the water is going to.
6. Use mechanical and inflatable plugs to isolate all the pool plumbing to narrow down if the leak is in a return, gutter or drain line. Once plugged, a tap could be added in the mechanical room to pressurize each area systematically to narrow down the leak location. This might be best hired out to a company specializing in this sort of thing. Be careful who you hire for this, an average leak detection company is probably not going to be setup to do this properly.
   a. Justin H. and my crew worked together last Thursday and Friday to plug some of the drain lines in conjunction with video camera inspection to further identify where the water source could be coming from. From their video camera inspection it appears as if the leak is concentrated close to the deep end of the lap pool within 6-10 feet of the farthest wall. The water is entering into the storm drain from this point. No section of piping was found to be broken.

The lap pool was turned off on Friday to determine if the leak was coming from inside the pool or the gutter around the pool. With the water off, it has been determined that the leak is coming from inside the pool. We are now draining the pool down past the lights to test a theory out. We are wondering if there is a leak through the lighting conduit somewhere. If the pool water does not continue to drain out once it is lowered past the lights our next step is to check out the lighting conduits. If it is the lighting conduits we will need to procure material to stop the leak. In this scenario the pool will need to remain drained for at least 48 hours to allow for curing. Once cured and refilled the pool will take approximately 7-10 days to reheat.

Justin Haley & Sam Jackson will be coming back tomorrow morning to meet with me to further develop a plan if the leak is not coming from the lighting conduits.

Heat Exchangers:

The heat exchangers have a very slow minute leak. It was suggested that they were not running at optimum performance when we were having trouble keeping the pool temperature up. Bryan Haley was asked to come in and look at the Heat Exchangers. He is incredibly busy with multiple items around town and at first glance explained that we will need to purchase a new head plate and gaskets. Each head plate is roughly $800 and each gasket needed is around $50. We have ordered these items. He also stated that the HVAC system and the pool issues need to be fixed prior to any work that he might be able to start on. I have also called Ketchikan Mechanical to come in and assess the situation. They will be able to check it out either next Monday or Tuesday. If it is determined that the Heat Exchangers need to be replaced this could extend the pool closure as these are what heat the pools. We have received a quote on their replacements, each one would cost approximately $5,000 and there are two of them.

We are working as diligently as possible to reopen the facility as soon as possible. We can not thank the public enough for their understanding during this time.

Chandra Thornburg

Parks and Recreation Director
Petersburg Borough
500 N. 3rd. St., Petersburg, AK, 99833
(907) 772-3392
www.PetersburgRec.com
www.ci.petersburg.ak.us
Find us on Facebook

Little Norway. Big Adventure.

BE THE INSPIRATION

PETERSBURG
PARKS AND RECREATION