



MORRISON HERSHFIELD

March 2, 2021

Rudolf Liebenberg, RPP  
CAO – The Summer Village of Sandy Beach  
Box 63 Site 1 RR 1  
Onoway, AB  
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Dear Mr. Liebenberg:

**Re: Sandy Beach Lagoon Options**

We are writing this letter in response to questions circulated during the Joint Lagoon Committee meeting that occurred on November 25<sup>th</sup>, 2020 which was lead by Michael Harney, the Chair of the committee. This letter summarizes all questions followed by answers in bold text as shown below:

1. It is questionable as to whether we would ever be able to discharge into Bard Lake. Therefore, is there an option in Option 3 that would allow us to discharge into our own lake? ie sand filtering or other?  
***Discharge into a recreational lake will need to be reviewed with Alberta Environment and Parks to confirm what water quality and monitoring criteria need to be met. We are currently waiting for a response from Alberta Environment.***
2. Would work on the fourth cell begin first, allowing the pumping of fluids from cell 2 and 3 into 4 before work would be done on existing cells?  
***Yes, the fourth cell (new evaporation pond) will need to be constructed first so each individual cell can be pumped into it. Once discharged to the proper levels, the extent of damage will be examined, and then the existing cells can be repaired.***
3. With proper maintenance (scheduled desludging and other) would we need to potentially have to discharge cell 4 at some point, and what would be possible time lines involved. Considering future technical innovations, in your opinion could that discharge be to our lake?  
***Typically, the first cell (primary cell) is where sludge accumulates more quickly and they require more desludging than other cells, typically every 5-10 years. The cells downstream may accumulate much less sludge and may not require desludging long-term. They are typically dependent on the maintenance schedule of the primary cell. When water levels are lowered for berm repair, the depth of sludge in each cell will need to be measured to determine which cells need desludging.***

***Proper monitoring of the lagoon water levels and ensuring that the influent rate does not exceed the evaporation rate ensure that no discharge will be required.***

***We can not comment on discharge into Sandy Beach Lake, until further discussion with Alberta Environment.***

4. Is it possible that a fountain system could be set up in one of the cells to aid in evaporation process? This would of course not need to be functional immediately but may be considered in the actually building process.

***There are floating surface aerators that maybe helpful in increasing the evaporation rate in the ponds downstream of the primary cell. An analysis will need to be completed to determine the feasibility, and cost and benefit of installing these aerators. These aerators will need to be removed in winter to prevent freezing.***

5. What are the potential O&M costs that might be related to a functioning Option 2, and what is the considered life span of such a project? ***For Option 2, we would assume only desludging of the primary cell and on going monitoring as operation and maintenance costs.***
6. Does Morrison Hershfield make the grant applications for these types of projects. ***We should be able to complete grant applications for a fixed fee.***

Should you have any questions or concerns, please feel free to contact the Chad Newton or myself.

Yours truly,  
Morrison Hershfield Limited



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