

EXPERT SERVICE, LASTING VALUE, CLEAN WATER

10-16-2023

Covenant Pines Bible Camp 43696 245<sup>th</sup> Place McGregor, MN 55760

TO: Aitkin County Planning & Zoning/Environmental Services

RE: Septic Explanation for Proposed New Building

Per your request we have completed a workplan for the proposed new building septic system.

## Summary:

Covenant Pines Bible Camp in McGregor is proposing a new worship building including office spaces. It is my understanding that the camp occupancy will not be increasing only relocating the meeting space to this new building. The new building will allow for up to 300 people. Using the MN Rule Chapter 7081.0130 (K) Assembly Hall (Seat-4 Gallons) the new building would have a conservative max flow of 1200 GPD. This would be if every person used the bathroom while occupying the building, which is unlikely.

The camp currently has many different septic systems that serve the buildings spread out across the property. The largest system that serves the dining hall and office buildings has the capacity to except the flows from the proposed worship building. This system has two large 3000 gallon recirculation tanks that dose a gravel filter than cleans the water. The filter effluent is then time dosed to two 25' x 150' Pressure Bed drainfields with a daily flow capacity of 5800 GPD. A compliance inspection was completed in early March and found all the components of the system compliant and free of defects. Flow meter readings from July 2022 show that the system receives and treats up to 2300 gallons on average. The addition of the proposed 1200 gallons would total an anticipated max flow of 3500 gallons. Being the current system is rated for up to 5800 GPD the addition of the new flow will not impact the system performance and is less than 70% of its capacity.