

Seaweed culture hall

Bioforsk Nord Bodø

Background

Bioforsk Nord Bodø is designing a new algae culture facility in an existing building of the University of Nordland (Mørkvedbukta Hall 7, Bodø). This document describes our needs for seawater treatment.

The hall 7 seawater main supply line is located beside the main entrance (Fig. 1). The water treatment room is set up nearby. The water will be distributed further in the hall through a pipe system.

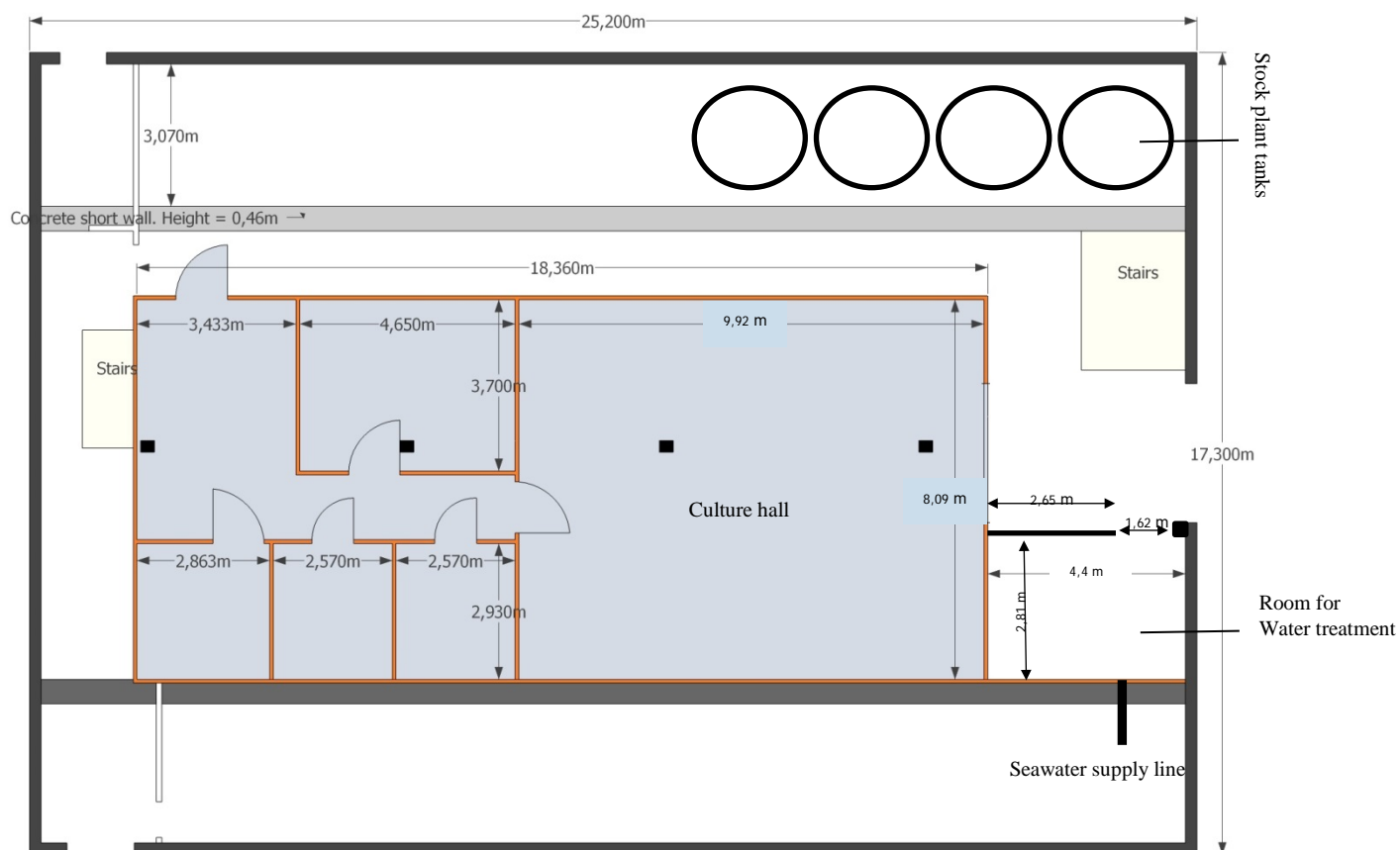


Figure 1: Hall 7 floor plan

The seawater at the university facility in Mørkvedbukta is pumped from the fjord (Saltfjorden) nearby at two different depths: 50m and 250m. The seawater delivered to Hall 7 is pumped from 250m depth having a relatively stable temperature of 7.5 °C throughout the year (Fig. 2). Prior to being distributed to the different departments, the seawater runs through a Bernoulli filter (150µm) to remove coarse elements.

We are guaranteed a minimum seawater supply of 100 L.min⁻¹ filtrated to 150µm.

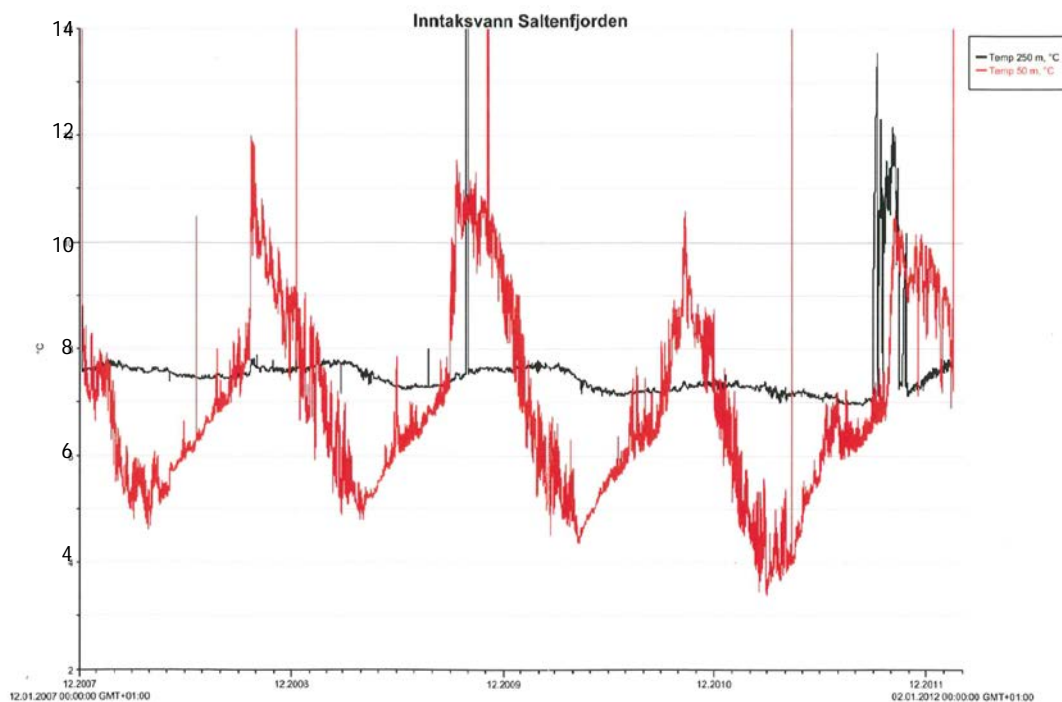


Figure 2: Water temperature pumped from 50m (red line) and 250m (black line), measured between December 2007 and February 2011.

Demand of offer

A continuous water flow-through system is required.

The finest filtration should be 1 μm + UV treatment. 0.3 μm filtration prior to UV treatment should also be an option. We must have access to seawater at different grades of filtration.

It must be possible to regulate the water temperature from 3-18 °C. Options for a wider temperature range are requested.

The treatment must have as limited effect as possible on physical and chemical quality of the natural seawater.

NOTICE: The provider is responsible for the detail engineering of the plant. The provider is responsible for the detail engineering of the plant. A detailed engineering plan must be included in the bid, and shall contain a schematic representation and description of the project, with the specified list of equipment / materials to be used.