

Amir Nasser Katirachi



Department of Civil
and Environmental
Engineering

Spring 2018 – Fall 2018

Evaluation of snow simulations in SHyFT

Supervisor:

Knut Alfredsen

Co-supervisor:

Oddbjørn Bruland



Background

Snow is a very important component in the hydrological cycle in Norway and crucial for determining reservoir operation during the spring flood to ensure full reservoir and as little flood spill as possible.

The Statkraft Hydrological Forecasting Toolbox (SHyFT) is a newly developed hydrological toolbox that is used for forecasting inflow in the Statkraft system. This is a flexible system in which a model can be custom designed for various purposes.

The SHyFT toolbox currently has three different methods for simulating snow accumulation and storage, and these are not yet evaluated with snow data. The purpose of this master thesis is to evaluate the SHyFT snow routines against observed snow data from satellite images and snow measurements in the field.