Abstract- In this paper, 1D SWE - convection reaction diffusion using semi implicit staggered scheme for approximating underwater landslide has been done. The numerical results is shown close enough to the experiment data by Centre National du Machinisme Agricole du Genie Rural des Eaux et des For ´ ets (CE- ˆ MEGREF) laboratory, on December 1994. Here, two scenarios using different parameters in convection diffusion equation are elaborated. Using sediment speed 0.25 and diffusion coefficient of sediment 0.005, the water and sediment error are observed 0.49 and 0.507 respectively at time t = 0.4. Moreover, in this final project, the parallel computing using OpenMP platform is elaborated in the simulation. As the result, computer I with AMD Rayzen(TM) 2400 has the best result for speedup and efficiency with 3.602396 times and 90.0599 % when the final time at t = 0.8s and Nx = 6400 points.