Update boundary conditions

River model

Get lake surface elevation
Calc. discharge
Calc. outflow from rivers
Solve advective budget
Add runoff
Diagnose cross-sectional shape
Update water quality and phase change
Update cross-sectional shape

Coupled framework

Get river depth
Calc. discharge at lake outlets
Calc. outflow from lakes
Solve advective budget
Add precipitation
Diagnose lake shape
Update water quality and phase change
Add or remove evaporative flux
Diagnose lake shape

Lake model

Get lake surface elevation
Calc. discharge
Calc. outflow from rivers
Solve advective budget
Add runoff
Diagnose cross-sectional shape
Update water quality and phase change
Update cross-sectional shape

Water depth, surface elevation
Water/ice discharge
Inflow into rivers and lakes, its solute concentration

Adaptive time step for CFL condition