Hydrology:
- NARClM 1.5 historical outputs
- Hydrology modelling
- Discharge estimates at gauging station(s)
- Compare modelled & measured discharge distributions
- Establish hydrology model inputs

Hydraulics:
- Previous Hydraulic Model Predictions for a particular event
- Hydraulic modelling
- Constrain inundation projections to match previous predictions
- Establish inundation model parameters

Simulations:
- Apply hydrology for boundary conditions
- Run low flow case to establish initial conditions
- Break simulation period into 4-year segments
- Run each segment in parallel using high-performance computing resources
- Record hourly water depth and flow speed
- Once all runs completed combine segments and convert to compressed NetCDF
- Write to binary files and compress using tar
- Post-processing activities (checking and usage)
- Process during runtime to obtain daily maximum depth and flow speed at that depth