# CHURCHILL RIVER FLOOD FORECASTING SYSTEM

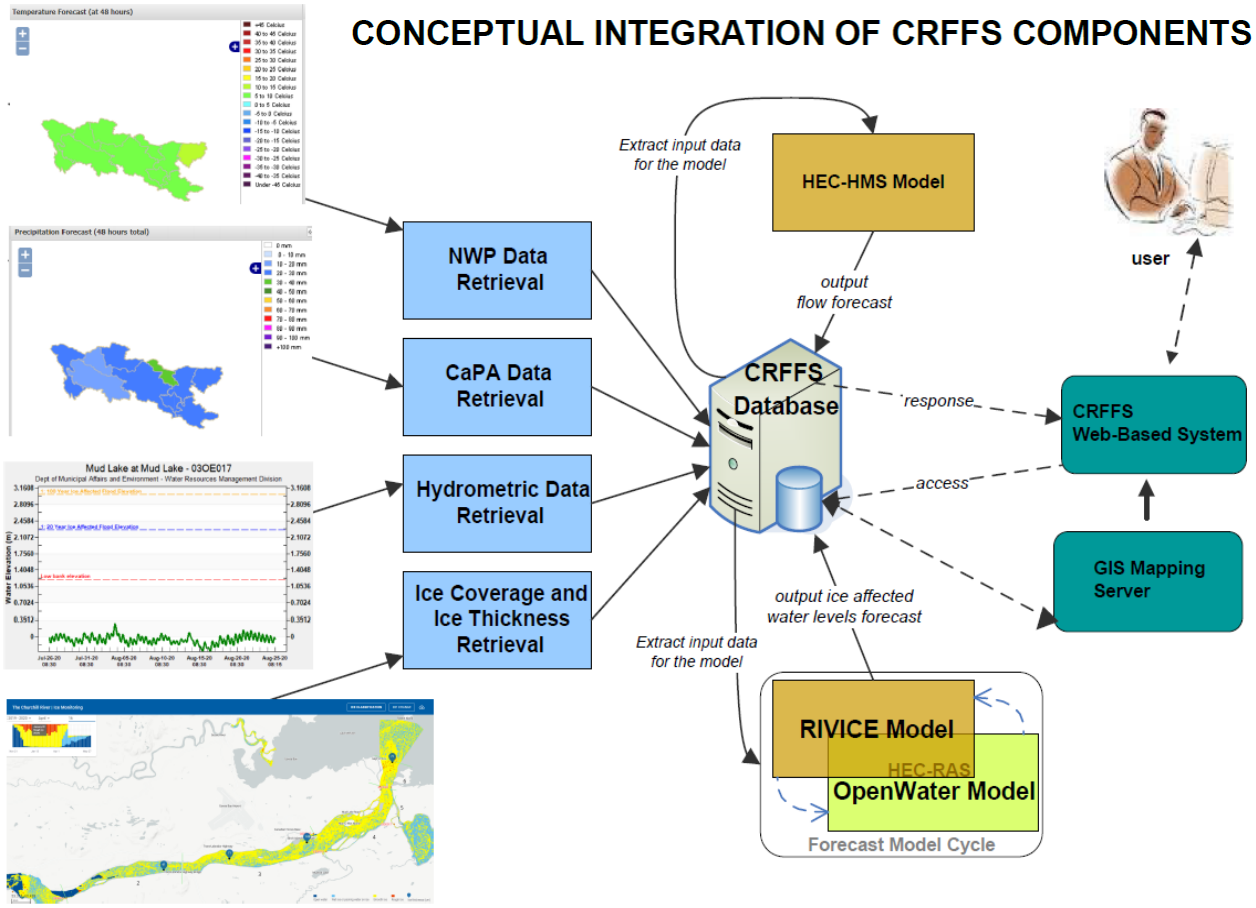
The Churchill River Flood Forecasting System (CRFFS) runs once a day and provides 72 hour water levels for the Churchill River from Muskrat Falls to English Point for all conditions – open water, ice generation, ice break up, and ice jams.

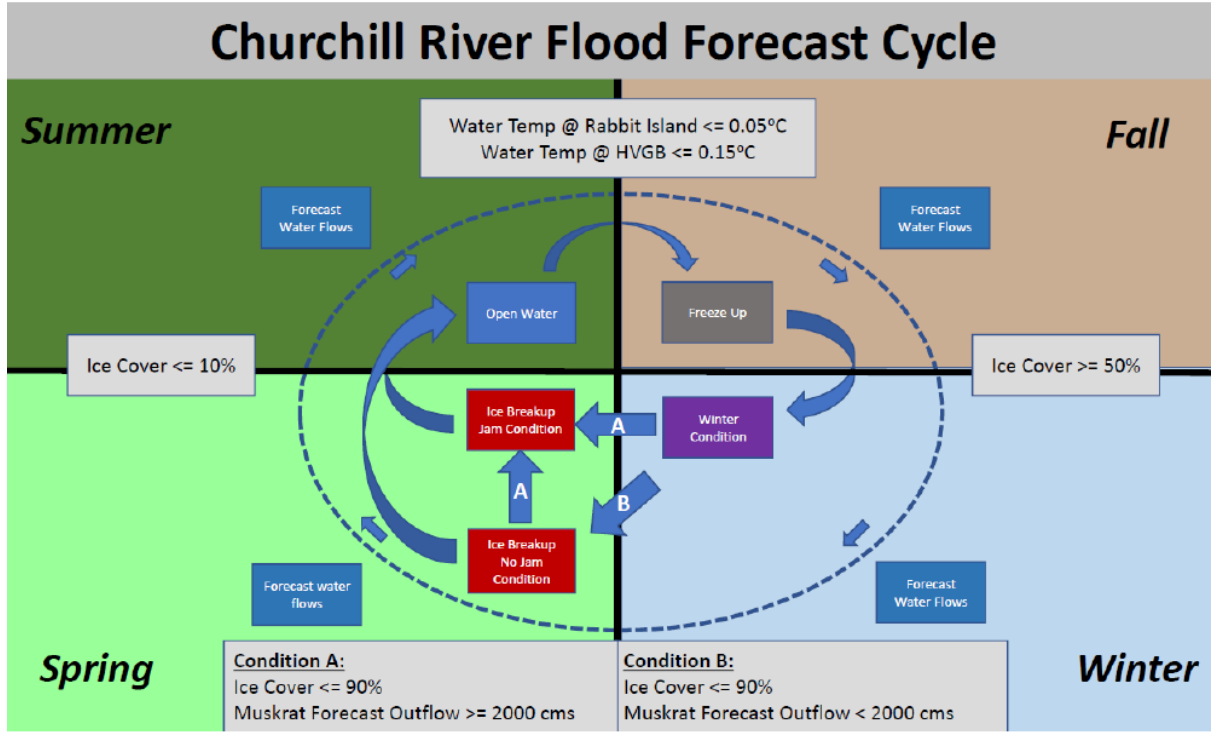
CRFFS gathers a wide variety of near real-time or forecast information from several different sources to generate the forecast. The hydrologic and hydraulic models are integrated together in CRFFS using 4DM Inc.'s HydrologiX framework.

**CRFFS is the first system in the country to incorporate real time remote sensing data with real time water flows, ice thickness, and weather data to forecast both open water levels and ice-jam floods in real-time.**

CRFFS runs throughout the year. Depending on the season, the flow forecast is converted to water levels using either the open water forecasting model or the ice-affected forecasting model.

## CONCEPTUAL INTEGRATION OF CRFFS COMPONENTS




The forecast water levels at key locations are automatically compared by CRFFS against 1:20 and 1:100 flood levels. The system automatically emails flood warnings if a flood is predicted to happen in the next 72 hours.

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