The city of Toronto hosted the Pan Am and ParaPan Am games during the months of July and August in 2015. The Ontario Storm Prediction Centre (OSPC) provided a host of additional products and services in support of the games. Two Pan Am desks were established which provided venue specific information over land and for near shore marine activities, graphical convective weather products and consultation services for on-site Briefer units. Meteorologists from the OSPC were able to utilize a suite of additional scientific data sets established by the Science and Technology Branch of Environment Canada and interacted with Research Meteorologists. In addition, meteorologists from various regions outside of Toronto also participated including Meteorologists from the National Weather Service and the Prairie and Arctic Storm Prediction Centre (PASPC) in Winnipeg. The following presentation will aim to highlight the “weather experience” associated with the games and some of the discoveries made during this time frame.