The Atlantic hurricane season of 2015 was particularly active due to a strong El Niño event. El Niño is a natural climate phenomenon characterized by an increase in surface temperature in the eastern Pacific Ocean, which can affect weather patterns worldwide. This year, the hurricane season brought a series of powerful storms, including a very active Pacific hurricane and typhoon season enabled by this event. The SEACC is now working with the Association for Professional Engineers to create guidance documents to help engineers make use of climate projections for designing infrastructure.

The next step to help ensure that BC’s infrastructure will be resilient to the effects of climate change is the creation of a set of guidance documents to help engineers make use of climate projections for designing infrastructure. The committee’s work has followed recent failures due to extreme events (for example Bella Coola flooding in 2012). PCIC has collaborated on projects in the province to consider the effects of climate change. The committee’s work has been influenced by the high-pressure system that had been providing our clear skies and warm temperatures. Soon thereafter, the high pressure that had been providing our clear skies and warm temperatures was followed by cooler temperatures. The sequence of events resulting from this change is the creation of a set of guidance documents to help engineers make use of climate projections for designing infrastructure.

As the climate continues to change, it presents a unique set of challenges to infrastructure and planning and priorities. PCIC researchers have found that precipitation projections are strongly correlated with the number of extreme temperature events. Projected changes in 20-year return period events for the warmest daily maximum temperature of the year and the heaviest one day precipitation amount of the year for the Whistler region. These are downscaled from an ensemble of climate projections with information from PRISM. Incorporating high-resolution observations with climate projections can address the small area and complex topography of Metro Vancouver, which, given its small area and complex topography, makes analysis of local climate change difficult.

Prior to this work, all of the information available on projected changes to extremes for Metro Vancouver was limited to coarse spatial resolution. Extreme temperature so warm that in the past they would be exceeded on average only once every twenty years is projected to warm by 4.6°C (Figure 2). This represents a significant warming compared to the past and is consistent with global warming projections. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is projected to increase from its value of 25°C in the past to 29°C in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm. Extreme temperature events are projected to increase in magnitude by 36% (for daily accumulations) in the 2050s. Following suit, the coldest day of the year is also projected to warm.