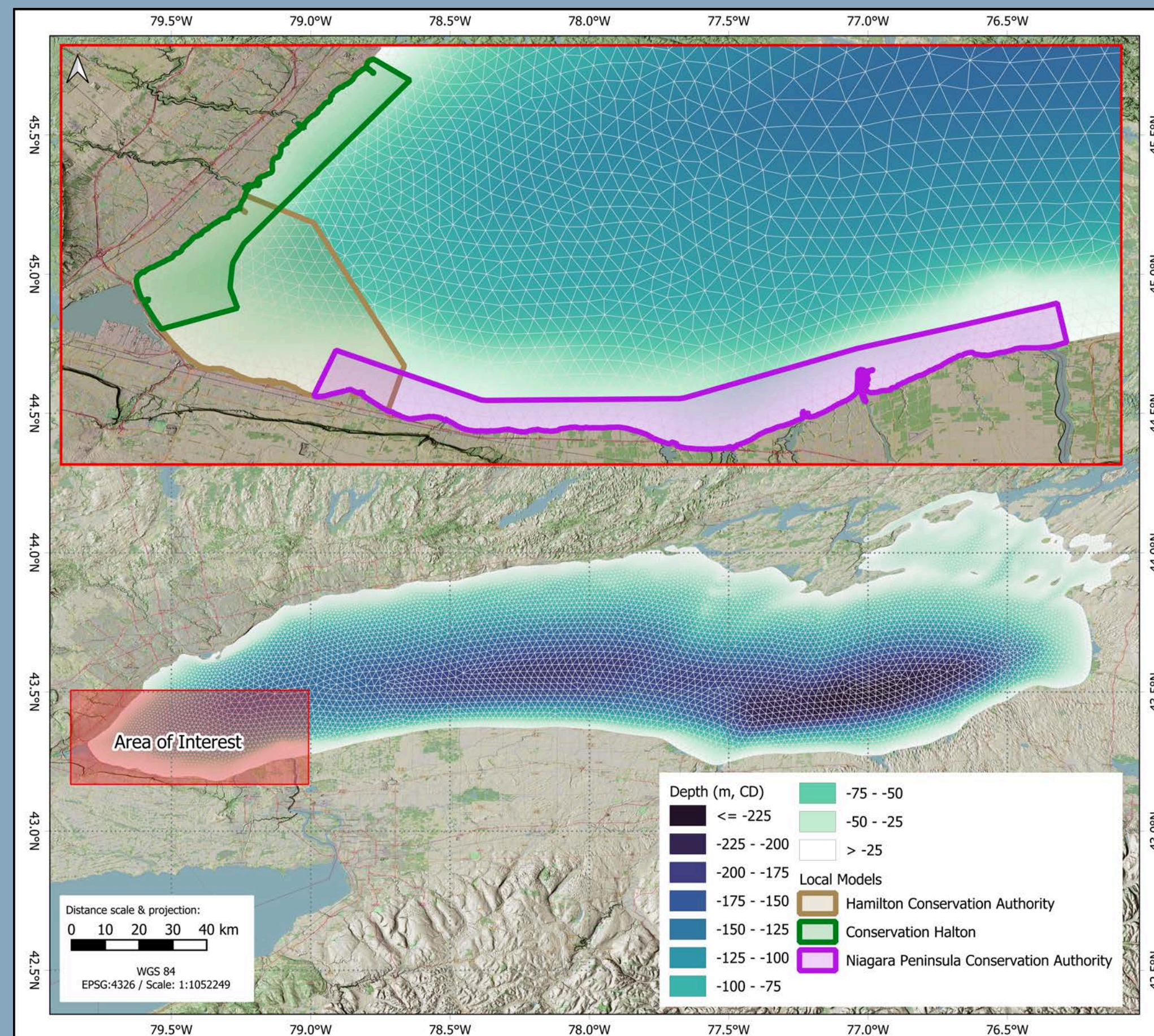


Purpose

To better understand how storm waves affect the shoreline and to support hazard mapping of areas at risk from wave impacts.

1

Wave Model Mesh



The Regional and Local Lake Ontario wave models are used to determine how offshore waves reach the nearshore.

2

Wave Model Calibration



The Lake Ontario wave model is used to inform the local models and was calibrated to measured data. Below shows the comparison between measured wave heights vs modelled wave heights using data from buoy #45139.

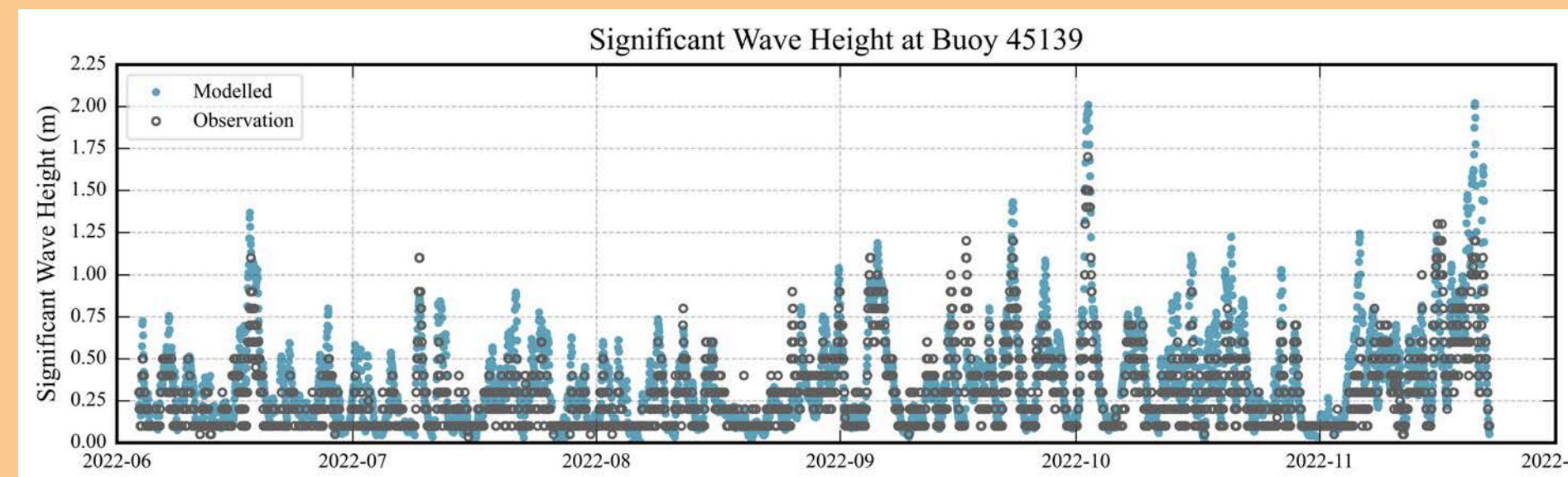


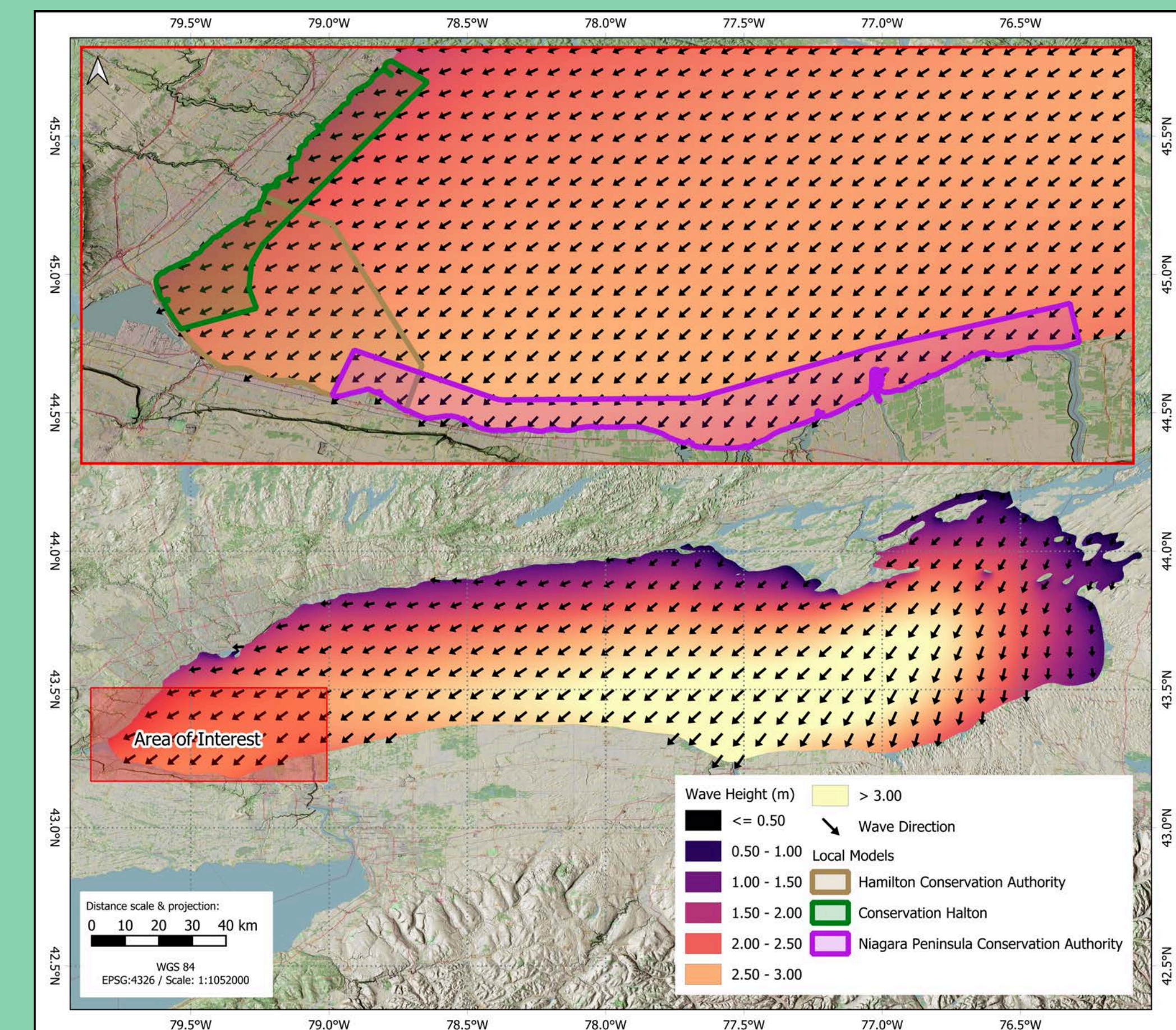
Image credit: David Piano / YouTube (2014)



Image credit: Rob Petrucci

3

Wave Model Results



An example of modelled wave heights in Lake Ontario (March 12, 2014). Modelled wave heights are shown as coloured shading while wave directions are shown by the black arrows.

Numerical models are used to integrate the spatially varying local wave effects in the hazard mapping process.