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REAL TIME FLOOD FORECASTING WITH PCSWMM, NEXRAD AND SWMM5

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ABSTRACT: Authorities and agencies charged with flood management for the watersheds and/or sewersheds in their areas are required to provide adequate and timely flood warning to property owners and local emergency response agencies. In an effort to improve the accuracy and lead time of flood forecasting, a remote-sensing flood forecasting and web-based decision support system was developed. Utilizing PCSWMM Real-Time, NOAA's NWS NEXRAD WSR-88D radar, US EPA SWMM5, HTML5 and Google Maps, this system forecasts near-future water surface elevations throughout the watershed and produces products to help flood duty staff make appropriate and informed decisions. This presentation highlights the key features of this system, evaluates its performance and presents lessons learned from developing and integrating the system components for the Toronto and Region Conservation Authority's Don Valley and Etobicoke Creek watersheds.