

Development of Water Quality Database for Watershed Model Evaluation to Support Source Water Protection

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CSBE08168

For sustainable protection of water resources in Ontario, it is crucial to estimate pollutants loading as realistically as possible. Thus, this study has planned to address this important gap, at least in one of the watersheds, so that a comprehensive water quality data set could be developed for proper estimation of sediment and nutrients (phosphorus and nitrogen) loads. The approach would be to assess the health of water bodies in the watershed, and to identify the sources and their contribution to the loadings. The specific objectives of the on-going study are: to develop a comprehensive water quality data set for one of the watersheds in Ontario which could be used to evaluate hydrologic models to estimate pollutants (sediment and nutrients) loads; and to evaluate temporal (season and event) pattern of pollutant loadings (flow and concentration) and their relationship with land use activities. This data set will not only be a direct support to the ongoing research work but would also support research objectives of other watershed modeling projects which aim to evaluate and improve existing hydrological models for better representation of Ontario hydrology.