Applying knowledge to improve water quality
National
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Hydraulic Model using the HEC-GeoRAS for use in Regional Stormwater Management Planning: A Case Study

A cost effective GIS based hydraulic model was used to simulate water surface elevations expected for a variety of design storms along the Many Mind Creek in Atlantic Highlands and Middletown, New Jersey. Using a county obtained digital elevation model, several field surveyed stream cross sections, along with other readily available land use GIS data layers, the Rutgers Water Resources Program was able to predict problem areas in a relatively small, but highly populated watershed on the coast of New Jersey. Poor water quality attributed to erosion could be analyzed in the context of water velocity and stream sinuosity. Various land use alterations were modeled to forecast the effect of several modifications. All information was presented to the Many Mind Regional Stormwater Management Planning Committee for consideration.

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