



Floodplain & Stormwater Management

Rob Roy Creek - Raymond Drainage District Regional Detention
Yorkville, Illinois



The United City of Yorkville contracted with Engineering Enterprises, Inc. to prepare a regional detention alternative analysis for the Raymond Drainage District portion of the Rob Roy Creek watershed.

The Raymond Drainage District portion of the Rob Roy Creek watershed consists of approximately 2,100 acres of tributary area currently in use as farmland. Proposed development of nearly all of this area is currently in the preliminary stages.

An existing 250 acre depressional storage area is present at the downstream end of the Raymond area that provides approximately 630 acre-feet of floodplain storage. The regional detention analysis reviewed alternatives to expand the existing floodplain storage area to provide detention for the development of the 2,100 acres of the Raymond Drainage District tributary to the existing storage area.

The base conditions for the analysis were taken from the Rob Roy Creek Hydrologic and Hydraulic Study previously completed by EEI. The HEC-HMS hydrologic modeling program was used to analyze various regional detention scenarios including: 1) a single lake-type basin; 2) a series or chain of lake-type basins; 3) and a created wetland basin to provide the required

1,200 acre-feet of detention storage and mitigation for lost floodplain storage volume.

The various scenarios were additionally analyzed for their ability to support recreational uses such as a public park and a golf course. Preliminary analysis was also completed to determine the suitability of the regional detention concept to support a regional wetland mitigation bank.

The analysis and recommendations included coordination during the work with not only the City, but also with the land developers and their representatives, as well as cooperation with the City's land planner to develop an appropriate land use scenario for the area.

