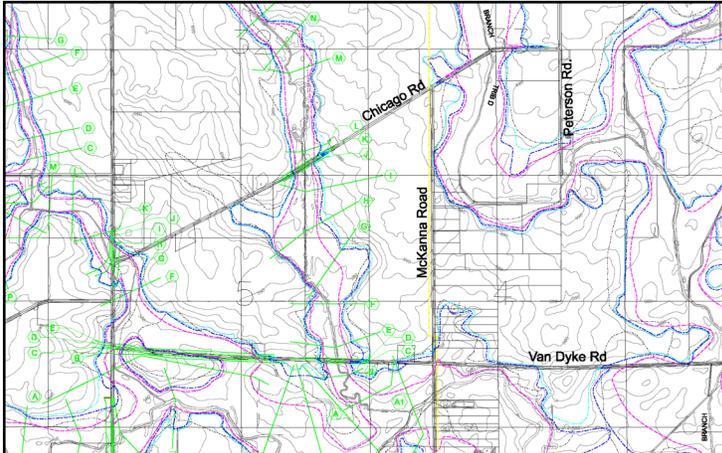
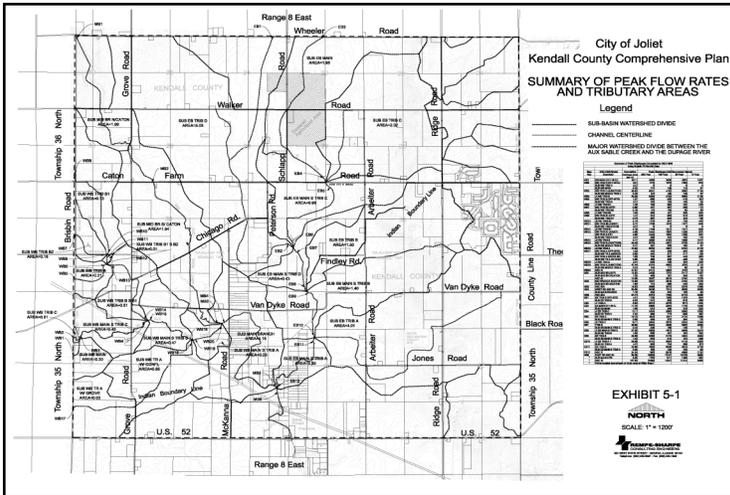


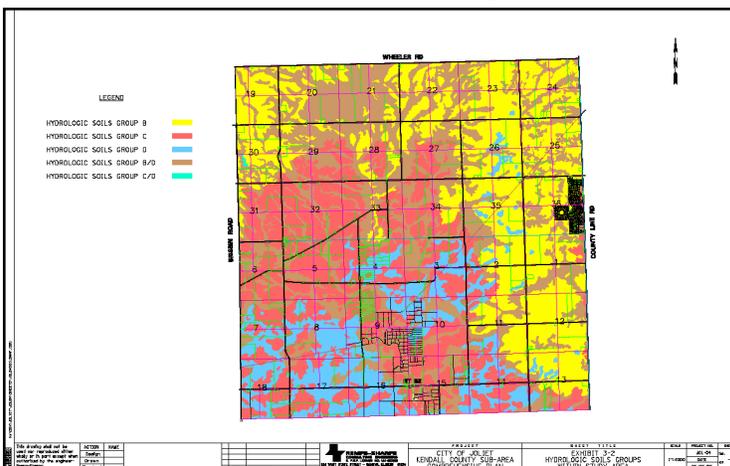
AUX SABLE CREEK PMR—JOLIET



36 Square Mile Growth Sector



Complex Watershed Analysis



**Hydrologic Modeling
Results in Accurate FEMA Remapping**

Client: City of Joliet

The City of Joliet was seeking a revision to the Flood Insurance Rate Maps for Kendall County. A study of the 36+/- square mile was conducted for the purpose of more accurately defining floodplain within an expanding planning area of the City. The area is rural in nature and therefore little detailed floodplain information was available. The City of Joliet took the necessary steps to update floodplain mapping utilizing more accurate topographic data, current rainfall data and detailed hydraulic modeling.

Rempe-Sharpe:

- ◆ Prepared a study to update and expand the available information for flood flows in the Aux Sable Creek watershed north of US Route 52, south of Wheeler Road and east of Brisbin Road.
- ◆ Included were hydraulic and hydrologic models of unincorporated portions of Kendall County, riverine flooding on the Main, East and Middle Aux Sable Creek and its tributaries were studied by detailed methods.
- ◆ Utilized HEC-HMS software, the SCS Curve Number method for calculation of losses, and the SCS Unit Hydrograph method with calculated and calibrated lag times were used to develop runoff hydrographs for each watershed sub-basin. with concurrence from IDNR for the critical duration analysis calculated peak discharges.
- ◆ Used elevation data for cross sections used in preparation of the hydraulic analyses based on two foot aerial contour mapping; with the exception of field surveyed cross sections on each side of major hydraulic structures.
- ◆ Based water surface profiles on hydraulic analysis using the HEC-RAS water surface modeling software. A complete hydraulic model was developed for the watershed .
- ◆ Final Report and LOMR application included delineation of the 100 yr, 500 yr, and floodway for the entire study area.

REFERENCE:
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