**Example: Catchment and Collector System**

This example demonstrates how to model a catchment and collector system. The approach is similar to the SWMM model, except that flow routing in the pipes is handled using the ITM model. As shown in Figure 1, the combined catchment and collector system consists of three subcatchments and four pipes, which discharge into an outlet pond (node "Out1") with a 10-ft elevation drop. The complete ITM-SWMM input file for this example, **"ITM-SWMM_Catchment_Collector_System.inp,"** is included with this report.
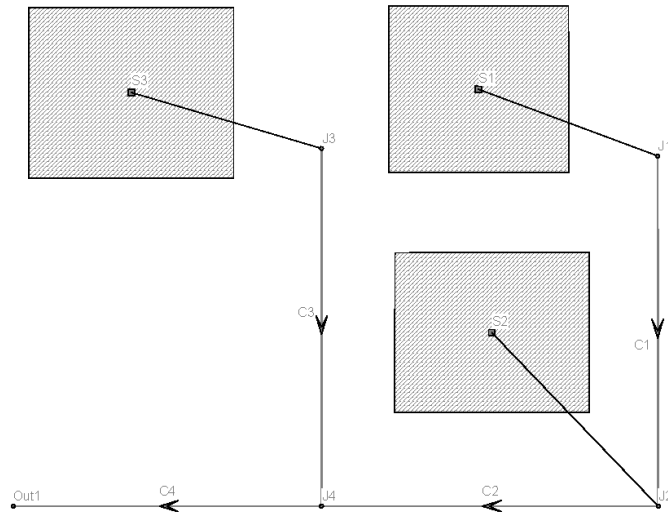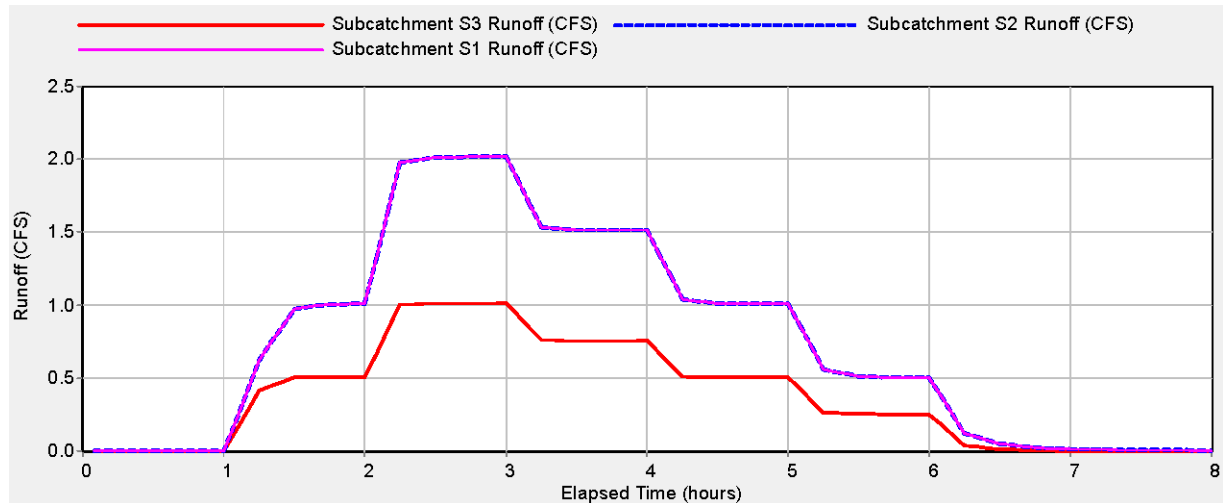


**Figure 1.** Layout of the Example Catchment and Collector System

Note that the **Illinois Transient Model (ITM)** is selected for flow routing under **Simulation Options** in ITM-SWMM, as shown in Figure 2. The inflows to the collector system originate from surface flows in subcatchments **S1–S3** and are depicted in Figure 3.
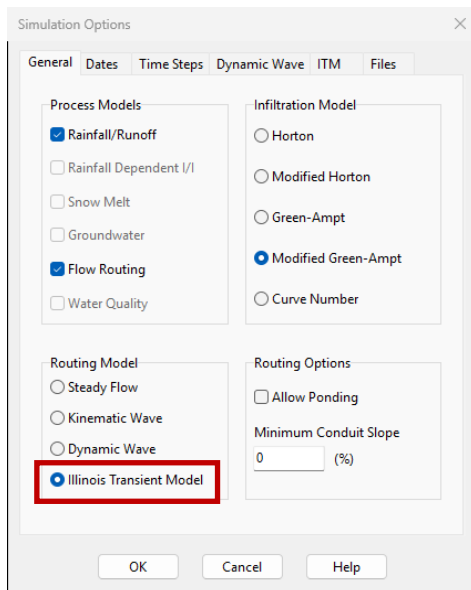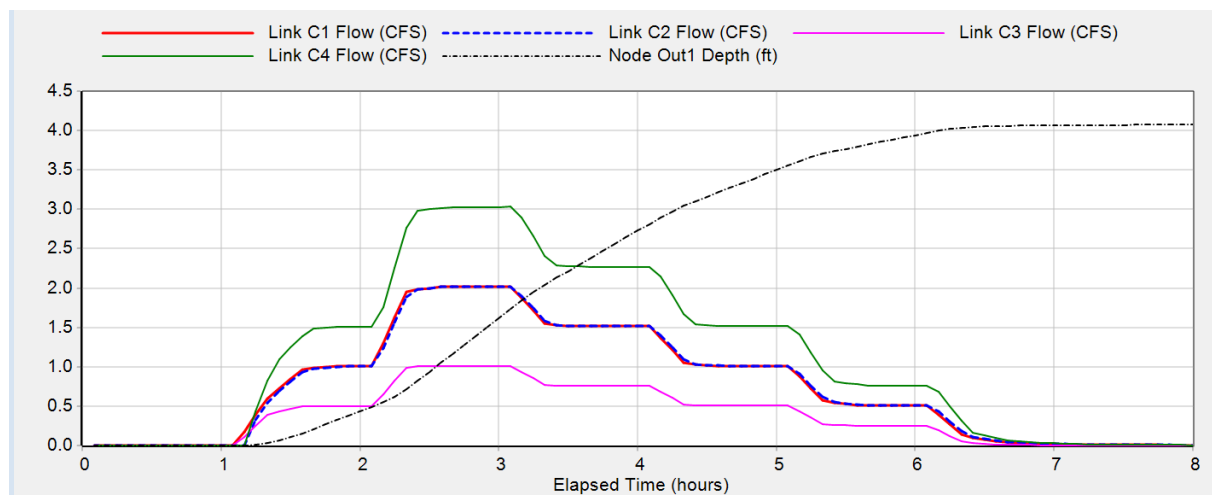


**Figure 2.** Simulation Options in the ITM-SWMM model

**Figure 3.** Inflow Hydrographs resulting from subcatchments S1-S3

The flows in conduits C1–C4 are shown in Figure 4. Similarly, the volume collected at node Out1 is also depicted in this figure.



**Figure 4.** Simulation results for flows in conduits **C1–C4** and volume storage at node **Out1**.