

## **1. HEC-HMS**

The Hydrologic Modeling System (HEC-HMS) is designed to simulate the hydrologic processes in basins. The software includes traditional procedures of hydrologic analysis, such as infiltration events, unit hydrograms and routing. HEC-HMS also includes modules for evapotranspiration, snow melting and calculus of soil humidity.

## **2. iRIC**

iRIC (International River Interface Cooperative) is a software developed with the purpose of offering a complete simulation environment of the riverbed and its results can be exported and used to analyze, mitigate and prevent disasters, through the visualization of the results of the river simulation.

## **3. MT3DMS**

The MT3DMS package is a mass transport model coupled to a flux model in MODFLOW. The MT3DMS code simulates advection, dispersion/diffusion and chemical reactions of adsorption/absorption of contaminants in groundwater.

## **4. R**

R is a programming language for statistic calculations and graphics generation. It is easy to understand and makes it possible to make complicated analysis with just a few lines of code.

It is the best option to perform spatial analysis since it incorporates several interpolation options.

## **5. Python**

This is the favorite code for scientific, water resources and environment analysis. It has several packages for different tools such as GIS, mathematical analysis and artificial intelligence.

If a complete tool for manipulation, processing and plotting of data is needed, Python – Scipy is an effective, versatile and free code solution.

1	time	runoff	baseflow	direct runc	depth of d	2hr unit hydrograph ordinate
2	1	110	110	0	1.415	0
3	2	120	110	10	1.415	7.067138
4	3	230	110	120	1.415	84.80565
5	4	570	110	460	1.415	325.0883
6	5	640	110	530	1.415	374.5583
7	6	430	110	320	1.415	226.1484
8	7	290	110	180	1.415	127.2085
9	8	200	110	90	1.415	63.60424
10	9	160	110	50	1.415	35.33569
11	10	120	110	10	1.415	7.067138
12	11	90	90	0	1.415	0
13	12	80	80	0	1.415	0
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