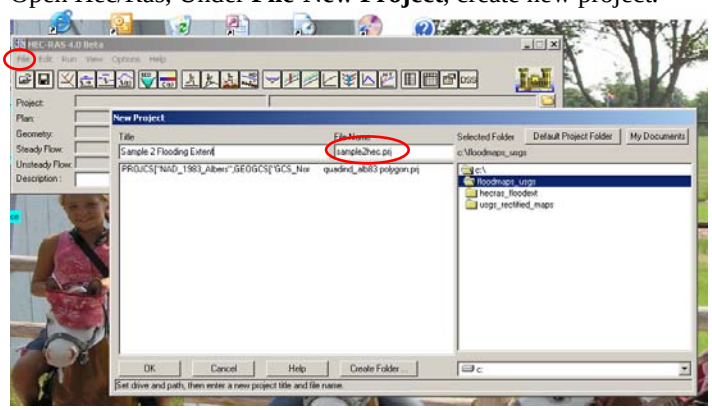
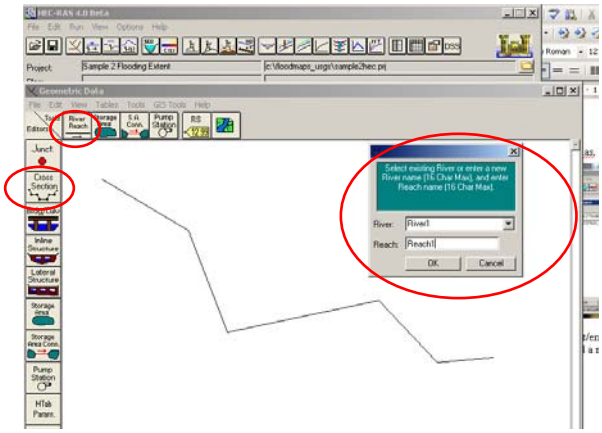
Figure 4. Instructions for using Hec/Ras to estimate depth and extent of peak flows.

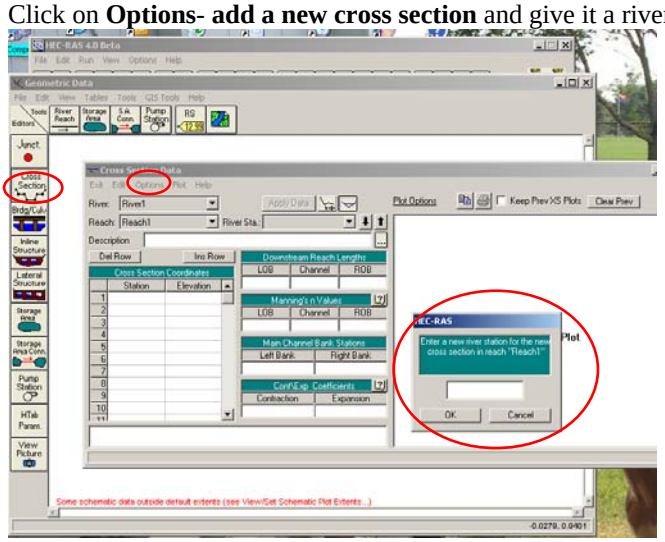
Open Hec/Ras, Under **File-New Project**, create new project.



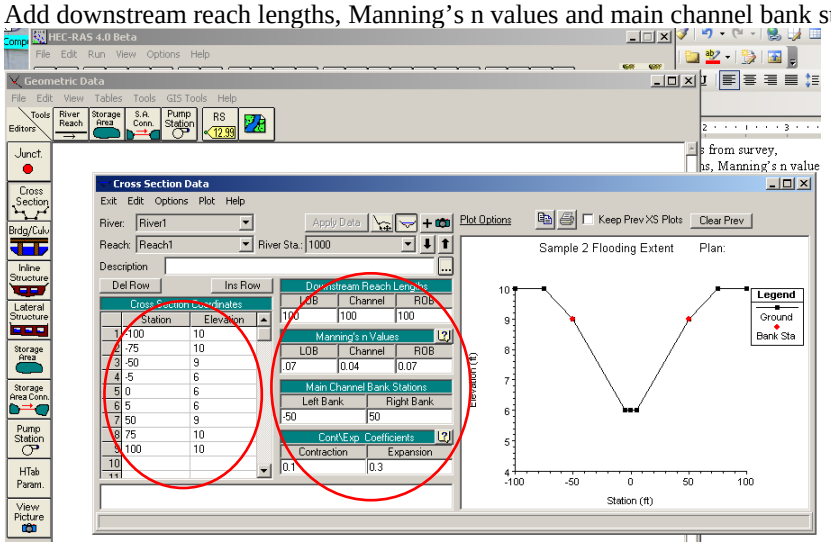
Enter cross sectional data; click on **Edit/Enter geometric data.**
Click on **River Reach-add a new river reach to the schematic**: sketch river and name the river and reach.



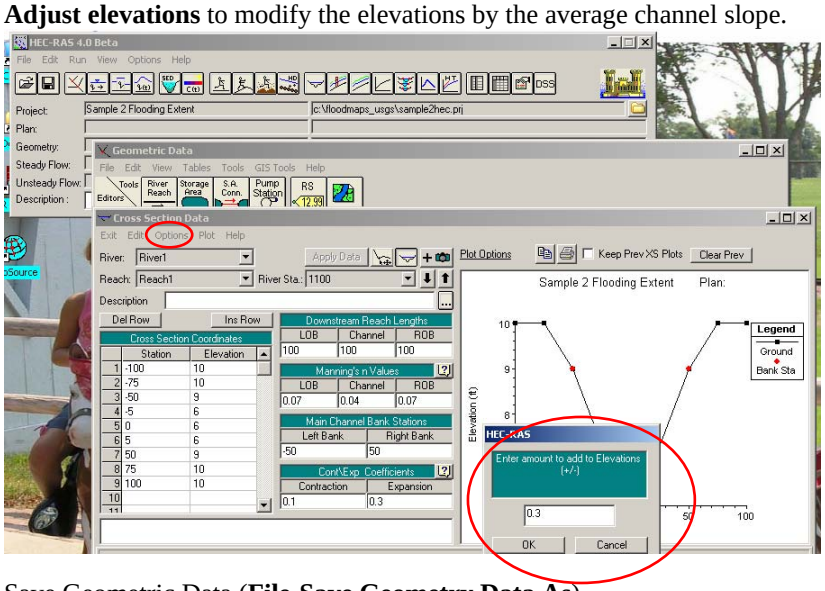
Click on **Cross Section-Edit and/or create cross sections** and add cross sectional data.
Click on **Options- add a new cross section** and give it a river station.



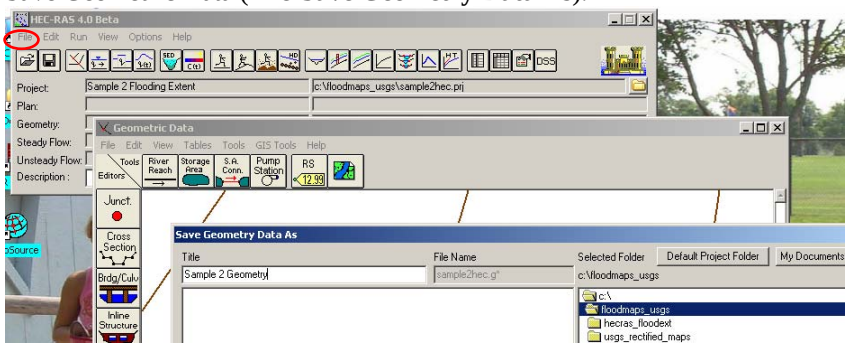
Add cross section coordinates from survey (if supplement survey with USGS contours, elevations should be based on sea level datum).
Add downstream reach lengths, Manning's n values and main channel bank stations.



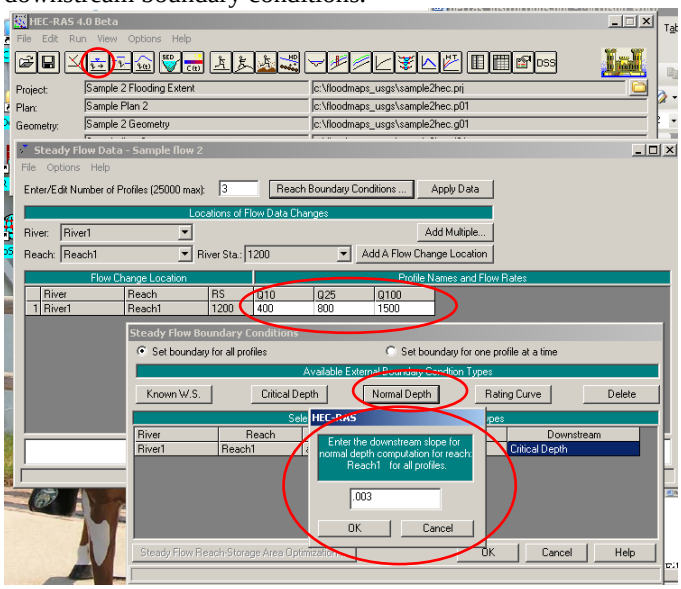
Continue adding cross sections; recommend a minimum of 3 cross sections.
If channel and floodplain are fairly uniform in your area-of-interest, you can use just one surveyed cross section. Make a copy of the surveyed cross section (**Options-Copy current cross section**); use **Options-Adjust elevations** to modify the elevations by the average channel slope.



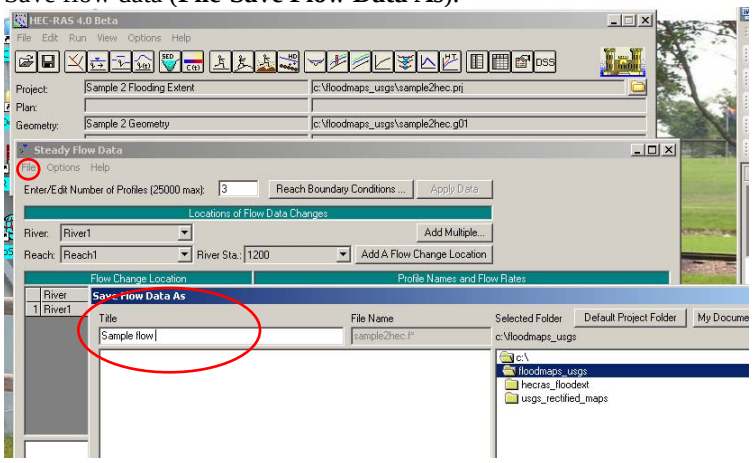
Save Geometric Data (**File-Save Geometry Data As**).



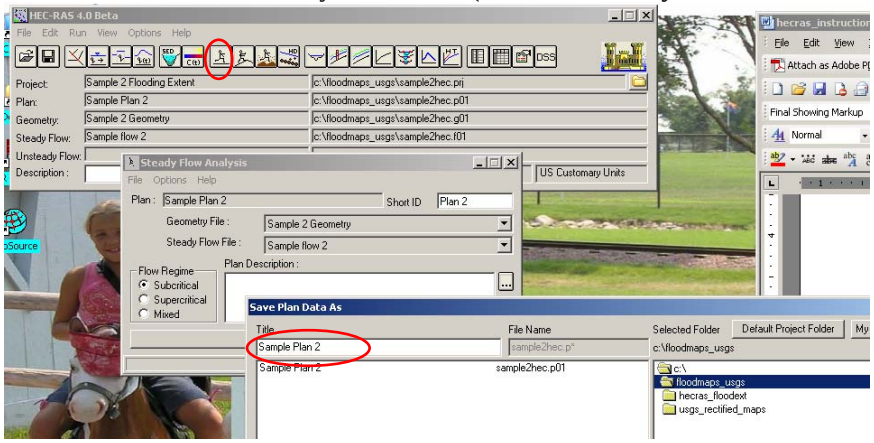
Under **Edit/Enter steady flow data**, input the profiles (peak flows) that you want evaluated. Also input downstream boundary conditions.



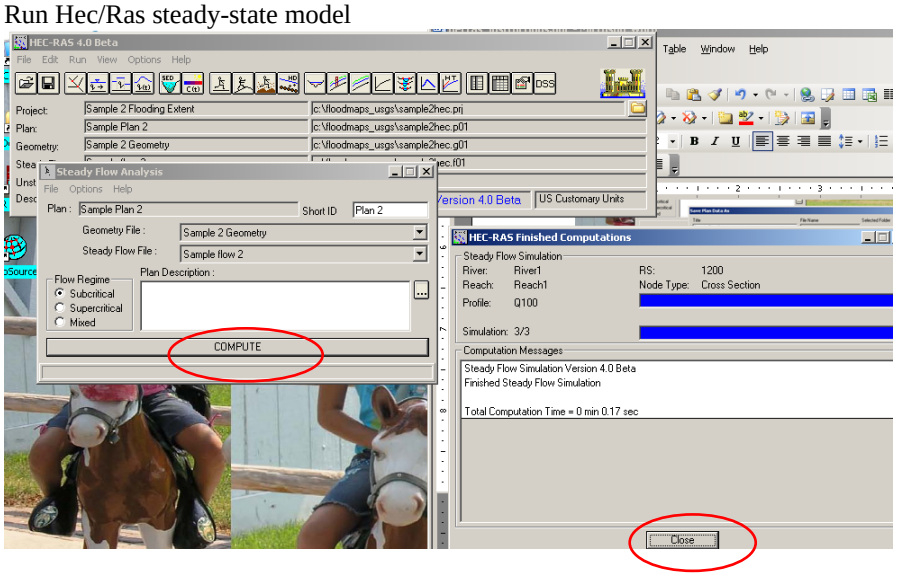
Save flow data (**File-Save Flow Data As**).



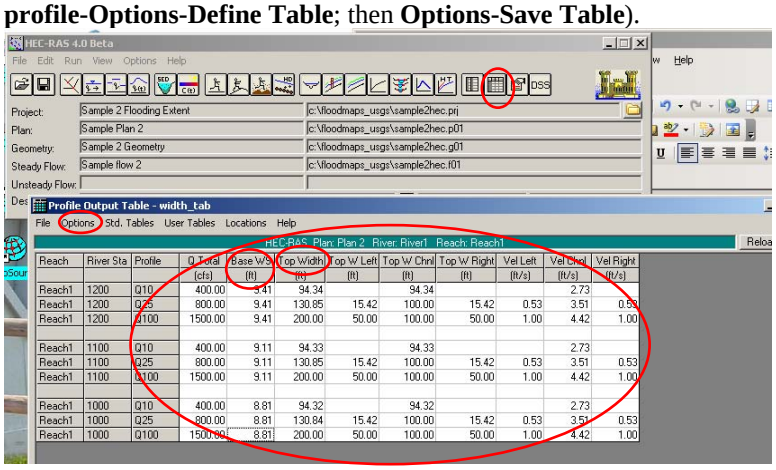
Save Plan Run Hec/Ras steady-state model (**Perform a steady flow simulation-File-Save Plan As**)



Run Hec/Ras steady-state model



Examine output for flood depths and extents (can define own table under **View summary output tables by profile-Options-Define Table**; then **Options-Save Table**).



Reach	River Sta	Profile	Q Total	Base WS	Top Width	Top W Left	Top W Chnl	Top W Right	Vel Left	Vel Chnl	Vel Right
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/s)	(ft/s)	(ft/s)
Reach1	1200	Q10	400.00	9.41	94.34		94.34			2.73	
Reach1	1200	Q25	800.00	9.41	130.85	15.42	100.00	15.42	0.53	3.51	0.53
Reach1	1200	Q100	1500.00	9.41	200.00	50.00	100.00	50.00	1.00	4.42	1.00
Reach1	1100	Q10	400.00	9.11	94.33		94.33			2.73	
Reach1	1100	Q25	800.00	9.11	130.85	15.42	100.00	15.42	0.53	3.51	0.53
Reach1	1100	Q100	1500.00	9.11	200.00	50.00	100.00	50.00	1.00	4.42	1.00
Reach1	1000	Q10	400.00	8.81	94.32		94.32			2.73	
Reach1	1000	Q25	800.00	8.81	130.84	15.42	100.00	15.42	0.53	3.51	0.53
Reach1	1000	Q100	1500.00	8.81	200.00	50.00	100.00	50.00	1.00	4.42	1.00