The "*->" has now moved from 3 to 4. The fourth choice in the menu will allow you to select the hydraulic and simulation parameters. The values used herein are arbitrary but you should use the same values to replicate the results. On selecting the Choice: 4, you will see the following in Figure 5 on the monitor:

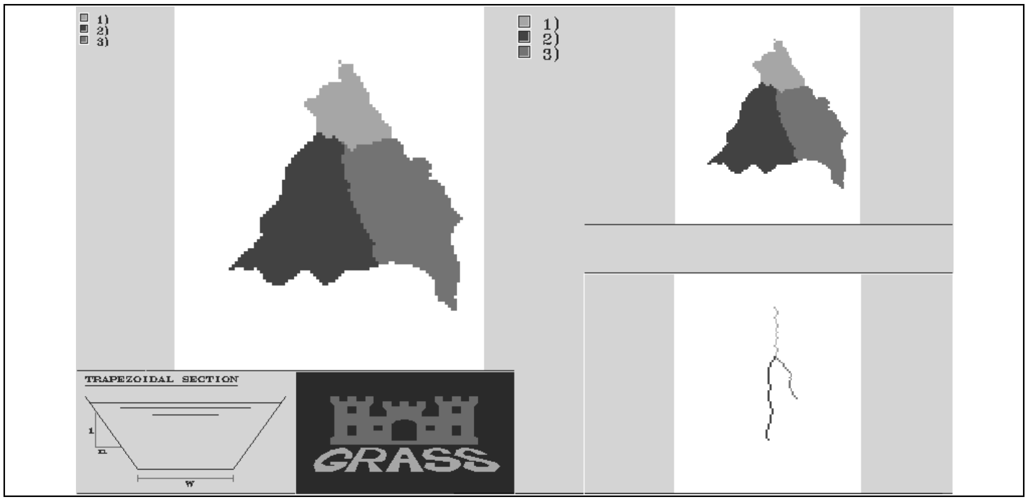

Figure 5. Basin and stream maps displayed with legend along with trapezoidal cross-section.

You will now be queried for various simulation and hydrologic parameters:

```
Enter the rainfall duration in minutes
DURATION: 60

Enter the maximum rainfall intensity(cm/hr) expected
MAX INTENSITY: 5.0

Please enter the maximum Manning's roughness value in your watershed
MAX. MANNINGS[0.01-0.9]: 0.15

COURANT TIME: 11.503015 seconds

For numerical stability use 5 seconds to 7seconds of the COURANT TIME
```

It is important to note that MAX. MANNINGS value you entered is used to calculate an estimate for the time step to prevent oscillations in the solution. You can easily present a lower value to obtain a different COURANT TIME. The time step that you select cannot be greater than the COURANT TIME or less than 1.

```
Enter time increment at which calculation should be made
TIME INCREMENT (seconds): 10

Enter the length of time for which you would like to monitor the hydrograph
MONITOR TIME (minutes): 180
```

```
Enter the name of the time file
Enter 'list' for a list of existing r.water.fea/my_project/timefiles files
Hit RETURN to cancel request
>my_timefile
```

Because the "Spatially constant and time variant" rainfall mode was selected in the configuration, you will be queried for the name of an ASCII text file containing information on the particular rainfall mode. All the files related to the particular rainfall scenario will be stored and accessed from the *r.water.fea/<project_name>/timefiles* directory. Since on the first run the file may not exist, you will be provided with an interface similar to the one shown below to create the file:

```
                                Rainfall data
                              ----------------
[The time column must be filled in increasing order.]

                  Time [minutes]                Intensity [cm/hr]

1                       30                            4.00
2                       60                            5.00
3                       ______                        ______
4                       ______                        ______
5                       ______                        ______
6                       ______                        ______
7                       ______                        ______
8                       ______                        ______
9                       ______                        ______
10                      ______                        ______
11                      ______                        ______
12                      ______                        ______
13                      ______                        ______
14                      ______                        ______
15                      ______                        ______

                 AFTER COMPLETING ALL ANSWERS, HIT <ESC> TO CONTINUE
                                   (OR <Ctrl - C> TO CANCEL)
```

After filling the columns in an increasing order, you will be queried for the availability of certain parameter maps as described in the user's manual pages. If you can provide these maps then you need not provide the parameter values for every basin, else you will be queried for the values during basin simulations for each individual basin. The values queried are assumed to be constant for the entire basin being simulated.

```
Do you have maps of the following types?

1. Manning's roughness coefficient
2. Saturated conductivity values (m/sec)
3. Capillary suction values (m)
4. Porosity values (%)

Please answer yes only if you have all the maps
(y/n) n
```

Finally you are queried for the channel characteristics to complete choice:4 of the menu:

```
Please enter channel characteristics based on
the trapezoid shown on the monitor, enter one value for each stream
Basin number: 1
n= 4
W(meters)= 14
Mannings roughness[0.001-0.8]= 0.07
Basin number:  2
n= 3
W(meters)= 12
Mannings roughness[0.001-0.8]= 0.06
Basin number: 3
n= 4
W(meters)= 15
Mannings roughness[0.001-0.8]= 0.06
```