FIRST STEPS

Installation of City Drain

City Drain requires two simple steps prior being available within Matlab/Simulink environment. Following files are part of the City Drain software:

> *CityDrain01.zip*
> *CD1_startup.m*
> *CD1_A_UserManual.pdf*
> *CD1_B_Tutorial.pdf*

The file (*CityDrain01.zip*) contains the software library and all associated. Data is to be unzipped and saved preferably in the operating system's programs directory.

> *C:\Programme\CityDrain01*   for German operating system
> *C:\Program Files\CityDrain01*   for English operating system

All functions of City Drain are provided with the prefix *"CD1_"* to avoid conflicts with other Matlab libraries or functions used. For convenient use of City Drain 1.0 it is required to include the *CityDrain01* directory (and all subdirectories) in the Matlab paths. Therefore the Matlab "startup.m" file is extended for automatic adding of City Drain directory to the Matlab path.

File:
> *C:\Programme\MATLAB6p5\work\startup.m*

In case there is no startup.m file created in your Matlab, please create a new startup-file. Following code to be added can be found in *CD1_startup.m.* The user may modify the path of City Drain included in the code (bold printed).

```
% Path setting for CITY DRAIN 1.0
% IUT Institute of Environmental Engineering

cd01path='C:\Program Files\CityDrain01';
cd01path_full=genpath(cd01path);
k=strcmp(cd01path_full,'');
disp('Matlab-path for CITY DRAIN 1.0:');

if k==1
    disp('HAS NOT BEEN SET !!');
    disp('Please check in startup.m if path is set correctly.');
    disp(' ');disp(' ');

else
    disp(cd01path);
    path(path,cd01path_full);
    disp(' ');disp(' ');
end

clear('cd01path');clear('cd01path_full');clear('k');
```

The City Drain Library

To open the City Drain block library type

```
> citydrain
```

in the Matlab command window. Alternative, the Library can be opened via *"File/Open…"* :

```
C:\Programs\CityDrain01\CD1_CityDrain_Library.mdl
```
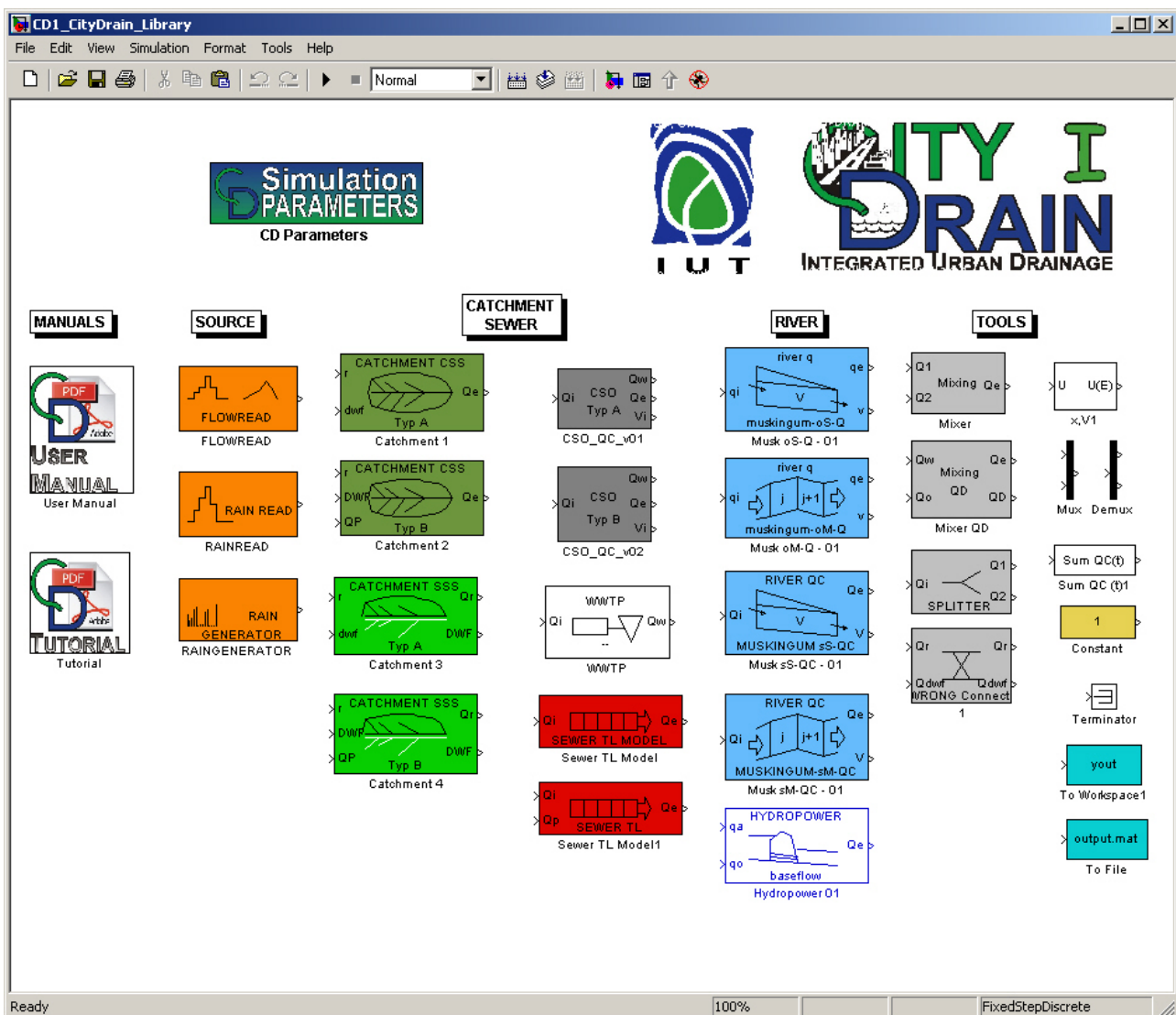

Fig. 2. City Drain 1.0 Block Library (*CD1_CityDrain_Library.mdl*)

The library contains blocks in 5 sections. Core block required for every simulation is the "CD Parameters" blocks organizing global setting for each simulation.

This manual as well as the Tutorial may be opened via double click on the "Manual Blocks". The remaining blocks represent different parts of the urban drainage system and are described in detail in this manual. How to create a new scenario, perform simulations and cope with simulation results is shown in the Tutorial Manual.