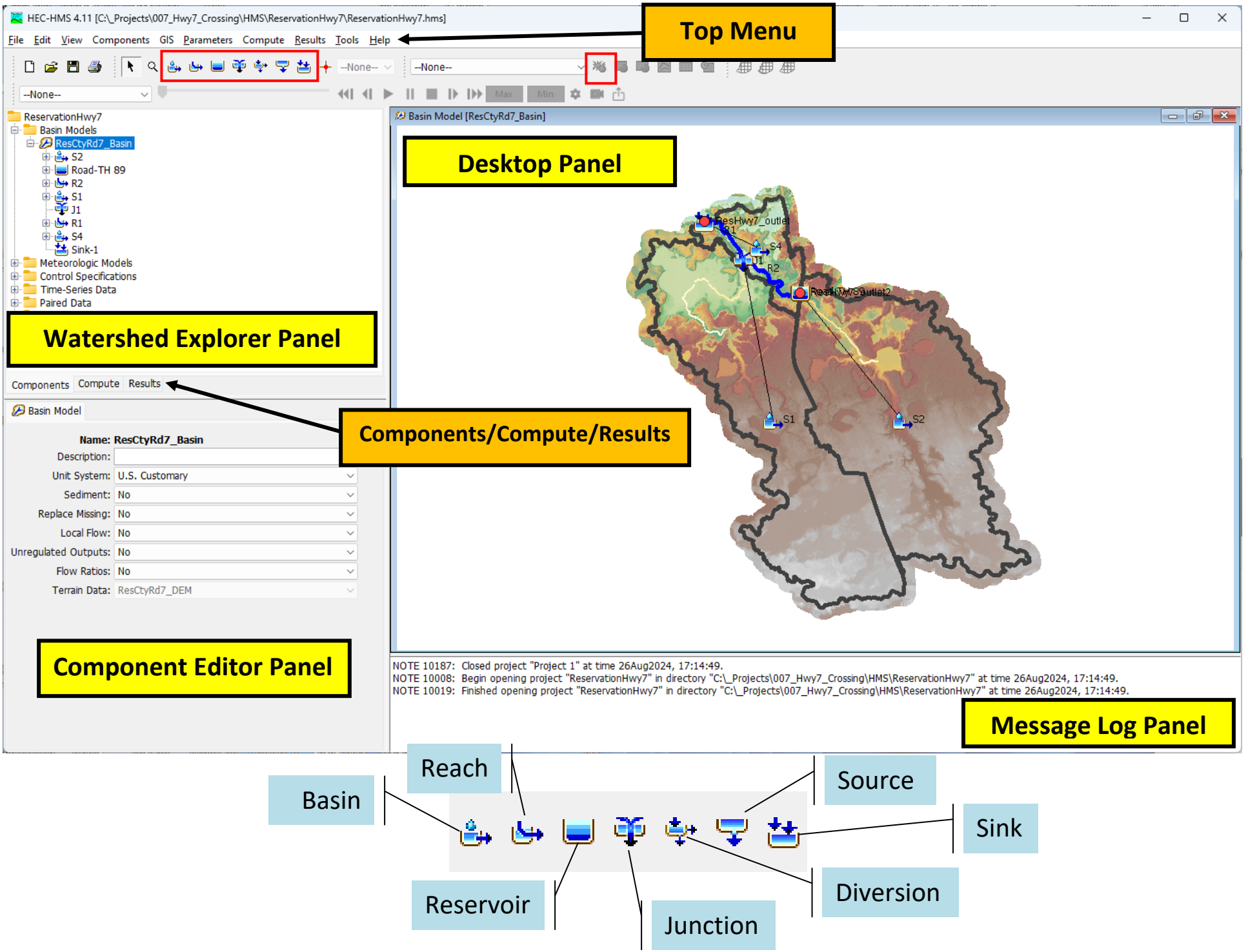
Help Sheet - Basic HMS Input, Run Setup, Run Model, View Output Sequence

1. **Open HMS/Set Program Defaults/Create New Project**
   - Select HEC-HMS from desktop of browse programs.
   - Top menu: Tools – Program Settings – Defaults. Set unit system (U.S. Customary), set Subbasin Loss method (SCS Curve Number), Subbasin transform method (SCS Unit Hydrograph), Subbasin precipitation (Specified Hyetograph)
   - Top menu: File – New. Create new project. Set units to "U.S. Customary"
2. **Create Basin Model Manager** (subbasins, reaches, etc.)
   - Top Menu: Components - Basin Model Manager - New. Enter name & Create the basin.
   - Watershed Explorer Panel: Expand Basin Models – Select created basin – Desktop Panel should appear
3. **Create Paired Data** (i.e. Stage/Area for storage areas or Sta/Elev for 8 pt cross sections if needed)
   - For example, when modeling a culvert an Elevation-Area or Elevation-Discharge Paired Data will be required.
   - Top menu: Components – Paired Data Manager – Select desired Data Type – New. Enter name & Create the data.
   - Watershed Explorer Panel: Expand Paired Data – Expand type of paired data – select created paired data
   - Component Editor: Select Table Tab – enter data
4. **Create Basin (Watershed Elements)**
   - Add Background Images if desired – View – Map Layers – Add. Select desired shapefile or image.
   - Using icons on top toolbar  (subbasin, reach, reservoir, junction, diversion, source, sink), select an element, then click in the Desktop Panel to place watershed element.
   - Subbasin may be used for drainage areas, reservoir may be used for culverts, junction may be used for the outlet.
5. **Enter Parameters for each element & Make Hydrologic Connections for Each Element**
   - Watershed Explorer Panel: Expand Basin (Step 2) – Select Watershed Element (Step 4).
   - Component Editor Panel: Enter required information for each Watershed Element. ***Note: Lag Time = 0.6*Tc***.
6. **Create Time Series Data**
   - Top menu: Components – Time-Series Data Manager. Data Type – Precipitation Gages - New. Enter name (e.g. 24-hour rainfall) & Create Gage.
   - Watershed Explorer Panel: Expand Time-Series Data – Expand Precipitation Gages – Select Created Gage.
   - Component Editor Panel: Time-Series Gage tab – Data Source: Manual Entry - Unit: Cumulative Inches – Time Interval: 6 minutes
   - Component Editor Panel: Time Window tab –needs to be 24 hours. (e.g. 01Jan2000, 00:00, 02Jan2000, 0:00)
   - Component Editor Panel: Table tab – Copy & Paste MSE 3 ratio column from excel into Precipitation Column – Ctrl+V for paste in HEC-HMS.
7. **Create Meteorological Models**
   - Top Menu: Components – Meteorological Model Manager – New. Enter name (e.g. MSE3) & Create Model.
   - Watershed Explorer panel: Expand Meteorologic Model – Select created Model.
   - Component Editor panel: Precipitation – Specified Hyetograph – Gage – select created gage (Step 6).
8. **Create Control Specification** (Run Start/Stop Time & computation time interval)
   - Top Menu: Components – Control Specifications Manager – New. Enter name & Create Control.
   - Watershed Explorer panel: Watershed Explorer Panel – Expand Control Specifications – Selected created Control.
   - Component Editor Panel: Enter Date & Time information (Must be the same as Start & End time in Step 6). Select Time Interval (typically 6 minutes).
9. **Create Run File & Run Model**
   - Top Menu: Compute – Create Compute – Simulation Run. Follow steps to Create Simulation Run.
   - Watershed Explorer Panel: Compute Tab - Expand Simulation Runs – Select created Simulation Run.
   - Component Editor Panel: Ratio tab - Ratio Method: Precipitation – Apply to Subbasins: Yes – Ratio: Enter rainfall depth.
   - Watershed Explorer Panel: Compute Tab: Select run from Simulation Runs Folder then 
10. **View Output**
    - Watershed Explorer Panel: Results Tab - Select desired Run.
    - Select Global Summary or output by individual element.


HEC-HMS 4.11 [C:_Projects\007_Hwy7_Crossing\HMS\ReservationHwy7\ReservationHwy7.hms]
File Edit View Components GIS Parameters Compute Results Tools Help
Top Menu
ReservationHwy7
Basin Models
ResCtyRd7_Basin
S2
Road-TH 89
R2
S1
J1
R1
S4
Sink-1
Meteorologic Models
Control Specifications
Time-Series Data
Paired Data
Watershed Explorer Panel
Components Compute Results
Components/Compute/Results
Basin Model
Name: ResCtyRd7_Basin
Description:
Unit System: U.S. Customary
Sediment: No
Replace Missing: No
Local Flow: No
Unregulated Outputs: No
Flow Ratios: No
Terrain Data: ResCtyRd7_DEM
Component Editor Panel
Basin Model [ResCtyRd7_Basin]
Desktop Panel
ResHwy7_outlet
S4
J1
R2
S1
S2
NOTE 10187: Closed project "Project 1" at time 26Aug2024, 17:14:49.
NOTE 10008: Begin opening project "ReservationHwy7" in directory "C:_Projects\007_Hwy7_Crossing\HMS\ReservationHwy7" at time 26Aug2024, 17:14:49.
NOTE 10019: Finished opening project "ReservationHwy7" in directory "C:_Projects\007_Hwy7_Crossing\HMS\ReservationHwy7" at time 26Aug2024, 17:14:49.
Message Log Panel
Basin
Reach
Source
Sink
Reservoir
Junction
Diversion