



## Highway Drainage Manual Design Guidelines Software

### I. Limits

The following software applications are approved for use as specified. The use of alternative programs is subject to approval by the Chief, Highway Hydraulics Division.

### II. Hydrology

- NRCS WIN TR-20 - v 1.11 (2009)
- NRCS WIN TR-55 - v 1.00 (2013)
- GISHYDRO2000

### III. Culverts

- HY-8 Culvert Hydraulic Analysis Program - v 7.2 (2012)
- HDS 5 Hydraulic Design of Highway Culverts, Third Edition (FHWA 2012)

### IV. Storm Drains/Inlets/Pipes

- SHA TVHG (1994) *SHA hydraulic gradient computation tool*.
- FHWA Hydraulic Toolbox v 4.10 (2013)
- Bentley InRoads Group v8i Select - Storm and Sanitary (**Note: the software may not be used for any inlet capacity computations; use is restricted to HGL computations when the option to 'ignore inlet capacity' is applied.**)

### V. Stormwater Management

- SHARISER - v 2.0 (2009) *SHA riser evaluation*.

### VI. Streams

- HEC-RAS - v 4.1