

Below is the assignment of project data outputs to be turned in by the 4295 students. I'd like the 5295 students to turn in something similar. However, you've developed your own, standard data template for the input, and so I'd like you to look these over, discuss any modifications, propose changes that better match the standard geodatabase and different project requirements you have; we'll meet and discuss them next Monday, November 14<sup>th</sup>.

### **Geodatabase Layers to Be Submitted at End of Semester**

The following layers should be in your final geodatabase that you'll turn in at the end of your analysis. You will be turning in a combined geodatabase, that is, the data for the entire study area, all student sections, merged/mosaicked. You don't have to follow the naming conventions below, but should have the layers named such that I can identify them easily.

Note that you can have variants on the attributes below, but they must be described in your final documentation or metadata. You can also (will?) have additional attributes, but remember, each attribute must be described completely (name, type, domain, values, key for any codes)

All data are to be in UTM zone15N NAD83(CORS96) coordinates

#### **I. Base Data Layers (input for analysis)**

##### ***Vector Polygon Layers:***

ProjectArea – the outline of the combined St. Paul Campus study area

##### **Buildings**

Attributes are should include at least a

- Name (text)

##### **Surface (from WalkableAreas data layer)**

Attributes for

- Permeability (e.g., 1, impermeable, 0 if it is permeable)
- MatCode (short integer, values 1 for asphalt areas, 2 for concrete areas, 3 for natural areas, 4 for other)

##### **Soils**

Attributes are

- Type (text, 50 character, values "Excessive", "Well", "Urban")
- AbsorbInch (float, with absorption values for Excessive, Well drained, and Urban)
- AbsorbM (float), above values converted to meter units

##### **Canopy**

- Conifer/hardwood
- Height class

Grates\_sinks

Attributes are

GrateID (long integer, sequential number)

GrateType (text, 10, values of "G", "S")

Runoff\_1 (double, precision 15, scale 1)

Runoff\_2 (double, precision 15, scale 1)

Runoff\_4 (double, precision 15, scale 1)

Rainfall\_1qtr

Attributes are

Data layer of the amount of runoff not intercepted or absorbed by the canopy or surface (float, with the ¼" amount of rainfall, but converted to meters in depth)

Rainfall\_1 – similar to above, but 1" rainfall

Rainfall2 – similar to above, but 2" rainfall

Rainfall\_4 – similar to above, but 4" rainfall

***Raster layers, 1m cell resolution***

DEM – cells are type double, elevation in meters

**II. Created Final or Intermediate Layers**

Besides the above, your geodatabase should contain the following layers, developed by you during your processing:

Canopy\_1qtr – canopy modified for absorbing the first ¼ inch

Canopy\_1 – canopy modified for absorbing first 1 inch

WalkableAreas\_1qtr – after modifications to landcover when absorbing first ¼ rainfall, same attributes as original WalkableAreas

WalkableAreas\_1 – after modification to landcover when absorbing first 1" rainfall, , same attributes as original WalkableAreas

Grates\_sinks\_1qtr – after modifications to absorb first ¼ storm

Attributes are

GrateID (long integer, sequential number)

GrateType (text, 10, values of "G", "S", "NS")

Runoff\_1qtr (double, precision 15, scale 1)

Runoff\_1 (double, precision 15, scale 1)

Grates\_sinks\_1 – after modifications to absorb first 1” storm

Attributes are

GrateID (long integer, sequential number)

GrateType (text, 10, values of “G”, “S”, “NS”)

Runoff\_1qtr (double, precision 15, scale 1)

Runoff\_1 (double, precision 15, scale 1)

Raster Layers, 1m resolution DEM:

FlowDir\_orig – flow direction under original conditions

FlowAcc\_orig – flow accumulation under original conditions

Watersheds\_orig – watersheds delineated under current conditions

Watersheds\_1qtr – watersheds delineated under modified conditions to absorb ¼”

Watersheds\_1in – watersheds delineated under modified conditions to absorb 1”

**Tables, Not in Geodatabase:**

Output summary Excel spreadsheet tables, see separate instructions for content and format