

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 should use the data you've already collected, plus a bit more data collection, to populate this geodatabase; you may have to rename/create/assign columns in tables, or data layers, but you should already have most of the data already created.

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 your project sub-area on the St. Paul Campus

Attributes are

- Project Area ID (short integer, with value equal to your project area)

Buildings

Attributes are

- BuildingID (sequential, long integer, and this is IN ADDITION to the OBJECTID variable),
- Name (text, 50 character),
- SHAPE_Length (double, precision 15, scale 1),
- SHAPE_area(double, precision 15, scale 1)

WalkableAreas

Attributes are

- MATERIAL (text, 50 character, values can only be one of “asphalt”, “concrete”, “natural”, “other”)
- 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, precision 10, scale 5, values = 2.25 for Excessive, 0.75 for Well, 0.375 for Urban)
- AbsorbM (float, precision 10, scale 5). AbsorbInch values converted to meter units

Canopy

No attributes required

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

Amount (float, with the ¼" amount of rainfall, but converted to in meters 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)

ESPM4295

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