City of Holladay
Onsite Retention Worksheet

Owner's Name_____

Address_____

Permit No._____

Stormwater runoff increases as natural surfaces are covered with impervious surfaces, such as concrete, asphalt and roofs. To minimize impact on downstream properties and to meet water quality required by permit from the Utah Department of Water Quality, the City has adopted ordinances that require stormwater runoff from newly created impervious surfaces to be captured and retained on the property (onsite). A retention system infiltrates stormwater into the ground. This worksheet is provided as a courtesy to assist applicants and their consultants or contractor with sizing an onsite retention system. Please refer to City code section 17.20 for additional information, including design criteria for more complex sizing methods that may be accepted by the City.

Step 1: If the lot is vacant, determine if the lot is part of a subdivision that has constructed a stormwater management system to be used for the benefit of the lots in the subdivision. Contact the developer to request additional information.

Step 2: Determine the existing or historical impervious surface area in square feet. This can be done using polygon tools in Google Earth or Salt County's Assessor Parcel Viewer. A field survey is also accepted.

Step 3: Using the design, determine the proposed impervious surface area for the developed condition.

Step 4: Complete the following calculations:

a. Proposed Impervious Area: _____ sq. ft
   (include any existing impervious areas that are not demo'd)

b. Existing or Historical Impervious Area: _____ sq. ft
   (enter 0 for undeveloped lots)

c. Subtract line (b) from line (a): _____ sq. ft

d. Divide line (c) by line (a) then multiple by 100:_____ %
   (if less than 10%, no retention is required)

e. Multiple line (c) by 0.04333 ft: _____ cu.ft
   (this is the required storage volume)

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Step 5: Design the retention system to meet required storage volume. Design of the retention system can be done by a professional civil or geotechnical engineer.

f. Volume of structure: _____ cu.ft
(i.e. perforated manhole, tank, pipe)

g. Void volume = Volume of drain rock _____ x 0.35 = _____ cu.ft

h. Add line (f) and line (g): _____ cu.ft
(this is the design storage volume)

Is line (h) greater than line (e)? If no, increase size of the structure until the required storage volume is met.

Step 6: Design drainage plan to tie roof drains into retention system and/or swales with catchbasins that connect to retention system.

Step 7: Provide a detail of the retention system on the plan, specifying drain rock size, filter fabric make and model, and dimensions. Add the following note: DOCUMENT CONSTRUCTION OF RETENTION SYSTEM WITH PHOTOS. CALL THE CITY FOR INSPECTION OF RETENTION SYSTEM PRIOR TO BACKFILLING.

Bonding

A $5,000 bond is required for onsite retention systems constructed on single family residential lots. Contact the City to calculate the bond amount for all other development.

Surface Retention

Retention systems on lots less than 0.5 acres must be built underground. Surface retention allowed on parcels 0.5 acres and larger with an executed “Site Grading Management Agreement”.