Simplified Method Discussion
Community Development Department
Greenwood Village
6060 S. Quebec Street
Greenwood Village, CO 80111-4591
(303) 486-5783; FAX (303) 773-1238

Minor Development and *Minor Redevelopment* projects will have minimal impact on stormwater runoff patterns and water quality. *Minor Development* and *Minor Redevelopment* projects may submit a design in accordance with the Simplified Method. The Simplified Method includes both the flood attenuation and water quality management requirements for the increased impervious area.

To use the Simplified Method, please complete the Simplified Method Worksheet in order to determine the retention requirements for your project. The calculations need to be submitted with your application. Additionally, you must include on your site plan the location of the required retention area with the volume information.

The Simplified Method is based on the following assumptions:

1) All runoff calculations are based on impervious area and total lot size.
2) Stormwater flows are not separated into multiple downstream drainage basins.
3) The stormwater retention volume requirements are based on the Equation Detention Method (Table 13-1) for Type II (clay loam) soils.
4) The 60% phosphorus removal can be achieved with the retention of 0.45 inches of rainfall on-site based on Figures 6-2 and 6-4 for Type II (clay loam) soils.
5) A retention facility will be used. If a detention facility is used, then the facility shall be designed by a professional engineer licensed in the State of Colorado.

Figure 13-1 shows the required retention volume based on lot size and amount of impervious area, with sufficient volume for both flood attenuation and water quality control, using the Simplified Method.

The construction of a swimming pool may or may not increase the effective impervious area on a site. If the pool is covered in such a way that it sheds runoff, the pool acts as if it was a new impervious surface and will increase the runoff from the site. If the pool is not covered, it will reduce runoff from the site. Because of the variation in the design of pool covers and the likelihood that a pool cover will be replaced with a different design sometime during the life of the pool, it is impractical to assign a specific permanent impervious area to a pool. Therefore, it shall be assumed that the surface area of the pool will not create a change in the impervious area for the site. However, the impervious area created by the pool deck area shall be considered as new impervious area for the site.
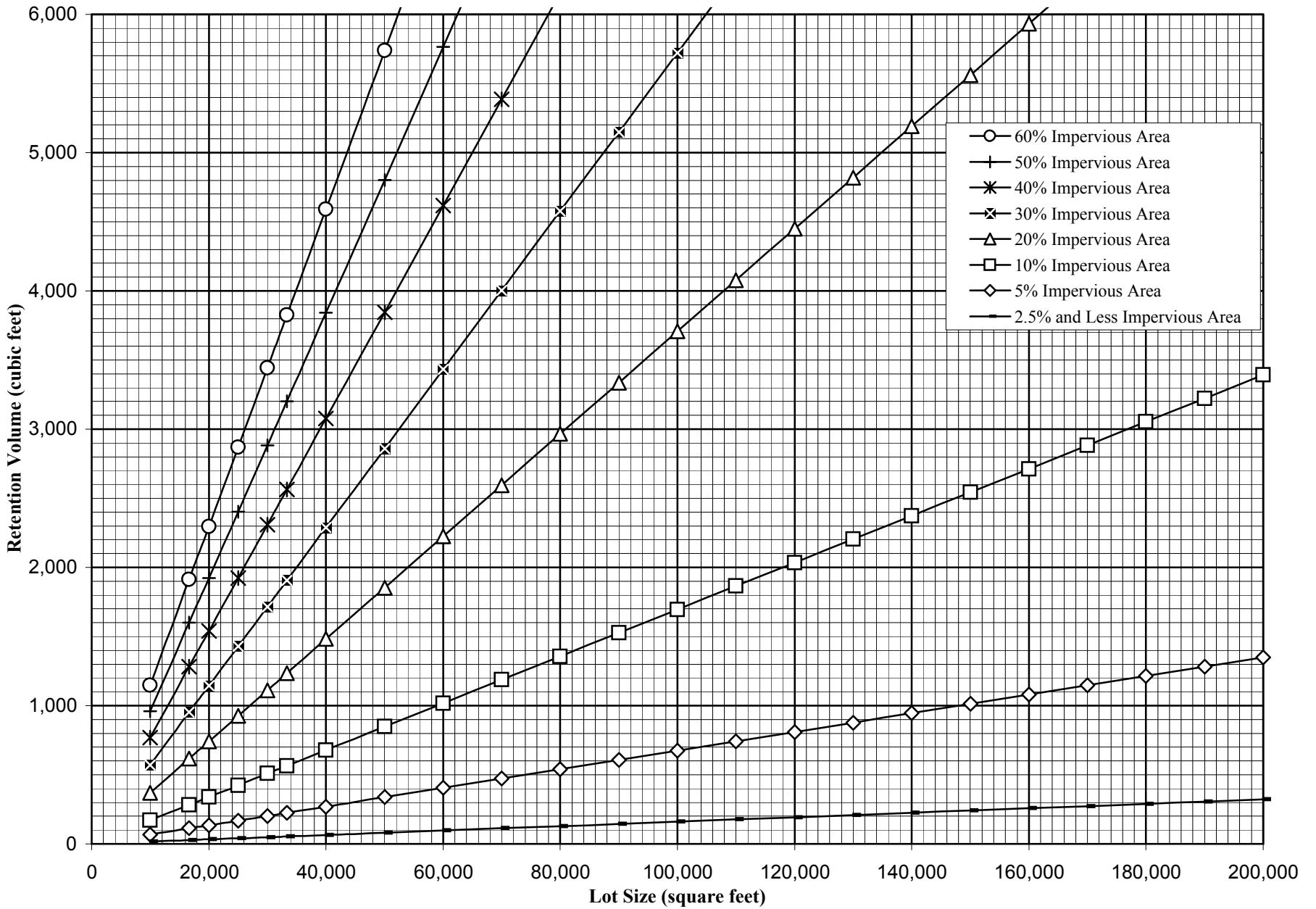
(clarification added by PMB on 1/7/08)

Revised 8/16/05

Simplified Method Worksheet
Community Development Department
Greenwood Village
6060 S. Quebec Street
Greenwood Village, CO 80111-4591
(303) 486-5783; FAX (303) 773-1238

(A)   Lot Size =   (A) _____ ft^2

(B)   Existing Impervious (Paved or Roofed) Area =   (B) _____ ft^2

(C)   Existing Impervious Area Divided by Lot Size: 100 x (B) / (A) =   (C) _____ %

(D)   Removed Impervious Area =   (D) _____ ft^2

(E)   Proposed (New) Impervious Area =   (E) _____ ft^2

(F)* Increased Impervious Area: (E) – (D) =   (F) _____ ft^2

(G)   Increased Impervious Area Divided by Existing Impervious Area:
       100 x (F) / (B) =   (G) _____ %

(H)   Total Impervious Area: (B) + (F) =   (H) _____ ft^2

(I)   Total Impervious Area Divided by Lot Size: 100 x (H) / (A) =   (I) _____ %

(J)   Required Retention Volume for Existing (C): _____% =   (J) _____ ft^3
       (Based on Figure 13-1)

(K)   Required Retention Volume for Total (I): _____% =   (K) _____ ft^3
       (Based on Figure 13-1)

(L)   Required Retention Volume for Increase: (K) – (J) =   (L) _____ ft^3

*   If the increased impervious area is less than 500 square feet, then a retention area is not
     required.

Greenwood Village
October 2003

FIG 13-1 -Fig 13-1 Chart

Figure 13-1
Simplified Plan
Retention Requirements