

Decatur, Georgia Stormwater Management Policy Guidelines

DRAFT November 5, 2014



STORMWATER MANAGEMENT POLICY GUIDELINES

- 1.0 Introduction 3
- 2.0 Determining Predevelopment Conditions of the Site for Stormwater Management Analysis..... 5
- 3.0 Reductions to Stormwater Management Criteria.....7
 - 3.1 Preservation of Existing Tree Canopies.....7
 - 3.2 Green Infrastructure and Low Impact Development (LID).....9
- AppendixA-1

This page intentionally left blank.

1.0 Introduction

The City will use the latest edition of the Georgia Stormwater Management Manual and the Georgia Coastal Stormwater Supplement to implement the policy, criteria, and information of the stormwater management criteria in the ordinance, including technical specifications and standards. The information contained within this guideline is a supplement to the Georgia Stormwater Management Manual and the Georgia Coastal Stormwater Supplement and shall be used to assist applicants, designers, and City staff in implementing the stormwater management criteria within code of ordinances.

These guidelines are limited to specific stormwater management criteria, which are not standard practices discussed within the Georgia Stormwater Management Manual and the Georgia Coastal Stormwater Supplement and/or are frequently misunderstood among applicants/designers. These guidelines are intended to assist applicants and designers in understanding and implementing the stormwater management criteria and will be updated as necessary.

For additional information contact:

Design Environmental and Construction Division

City of Decatur
2635 Talley Street
Decatur, Georgia 30030
tel: 404-370-4104

This page intentionally left blank.

2.0 Determining Predevelopment Conditions of the Site for Stormwater Management Analysis

The Unified Development Code defines predevelopment as the conditions that exist on a site prior to the commencement of a land development project and at the time that plans for the land development of a site are approved by the plan approving authority. Where phased development or plan approval occurs, the existing conditions at the item prior to the first item being approved or permitted shall establish predevelopment conditions. However, the Unified Development Code also establishes criteria when the predevelopment condition shall revert to the natural undeveloped state, such as the criteria listed below from the Stormwater Management Applicability Table Notes (Sec.9.3.3.C):

- The predevelopment condition of an existing impervious area that is removed shall revert be reverted to the runoff coefficient/curve number for such area in its *natural undeveloped state*; and
- Attenuate the stormwater runoff to a level of 90 percent of that which would be generated from the *site* in its *natural undeveloped state* for all storms.

The following supplemental information to the Unified Development Ordinance is to help:

- Clarify the meaning of natural undeveloped state when referenced within the Unified Development Code; and
- Establish the limits of the site when performing stormwater management computations.

Natural Undeveloped State:

The natural undeveloped state shall refer to the forested, unimproved condition. Depending upon the hydrologic method used, the natural undeveloped condition shall be defined as follows:

Rational Method:

Areas considered to be in the natural undeveloped state shall use the runoff coefficient value associated with unimproved areas (forest) as listed in Georgia Stormwater Management Manual, Table 2.1.4-2, Recommended Runoff Coefficient Values, which is 0.15.

SCS Hydrologic Method:

Areas considered to be in the natural undeveloped state shall use the curve number value associated with wood or forest land with good ground cover using hydrologic soil group B as listed in Georgia Stormwater Management Manual, Table 2.1.5-1, Runoff Curve Numbers, which is 55. (NOTE: Applicant may use other hydrologic soil group classification for the natural undeveloped state upon City approval of field soil test of the site. An adequate number of field soil test shall be performed that represents the entire site. The field soil test locations and results as well as methodology used to define a new hydrologic soil group for the exiting soils shall be submitted to City for approval.)

Site Limits for Stormwater Management Analysis:

When meeting the performance criteria within the Stormwater Management Article of the Unified Development Code, the site limits for the stormwater management analysis should be as follows:

New Development:

The site limits for stormwater management analysis shall be the entire property boundary area and all proposed project improvements offsite, unless otherwise approved by City due to constraints of the site.

Redevelopment:

If land development activity consists of 50% or less area than the entire property boundary area, then the site limits for stormwater analysis shall be the portion of the property boundary area where the land development activity occurs and all proposed project improvements offsite, unless otherwise approved by City due to constraints of the site.

If land development activity consists of more area than 50% of the entire property boundary area, then the site limits for stormwater management analysis shall be the entire property boundary area and all proposed project improvements offsite, unless otherwise approved by City due to constraints of the site.

3.0 Reductions to Stormwater Management Criteria

When sites preserve existing tree canopies and implement green infrastructure and low impact development practices, the Stormwater Management Section within the Unified Development Ordinance allows applicants to reduce requirements and/or to achieve credits toward the stormwater management criteria. The following subsections explain how to achieve these reductions to stormwater management criteria.

3.1 Preservation of Existing Tree Canopies

The City recognizes that trees improve stream quality and watershed health primarily by decreasing the amount of stormwater runoff and pollutants that reach our streams. Some of the stormwater benefits provided by trees are:

- Reducing runoff by capturing and storing rainfall in the canopy and releasing water into the atmosphere through evapotranspiration that reduces runoff
- Replenishing groundwater supply and maintaining streamflow during dry periods by improving infiltration of soils with the root system and leaf litter of the trees
- Improving water quality by absorbing harmful nutrients and other pollutants from soils and water with the root systems of the trees, which transforms pollutants into less harmful substances

Due to the many stormwater benefits trees provide, the City promotes preservation of existing tree canopies and provides the incentive of reducing stormwater management criteria in exchange for preservation of existing canopies.

The Tree Protection Section of the Unified Development Ordinance shall be referenced to define what existing trees and their associated canopies may be used toward obtaining reductions to stormwater management criteria for preservation of existing tree canopies. Also, in order to obtain the reduction of stormwater management criteria from preservation of existing tree canopies, the existing tree canopies preserved shall be protected by drainage or maintenance easements and shall be included in all stormwater management system inspection and maintenance plans(similar to other stormwater management practices).

The following describes how preservation of existing tree canopies can reduce stormwater management criteria.

Water Quality:

All *undisturbed pervious* area below existing tree canopies may be used to achieve the better site design credit of reduce clearing and grading limits, as described in Section 3.2. The better site design credit of reduce clearing and grading limits subtracts 50% of undisturbed pervious area from the total site area when calculating the water quality volume, which will reduce the required water quality volume for the site.

Channel Protection, Overbank Flood Protection, and Extreme Flood Protection:

All *undisturbed pervious* areas below existing tree canopies may be used to achieve the better site design credit of reduce clearing and grading limits, as described in Section 3.2. The better site design credit of reduce clearing and grading limits allows the ability to assume that the post-development hydrologic conditions of any *undisturbed pervious* areas below the existing canopy are equivalent to the predevelopment conditions for those same areas.

If the existing tree canopy that remains after development covers 45% or more of the site, the site must only attenuate the post development stormwater runoff for overbank and extreme flood protection to a level of that which would be generated from the site in its natural undeveloped state for all required storm events, in lieu of the typical criteria of attenuating the post development stormwater runoff to the level of 90% of that which would be generated from the site in its natural undeveloped state.

Example of Water Quality Volume:

Site = 2 acres

Post development land conditions:

Impervious area = 1.0 acre

Pervious area (lawn) = 1.0 acres with 0.8 acres of undisturbed pervious area below existing tree canopies

$$R_v = 0.05 + 0.009(I) = 0.05 + 0.009(50\%) = 0.53$$

Before Area Reduction Applied: $WQV = (1.2)(0.53)(2.0)/12 = 0.11 \text{ acre-feet} = 4,620 \text{ cf}$

After Area Reduction Applied: New Drainage Area for Calc = $2.0 - (0.5)(0.8) = 1.6$
 $WQV = (1.2)(0.53)(1.6)/12 = \underline{0.08 \text{ acre-feet} = 3,690 \text{ cf}}$

Example of Predevelopment vs. Post Development Curve Number Calculations

Site = 2 acres (Hydrologic Soil Group B)

Curve Numbers for Land Condition: Wooded CN = 70; Lawn CN = 74; Impervious CN = 98

Predevelopment land conditions:

Impervious area = 0.8 acres

Pervious area (lawn) = 1.2 acres

Post development land conditions:

Impervious area = 1.0 acres of new impervious area (all existing impervious area demolished)

Pervious area (lawn) = 1.0 acres with 0.8 acres of undisturbed pervious area below existing tree canopies

Curve Number Calculations Not Considering Existing Tree Canopies:

Predevelopment:

Entire site CN = 55 (Natural undeveloped state for hydrologic group B soil required for entire site, since land disturbance occurs on more than 50% of site area. Refer to Section 2.0 as to how the CN value is determined.)

Post Development:

Impervious area CN = 98 (1.0 acres)

Pervious area CN = 74 (1.0 acres)

Weighted CN = $((98 \times 1.0) + (74 \times 1.0))/2.0 = 86$

Curve Number Calculations Considering Existing Tree Canopies:

Predevelopment:

Entire site CN = 55 (Natural undeveloped state for hydrologic group B soil required for entire site, since land disturbance occurs on more than 50% of site area. Refer to Section 2.0 as to how the CN value is determined.)

Post Development:

Impervious area CN = 98 (1.0 acres)

Pervious area below existing tree canopy CN = 55 (0.8 acres)

Pervious area outside existing tree canopy disturbed CN = 74 (1.0 acres)

Weighted CN = $((98 \times 1.0) + (55 \times 0.8) + (74 \times 0.2))/2.0 = 78$

3.2 Green Infrastructure and Low Impact Development (LID)

Green infrastructure/low impact development is a stormwater management approach that seeks to manage runoff using distributed, micro-scale practices. The goal is to mimic the site's predevelopment hydrology using design techniques that infiltrate, filter, store, evaporate and detain runoff close to its source. LID practices are typically small-scale stormwater management practices that are used to disconnect impervious and disturbed pervious surfaces from the storm drain system and reduce post-development stormwater runoff rates, volumes, and pollutant loads. Throughout this section LID practices will refer to Green Infrastructure and Low Impact Development practices.

The Georgia Coastal Stormwater Supplement (GCSS) describes how Better Site Design and LID practices have the ability to reduce the annual stormwater runoff volumes and pollutant loads on development sites. The GCSS provides Better Site Design and LID practices recommended for use and assigns quantifiable stormwater management "credits" for each practice to help satisfy stormwater management criteria.

The City recognizes that Better Site Design and LID practices help achieve the required stormwater management criteria; therefore, the City accepts the Better Site Design and LID practices recommended for use by the GCSS and their associated assigned "credits" to help satisfy stormwater management criteria. For a summary of the Better Site Design and LID practices that the GCSS recommend for use and associated "credits" allowed to help satisfy stormwater management criteria, refer to table 7.1 of the GCSS.

In order for the Better Site Design and LID practices implemented on site to be considered acceptable, the LID practices shall meet the overall feasibility, site applicability, planning/design criteria, construction considerations, and maintenance requirements described in Section 7.8 of the GCSS. Also, any LID practices applied to the site shall be placed in drainage or maintenance easements and shall be included in all stormwater management system inspection and maintenance plans (similar to other stormwater management practices).

The following generally describes what steps need to be taken to determine/calculate the “credits” achieved for each Better Site Design and LID practice. Table 3.2.A and Table 3.2.B below will be used in calculating the “credits” achieved for Better Site Design and LID practices.

TABLE 3.2.A

Better Site Design and Site Restoration Practices	Allowable Reduction of WQV Site Area*	Post Development Hydrologic Condition Allowed for Practice*
Protect Primary Conservation Areas	100%	Equivalent to predevelopment condition
Protect Secondary Conservation Areas	100%	Equivalent to predevelopment condition
Soil restoration	50%	Open space good condition
Site reforestation/revegetation	50%	Similar cover type in fair condition
Soil restoration with site reforestation/revegetation	100%	Similar cover type in good condition
Reduce clearing and grading limits	50% of undisturbed pervious area	Undisturbed pervious area equivalent to predevelopment condition

*Only applied to portion of site where better site design/site restoration practices are achieved.

TABLE 3.2.B

Low Impact Development Practices	% Efficiency of Runoff Reduction	Method to Determine Reduction of Runoff Volume (RRV) by LID	Method to Determine Water Quality Volume (WQV) Treated by LID
Green Roof	60%	$WQV_{RECEIVED} \times ELID$	$WQV_{RECEIVED}$
Permeable Pavement (No Underdrain)	100%	Lesser of $(WQV_{PROVIDED} \times ELID)$ or $WQV_{RECEIVED}$	Lesser of $WQV_{PROVIDED}$ or $WQV_{RECEIVED}$
Permeable Pavement (Underdrain)	50%	Lesser of $(WQV_{PROVIDED} \times ELID)$ or $WQV_{RECEIVED}$	Lesser of $WQV_{PROVIDED}$ or $WQV_{RECEIVED}$
Undisturbed Pervious Areas, A/B Soils	90%	$WQV_{RECEIVED} \times ELID$	$WQV_{RECEIVED} \times ELID$
Undisturbed Pervious Areas, C/D Soils	60%	$WQV_{RECEIVED} \times ELID$	$WQV_{RECEIVED} \times ELID$
Vegetated Filter Strips, A/B or Amended Soils	60%	$WQV_{RECEIVED} \times ELID$	$WQV_{RECEIVED} \times ELID$
Vegetated Filter Strips, C/D Soils	30%	$WQV_{RECEIVED} \times ELID$	$WQV_{RECEIVED} \times ELID$
Grass Channels, A/B or Amended Soils	25%	$WQV_{RECEIVED} \times ELID$	$WQV_{RECEIVED} \times ELID$
Grass Channels, C/D Soils	12.5%	$WQV_{RECEIVED} \times ELID$	$WQV_{RECEIVED} \times ELID$
Downspout Disconnection, A/B or Amended Soils	60%	$WQV_{RECEIVED} \times ELID$	$WQV_{RECEIVED} \times ELID$
Downspout Disconnection, C/D Soils	30%	$WQV_{RECEIVED} \times ELID$	$WQV_{RECEIVED} \times ELID$
Rain Gardens	100%	Lesser of $(WQV_{PROVIDED} \times ELID)$ or $WQV_{RECEIVED}$	Lesser of $WQV_{PROVIDED}$ or $WQV_{RECEIVED}$
Stormwater Planters	50%	Lesser of $(WQV_{PROVIDED} \times ELID)$ or $WQV_{RECEIVED}$	Lesser of $WQV_{PROVIDED}$ or $WQV_{RECEIVED}$
Dry Wells	100%	Lesser of $(WQV_{PROVIDED} \times ELID)$ or $WQV_{RECEIVED}$	Lesser of $WQV_{PROVIDED}$ or $WQV_{RECEIVED}$
Rainwater Harvesting	75%	Lesser of $(WQV_{PROVIDED} \times ELID)$ or $WQV_{RECEIVED}$	Lesser of $WQV_{PROVIDED}$ or $WQV_{RECEIVED}$
Bioretention Areas, No Underdrain	100%	Lesser of $(WQV_{PROVIDED} \times ELID)$ or $WQV_{RECEIVED}$	Lesser of $WQV_{PROVIDED}$ or $WQV_{RECEIVED}$
Bioretention Areas, Underdrain	50%	Lesser of $(WQV_{PROVIDED} \times ELID)$ or $WQV_{RECEIVED}$	Lesser of $WQV_{PROVIDED}$ or $WQV_{RECEIVED}$
Infiltration Practices	100%	Lesser of $(WQV_{PROVIDED} \times ELID)$ or $WQV_{RECEIVED}$	Lesser of $WQV_{PROVIDED}$ or $WQV_{RECEIVED}$
Dry Swales, No Underdrain	100%	Lesser of $(WQV_{PROVIDED} \times ELID)$ or $WQV_{RECEIVED}$	Lesser of $WQV_{PROVIDED}$ or $WQV_{RECEIVED}$
Dry Swales, Underdrain	50%	Lesser of $(WQV_{PROVIDED} \times ELID)$ or $WQV_{RECEIVED}$	Lesser of $WQV_{PROVIDED}$ or $WQV_{RECEIVED}$

STEP 1: Create drainage basins (one for each point where runoff leaves a site study point) for both the pre- and post-development conditions. The stormwater management criteria shall be satisfied at each site basin's study point.

STEP 2: For each basin, determine total water quality volume achieved from better site design/site restoration credits and treated by the LID practices implemented on site. Determine remaining water volume that requires treatment by additional stormwater management practices to meet water quality criteria for the site.

Water Quality Volume Required without Better Site Design Credits Applied:

- Determine the required water quality volume ($WQV_{NO\ CREDITS}$) for site not considering any potential better site design and site restoration credits.

Water Quality Volume Required with Better Site Design Credits Applied:

- Consider if any better site design and/or site restoration practices are feasible at site. Better site design/site restoration credits reduce the total site area when calculating the required water quality volume. See Table 3.2.A above for allowable reduction in total site area for better site design and site restoration credits and recalculate the required water quality volume ($WQV_{BSD\ CREDITS}$) considering better site design/site restoration credits.

Water Quality Volume Treated from LID Practices:

- For each LID practice implemented, determine the water quality volume received ($WQV_{RECEIVED}$) and water quality storage volume provided ($WQV_{PROVIDED}$).
- Determine the water quality volume treated ($WQV_{TREATED\ BY\ LID}$) by the LID practices implemented on site, using the associated formula on Table 3.2.B.

NOTE: The formulas for water quality volume treated are based on the water quality runoff volume received and/or water quality storage volume provided by the LID practice. There are three formulas used to determine the water quality volume treated for differing LID practices implemented, which are as follows:

- Water Quality Runoff Volume Received ($WQV_{RECEIVED}$): These measures typically achieve 80% TSS removal rate for the water quality runoff volume received and have no storage volume associated with water quality. (Example: Green Roof)
- Lesser of Either the Water Quality Storage Volume Provided ($WQV_{PROVIDED}$) or Water Quality Runoff Volume Received ($WQV_{RECEIVED}$) by the LID Practice. These LID practices typically achieve 80% TSS removal rate of the water quality runoff volume received and water quality storage volume provided by the LID practice. However, if the water quality storage volume provided is less than the water quality runoff volume received, then only the water quality storage volume provided can be considered treated by the LID practice. Also, if the water quality storage volume provided is greater than the water quality runoff volume received, then only the water quality runoff volume received can be considered treated by the device. (Examples: Permeable pavement, bioretention pond, etc.)

- Water Quality Runoff Volume Received Multiplied by the Runoff Reduction Efficiency ($WQV_{RECEIVED} \times ERRV$): These LID practices typically do not fully achieve the 80% removal rate for the water quality runoff volume received and have no storage volume associated on water quality. (Examples: Grass channel, vegetated filter strip, etc.)

- Total the water quality volume treated by all of the LID practices implemented on site.

$$\sum WQV_{TREATED\ BY\ LID}$$

Remaining Water Quality Volume that Requires Treatment

- Compare the total water quality volume treated ($\sum WQV_{TREATED\ BY\ LID}$) to the water quality volume with better site design and site restoration credits applied ($WQV_{BSD\ CREDITS}$).
 - If $WQV_{BSD\ CREDITS} \leq \sum WQV_{TREATED\ BY\ LID}$, then water quality requirements achieved by Better Site Design and LID practices.
 - If $WQV_{BSD\ CREDITS} > \sum WQV_{TREATED\ BY\ LID}$, then water quality requirements are not achieved.
- If water quality requirements are not achieved, determine remaining water quality volume ($WQV_{NOT\ TREATED}$) that requires treatment.

$$WQV_{NOT\ TREATED} = WQV_{BSD\ CREDITS} - \sum WQV_{TREATED\ BY\ LID}$$

- As required, provide additional stormwater management practices that intercept and treat the remaining water quality volume and provides at least an 80% reduction in TSS loads.

STEP 3: For each drainage basin, determine the total reduction of runoff volume (RRV_{TOTAL}) achieved by better site design/site restoration credits and LID practices implemented. This total reduction of runoff volume will be used in Step 5 to determine an adjusted curve number from better site design/site restoration credits and LID practices implemented on site.

Reduction of Runoff Volume from Better Site Design and LID Practices:

- Determine the reduction of runoff volume ($RRV_{BSD\ CREDITS}$) achieved by better site design and site restoration practices, which is the difference of the required water quality volume without better site design/site restoration credits applied ($WQV_{NO\ CREDITS}$) from the required water quality volume with better site design/site restoration credits applied ($WQV_{BSD\ CREDITS}$) These required water quality volume with and without better site design/site restoration credits were previously calculated in Step 2.

$$RRV_{BSD\ CREDITS} = WQV_{NO\ CREDITS} - WQV_{BSD\ CREDITS}$$

Reduction of Runoff Volume from LID Practices:

- Determine the reduction of runoff volume (RRV_{LID}) achieved by each LID practices, using the associated formula on Table 3.2.B.

NOTE: The formulas for achieved reduction of runoff volume (RRV_{LID}) are based on a percentage of the water quality runoff volume received and/or water quality storage volume provided by the LID practice. There are two formulas used to determine the achieved reduction of runoff volume for differing LID practices implemented, which are as follows:

- Lesser of Water Quality Storage Volume Provided (WQV_{PROVIDED}) by the LID Practice Multiplied by Runoff Reduction Efficiency of LID (WQV_{PROVIDED} × E_{LID}) or Water Quality Runoff Volume Received by the LID Practice (WQV_{RECEIVED}). The design of these LID practices are usually based on water quality storage volume provided by the LID practice.
- Water Quality Runoff Volume Received Multiplied by the Runoff Reduction Efficiency of LID Practice (WQV_{RECEIVED} × E_{LID}). The design of these LID practices are usually based on water quality runoff volume received by the LID practice and have no storage volume associated with water quality.

Total Reduction of Runoff Volume from Better Site Design and LID Practices:

- Total the reduction of runoff volume (RRV_{TOTAL}) achieved by both better site design/site restoration credits and LID practices implemented.

$$RRV_{TOTAL} = RRV_{BSD \text{ CREDITS}} + \sum RRV_{LID}$$

STEP 4: For each drainage basin, determine predevelopment and post development weighted curve number values for the site, considering allowable adjustments to the post development hydrologic conditions (curve numbers) for implemented better site design/site restoration practices. See Table 3.2.A for post development hydrologic land conditions to use for implemented better site design/site restoration practices.

STEP 5: For each drainage basin, adjust the post development hydrologic conditions (curve numbers) to take into account the runoff reduction volume achieved by the LID practice for each site drainage basin.

- Determine the post development runoff volume Q (inches) for each drainage basin for all required storm events.

$$Q = (p - 0.2 \times S)^2 / (p + 0.8 \times S)$$

Where: p = precipitation depth for a given 24-hour storm (inches)

S = potential abstraction (inches) = (1000/CN) – 10

- Adjust the drainage basin curve number for implemented LID practices. The adjusted curve number will be a different value for each storm event, so an adjusted curve number must be determined for all required storm events.

- Convert the runoff reduction volume determined in Step 3 from cubic feet to inches

$$Q_{RRV} = RRV_{TOTAL} / (SA \times 3,630)$$

Where: RRV_{TOTAL} = Total reduction to runoff volume of LID practices (cf)

SA = Site area (acres)

- Subtract the total runoff reduction volume converted to inches from the post development runoff volume Q (inches), which determines the adjusted post development runoff volume from LID practices

$$Q_{ADJUSTED} = Q - Q_{RRV}$$

- For each required storm event, use Appendix A to interpolate adjusted curve number (CN_{ADJUSTED}) associated with adjusted post development runoff from LID practices. NOTE: The following formula was used to calculate the numeric values listed within Appendix A Table.

$$Q_{ADJUSTED} = (p - 0.2 \times S_{ADJUSTED})^2 / (p + 0.8 \times S_{ADJUSTED})$$

Where: p = precipitation depth for a given 24-hour storm (inches)

S_{ADJUSTED} = potential abstraction (inches) = (1000/CN_{ADJUSTED}) – 10

STEP 6: The adjusted post development hydrologic conditions (curve numbers), calculated above, shall be used when calculating the requirements for channel protection, overbank flood protection, and extreme flood protection. See the Georgia Stormwater Management Manual for how to perform the necessary analyses for channel protection, overbank flood protection, and extreme flood protection.

Example of Calculating LID Practices Implemented

Total Site = 4.0 acres (Hydrologic Group C Soils), single drainage basin

Post Development Conditions: 2.0 acres impervious and 2.0 acres pervious

Better Site Design/ Site Restoration Practices Implemented:

Reduce Grading/Clearing Limits = 1.0 acres of undisturbed meadow area

Site Reforestation/Revegetation = 0.5 acres of land planted with native trees

LID Practices Implemented:

Green Roof = 0.3 acres of impervious area

Permeable Paving = 0.5 acres of impervious area

Grass Channel = 0.5 acres (0.4 acres impervious, 0.1 acres pervious grass)

STEP 1: Determine the number of drainage basins site needs to be divided into.

- Only one drainage basin needs to be considered.

STEP 2: Determine total water quality volume achieved from better site design/site restoration credits and treated by the LID practices implemented on site. Determine remaining water volume that requires treatment by additional stormwater management practices to meet water quality criteria for the site.

Water Quality Volume Required without Better Site Design Credits Applied:

- Water quality volume without better site design/soil restoration credits:

$$\% \text{ Impervious (I)} = 2.0/4.0 \times 100 = 50\%$$

$$R_v = 0.05 + 0.009(I) = 0.05 + 0.009(50\%) = 0.50$$

$$WQV_{\text{NO BSD CREDITS}} = (1.2)(0.50)(4.0)/12 = 0.20 \text{ acre-feet} = 8706 \text{ cf}$$

Water Quality Volume Required without Better Site Design Credits Applied:

- Water quality volume with better site design/soil restoration credits:

$$\text{Site Area Reduction from Credits} = 4.0 - (1.0)(0.50) - (0.50)(0.50) = 3.25 \text{ acres}$$

$$\text{WQV}_{\text{BSD CREDITS}} = (1.2)(0.50)(3.25)/12 = 0.16 \text{ acre-feet} = 7079 \text{ cf}$$

Water Quality Volume Treated from LID Practices:

- For each LID practice implemented, determine the water quality volume received (WQV_{RECEIVED}) and water quality storage volume provided (WQV_{PROVIDED}).

LID Practice	Contributing Drainage Area (acres)	Contributing Impervious Area (acres)	Percent Impervious (%)	Rv	WQV Received (cf)	WQV Provided (cf)
Green Roof	0.3	0.3	100%	0.95	1241	N/A
Permeable Paving w/ Underdrain	0.5	0.5	100%	0.95	2069	6970
Grass Channel	0.5	0.4	80%	0.77	1677	N/A

- Determine the water quality volume treated (WQV_{TREATED BY LID}) by the LID practices implemented on site, using the associated formula on Table 3.2.B.

LID Practice	WQV Received(cf)	Efficiency of Runoff Reduction (%)	WQV Provided by LID (cf)	Method to Determine WQV Treated by LID	WQV Treated by LID (cf)
Green Roof	1241	60%	N/A	WQV _{RECEIVED}	1241
Permeable Paving w/ Underdrain	2069	50%	6970	Lesser of WQV _{PROVIDED} OR WQV _{RECEIVED}	2069
Grass Channel (Type C Soils)	1677	12.5%	N/A	WQV _{RECEIVED} X ELID	210

- Total water quality volume treated by each LID practices implemented.

$$\sum \text{WQV}_{\text{TREATED BY LID}} = 1241 + 2069 + 210 = \underline{3,520 \text{ cf}}$$

Remaining Water Quality Volume that Requires Treatment

- Compare the total water quality volume treated ($\sum \text{WQV}_{\text{TREATED BY LID}}$) to the water quality volume with better site design and site restoration credits applied (WQV_{BSD CREDITS}).

$$\text{WQV}_{\text{BSD CREDITS}} = 7079 \text{ cf, so } \text{WQV}_{\text{BSD CREDITS}} > \sum \text{WQV}_{\text{TREATED BY LID}}$$

Therefore, additional measures required.

- Determine remaining water quality volume that requires treatment.

$$WQV_{\text{NOT TREATED}} = WQV_{\text{BSD CREDITS}} - WQV_{\text{TREATED BY LID}} = 7079 - 3520 = \underline{3,559 \text{ cf}}$$

- As required, provide additional stormwater management practices that intercept and treat the remaining water quality volume and provides at least an 80% reduction in TSS loads.

STEP 3: Determine the total reduction of runoff volume (RRV_{TOTAL}) achieved by better site design/site restoration credits and LID practices implemented for each site drainage basin. This total reduction of runoff volume will be used in Step 5 to determine an adjusted curve number from better site design/site restoration credits and LID practices implemented on site.

Reduction of Runoff Volume from Better Site Design and LID Practices:

- Reduction of runoff volume ($RRV_{\text{BSD CREDITS}}$) achieved by better site design and site restoration practices.

$$RRV_{\text{BSD CREDITS}} = WQV_{\text{NO BSD CREDITS}} - WQV_{\text{BSD CREDITS}} = 8706 - 7079 = 1627 \text{ cf}$$

Reduction of Runoff Volume from LID Practices:

- Determine the reduction of runoff volume (RRV_{LID}) achieved by each LID practices, using the associated formula on Table 3.2.B.

LID Practice	WQV Received(cf)	WQV Provided(cf)	Efficiency of Runoff Reduction (%)	Method to Determine Runoff Reduction Volume by LID	Runoff Reduction Volume (cf)
Green Roof	1241	N/A	60%	$WQV_{\text{RECEIVED}} \times E_{\text{LID}}$	745
Permeable Paving w/ Underdrain	2069	6970	50%	Lesser of $(WQV_{\text{PROVIDED}} \times E_{\text{LID}})$ or WQV_{RECEIVED}	1035
Grass Channel (Type C Soils)	1677	N/A	12.5%	$WQV_{\text{RECEIVED}} \times E_{\text{LID}}$	210

Total Reduction of Runoff Volume from Better Site Design and LID Practices

- Total the reduction of runoff volume (RRV_{TOTAL}) achieved by both better site design/site restoration credits and LID practices implemented.

$$RRV_{\text{TOTAL}} = RRV_{\text{BSD CREDITS}} + \sum RRV_{\text{LID}} = 1627 + 745 + 1035 + 210 = \underline{3617 \text{ cf}}$$

STEP 4: Determine predevelopment and post-development weighted curve number values for the site, considering allowable adjustments to the post development hydrologic conditions (curve numbers) for implemented better site design/site restoration practices. See Table 3.2.A for post development hydrologic land conditions to use for implemented better site design/site restoration practices.

- Predevelopment Weighted CN.

Since land disturbance occurs on more than 50% of site area, the natural undeveloped state for hydrologic group B is will be used for the entire site. Refer to Section 2.0 as to how the CN value is determined

- Post development weighted CN.

Land Cover	Area (acres)	CN
Impervious	2.0	98
Reduced Grading Limits (Lawn good condition)	1.0	55
Site Reforestation/ Revegetation (Forested fair condition)	0.5	77
Pervious area lawn good condition	0.5	79

$$\text{Weighted CN} = ((98 \times 2.0) + (55 \times 1.0) + (77 \times 0.5) + (74 \times 0.5))/4.0 = 82$$

STEP 5: Adjust the post development hydrologic conditions (curve numbers) to take into account the runoff reduction provided by the LID practice for each site drainage basin.

- Determine the post development runoff (inches) and the runoff adjusted for LID practice reductions for each drainage basin for all required storm events. Use Appendix A Table to interpolate the adjusted curve number associated with adjusted post-development runoff from LID practices.

Storm Event	Q (inches)	Runoff Reduction (inches)*	Adjusted Q (inches)	Adjusted CN
1-year, 24-hour	1.6677	0.2491	1.4186	78.4
2-year, 24-hour	2.2715	0.2491	2.0224	78.9
5-year, 24-hour	2.9008	0.2491	2.6517	79.2
10-year, 24-hour	3.5481	0.2491	3.2990	79.5
25-year, 24-hour	4.4309	0.2491	4.1818	79.7
50-year, 24-hour	5.1039	0.2491	4.8548	79.8
100-year, 24-hour	5.7838	0.2491	5.5347	79.9

$$* Q_{RRV} = RRV_{TOTAL} / (SA \times 3,630) = 3617 / (4.0 \times 3630) = 0.2491 \text{ inches}$$

STEP 6: The adjusted post development hydrologic conditions (curve numbers), calculated above, shall be used when calculating the requirements for channel protection, overbank flood protection, and extreme flood protection. See the Georgia Stormwater Management Manual for how to perform the necessary analyses for channel protection, overbank flood protection, and extreme flood protection.

This page intentionally left blank.

Appendix

This page intentionally left blank.

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
30	23.333	0.0000	0.0000	0.0008	0.0301	0.1308	0.2481	0.3981
30.1	23.223	0.0000	0.0000	0.0010	0.0318	0.1344	0.2533	0.4049
30.2	23.113	0.0000	0.0000	0.0014	0.0335	0.1382	0.2586	0.4117
30.3	23.003	0.0000	0.0000	0.0017	0.0353	0.1419	0.2639	0.4186
30.4	22.895	0.0000	0.0000	0.0021	0.0372	0.1458	0.2692	0.4255
30.5	22.787	0.0000	0.0000	0.0026	0.0390	0.1496	0.2746	0.4324
30.6	22.680	0.0000	0.0000	0.0030	0.0409	0.1535	0.2800	0.4394
30.7	22.573	0.0000	0.0000	0.0036	0.0429	0.1574	0.2855	0.4464
30.8	22.468	0.0000	0.0000	0.0041	0.0448	0.1614	0.2910	0.4534
30.9	22.362	0.0000	0.0000	0.0047	0.0469	0.1654	0.2965	0.4605
31	22.258	0.0000	0.0000	0.0054	0.0489	0.1694	0.3021	0.4676
31.1	22.154	0.0000	0.0000	0.0060	0.0510	0.1735	0.3077	0.4747
31.2	22.051	0.0000	0.0000	0.0068	0.0532	0.1776	0.3133	0.4819
31.3	21.949	0.0000	0.0000	0.0075	0.0553	0.1817	0.3190	0.4891
31.4	21.847	0.0000	0.0000	0.0083	0.0576	0.1859	0.3247	0.4964
31.5	21.746	0.0000	0.0000	0.0092	0.0598	0.1902	0.3304	0.5036
31.6	21.646	0.0000	0.0000	0.0100	0.0621	0.1944	0.3362	0.5109
31.7	21.546	0.0000	0.0000	0.0109	0.0644	0.1987	0.3420	0.5183
31.8	21.447	0.0000	0.0000	0.0119	0.0668	0.2030	0.3478	0.5257
31.9	21.348	0.0000	0.0000	0.0129	0.0692	0.2074	0.3537	0.5331
32	21.250	0.0000	0.0000	0.0139	0.0716	0.2118	0.3596	0.5405
32.1	21.153	0.0000	0.0000	0.0149	0.0741	0.2162	0.3655	0.5479
32.2	21.056	0.0000	0.0000	0.0160	0.0766	0.2207	0.3715	0.5554
32.3	20.960	0.0000	0.0000	0.0171	0.0791	0.2252	0.3775	0.5630
32.4	20.864	0.0000	0.0000	0.0183	0.0817	0.2297	0.3836	0.5705
32.5	20.769	0.0000	0.0000	0.0195	0.0843	0.2343	0.3896	0.5781
32.6	20.675	0.0000	0.0000	0.0207	0.0870	0.2389	0.3957	0.5857
32.7	20.581	0.0000	0.0000	0.0220	0.0896	0.2435	0.4019	0.5934
32.8	20.488	0.0000	0.0000	0.0233	0.0923	0.2482	0.4080	0.6010
32.9	20.395	0.0000	0.0000	0.0246	0.0951	0.2529	0.4142	0.6087
33	20.303	0.0000	0.0000	0.0260	0.0979	0.2576	0.4204	0.6164
33.1	20.211	0.0000	0.0001	0.0274	0.1007	0.2624	0.4267	0.6242
33.2	20.120	0.0000	0.0002	0.0288	0.1035	0.2672	0.4330	0.6320
33.3	20.030	0.0000	0.0003	0.0303	0.1064	0.2720	0.4393	0.6398
33.4	19.940	0.0000	0.0004	0.0318	0.1093	0.2768	0.4456	0.6476
33.5	19.851	0.0000	0.0006	0.0333	0.1122	0.2817	0.4520	0.6555
33.6	19.762	0.0000	0.0008	0.0349	0.1152	0.2866	0.4584	0.6634
33.7	19.674	0.0000	0.0011	0.0365	0.1182	0.2916	0.4648	0.6713
33.8	19.586	0.0000	0.0013	0.0381	0.1212	0.2965	0.4713	0.6793
33.9	19.499	0.0000	0.0017	0.0397	0.1243	0.3016	0.4777	0.6872
34	19.412	0.0000	0.0020	0.0414	0.1274	0.3066	0.4843	0.6952
34.1	19.326	0.0000	0.0024	0.0431	0.1305	0.3116	0.4908	0.7032
34.2	19.240	0.0000	0.0028	0.0449	0.1337	0.3167	0.4974	0.7113
34.3	19.155	0.0000	0.0032	0.0467	0.1369	0.3219	0.5040	0.7194
34.4	19.070	0.0000	0.0037	0.0485	0.1401	0.3270	0.5106	0.7275
34.5	18.986	0.0000	0.0042	0.0503	0.1433	0.3322	0.5172	0.7356
34.6	18.902	0.0000	0.0047	0.0522	0.1466	0.3374	0.5239	0.7437
34.7	18.818	0.0000	0.0052	0.0541	0.1499	0.3426	0.5306	0.7519
34.8	18.736	0.0000	0.0058	0.0560	0.1533	0.3479	0.5373	0.7601
34.9	18.653	0.0000	0.0064	0.0580	0.1566	0.3532	0.5441	0.7683

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
35	18.571	0.0000	0.0071	0.0600	0.1600	0.3585	0.5509	0.7766
35.1	18.490	0.0000	0.0077	0.0620	0.1634	0.3638	0.5577	0.7848
35.2	18.409	0.0000	0.0084	0.0640	0.1669	0.3692	0.5645	0.7931
35.3	18.329	0.0000	0.0092	0.0661	0.1704	0.3746	0.5713	0.8014
35.4	18.249	0.0000	0.0099	0.0682	0.1739	0.3800	0.5782	0.8098
35.5	18.169	0.0000	0.0107	0.0703	0.1774	0.3855	0.5851	0.8181
35.6	18.090	0.0000	0.0115	0.0725	0.1810	0.3910	0.5921	0.8265
35.7	18.011	0.0000	0.0123	0.0747	0.1845	0.3965	0.5990	0.8349
35.8	17.933	0.0000	0.0132	0.0769	0.1882	0.4020	0.6060	0.8434
35.9	17.855	0.0000	0.0141	0.0791	0.1918	0.4075	0.6130	0.8518
36	17.778	0.0000	0.0150	0.0814	0.1955	0.4131	0.6200	0.8603
36.1	17.701	0.0000	0.0160	0.0837	0.1992	0.4187	0.6271	0.8688
36.2	17.624	0.0000	0.0170	0.0860	0.2029	0.4243	0.6341	0.8773
36.3	17.548	0.0000	0.0180	0.0884	0.2066	0.4300	0.6412	0.8858
36.4	17.473	0.0000	0.0190	0.0908	0.2104	0.4357	0.6483	0.8944
36.5	17.397	0.0000	0.0200	0.0932	0.2142	0.4414	0.6555	0.9030
36.6	17.322	0.0000	0.0211	0.0956	0.2180	0.4471	0.6627	0.9115
36.7	17.248	0.0000	0.0222	0.0981	0.2219	0.4529	0.6698	0.9202
36.8	17.174	0.0000	0.0234	0.1005	0.2258	0.4586	0.6771	0.9288
36.9	17.100	0.0000	0.0245	0.1030	0.2297	0.4644	0.6843	0.9375
37	17.027	0.0000	0.0257	0.1056	0.2336	0.4703	0.6915	0.9461
37.1	16.954	0.0000	0.0269	0.1081	0.2376	0.4761	0.6988	0.9548
37.2	16.882	0.0000	0.0282	0.1107	0.2415	0.4820	0.7061	0.9636
37.3	16.810	0.0000	0.0294	0.1133	0.2455	0.4879	0.7134	0.9723
37.4	16.738	0.0000	0.0307	0.1160	0.2496	0.4938	0.7208	0.9811
37.5	16.667	0.0000	0.0320	0.1186	0.2536	0.4997	0.7281	0.9898
37.6	16.596	0.0001	0.0334	0.1213	0.2577	0.5057	0.7355	0.9986
37.7	16.525	0.0002	0.0347	0.1240	0.2618	0.5117	0.7429	1.0075
37.8	16.455	0.0003	0.0361	0.1268	0.2659	0.5177	0.7504	1.0163
37.9	16.385	0.0004	0.0375	0.1295	0.2701	0.5237	0.7578	1.0251
38	16.316	0.0006	0.0389	0.1323	0.2742	0.5298	0.7653	1.0340
38.1	16.247	0.0007	0.0404	0.1351	0.2784	0.5359	0.7728	1.0429
38.2	16.178	0.0009	0.0419	0.1379	0.2827	0.5420	0.7803	1.0518
38.3	16.110	0.0012	0.0434	0.1408	0.2869	0.5481	0.7878	1.0608
38.4	16.042	0.0014	0.0449	0.1437	0.2912	0.5542	0.7953	1.0697
38.5	15.974	0.0017	0.0465	0.1466	0.2955	0.5604	0.8029	1.0787
38.6	15.907	0.0020	0.0481	0.1495	0.2998	0.5666	0.8105	1.0876
38.7	15.840	0.0023	0.0497	0.1524	0.3041	0.5728	0.8181	1.0966
38.8	15.773	0.0026	0.0513	0.1554	0.3085	0.5790	0.8257	1.1057
38.9	15.707	0.0030	0.0529	0.1584	0.3128	0.5852	0.8334	1.1147
39	15.641	0.0034	0.0546	0.1614	0.3172	0.5915	0.8411	1.1237
39.1	15.575	0.0038	0.0563	0.1645	0.3217	0.5978	0.8487	1.1328
39.2	15.510	0.0042	0.0580	0.1675	0.3261	0.6041	0.8564	1.1419
39.3	15.445	0.0047	0.0597	0.1706	0.3306	0.6104	0.8642	1.1510
39.4	15.381	0.0051	0.0615	0.1737	0.3351	0.6168	0.8719	1.1601
39.5	15.316	0.0056	0.0633	0.1769	0.3396	0.6232	0.8797	1.1693
39.6	15.253	0.0062	0.0651	0.1800	0.3441	0.6296	0.8874	1.1784
39.7	15.189	0.0067	0.0669	0.1832	0.3487	0.6360	0.8952	1.1876
39.8	15.126	0.0073	0.0688	0.1864	0.3532	0.6424	0.9031	1.1968
39.9	15.063	0.0078	0.0706	0.1896	0.3578	0.6489	0.9109	1.2060

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
40	15.000	0.0084	0.0725	0.1929	0.3625	0.6553	0.9188	1.2152
40.1	14.938	0.0091	0.0745	0.1961	0.3671	0.6618	0.9266	1.2244
40.2	14.876	0.0097	0.0764	0.1994	0.3718	0.6683	0.9345	1.2337
40.3	14.814	0.0104	0.0783	0.2027	0.3765	0.6749	0.9424	1.2429
40.4	14.752	0.0111	0.0803	0.2060	0.3812	0.6814	0.9503	1.2522
40.5	14.691	0.0118	0.0823	0.2094	0.3859	0.6880	0.9583	1.2615
40.6	14.631	0.0125	0.0844	0.2128	0.3906	0.6946	0.9662	1.2708
40.7	14.570	0.0132	0.0864	0.2162	0.3954	0.7012	0.9742	1.2801
40.8	14.510	0.0140	0.0885	0.2196	0.4002	0.7078	0.9822	1.2895
40.9	14.450	0.0148	0.0905	0.2230	0.4050	0.7144	0.9902	1.2988
41	14.390	0.0156	0.0927	0.2264	0.4098	0.7211	0.9982	1.3082
41.1	14.331	0.0164	0.0948	0.2299	0.4147	0.7278	1.0063	1.3176
41.2	14.272	0.0173	0.0969	0.2334	0.4195	0.7345	1.0143	1.3270
41.3	14.213	0.0182	0.0991	0.2369	0.4244	0.7412	1.0224	1.3364
41.4	14.155	0.0191	0.1013	0.2405	0.4293	0.7479	1.0305	1.3458
41.5	14.096	0.0200	0.1035	0.2440	0.4342	0.7547	1.0386	1.3553
41.6	14.038	0.0209	0.1057	0.2476	0.4392	0.7614	1.0467	1.3647
41.7	13.981	0.0219	0.1080	0.2512	0.4441	0.7682	1.0549	1.3742
41.8	13.923	0.0228	0.1102	0.2548	0.4491	0.7750	1.0630	1.3837
41.9	13.866	0.0238	0.1125	0.2585	0.4541	0.7819	1.0712	1.3932
42	13.810	0.0248	0.1148	0.2621	0.4592	0.7887	1.0794	1.4027
42.1	13.753	0.0259	0.1172	0.2658	0.4642	0.7956	1.0876	1.4122
42.2	13.697	0.0269	0.1195	0.2695	0.4693	0.8024	1.0958	1.4218
42.3	13.641	0.0280	0.1219	0.2732	0.4743	0.8093	1.1041	1.4313
42.4	13.585	0.0291	0.1243	0.2769	0.4794	0.8163	1.1123	1.4409
42.5	13.529	0.0302	0.1267	0.2807	0.4846	0.8232	1.1206	1.4505
42.6	13.474	0.0313	0.1291	0.2845	0.4897	0.8301	1.1289	1.4601
42.7	13.419	0.0324	0.1316	0.2883	0.4948	0.8371	1.1372	1.4697
42.8	13.364	0.0336	0.1340	0.2921	0.5000	0.8441	1.1455	1.4793
42.9	13.310	0.0348	0.1365	0.2959	0.5052	0.8511	1.1538	1.4889
43	13.256	0.0360	0.1390	0.2997	0.5104	0.8581	1.1622	1.4986
43.1	13.202	0.0372	0.1416	0.3036	0.5156	0.8651	1.1705	1.5082
43.2	13.148	0.0384	0.1441	0.3075	0.5209	0.8722	1.1789	1.5179
43.3	13.095	0.0397	0.1467	0.3114	0.5261	0.8792	1.1873	1.5276
43.4	13.041	0.0410	0.1492	0.3153	0.5314	0.8863	1.1957	1.5373
43.5	12.989	0.0423	0.1518	0.3193	0.5367	0.8934	1.2041	1.5470
43.6	12.936	0.0436	0.1545	0.3232	0.5420	0.9005	1.2125	1.5567
43.7	12.883	0.0449	0.1571	0.3272	0.5474	0.9076	1.2210	1.5665
43.8	12.831	0.0462	0.1597	0.3312	0.5527	0.9148	1.2294	1.5762
43.9	12.779	0.0476	0.1624	0.3352	0.5581	0.9219	1.2379	1.5860
44	12.727	0.0490	0.1651	0.3393	0.5635	0.9291	1.2464	1.5957
44.1	12.676	0.0504	0.1678	0.3433	0.5689	0.9363	1.2549	1.6055
44.2	12.624	0.0518	0.1706	0.3474	0.5743	0.9435	1.2634	1.6153
44.3	12.573	0.0533	0.1733	0.3515	0.5798	0.9507	1.2720	1.6251
44.4	12.523	0.0547	0.1761	0.3556	0.5852	0.9580	1.2805	1.6349
44.5	12.472	0.0562	0.1788	0.3597	0.5907	0.9652	1.2891	1.6448
44.6	12.422	0.0577	0.1817	0.3639	0.5962	0.9725	1.2976	1.6546
44.7	12.371	0.0592	0.1845	0.3680	0.6017	0.9798	1.3062	1.6645
44.8	12.321	0.0607	0.1873	0.3722	0.6072	0.9871	1.3148	1.6743
44.9	12.272	0.0622	0.1902	0.3764	0.6128	0.9944	1.3234	1.6842

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
45	12.222	0.0638	0.1930	0.3806	0.6183	1.0017	1.3321	1.6941
45.1	12.173	0.0654	0.1959	0.3849	0.6239	1.0091	1.3407	1.7040
45.2	12.124	0.0670	0.1988	0.3891	0.6295	1.0164	1.3493	1.7139
45.3	12.075	0.0686	0.2018	0.3934	0.6351	1.0238	1.3580	1.7238
45.4	12.026	0.0702	0.2047	0.3977	0.6407	1.0312	1.3667	1.7338
45.5	11.978	0.0719	0.2077	0.4020	0.6464	1.0386	1.3754	1.7437
45.6	11.930	0.0735	0.2106	0.4063	0.6520	1.0460	1.3841	1.7537
45.7	11.882	0.0752	0.2136	0.4106	0.6577	1.0534	1.3928	1.7636
45.8	11.834	0.0769	0.2167	0.4150	0.6634	1.0609	1.4015	1.7736
45.9	11.786	0.0786	0.2197	0.4193	0.6691	1.0684	1.4103	1.7836
46	11.739	0.0803	0.2227	0.4237	0.6748	1.0758	1.4190	1.7936
46.1	11.692	0.0821	0.2258	0.4281	0.6806	1.0833	1.4278	1.8036
46.2	11.645	0.0839	0.2289	0.4325	0.6863	1.0908	1.4366	1.8136
46.3	11.598	0.0856	0.2320	0.4370	0.6921	1.0983	1.4454	1.8236
46.4	11.552	0.0874	0.2351	0.4414	0.6979	1.1059	1.4542	1.8337
46.5	11.505	0.0892	0.2382	0.4459	0.7037	1.1134	1.4630	1.8437
46.6	11.459	0.0911	0.2414	0.4504	0.7095	1.1210	1.4718	1.8538
46.7	11.413	0.0929	0.2445	0.4549	0.7154	1.1286	1.4807	1.8638
46.8	11.368	0.0948	0.2477	0.4594	0.7212	1.1362	1.4895	1.8739
46.9	11.322	0.0967	0.2509	0.4640	0.7271	1.1438	1.4984	1.8840
47	11.277	0.0986	0.2541	0.4685	0.7330	1.1514	1.5073	1.8941
47.1	11.231	0.1005	0.2574	0.4731	0.7389	1.1590	1.5162	1.9042
47.2	11.186	0.1024	0.2606	0.4777	0.7448	1.1667	1.5251	1.9143
47.3	11.142	0.1043	0.2639	0.4823	0.7507	1.1743	1.5340	1.9245
47.4	11.097	0.1063	0.2672	0.4869	0.7566	1.1820	1.5429	1.9346
47.5	11.053	0.1083	0.2705	0.4915	0.7626	1.1897	1.5518	1.9447
47.6	11.008	0.1103	0.2738	0.4962	0.7686	1.1974	1.5608	1.9549
47.7	10.964	0.1123	0.2771	0.5008	0.7746	1.2051	1.5698	1.9651
47.8	10.921	0.1143	0.2805	0.5055	0.7806	1.2128	1.5787	1.9752
47.9	10.877	0.1164	0.2838	0.5102	0.7866	1.2206	1.5877	1.9854
48	10.833	0.1184	0.2872	0.5149	0.7926	1.2283	1.5967	1.9956
48.1	10.790	0.1205	0.2906	0.5197	0.7987	1.2361	1.6057	2.0058
48.2	10.747	0.1226	0.2940	0.5244	0.8048	1.2439	1.6147	2.0160
48.3	10.704	0.1247	0.2974	0.5292	0.8108	1.2517	1.6238	2.0263
48.4	10.661	0.1268	0.3009	0.5340	0.8169	1.2595	1.6328	2.0365
48.5	10.619	0.1289	0.3043	0.5387	0.8230	1.2673	1.6419	2.0467
48.6	10.576	0.1311	0.3078	0.5436	0.8292	1.2751	1.6509	2.0570
48.7	10.534	0.1332	0.3113	0.5484	0.8353	1.2830	1.6600	2.0673
48.8	10.492	0.1354	0.3148	0.5532	0.8415	1.2908	1.6691	2.0775
48.9	10.450	0.1376	0.3183	0.5581	0.8476	1.2987	1.6782	2.0878
49	10.408	0.1398	0.3219	0.5629	0.8538	1.3066	1.6873	2.0981
49.1	10.367	0.1421	0.3254	0.5678	0.8600	1.3145	1.6964	2.1084
49.2	10.325	0.1443	0.3290	0.5727	0.8662	1.3224	1.7055	2.1187
49.3	10.284	0.1466	0.3326	0.5777	0.8725	1.3303	1.7147	2.1290
49.4	10.243	0.1488	0.3362	0.5826	0.8787	1.3382	1.7238	2.1393
49.5	10.202	0.1511	0.3398	0.5875	0.8850	1.3462	1.7330	2.1496
49.6	10.161	0.1534	0.3435	0.5925	0.8912	1.3541	1.7422	2.1600
49.7	10.121	0.1558	0.3471	0.5975	0.8975	1.3621	1.7513	2.1703
49.8	10.080	0.1581	0.3508	0.6025	0.9038	1.3701	1.7605	2.1807
49.9	10.040	0.1605	0.3544	0.6075	0.9101	1.3781	1.7697	2.1910

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
50	10.000	0.1628	0.3581	0.6125	0.9164	1.3861	1.7789	2.2014
50.1	9.960	0.1652	0.3619	0.6175	0.9228	1.3941	1.7882	2.2118
50.2	9.920	0.1676	0.3656	0.6226	0.9291	1.4021	1.7974	2.2222
50.3	9.881	0.1700	0.3693	0.6277	0.9355	1.4102	1.8067	2.2326
50.4	9.841	0.1724	0.3731	0.6327	0.9419	1.4182	1.8159	2.2430
50.5	9.802	0.1749	0.3769	0.6378	0.9483	1.4263	1.8252	2.2534
50.6	9.763	0.1773	0.3806	0.6430	0.9547	1.4344	1.8344	2.2638
50.7	9.724	0.1798	0.3844	0.6481	0.9611	1.4425	1.8437	2.2742
50.8	9.685	0.1823	0.3883	0.6532	0.9676	1.4506	1.8530	2.2847
50.9	9.646	0.1848	0.3921	0.6584	0.9740	1.4587	1.8623	2.2951
51	9.608	0.1873	0.3959	0.6636	0.9805	1.4668	1.8716	2.3056
51.1	9.569	0.1898	0.3998	0.6687	0.9870	1.4750	1.8810	2.3160
51.2	9.531	0.1924	0.4037	0.6739	0.9935	1.4831	1.8903	2.3265
51.3	9.493	0.1949	0.4076	0.6792	1.0000	1.4913	1.8997	2.3370
51.4	9.455	0.1975	0.4115	0.6844	1.0065	1.4994	1.9090	2.3474
51.5	9.417	0.2001	0.4154	0.6896	1.0130	1.5076	1.9184	2.3579
51.6	9.380	0.2027	0.4194	0.6949	1.0196	1.5158	1.9277	2.3684
51.7	9.342	0.2053	0.4233	0.7002	1.0261	1.5240	1.9371	2.3789
51.8	9.305	0.2080	0.4273	0.7055	1.0327	1.5323	1.9465	2.3894
51.9	9.268	0.2106	0.4313	0.7108	1.0393	1.5405	1.9559	2.4000
52	9.231	0.2133	0.4353	0.7161	1.0459	1.5487	1.9653	2.4105
52.1	9.194	0.2160	0.4393	0.7214	1.0525	1.5570	1.9748	2.4210
52.2	9.157	0.2187	0.4433	0.7268	1.0592	1.5652	1.9842	2.4316
52.3	9.120	0.2214	0.4473	0.7321	1.0658	1.5735	1.9936	2.4421
52.4	9.084	0.2241	0.4514	0.7375	1.0725	1.5818	2.0031	2.4527
52.5	9.048	0.2268	0.4555	0.7429	1.0791	1.5901	2.0125	2.4632
52.6	9.011	0.2296	0.4596	0.7483	1.0858	1.5984	2.0220	2.4738
52.7	8.975	0.2323	0.4637	0.7537	1.0925	1.6067	2.0315	2.4844
52.8	8.939	0.2351	0.4678	0.7591	1.0992	1.6151	2.0410	2.4950
52.9	8.904	0.2379	0.4719	0.7646	1.1059	1.6234	2.0505	2.5056
53	8.868	0.2407	0.4761	0.7700	1.1127	1.6318	2.0600	2.5162
53.1	8.832	0.2436	0.4802	0.7755	1.1194	1.6401	2.0695	2.5268
53.2	8.797	0.2464	0.4844	0.7810	1.1262	1.6485	2.0790	2.5374
53.3	8.762	0.2492	0.4886	0.7865	1.1330	1.6569	2.0885	2.5480
53.4	8.727	0.2521	0.4928	0.7920	1.1397	1.6653	2.0981	2.5586
53.5	8.692	0.2550	0.4970	0.7976	1.1465	1.6737	2.1076	2.5693
53.6	8.657	0.2579	0.5012	0.8031	1.1534	1.6821	2.1172	2.5799
53.7	8.622	0.2608	0.5055	0.8087	1.1602	1.6906	2.1268	2.5905
53.8	8.587	0.2637	0.5097	0.8142	1.1670	1.6990	2.1363	2.6012
53.9	8.553	0.2667	0.5140	0.8198	1.1739	1.7075	2.1459	2.6119
54	8.519	0.2696	0.5183	0.8254	1.1807	1.7159	2.1555	2.6225
54.1	8.484	0.2726	0.5226	0.8310	1.1876	1.7244	2.1651	2.6332
54.2	8.450	0.2756	0.5269	0.8367	1.1945	1.7329	2.1747	2.6439
54.3	8.416	0.2786	0.5313	0.8423	1.2014	1.7414	2.1844	2.6546
54.4	8.382	0.2816	0.5356	0.8480	1.2083	1.7499	2.1940	2.6653
54.5	8.349	0.2846	0.5400	0.8536	1.2152	1.7584	2.2036	2.6760
54.6	8.315	0.2876	0.5443	0.8593	1.2222	1.7669	2.2133	2.6867
54.7	8.282	0.2907	0.5487	0.8650	1.2291	1.7755	2.2229	2.6974
54.8	8.248	0.2938	0.5531	0.8707	1.2361	1.7840	2.2326	2.7081
54.9	8.215	0.2968	0.5576	0.8764	1.2431	1.7926	2.2423	2.7188

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
55	8.182	0.2999	0.5620	0.8822	1.2501	1.8012	2.2519	2.7295
55.1	8.149	0.3030	0.5664	0.8879	1.2571	1.8097	2.2616	2.7403
55.2	8.116	0.3062	0.5709	0.8937	1.2641	1.8183	2.2713	2.7510
55.3	8.083	0.3093	0.5754	0.8995	1.2711	1.8269	2.2810	2.7618
55.4	8.051	0.3124	0.5799	0.9053	1.2782	1.8355	2.2908	2.7725
55.5	8.018	0.3156	0.5844	0.9111	1.2852	1.8442	2.3005	2.7833
55.6	7.986	0.3188	0.5889	0.9169	1.2923	1.8528	2.3102	2.7941
55.7	7.953	0.3220	0.5934	0.9227	1.2993	1.8614	2.3199	2.8048
55.8	7.921	0.3252	0.5980	0.9285	1.3064	1.8701	2.3297	2.8156
55.9	7.889	0.3284	0.6025	0.9344	1.3135	1.8787	2.3394	2.8264
56	7.857	0.3316	0.6071	0.9403	1.3206	1.8874	2.3492	2.8372
56.1	7.825	0.3349	0.6117	0.9462	1.3278	1.8961	2.3590	2.8480
56.2	7.794	0.3382	0.6163	0.9521	1.3349	1.9048	2.3688	2.8588
56.3	7.762	0.3414	0.6209	0.9580	1.3421	1.9135	2.3786	2.8696
56.4	7.730	0.3447	0.6255	0.9639	1.3492	1.9222	2.3883	2.8804
56.5	7.699	0.3480	0.6302	0.9698	1.3564	1.9309	2.3982	2.8912
56.6	7.668	0.3514	0.6348	0.9758	1.3636	1.9396	2.4080	2.9021
56.7	7.637	0.3547	0.6395	0.9818	1.3708	1.9484	2.4178	2.9129
56.8	7.606	0.3580	0.6442	0.9877	1.3780	1.9571	2.4276	2.9237
56.9	7.575	0.3614	0.6489	0.9937	1.3852	1.9659	2.4374	2.9346
57	7.544	0.3648	0.6536	0.9997	1.3925	1.9747	2.4473	2.9454
57.1	7.513	0.3682	0.6583	1.0058	1.3997	1.9834	2.4571	2.9563
57.2	7.483	0.3716	0.6631	1.0118	1.4070	1.9922	2.4670	2.9672
57.3	7.452	0.3750	0.6678	1.0178	1.4142	2.0010	2.4769	2.9780
57.4	7.422	0.3784	0.6726	1.0239	1.4215	2.0098	2.4867	2.9889
57.5	7.391	0.3819	0.6774	1.0300	1.4288	2.0187	2.4966	2.9998
57.6	7.361	0.3853	0.6822	1.0360	1.4361	2.0275	2.5065	3.0107
57.7	7.331	0.3888	0.6870	1.0421	1.4434	2.0363	2.5164	3.0215
57.8	7.301	0.3923	0.6918	1.0482	1.4508	2.0452	2.5263	3.0324
57.9	7.271	0.3958	0.6966	1.0544	1.4581	2.0540	2.5362	3.0433
58	7.241	0.3993	0.7015	1.0605	1.4655	2.0629	2.5461	3.0542
58.1	7.212	0.4028	0.7064	1.0667	1.4728	2.0718	2.5561	3.0652
58.2	7.182	0.4064	0.7112	1.0728	1.4802	2.0807	2.5660	3.0761
58.3	7.153	0.4099	0.7161	1.0790	1.4876	2.0896	2.5760	3.0870
58.4	7.123	0.4135	0.7210	1.0852	1.4950	2.0985	2.5859	3.0979
58.5	7.094	0.4171	0.7260	1.0914	1.5024	2.1074	2.5959	3.1089
58.6	7.065	0.4207	0.7309	1.0976	1.5098	2.1163	2.6058	3.1198
58.7	7.036	0.4243	0.7359	1.1038	1.5173	2.1252	2.6158	3.1307
58.8	7.007	0.4279	0.7408	1.1101	1.5247	2.1342	2.6258	3.1417
58.9	6.978	0.4315	0.7458	1.1163	1.5322	2.1431	2.6358	3.1526
59	6.949	0.4352	0.7508	1.1226	1.5397	2.1521	2.6458	3.1636
59.1	6.920	0.4389	0.7558	1.1289	1.5471	2.1611	2.6558	3.1746
59.2	6.892	0.4425	0.7608	1.1352	1.5546	2.1701	2.6658	3.1855
59.3	6.863	0.4462	0.7658	1.1415	1.5621	2.1790	2.6758	3.1965
59.4	6.835	0.4499	0.7709	1.1478	1.5697	2.1880	2.6858	3.2075
59.5	6.807	0.4537	0.7759	1.1541	1.5772	2.1970	2.6958	3.2185
59.6	6.779	0.4574	0.7810	1.1605	1.5847	2.2061	2.7059	3.2295
59.7	6.750	0.4611	0.7861	1.1668	1.5923	2.2151	2.7159	3.2404
59.8	6.722	0.4649	0.7912	1.1732	1.5998	2.2241	2.7260	3.2514
59.9	6.694	0.4687	0.7963	1.1796	1.6074	2.2332	2.7360	3.2624

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
60	6.667	0.4725	0.8014	1.1860	1.6150	2.2422	2.7461	3.2735
60.1	6.639	0.4763	0.8066	1.1924	1.6226	2.2513	2.7562	3.2845
60.2	6.611	0.4801	0.8117	1.1988	1.6302	2.2604	2.7663	3.2955
60.3	6.584	0.4839	0.8169	1.2052	1.6378	2.2694	2.7763	3.3065
60.4	6.556	0.4878	0.8221	1.2117	1.6455	2.2785	2.7864	3.3175
60.5	6.529	0.4916	0.8273	1.2181	1.6531	2.2876	2.7965	3.3286
60.6	6.502	0.4955	0.8325	1.2246	1.6608	2.2967	2.8066	3.3396
60.7	6.474	0.4994	0.8377	1.2311	1.6684	2.3059	2.8168	3.3506
60.8	6.447	0.5033	0.8429	1.2376	1.6761	2.3150	2.8269	3.3617
60.9	6.420	0.5072	0.8482	1.2441	1.6838	2.3241	2.8370	3.3727
61	6.393	0.5111	0.8535	1.2506	1.6915	2.3333	2.8471	3.3838
61.1	6.367	0.5151	0.8587	1.2572	1.6992	2.3424	2.8573	3.3949
61.2	6.340	0.5190	0.8640	1.2637	1.7069	2.3516	2.8674	3.4059
61.3	6.313	0.5230	0.8693	1.2703	1.7147	2.3608	2.8776	3.4170
61.4	6.287	0.5270	0.8747	1.2768	1.7224	2.3699	2.8878	3.4281
61.5	6.260	0.5310	0.8800	1.2834	1.7302	2.3791	2.8979	3.4392
61.6	6.234	0.5350	0.8853	1.2900	1.7379	2.3883	2.9081	3.4502
61.7	6.207	0.5390	0.8907	1.2966	1.7457	2.3975	2.9183	3.4613
61.8	6.181	0.5431	0.8961	1.3033	1.7535	2.4067	2.9285	3.4724
61.9	6.155	0.5471	0.9014	1.3099	1.7613	2.4160	2.9387	3.4835
62	6.129	0.5512	0.9068	1.3166	1.7691	2.4252	2.9489	3.4946
62.1	6.103	0.5553	0.9123	1.3232	1.7770	2.4344	2.9591	3.5057
62.2	6.077	0.5594	0.9177	1.3299	1.7848	2.4437	2.9693	3.5168
62.3	6.051	0.5635	0.9231	1.3366	1.7926	2.4529	2.9795	3.5279
62.4	6.026	0.5676	0.9286	1.3433	1.8005	2.4622	2.9898	3.5391
62.5	6.000	0.5718	0.9341	1.3500	1.8084	2.4715	3.0000	3.5502
62.6	5.974	0.5759	0.9395	1.3567	1.8163	2.4808	3.0102	3.5613
62.7	5.949	0.5801	0.9450	1.3635	1.8241	2.4901	3.0205	3.5724
62.8	5.924	0.5843	0.9505	1.3702	1.8320	2.4994	3.0307	3.5836
62.9	5.898	0.5885	0.9561	1.3770	1.8400	2.5087	3.0410	3.5947
63	5.873	0.5927	0.9616	1.3838	1.8479	2.5180	3.0513	3.6059
63.1	5.848	0.5969	0.9672	1.3905	1.8558	2.5273	3.0616	3.6170
63.2	5.823	0.6011	0.9727	1.3973	1.8638	2.5367	3.0718	3.6282
63.3	5.798	0.6054	0.9783	1.4042	1.8717	2.5460	3.0821	3.6393
63.4	5.773	0.6096	0.9839	1.4110	1.8797	2.5554	3.0924	3.6505
63.5	5.748	0.6139	0.9895	1.4178	1.8877	2.5647	3.1027	3.6617
63.6	5.723	0.6182	0.9951	1.4247	1.8957	2.5741	3.1130	3.6728
63.7	5.699	0.6225	1.0007	1.4315	1.9037	2.5835	3.1233	3.6840
63.8	5.674	0.6268	1.0064	1.4384	1.9117	2.5929	3.1337	3.6952
63.9	5.649	0.6312	1.0120	1.4453	1.9197	2.6023	3.1440	3.7064
64	5.625	0.6355	1.0177	1.4522	1.9277	2.6117	3.1543	3.7176
64.1	5.601	0.6399	1.0234	1.4591	1.9358	2.6211	3.1647	3.7287
64.2	5.576	0.6443	1.0291	1.4661	1.9439	2.6305	3.1750	3.7399
64.3	5.552	0.6487	1.0348	1.4730	1.9519	2.6399	3.1854	3.7511
64.4	5.528	0.6531	1.0405	1.4800	1.9600	2.6494	3.1957	3.7623
64.5	5.504	0.6575	1.0463	1.4869	1.9681	2.6588	3.2061	3.7735
64.6	5.480	0.6619	1.0520	1.4939	1.9762	2.6683	3.2165	3.7848
64.7	5.456	0.6664	1.0578	1.5009	1.9843	2.6777	3.2268	3.7960
64.8	5.432	0.6708	1.0636	1.5079	1.9924	2.6872	3.2372	3.8072
64.9	5.408	0.6753	1.0694	1.5149	2.0006	2.6967	3.2476	3.8184

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
65	5.385	0.6798	1.0752	1.5219	2.0087	2.7062	3.2580	3.8296
65.1	5.361	0.6843	1.0810	1.5290	2.0169	2.7157	3.2684	3.8409
65.2	5.337	0.6888	1.0869	1.5360	2.0250	2.7252	3.2788	3.8521
65.3	5.314	0.6933	1.0927	1.5431	2.0332	2.7347	3.2892	3.8633
65.4	5.291	0.6979	1.0986	1.5502	2.0414	2.7442	3.2996	3.8746
65.5	5.267	0.7025	1.1045	1.5573	2.0496	2.7537	3.3101	3.8858
65.6	5.244	0.7070	1.1104	1.5644	2.0578	2.7633	3.3205	3.8971
65.7	5.221	0.7116	1.1163	1.5715	2.0660	2.7728	3.3309	3.9083
65.8	5.198	0.7162	1.1222	1.5786	2.0743	2.7824	3.3414	3.9196
65.9	5.175	0.7208	1.1281	1.5857	2.0825	2.7919	3.3518	3.9309
66	5.152	0.7255	1.1341	1.5929	2.0908	2.8015	3.3623	3.9421
66.1	5.129	0.7301	1.1400	1.6001	2.0990	2.8111	3.3727	3.9534
66.2	5.106	0.7348	1.1460	1.6072	2.1073	2.8207	3.3832	3.9647
66.3	5.083	0.7395	1.1520	1.6144	2.1156	2.8302	3.3937	3.9759
66.4	5.060	0.7442	1.1580	1.6216	2.1239	2.8399	3.4042	3.9872
66.5	5.038	0.7489	1.1640	1.6289	2.1322	2.8495	3.4147	3.9985
66.6	5.015	0.7536	1.1700	1.6361	2.1405	2.8591	3.4251	4.0098
66.7	4.993	0.7583	1.1761	1.6433	2.1488	2.8687	3.4356	4.0211
66.8	4.970	0.7631	1.1821	1.6506	2.1572	2.8783	3.4461	4.0324
66.9	4.948	0.7678	1.1882	1.6578	2.1655	2.8880	3.4567	4.0437
67	4.925	0.7726	1.1943	1.6651	2.1739	2.8976	3.4672	4.0550
67.1	4.903	0.7774	1.2004	1.6724	2.1823	2.9073	3.4777	4.0663
67.2	4.881	0.7822	1.2065	1.6797	2.1906	2.9170	3.4882	4.0776
67.3	4.859	0.7870	1.2126	1.6870	2.1990	2.9266	3.4987	4.0889
67.4	4.837	0.7919	1.2188	1.6944	2.2074	2.9363	3.5093	4.1002
67.5	4.815	0.7967	1.2249	1.7017	2.2158	2.9460	3.5198	4.1115
67.6	4.793	0.8016	1.2311	1.7091	2.2243	2.9557	3.5304	4.1229
67.7	4.771	0.8065	1.2373	1.7164	2.2327	2.9654	3.5409	4.1342
67.8	4.749	0.8114	1.2435	1.7238	2.2412	2.9751	3.5515	4.1455
67.9	4.728	0.8163	1.2497	1.7312	2.2496	2.9848	3.5621	4.1568
68	4.706	0.8212	1.2559	1.7386	2.2581	2.9946	3.5726	4.1682
68.1	4.684	0.8261	1.2621	1.7460	2.2666	3.0043	3.5832	4.1795
68.2	4.663	0.8311	1.2684	1.7534	2.2751	3.0141	3.5938	4.1909
68.3	4.641	0.8360	1.2747	1.7609	2.2836	3.0238	3.6044	4.2022
68.4	4.620	0.8410	1.2809	1.7683	2.2921	3.0336	3.6150	4.2136
68.5	4.599	0.8460	1.2872	1.7758	2.3006	3.0433	3.6256	4.2249
68.6	4.577	0.8510	1.2935	1.7833	2.3091	3.0531	3.6362	4.2363
68.7	4.556	0.8561	1.2999	1.7908	2.3177	3.0629	3.6468	4.2476
68.8	4.535	0.8611	1.3062	1.7983	2.3262	3.0727	3.6574	4.2590
68.9	4.514	0.8662	1.3126	1.8058	2.3348	3.0825	3.6680	4.2704
69	4.493	0.8712	1.3189	1.8133	2.3434	3.0923	3.6787	4.2817
69.1	4.472	0.8763	1.3253	1.8209	2.3519	3.1021	3.6893	4.2931
69.2	4.451	0.8814	1.3317	1.8284	2.3605	3.1120	3.6999	4.3045
69.3	4.430	0.8865	1.3381	1.8360	2.3691	3.1218	3.7106	4.3159
69.4	4.409	0.8917	1.3445	1.8436	2.3778	3.1316	3.7212	4.3272
69.5	4.388	0.8968	1.3509	1.8511	2.3864	3.1415	3.7319	4.3386
69.6	4.368	0.9020	1.3574	1.8587	2.3950	3.1513	3.7426	4.3500
69.7	4.347	0.9072	1.3639	1.8664	2.4037	3.1612	3.7532	4.3614
69.8	4.327	0.9123	1.3703	1.8740	2.4123	3.1711	3.7639	4.3728
69.9	4.306	0.9175	1.3768	1.8816	2.4210	3.1809	3.7746	4.3842

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
70	4.286	0.9228	1.3833	1.8893	2.4297	3.1908	3.7853	4.3956
70.1	4.265	0.9280	1.3898	1.8970	2.4384	3.2007	3.7959	4.4070
70.2	4.245	0.9333	1.3964	1.9046	2.4471	3.2106	3.8066	4.4184
70.3	4.225	0.9385	1.4029	1.9123	2.4558	3.2205	3.8173	4.4298
70.4	4.205	0.9438	1.4095	1.9200	2.4645	3.2304	3.8280	4.4413
70.5	4.184	0.9491	1.4161	1.9277	2.4733	3.2404	3.8388	4.4527
70.6	4.164	0.9544	1.4227	1.9355	2.4820	3.2503	3.8495	4.4641
70.7	4.144	0.9597	1.4293	1.9432	2.4908	3.2602	3.8602	4.4755
70.8	4.124	0.9651	1.4359	1.9510	2.4995	3.2702	3.8709	4.4869
70.9	4.104	0.9704	1.4425	1.9587	2.5083	3.2801	3.8816	4.4984
71	4.085	0.9758	1.4492	1.9665	2.5171	3.2901	3.8924	4.5098
71.1	4.065	0.9812	1.4558	1.9743	2.5259	3.3001	3.9031	4.5212
71.2	4.045	0.9866	1.4625	1.9821	2.5347	3.3101	3.9139	4.5327
71.3	4.025	0.9920	1.4692	1.9899	2.5435	3.3200	3.9246	4.5441
71.4	4.006	0.9975	1.4759	1.9978	2.5523	3.3300	3.9354	4.5556
71.5	3.986	1.0029	1.4826	2.0056	2.5612	3.3400	3.9462	4.5670
71.6	3.966	1.0084	1.4893	2.0135	2.5700	3.3500	3.9569	4.5785
71.7	3.947	1.0139	1.4961	2.0213	2.5789	3.3601	3.9677	4.5899
71.8	3.928	1.0194	1.5028	2.0292	2.5878	3.3701	3.9785	4.6014
71.9	3.908	1.0249	1.5096	2.0371	2.5966	3.3801	3.9893	4.6129
72	3.889	1.0304	1.5164	2.0450	2.6055	3.3902	4.0000	4.6243
72.1	3.870	1.0360	1.5232	2.0529	2.6144	3.4002	4.0108	4.6358
72.2	3.850	1.0415	1.5300	2.0609	2.6234	3.4103	4.0216	4.6473
72.3	3.831	1.0471	1.5369	2.0688	2.6323	3.4203	4.0324	4.6587
72.4	3.812	1.0527	1.5437	2.0768	2.6412	3.4304	4.0433	4.6702
72.5	3.793	1.0583	1.5506	2.0847	2.6502	3.4405	4.0541	4.6817
72.6	3.774	1.0639	1.5575	2.0927	2.6591	3.4505	4.0649	4.6932
72.7	3.755	1.0695	1.5643	2.1007	2.6681	3.4606	4.0757	4.7046
72.8	3.736	1.0752	1.5713	2.1087	2.6771	3.4707	4.0866	4.7161
72.9	3.717	1.0809	1.5782	2.1167	2.6860	3.4808	4.0974	4.7276
73	3.699	1.0866	1.5851	2.1248	2.6950	3.4910	4.1082	4.7391
73.1	3.680	1.0923	1.5921	2.1328	2.7041	3.5011	4.1191	4.7506
73.2	3.661	1.0980	1.5990	2.1409	2.7131	3.5112	4.1299	4.7621
73.3	3.643	1.1037	1.6060	2.1489	2.7221	3.5213	4.1408	4.7736
73.4	3.624	1.1095	1.6130	2.1570	2.7311	3.5315	4.1517	4.7851
73.5	3.605	1.1152	1.6200	2.1651	2.7402	3.5416	4.1625	4.7966
73.6	3.587	1.1210	1.6270	2.1732	2.7493	3.5518	4.1734	4.8081
73.7	3.569	1.1268	1.6341	2.1813	2.7583	3.5620	4.1843	4.8196
73.8	3.550	1.1326	1.6411	2.1895	2.7674	3.5721	4.1951	4.8312
73.9	3.532	1.1384	1.6482	2.1976	2.7765	3.5823	4.2060	4.8427
74	3.514	1.1443	1.6553	2.2058	2.7856	3.5925	4.2169	4.8542
74.1	3.495	1.1502	1.6624	2.2140	2.7947	3.6027	4.2278	4.8657
74.2	3.477	1.1560	1.6695	2.2221	2.8038	3.6129	4.2387	4.8772
74.3	3.459	1.1619	1.6766	2.2303	2.8130	3.6231	4.2496	4.8888
74.4	3.441	1.1678	1.6837	2.2386	2.8221	3.6333	4.2605	4.9003
74.5	3.423	1.1738	1.6909	2.2468	2.8313	3.6435	4.2715	4.9118
74.6	3.405	1.1797	1.6981	2.2550	2.8404	3.6538	4.2824	4.9234
74.7	3.387	1.1857	1.7053	2.2633	2.8496	3.6640	4.2933	4.9349
74.8	3.369	1.1917	1.7125	2.2715	2.8588	3.6743	4.3042	4.9464
74.9	3.351	1.1976	1.7197	2.2798	2.8680	3.6845	4.3152	4.9580

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
75	3.333	1.2037	1.7269	2.2881	2.8772	3.6948	4.3261	4.9695
75.1	3.316	1.2097	1.7341	2.2964	2.8864	3.7050	4.3371	4.9811
75.2	3.298	1.2157	1.7414	2.3047	2.8957	3.7153	4.3480	4.9926
75.3	3.280	1.2218	1.7487	2.3130	2.9049	3.7256	4.3590	5.0042
75.4	3.263	1.2279	1.7560	2.3214	2.9142	3.7359	4.3699	5.0158
75.5	3.245	1.2340	1.7633	2.3297	2.9234	3.7462	4.3809	5.0273
75.6	3.228	1.2401	1.7706	2.3381	2.9327	3.7565	4.3919	5.0389
75.7	3.210	1.2462	1.7779	2.3465	2.9420	3.7668	4.4029	5.0504
75.8	3.193	1.2523	1.7853	2.3549	2.9513	3.7771	4.4138	5.0620
75.9	3.175	1.2585	1.7927	2.3633	2.9606	3.7874	4.4248	5.0736
76	3.158	1.2647	1.8000	2.3717	2.9699	3.7978	4.4358	5.0851
76.1	3.141	1.2709	1.8074	2.3801	2.9792	3.8081	4.4468	5.0967
76.2	3.123	1.2771	1.8148	2.3886	2.9885	3.8185	4.4578	5.1083
76.3	3.106	1.2833	1.8223	2.3970	2.9979	3.8288	4.4688	5.1199
76.4	3.089	1.2896	1.8297	2.4055	3.0073	3.8392	4.4798	5.1315
76.5	3.072	1.2958	1.8372	2.4140	3.0166	3.8496	4.4908	5.1431
76.6	3.055	1.3021	1.8446	2.4225	3.0260	3.8599	4.5019	5.1546
76.7	3.038	1.3084	1.8521	2.4310	3.0354	3.8703	4.5129	5.1662
76.8	3.021	1.3147	1.8596	2.4395	3.0448	3.8807	4.5239	5.1778
76.9	3.004	1.3210	1.8672	2.4480	3.0542	3.8911	4.5350	5.1894
77	2.987	1.3274	1.8747	2.4566	3.0636	3.9015	4.5460	5.2010
77.1	2.970	1.3337	1.8822	2.4651	3.0730	3.9119	4.5570	5.2126
77.2	2.953	1.3401	1.8898	2.4737	3.0825	3.9224	4.5681	5.2242
77.3	2.937	1.3465	1.8974	2.4823	3.0919	3.9328	4.5791	5.2358
77.4	2.920	1.3529	1.9050	2.4909	3.1014	3.9432	4.5902	5.2474
77.5	2.903	1.3594	1.9126	2.4995	3.1109	3.9537	4.6013	5.2590
77.6	2.887	1.3658	1.9202	2.5081	3.1204	3.9641	4.6123	5.2707
77.7	2.870	1.3723	1.9279	2.5168	3.1298	3.9746	4.6234	5.2823
77.8	2.853	1.3788	1.9355	2.5254	3.1393	3.9850	4.6345	5.2939
77.9	2.837	1.3853	1.9432	2.5341	3.1489	3.9955	4.6456	5.3055
78	2.821	1.3918	1.9509	2.5428	3.1584	4.0060	4.6566	5.3171
78.1	2.804	1.3984	1.9586	2.5515	3.1679	4.0165	4.6677	5.3287
78.2	2.788	1.4049	1.9663	2.5602	3.1775	4.0270	4.6788	5.3404
78.3	2.771	1.4115	1.9740	2.5689	3.1870	4.0375	4.6899	5.3520
78.4	2.755	1.4181	1.9818	2.5776	3.1966	4.0480	4.7010	5.3636
78.5	2.739	1.4247	1.9896	2.5864	3.2062	4.0585	4.7121	5.3753
78.6	2.723	1.4313	1.9973	2.5951	3.2158	4.0690	4.7233	5.3869
78.7	2.706	1.4380	2.0051	2.6039	3.2254	4.0795	4.7344	5.3985
78.8	2.690	1.4446	2.0129	2.6127	3.2350	4.0901	4.7455	5.4102
78.9	2.674	1.4513	2.0208	2.6215	3.2446	4.1006	4.7566	5.4218
79	2.658	1.4580	2.0286	2.6303	3.2542	4.1111	4.7678	5.4335
79.1	2.642	1.4647	2.0365	2.6391	3.2639	4.1217	4.7789	5.4451
79.2	2.626	1.4715	2.0444	2.6479	3.2735	4.1323	4.7900	5.4568
79.3	2.610	1.4782	2.0523	2.6568	3.2832	4.1428	4.8012	5.4684
79.4	2.594	1.4850	2.0602	2.6657	3.2929	4.1534	4.8123	5.4801
79.5	2.579	1.4918	2.0681	2.6745	3.3025	4.1640	4.8235	5.4917
79.6	2.563	1.4986	2.0760	2.6834	3.3122	4.1746	4.8347	5.5034
79.7	2.547	1.5054	2.0840	2.6923	3.3219	4.1852	4.8458	5.5150
79.8	2.531	1.5123	2.0920	2.7012	3.3317	4.1958	4.8570	5.5267
79.9	2.516	1.5192	2.1000	2.7102	3.3414	4.2064	4.8682	5.5384

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
80	2.500	1.5260	2.1080	2.7191	3.3511	4.2170	4.8793	5.5500
80.1	2.484	1.5329	2.1160	2.7281	3.3609	4.2277	4.8905	5.5617
80.2	2.469	1.5399	2.1240	2.7370	3.3706	4.2383	4.9017	5.5734
80.3	2.453	1.5468	2.1321	2.7460	3.3804	4.2489	4.9129	5.5851
80.4	2.438	1.5538	2.1401	2.7550	3.3902	4.2596	4.9241	5.5967
80.5	2.422	1.5607	2.1482	2.7640	3.4000	4.2702	4.9353	5.6084
80.6	2.407	1.5677	2.1563	2.7731	3.4098	4.2809	4.9465	5.6201
80.7	2.392	1.5748	2.1645	2.7821	3.4196	4.2916	4.9577	5.6318
80.8	2.376	1.5818	2.1726	2.7912	3.4294	4.3022	4.9689	5.6435
80.9	2.361	1.5888	2.1807	2.8002	3.4392	4.3129	4.9802	5.6551
81	2.346	1.5959	2.1889	2.8093	3.4491	4.3236	4.9914	5.6668
81.1	2.330	1.6030	2.1971	2.8184	3.4589	4.3343	5.0026	5.6785
81.2	2.315	1.6101	2.2053	2.8275	3.4688	4.3450	5.0138	5.6902
81.3	2.300	1.6172	2.2135	2.8366	3.4787	4.3557	5.0251	5.7019
81.4	2.285	1.6244	2.2217	2.8457	3.4886	4.3664	5.0363	5.7136
81.5	2.270	1.6316	2.2300	2.8549	3.4985	4.3772	5.0476	5.7253
81.6	2.255	1.6388	2.2383	2.8641	3.5084	4.3879	5.0588	5.7370
81.7	2.240	1.6460	2.2466	2.8732	3.5183	4.3986	5.0701	5.7487
81.8	2.225	1.6532	2.2549	2.8824	3.5282	4.4094	5.0813	5.7604
81.9	2.210	1.6604	2.2632	2.8916	3.5381	4.4201	5.0926	5.7721
82	2.195	1.6677	2.2715	2.9008	3.5481	4.4309	5.1039	5.7838
82.1	2.180	1.6750	2.2799	2.9101	3.5581	4.4417	5.1151	5.7956
82.2	2.165	1.6823	2.2882	2.9193	3.5680	4.4524	5.1264	5.8073
82.3	2.151	1.6896	2.2966	2.9286	3.5780	4.4632	5.1377	5.8190
82.4	2.136	1.6970	2.3050	2.9378	3.5880	4.4740	5.1490	5.8307
82.5	2.121	1.7043	2.3134	2.9471	3.5980	4.4848	5.1603	5.8424
82.6	2.107	1.7117	2.3219	2.9564	3.6080	4.4956	5.1716	5.8541
82.7	2.092	1.7191	2.3303	2.9657	3.6181	4.5064	5.1829	5.8659
82.8	2.077	1.7265	2.3388	2.9750	3.6281	4.5172	5.1942	5.8776
82.9	2.063	1.7340	2.3473	2.9844	3.6381	4.5281	5.2055	5.8893
83	2.048	1.7414	2.3558	2.9937	3.6482	4.5389	5.2168	5.9011
83.1	2.034	1.7489	2.3643	3.0031	3.6583	4.5497	5.2281	5.9128
83.2	2.019	1.7564	2.3728	3.0125	3.6683	4.5606	5.2394	5.9245
83.3	2.005	1.7639	2.3814	3.0219	3.6784	4.5714	5.2508	5.9363
83.4	1.990	1.7715	2.3899	3.0313	3.6885	4.5823	5.2621	5.9480
83.5	1.976	1.7790	2.3985	3.0407	3.6986	4.5932	5.2734	5.9597
83.6	1.962	1.7866	2.4071	3.0501	3.7088	4.6040	5.2848	5.9715
83.7	1.947	1.7942	2.4158	3.0596	3.7189	4.6149	5.2961	5.9832
83.8	1.933	1.8019	2.4244	3.0690	3.7290	4.6258	5.3075	5.9950
83.9	1.919	1.8095	2.4330	3.0785	3.7392	4.6367	5.3188	6.0067
84	1.905	1.8172	2.4417	3.0880	3.7494	4.6476	5.3302	6.0185
84.1	1.891	1.8249	2.4504	3.0975	3.7595	4.6585	5.3415	6.0302
84.2	1.876	1.8326	2.4591	3.1070	3.7697	4.6694	5.3529	6.0420
84.3	1.862	1.8403	2.4678	3.1166	3.7799	4.6803	5.3643	6.0537
84.4	1.848	1.8480	2.4766	3.1261	3.7901	4.6913	5.3756	6.0655
84.5	1.834	1.8558	2.4854	3.1357	3.8004	4.7022	5.3870	6.0772
84.6	1.820	1.8636	2.4941	3.1452	3.8106	4.7131	5.3984	6.0890
84.7	1.806	1.8714	2.5029	3.1548	3.8208	4.7241	5.4098	6.1008
84.8	1.792	1.8793	2.5117	3.1644	3.8311	4.7350	5.4212	6.1125
84.9	1.779	1.8871	2.5206	3.1741	3.8413	4.7460	5.4326	6.1243

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
85	1.765	1.8950	2.5294	3.1837	3.8516	4.7570	5.4440	6.1361
85.1	1.751	1.9029	2.5383	3.1933	3.8619	4.7679	5.4554	6.1478
85.2	1.737	1.9108	2.5472	3.2030	3.8722	4.7789	5.4668	6.1596
85.3	1.723	1.9187	2.5561	3.2127	3.8825	4.7899	5.4782	6.1714
85.4	1.710	1.9267	2.5650	3.2224	3.8928	4.8009	5.4896	6.1832
85.5	1.696	1.9347	2.5739	3.2321	3.9031	4.8119	5.5010	6.1949
85.6	1.682	1.9427	2.5829	3.2418	3.9135	4.8229	5.5125	6.2067
85.7	1.669	1.9507	2.5919	3.2515	3.9238	4.8339	5.5239	6.2185
85.8	1.655	1.9588	2.6008	3.2613	3.9342	4.8450	5.5353	6.2303
85.9	1.641	1.9668	2.6099	3.2710	3.9446	4.8560	5.5468	6.2421
86	1.628	1.9749	2.6189	3.2808	3.9550	4.8670	5.5582	6.2539
86.1	1.614	1.9830	2.6279	3.2906	3.9653	4.8781	5.5696	6.2657
86.2	1.601	1.9912	2.6370	3.3004	3.9758	4.8891	5.5811	6.2774
86.3	1.587	1.9993	2.6461	3.3102	3.9862	4.9002	5.5926	6.2892
86.4	1.574	2.0075	2.6552	3.3200	3.9966	4.9113	5.6040	6.3010
86.5	1.561	2.0157	2.6643	3.3299	4.0070	4.9223	5.6155	6.3128
86.6	1.547	2.0239	2.6734	3.3397	4.0175	4.9334	5.6269	6.3246
86.7	1.534	2.0322	2.6826	3.3496	4.0279	4.9445	5.6384	6.3364
86.8	1.521	2.0404	2.6917	3.3595	4.0384	4.9556	5.6499	6.3482
86.9	1.507	2.0487	2.7009	3.3694	4.0489	4.9667	5.6614	6.3600
87	1.494	2.0570	2.7101	3.3793	4.0594	4.9778	5.6729	6.3718
87.1	1.481	2.0654	2.7194	3.3892	4.0699	4.9889	5.6843	6.3837
87.2	1.468	2.0737	2.7286	3.3992	4.0804	5.0000	5.6958	6.3955
87.3	1.455	2.0821	2.7379	3.4092	4.0909	5.0112	5.7073	6.4073
87.4	1.442	2.0905	2.7472	3.4191	4.1015	5.0223	5.7188	6.4191
87.5	1.429	2.0989	2.7565	3.4291	4.1120	5.0334	5.7303	6.4309
87.6	1.416	2.1074	2.7658	3.4391	4.1226	5.0446	5.7418	6.4427
87.7	1.403	2.1159	2.7751	3.4491	4.1331	5.0557	5.7534	6.4545
87.8	1.390	2.1244	2.7845	3.4592	4.1437	5.0669	5.7649	6.4664
87.9	1.377	2.1329	2.7939	3.4692	4.1543	5.0781	5.7764	6.4782
88	1.364	2.1414	2.8032	3.4793	4.1649	5.0892	5.7879	6.4900
88.1	1.351	2.1500	2.8127	3.4894	4.1755	5.1004	5.7994	6.5018
88.2	1.338	2.1586	2.8221	3.4995	4.1862	5.1116	5.8110	6.5136
88.3	1.325	2.1672	2.8315	3.5096	4.1968	5.1228	5.8225	6.5255
88.4	1.312	2.1758	2.8410	3.5197	4.2074	5.1340	5.8341	6.5373
88.5	1.299	2.1845	2.8505	3.5298	4.2181	5.1452	5.8456	6.5491
88.6	1.287	2.1932	2.8600	3.5400	4.2288	5.1564	5.8572	6.5610
88.7	1.274	2.2019	2.8695	3.5502	4.2394	5.1677	5.8687	6.5728
88.8	1.261	2.2106	2.8791	3.5603	4.2501	5.1789	5.8803	6.5846
88.9	1.249	2.2193	2.8886	3.5705	4.2608	5.1901	5.8918	6.5965
89	1.236	2.2281	2.8982	3.5807	4.2716	5.2014	5.9034	6.6083
89.1	1.223	2.2369	2.9078	3.5910	4.2823	5.2126	5.9150	6.6202
89.2	1.211	2.2457	2.9175	3.6012	4.2930	5.2239	5.9265	6.6320
89.3	1.198	2.2546	2.9271	3.6115	4.3038	5.2352	5.9381	6.6439
89.4	1.186	2.2635	2.9368	3.6217	4.3145	5.2464	5.9497	6.6557
89.5	1.173	2.2724	2.9464	3.6320	4.3253	5.2577	5.9613	6.6675
89.6	1.161	2.2813	2.9561	3.6423	4.3361	5.2690	5.9729	6.6794
89.7	1.148	2.2902	2.9659	3.6526	4.3469	5.2803	5.9845	6.6913
89.8	1.136	2.2992	2.9756	3.6630	4.3577	5.2916	5.9961	6.7031
89.9	1.123	2.3082	2.9853	3.6733	4.3685	5.3029	6.0077	6.7150

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
90	1.111	2.3172	2.9951	3.6837	4.3793	5.3142	6.0193	6.7268
90.1	1.099	2.3263	3.0049	3.6941	4.3901	5.3255	6.0309	6.7387
90.2	1.086	2.3353	3.0147	3.7044	4.4010	5.3369	6.0425	6.7505
90.3	1.074	2.3444	3.0246	3.7149	4.4118	5.3482	6.0541	6.7624
90.4	1.062	2.3536	3.0344	3.7253	4.4227	5.3595	6.0658	6.7743
90.5	1.050	2.3627	3.0443	3.7357	4.4336	5.3709	6.0774	6.7861
90.6	1.038	2.3719	3.0542	3.7462	4.4445	5.3822	6.0890	6.7980
90.7	1.025	2.3811	3.0641	3.7566	4.4554	5.3936	6.1007	6.8099
90.8	1.013	2.3903	3.0741	3.7671	4.4663	5.4050	6.1123	6.8217
90.9	1.001	2.3995	3.0840	3.7776	4.4772	5.4163	6.1239	6.8336
91	0.989	2.4088	3.0940	3.7881	4.4882	5.4277	6.1356	6.8455
91.1	0.977	2.4181	3.1040	3.7987	4.4991	5.4391	6.1472	6.8573
91.2	0.965	2.4274	3.1140	3.8092	4.5101	5.4505	6.1589	6.8692
91.3	0.953	2.4368	3.1240	3.8198	4.5211	5.4619	6.1706	6.8811
91.4	0.941	2.4462	3.1341	3.8303	4.5320	5.4733	6.1822	6.8930
91.5	0.929	2.4556	3.1442	3.8409	4.5430	5.4847	6.1939	6.9049
91.6	0.917	2.4650	3.1543	3.8515	4.5540	5.4961	6.2056	6.9167
91.7	0.905	2.4744	3.1644	3.8622	4.5651	5.5076	6.2172	6.9286
91.8	0.893	2.4839	3.1745	3.8728	4.5761	5.5190	6.2289	6.9405
91.9	0.881	2.4934	3.1847	3.8834	4.5871	5.5304	6.2406	6.9524
92	0.870	2.5030	3.1949	3.8941	4.5982	5.5419	6.2523	6.9643
92.1	0.858	2.5125	3.2051	3.9048	4.6092	5.5534	6.2640	6.9762
92.2	0.846	2.5221	3.2153	3.9155	4.6203	5.5648	6.2757	6.9881
92.3	0.834	2.5317	3.2255	3.9262	4.6314	5.5763	6.2874	7.0000
92.4	0.823	2.5414	3.2358	3.9369	4.6425	5.5878	6.2991	7.0119
92.5	0.811	2.5510	3.2461	3.9477	4.6536	5.5992	6.3108	7.0238
92.6	0.799	2.5607	3.2564	3.9584	4.6647	5.6107	6.3225	7.0356
92.7	0.787	2.5704	3.2667	3.9692	4.6759	5.6222	6.3342	7.0475
92.8	0.776	2.5802	3.2770	3.9800	4.6870	5.6337	6.3459	7.0594
92.9	0.764	2.5900	3.2874	3.9908	4.6981	5.6453	6.3577	7.0713
93	0.753	2.5998	3.2978	4.0016	4.7093	5.6568	6.3694	7.0833
93.1	0.741	2.6096	3.3082	4.0125	4.7205	5.6683	6.3811	7.0952
93.2	0.730	2.6194	3.3186	4.0233	4.7317	5.6798	6.3929	7.1071
93.3	0.718	2.6293	3.3291	4.0342	4.7429	5.6914	6.4046	7.1190
93.4	0.707	2.6392	3.3395	4.0451	4.7541	5.7029	6.4163	7.1309
93.5	0.695	2.6492	3.3500	4.0560	4.7653	5.7145	6.4281	7.1428
93.6	0.684	2.6592	3.3605	4.0669	4.7765	5.7260	6.4398	7.1547
93.7	0.672	2.6691	3.3711	4.0779	4.7878	5.7376	6.4516	7.1666
93.8	0.661	2.6792	3.3816	4.0888	4.7991	5.7492	6.4634	7.1785
93.9	0.650	2.6892	3.3922	4.0998	4.8103	5.7607	6.4751	7.1905
94	0.638	2.6993	3.4028	4.1108	4.8216	5.7723	6.4869	7.2024
94.1	0.627	2.7094	3.4134	4.1218	4.8329	5.7839	6.4987	7.2143
94.2	0.616	2.7195	3.4241	4.1328	4.8442	5.7955	6.5104	7.2262
94.3	0.604	2.7297	3.4347	4.1438	4.8555	5.8071	6.5222	7.2381
94.4	0.593	2.7399	3.4454	4.1549	4.8668	5.8187	6.5340	7.2501
94.5	0.582	2.7501	3.4561	4.1659	4.8782	5.8304	6.5458	7.2620
94.6	0.571	2.7604	3.4668	4.1770	4.8895	5.8420	6.5576	7.2739
94.7	0.560	2.7707	3.4776	4.1881	4.9009	5.8536	6.5694	7.2858
94.8	0.549	2.7810	3.4884	4.1992	4.9123	5.8653	6.5812	7.2978
94.9	0.537	2.7913	3.4991	4.2103	4.9237	5.8769	6.5930	7.3097

Table to Determine Adjusted Curve Number from Adjusted Runoff

Hydrologic Data for Atlanta

Year of Storm Event	1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
Rainfall (inches)	3.36	4.08	4.80	5.52	6.48	7.20	7.92

Adjusted CN	Adjusted S	Adjusted Q (inches)						
		1-Yr, 24-hr	2-Yr, 24-hr	5-Yr, 24-hr	10-Yr, 24-hr	25-Yr, 24-hr	50-Yr, 24-hr	100-Yr, 24-hr
95	0.526	2.8017	3.5100	4.2215	4.9350	5.8886	6.6048	7.3216
95.1	0.515	2.8121	3.5208	4.2326	4.9465	5.9002	6.6166	7.3336
95.2	0.504	2.8225	3.5317	4.2438	4.9579	5.9119	6.6284	7.3455
95.3	0.493	2.8330	3.5425	4.2550	4.9693	5.9236	6.6402	7.3574
95.4	0.482	2.8435	3.5534	4.2662	4.9808	5.9352	6.6520	7.3694
95.5	0.471	2.8540	3.5644	4.2774	4.9922	5.9469	6.6639	7.3813
95.6	0.460	2.8645	3.5753	4.2887	5.0037	5.9586	6.6757	7.3933
95.7	0.449	2.8751	3.5863	4.2999	5.0152	5.9703	6.6875	7.4052
95.8	0.438	2.8857	3.5973	4.3112	5.0266	5.9820	6.6994	7.4171
95.9	0.428	2.8963	3.6083	4.3225	5.0381	5.9938	6.7112	7.4291
96	0.417	2.9070	3.6193	4.3338	5.0497	6.0055	6.7230	7.4410
96.1	0.406	2.9177	3.6304	4.3451	5.0612	6.0172	6.7349	7.4530
96.2	0.395	2.9284	3.6415	4.3565	5.0727	6.0289	6.7467	7.4649
96.3	0.384	2.9392	3.6526	4.3678	5.0843	6.0407	6.7586	7.4769
96.4	0.373	2.9500	3.6637	4.3792	5.0958	6.0524	6.7705	7.4888
96.5	0.363	2.9608	3.6749	4.3906	5.1074	6.0642	6.7823	7.5008
96.6	0.352	2.9717	3.6860	4.4020	5.1190	6.0760	6.7942	7.5127
96.7	0.341	2.9825	3.6972	4.4134	5.1306	6.0877	6.8061	7.5247
96.8	0.331	2.9935	3.7085	4.4249	5.1422	6.0995	6.8179	7.5367
96.9	0.320	3.0044	3.7197	4.4363	5.1538	6.1113	6.8298	7.5486
97	0.309	3.0154	3.7310	4.4478	5.1655	6.1231	6.8417	7.5606
97.1	0.299	3.0264	3.7423	4.4593	5.1771	6.1349	6.8536	7.5725
97.2	0.288	3.0374	3.7536	4.4708	5.1888	6.1467	6.8655	7.5845
97.3	0.277	3.0485	3.7649	4.4823	5.2004	6.1585	6.8774	7.5965
97.4	0.267	3.0596	3.7763	4.4939	5.2121	6.1703	6.8893	7.6084
97.5	0.256	3.0707	3.7877	4.5054	5.2238	6.1821	6.9012	7.6204
97.6	0.246	3.0819	3.7991	4.5170	5.2355	6.1940	6.9131	7.6324
97.7	0.235	3.0931	3.8105	4.5286	5.2472	6.2058	6.9250	7.6443
97.8	0.225	3.1044	3.8219	4.5402	5.2589	6.2177	6.9369	7.6563
97.9	0.215	3.1156	3.8334	4.5518	5.2707	6.2295	6.9488	7.6683
98	0.204	3.1269	3.8449	4.5635	5.2824	6.2414	6.9608	7.6803