

Appendix F1 Preliminary Drainage Report

**BERGAMOT SPECIFIC PLAN
INITIAL STUDY**

PRELIMINARY DRAINAGE REPORT
For
Tentative Tract No. 20336

PROJECT LOCATION

Citrus Valley
Tentative Tract Number 20336
City of Redlands, CA

PREPARED FOR:

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7/1/2020

Date

PREPARED: July 1, 2020

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1.0 Introduction

This preliminary drainage report has been prepared for MLC Holdings, Inc. in support of the residential development (Tentative Tract Map 20336, City of Redlands, in the County of San Bernardino, California). The Project site is bounded by Texas Street and an empty lot to the east, agricultural land to the north, State Route 210 and drainage channel to the west, and the Citrus Valley High School to the south. The tract is located south of the Santa Ana River as part of the Santa Ana River Watershed where all on-site and off-site runoff eventually drain. A vicinity map is included under Appendix A.

It is currently used as a citrus orchard under the agricultural land use type. The site is under a HCOC exempt condition as seen in the WAP Report in Appendix B-4. The project proposes to develop 58.67 acres of land into a mix of medium-density and high-density single family residences, lots, public streets and recreational space.

Onsite runoff from this project area, including areas associated with the public street improvements of Street N and Domestic Avenue, will be captured by on-site storm drains and conveyed to two separate onsite detention basins that allow infiltration of the LID design capture volume (see Appendix A for proposed drainage area map).

The 19.03 acres of privately owned parcels adjacent to the project site in the east that is tributary to Street N will remain agricultural (orchards; poor condition) and will not be developed. Maintenance of the proposed public streets and utilities will be transferred to the City of Redlands and/or the utility purveyor upon completion of the project.

2.0 Purpose & Design Criteria

The purpose of this report is the analysis of the existing hydrologic conditions associated with the project site and to determine design flow rates and storm drain sizes required for the proposed improvements. The evaluation of hydraulic conditions is deferred to final engineering. The hydrology maps and calculations reflect the tributary areas and associated Q_{10} and Q_{100} flows. Analysis includes calculations for both onsite and offsite areas.

The criteria, methods and assumptions are consistent with Section 2 S Storm Drain Standards of the City of Redlands Public Works Standards and the County of San Bernardino County Flood Control District (SBCFCD) Hydrology Manual. Specifically:

- The facilities shall be designed to minimize the inundation of private properties from storm runoff from a 100-year frequency storm;
- Public streets shall be protected from flooding from runoffs of a 10-year frequency storm, in accordance with city standards or approved equivalent;
- The drainage facilities shall be designed in accordance with the City master plan of drainage and applicable elements of the city general plan or any adopted specific plan;
- For flood control purposes flows are to be fully mitigated for the 100-year storm frequency, in accordance with City standards or approved equivalent.

3.0 Methodology

3.1 Hydrologic Analysis

Onsite and offsite hydrologic analysis was prepared using the methodology outlined in the SBCFCD Hydrology Manual. Rational method and Unit Hydrograph method calculations were completed for the 10- and 100-year return event using AES software.

- The 1-hour precipitation rate for the 10-and 100-year frequency events were taken from the latest NOAA Atlas 14 precipitation statistics consistent with the County's Hydrology Manual (see Appendix B).
- The slope of intensity duration curve is of 0.60 per the County's Hydrology Manual for the southwestern portions of the county (Valley Region) see Appendix C-7 for the Intensity-Duration Graph.
- Rainfall intensities were derived by AES based on the rainfall intensity curve and the expected time of concentration.
- 10-year analysis assumes AMC of II;
- 100-year assumes AMC of III;
- Based on the soils report provided by Petra Geosciences (J.N. 18-345) and included under Appendix B, the underlying soils are composed of alluvial soils consisting of medium dense fine to medium grained silty sands and sandy silt at an explored depth of approximately 10 to 15 feet below the ground surface corresponding to 5 feet below the anticipated basin floor elevation. The USCS data base classifies the hydrologic soil group as type "B".

Calculations and tabulation can be found in Appendix C.

3.2 Hydraulic Analysis

Onsite and offsite hydraulic analyses will be performed during final engineering. Calculations will be based on the 10- and 100-year rational method hydrologic flow rates. The following hydraulic calculations will be included in the final drainage report:

- Street Flow Depth and Capacity - Street Flow calculations will be completed using Bentley FlowMaster V8i. Streets will be modeled as irregular open channels based on the typical street section (existing or proposed). The software calculates flow capacity, velocity, and depth using Manning Equation of open channel flow.
- Catch Basin Capacity (Sizing) - Catch basin calculations will be completed using AES software. The software calculates a minimum width dimension of a catch basin with relation to flow condition, ponding depth and flow rate capture.
- Pipe Flow – Hydraulic analysis for the 100-year HGL will be completed using the Water Surface Pressure Gradient for Windows (WSPGW) software. The 100- year flow rates from AES will be used in the analysis of the proposed storm drain pipes.

Calculations and tabulation will be found in Appendix D of the final drainage report.

4.0 Existing Conditions

See Appendix A for Existing Condition Hydrology Map that highlights drainage areas and drainage patterns.

4.1 Onsite Drainage

Most of the site is currently being used for agricultural purposes as a citrus orchard. Some plots are fallowed or left vacant without any orchard trees. Dirt access roads border the site in the north and south. A soil type combination of fallow, orchards (in poor condition), and barren (for the dirt roads) were used in the existing condition hydrology analysis. A series of pictures supporting the selection of the land cover is included under Appendix E. The pictures were taken during the wet-season in the month of December 2019.

The site was divided into 28 subdrainage areas in accordance with the 10 acre/1000 feet flow path length limit for the upstream initial subarea as identified in the SBCFCD Hydrology Manual. Roughly half of site runoff flows towards the dirt access road in the north before eventually flowing into the western drainage channel. The other half of runoff flows west via surface flows into the drainage channel directly.

4.2 Offsite Drainage

Texas Street is an existing public road that borders a portion of the project site in the east before becoming a dirt access road north of Domestic Ave and extends beyond Street N to the north. Texas Street is crowned but curb and gutter improvements are not present for the entire length of the roadway. Current curb and gutter improvements extend from approximately 300 feet south of Pioneer Ave to the intersection with Domestic Avenue. Where curb and gutter improvements do not exist, street runoff from the southbound lane sheet flows to the adjacent agricultural fields.

In the existing condition, runoff from the half-section of Texas St runs northerly to Domestic Avenue and is comingled with runoff from the agricultural fields. Offsite flows from the northbound lane of Texas Street continues to flow north into a drainage ditch that runs alongside the dirt access road until it empties into the Santa Ana River.

Existing grading of the site prevents offsite runoff from the north to flow south, and a drainage channel borders the parcel along its entire length in the west. Approximately 19 acres of orchards in the east will remain privately owned and therefore excluded from the project site. Runon from these parcels will be considered offsite flow and will be addressed in the proposed condition.

5.0 Proposed Conditions

See Appendix A for Proposed Condition Hydrology Map that highlights drainage areas and drainage patterns.

5.1 Onsite Drainage Improvements

Existing drainage patterns are to be moderately modified in the proposed condition. All runoff will still be directed to the same concrete-lined channel that borders the Tract to the west at two separate outlets only. All lots will be graded to allow runoff to drain towards a designated street or area drain, leading to the proposed storm drain infrastructure. Grate inlets, curb and gutters and storm drain pipes are sized per

City standards. The development is composed of a mix of medium-density and high-density single-family residences, public roads, and recreational spaces.

All onsite runoff from the residential development will be collected by proposed curb inlets and conveyed by proposed storm drain lines in two separate drainage areas, namely Drainage Area 1 (South) and Drainage Area 2 (North). Both Drainage Areas 1 (40.38 acres) and 2 (18.3 acres) drain to the same concrete-lined channel that borders the Tract to the west at two separate outlets. Because of the incremental peak discharges resulting from the development, detention basins are proposed downstream of the Drainage Areas to mitigate the 100-year flows to existing conditions. Detention basins 1 (South) and 2 (North) are combination basins that allow for the infiltration of the LID design capture volume and provide supplemental flood storage for larger storm events.

A unit hydrograph analysis was performed to optimize the size of the detention basins and meet the mitigation criteria. The residential areas were assumed to have 60% impervious surfaces, which includes roofs, concrete walkways and roads. Parks and recreational areas were assumed to be 25% impervious, and roads 90% impervious (Appendix C-4).

Proposed detention basins 1 (South) and 2 (North) will have a storage capacity of 3.46 acre-feet and 1.58 acre-feet at the top of the outlet riser, respectively. An emergency spillway at least 2 feet above the grate inlet for sufficient free-board will also be included in the case that the basin overtops.

The bottom infiltration infiltrating area are approximately of 15,000 sq. ft and 6,800 sq. ft. for the detention basins 1 and 2 respectively. The general outlet structure in each of the basins will consist of an orifice at a height of 4 feet as determined based on local infiltration rates and required drawdown time of 48 hours for the WQV to completely infiltrate. At basin stages greater than 4 feet the basins will gradually release the captured flood control volume via the orifice and a grate inlet 1 foot above the orifice.

5.2 Offsite Drainage Improvements

Street flow from the planned extension of Domestic Avenue in the south will be captured and conveyed via storm drain network to the Detention Basin 1 (South). Street flow that flows north on Texas Street will be prevented from running onto Domestic Ave site by a proposed cross gutter at the intersection with of Domestic Ave.

Street flow that flows north on Texas Street will runoff to the shoulder and comingle with runoff from the offsite agricultural field east of the project site. Runoff from these agricultural fields (10% impervious) are considered offsite flows and will surface flow westward to be captured by a agricultural drainage ditch that runs north along the east side of the residential development.

At the northwest corner of the adjacent agricultural fields, a proposed inlet will capture all runoff from the agricultural drainage ditch and convey it west in a proposed offsite storm drain. Offsite street flow from the unimproved westbound lane of Street N will also be captured through an inlet and be conveyed in the offsite storm drain line. The offsite drainage line will outlet directly into the concrete-lined drainage channel that conveys runoff to the Santa Ana River. With the proposed offsite storm drain, no offsite runoff will comingle with onsite runoff.

It should be noted that street flows on Domestic Ave as well as the southern half of Street N will be captured by the onsite storm drain infrastructure and routed to detention basins 1 (South) and 2 (North), respectively.

6.0 Results

The hydrologic analysis performed demonstrate that the comparison between existing and proposed conditions of both 10- and 100-year peak discharges are decreased in the proposed condition with the implementation of infiltration/detention basins. Summary of the hydrology analysis is found in the table below.

Table 1- *Results from AES*

Condition	Q100 (cfs)	Q10 (cfs)	Method used
Existing	130.22	59.73	Rational
Proposed without basins (unmitigated)	155.53	80.81	Rational
Proposed with basins (mitigated)	92.11	47.57	Unit Hydrograph

Appendix C-5 shows the stage outflow relationship entered into AES for the unit hydrograph method for the main detention basin. Storage values were obtained from proposed grading and outflow was calculated using the orifice equation for the orifice and weir equation.

Grading improvements and the inclusion of the detention systems are anticipated to meet the drainage criteria.

Appendix A

Maps

A-1: Vicinity Map

A-2: Existing Hydrology Map

A-3: Proposed Hydrology Map

PROJECT
LOCATION

ALABAMA STREET

PIONEER AVENUE



DOMESTIC
AVENUE



CLEMENTINE STREET

STREET

210

TENNESSEE ST.

TEXAS

WEBSTER SREET

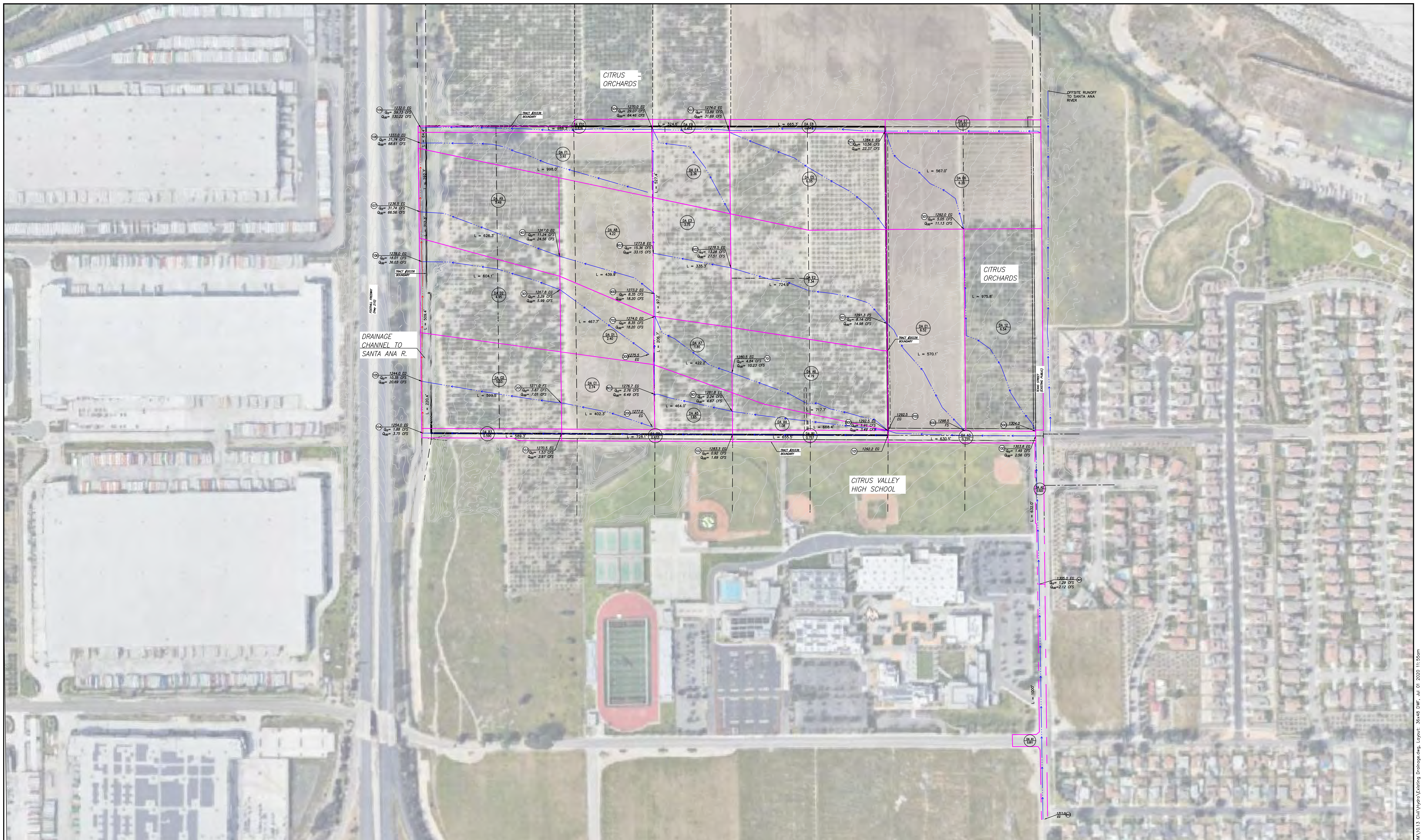
SAN BERNARDINO

AVENUE

10

VICINITY MAP

NOT TO SCALE



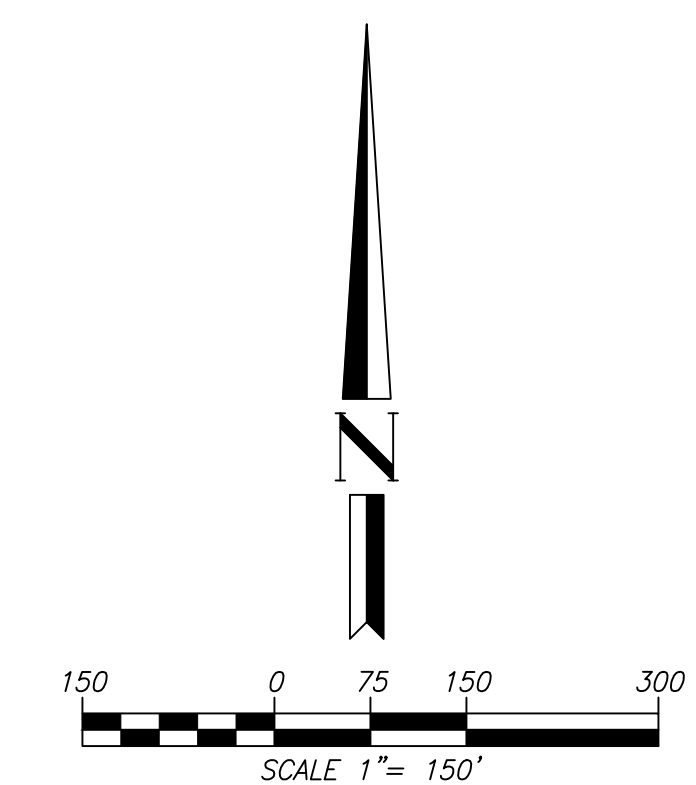
LEGEND

- OVERLAND FLOW —
- DRAINAGE AREA BOUNDARY —
- SUBAREA & ACREAGE E-1
XX.X
- NODE ELEVATION & NUMBER XX
XX EG
Q₁₀ = XX CFS
Q₁₀₀ = XX CFS

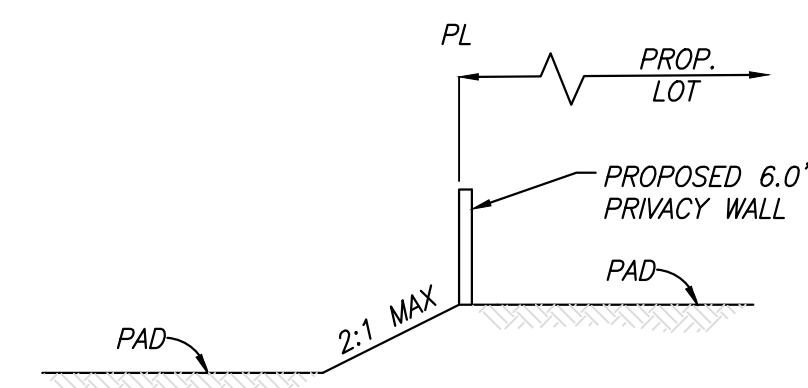
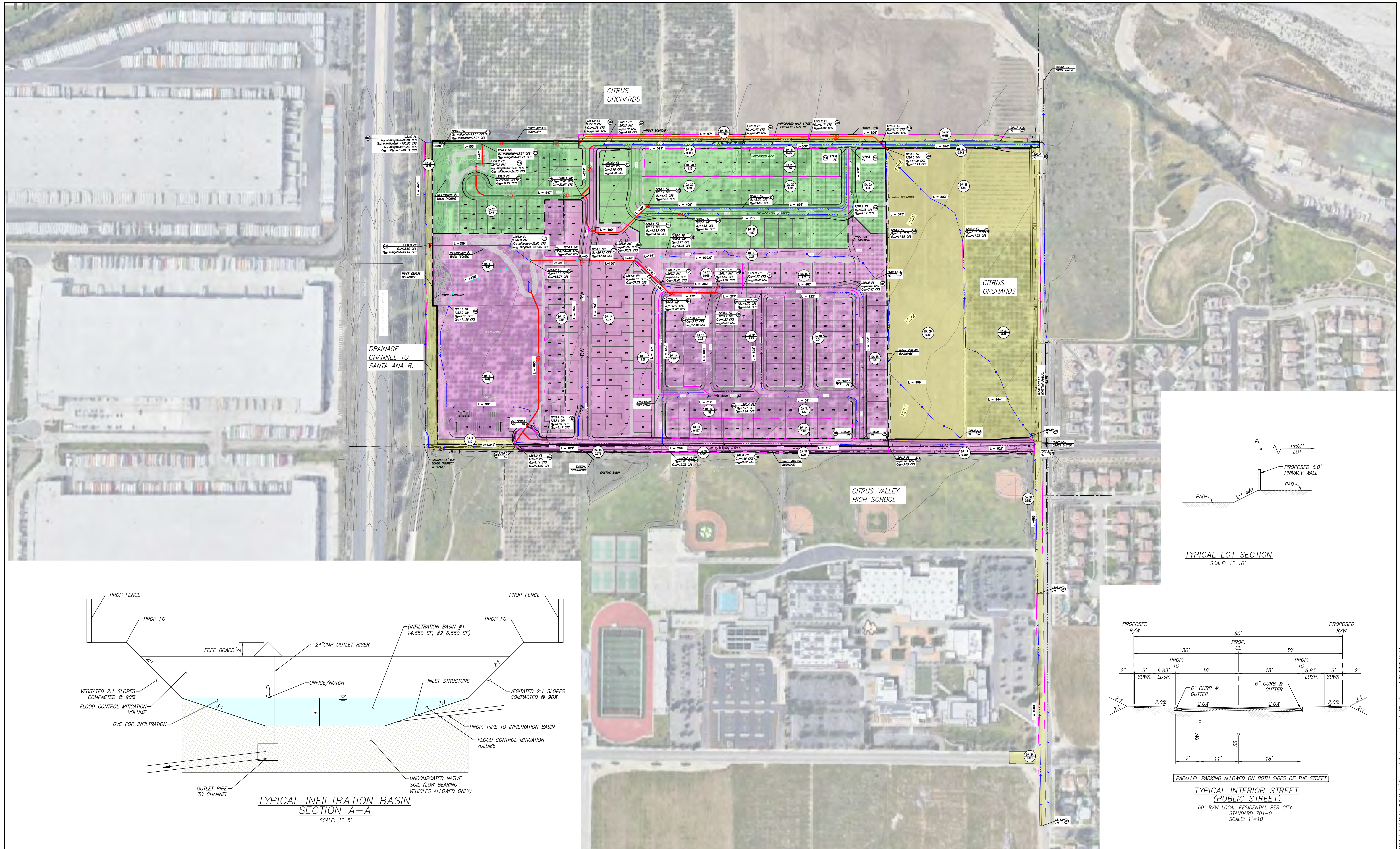
IMPERVIOUS AREA = 1.3 AC
 PERVIOUS AREA = 81.8 AC
 TOTAL AREA = 83.1 AC

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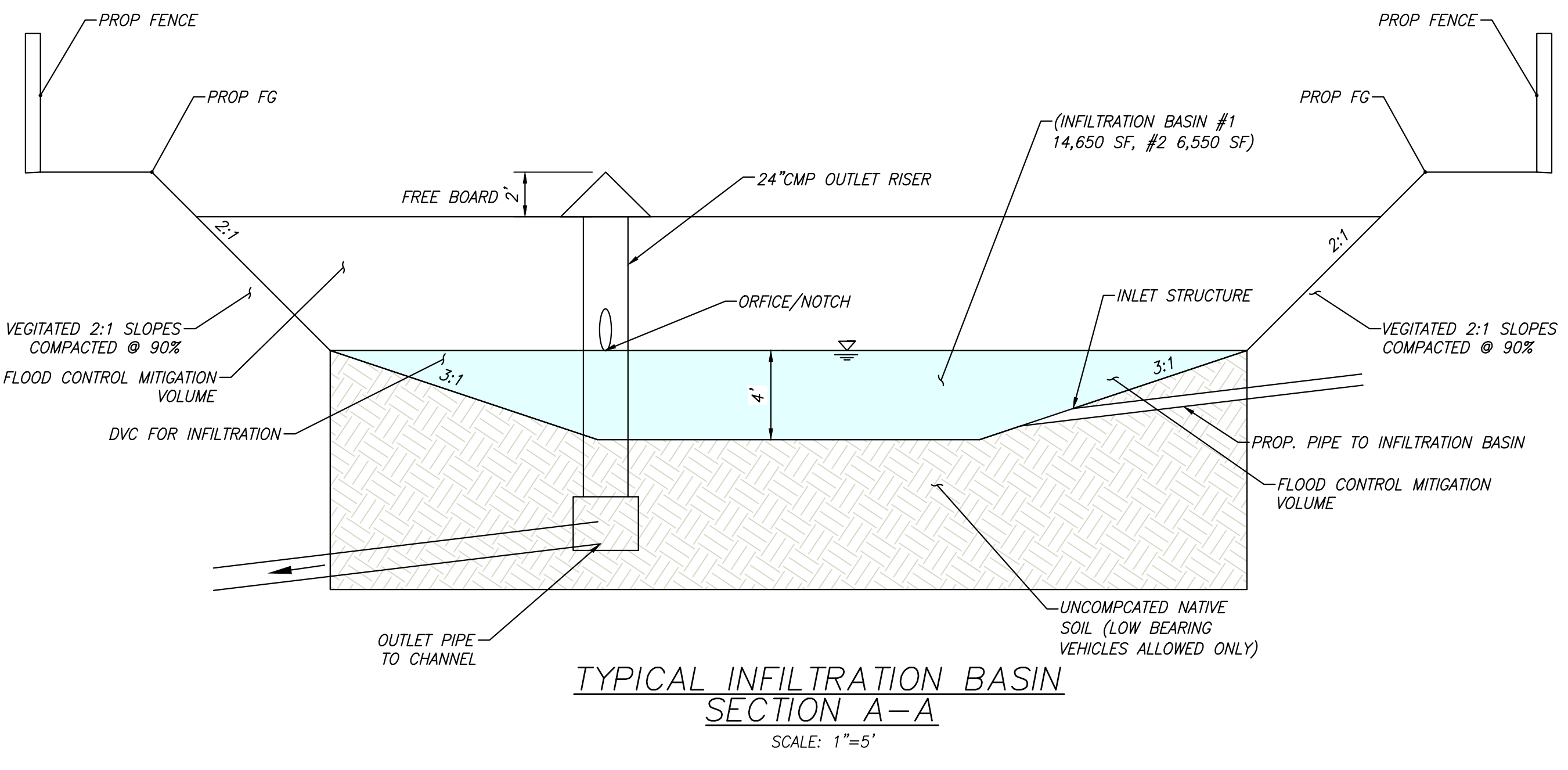
PREPARED FOR:
MLC Holdings, Inc.



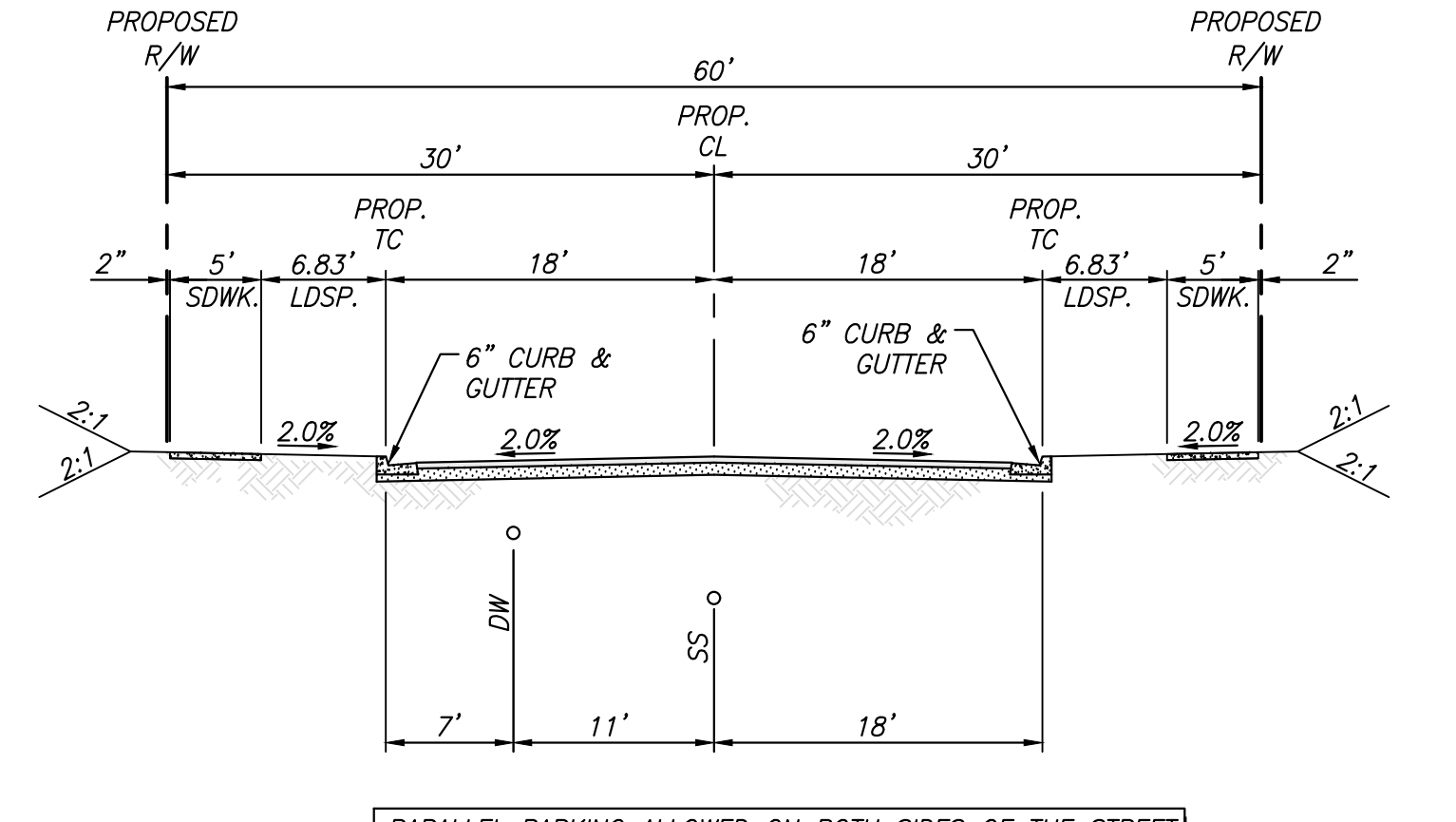
CITRUS VALLEY
 EXISTING DRAINAGE EXHIBIT
 REDLANDS, CA



TYPICAL LOT SECTION
SCALE: 1"=10'



TYPICAL INFILTRATION BASIN
SECTION A-A
SCALE: 1"=5'

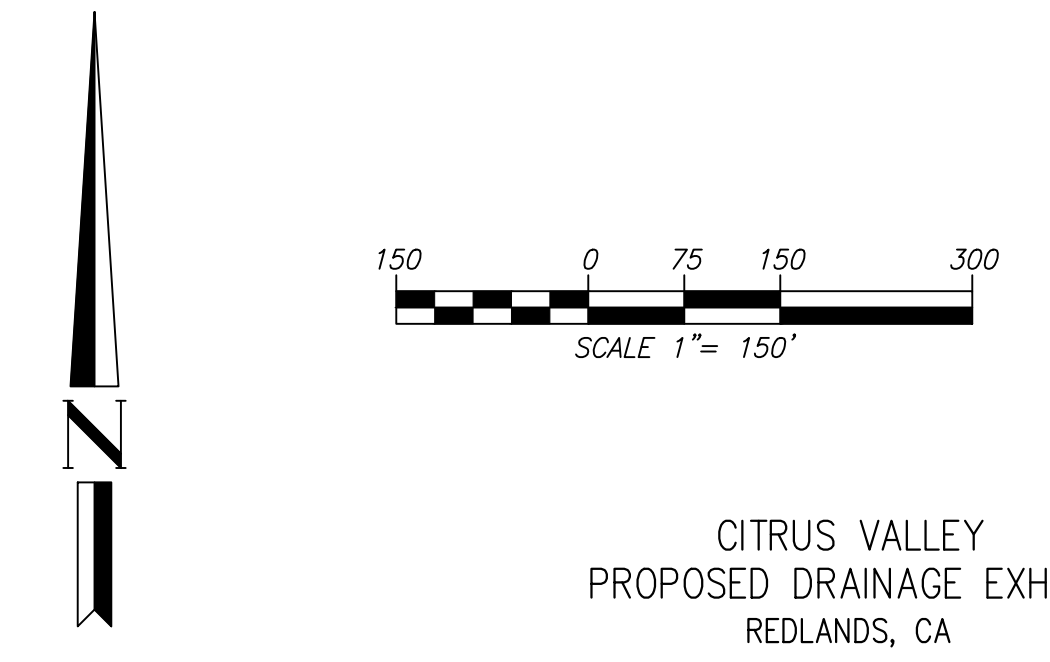
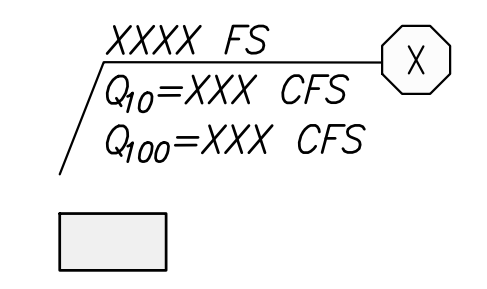


PARALLEL PARKING ALLOWED ON BOTH SIDES OF THE STREET
TYPICAL INTERIOR STREET
(PUBLIC STREET)
60' R/W LOCAL RESIDENTIAL PER CITY
STANDARD 701-0
SCALE: 1"=10'

IMPERVIOUS AREA = 37.8 AC APPROX.
PERVIOUS AREA = 47.6 AC APPROX.
TOTAL DRAINAGE AREA TO CHANNEL = 85.4 AC
OFFSITE AREA = 23.1 AC
NOTE: NO RUNON TO SITE FROM OFFSITE AREAS

LEGEND

- OVERLAND FLOW → DA 1
- PIPE FLOW → DA 2
- SUBAREA & ACREAGE E-1
XX.X DA 3 (OFFSITE)
- DRAINAGE AREA BOUNDARY
- HYDROLOGIC NODE & ELEV.
- BASIN SLOPES



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CITRUS VALLEY
PROPOSED DRAINAGE EXHIBIT
REDLANDS, CA

Appendix B

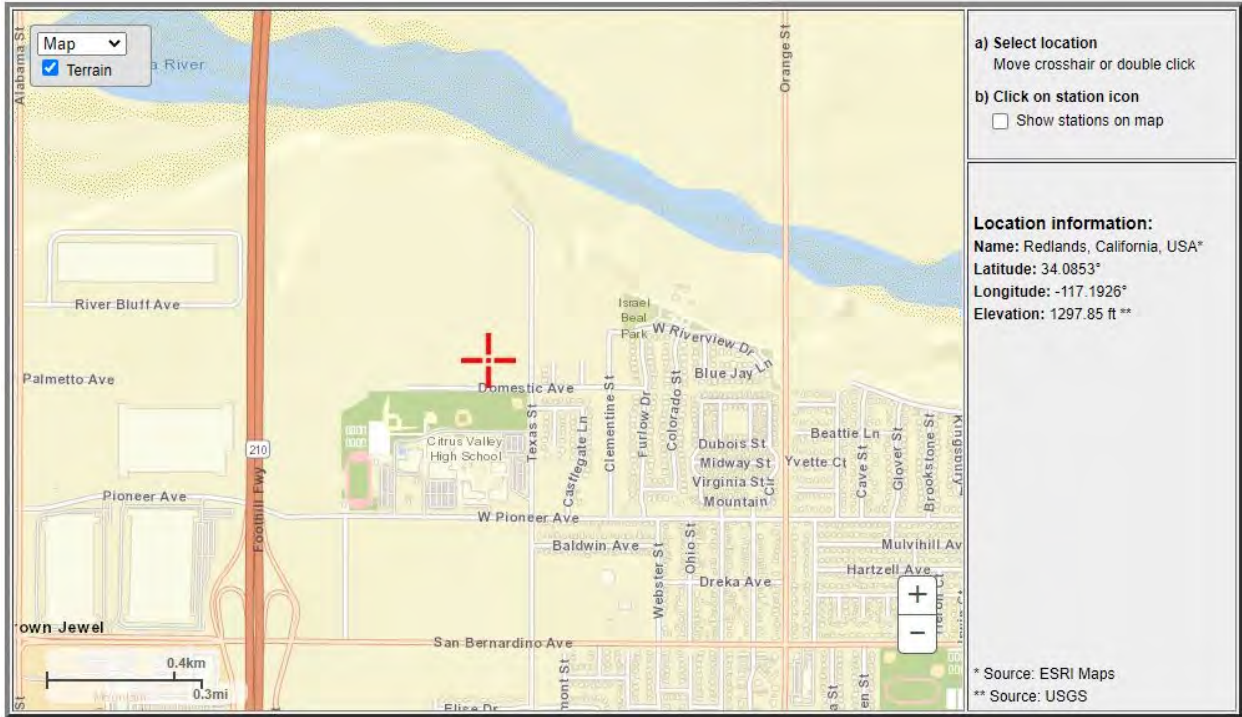
Hydrology Parameters

B-1: NOAA Atlas 14 Precipitation Statistics

B-2: Geotechnical Investigations Report

B-3: Soil Report by Geotechnical Engineer

B-4: San Bernardino WAP Report



POINT PRECIPITATION FREQUENCY (PF) ESTIMATES
 WITH 90% CONFIDENCE INTERVALS AND SUPPLEMENTARY INFORMATION
 NOAA Atlas 14, Volume 6, Version 2

PF tabular

PF graphical

Supplementary information

 Print page

PDS-based precipitation frequency estimates with 90% confidence intervals (in inches/hour)¹

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.19 (0.984-1.44)	1.54 (1.28-1.87)	2.02 (1.67-2.46)	2.41 (1.98-2.96)	2.95 (2.35-3.76)	3.40 (2.64-4.40)	3.84 (2.92-5.12)	4.32 (3.18-5.93)	4.99 (3.52-7.14)	5.52 (3.76-8.18)
10-min	0.852 (0.708-1.03)	1.10 (0.918-1.34)	1.45 (1.19-1.76)	1.73 (1.42-2.12)	2.12 (1.68-2.69)	2.43 (1.89-3.16)	2.75 (2.09-3.67)	3.10 (2.28-4.25)	3.58 (2.52-5.11)	3.95 (2.69-5.66)
15-min	0.688 (0.572-0.836)	0.892 (0.740-1.08)	1.16 (0.964-1.42)	1.39 (1.14-1.71)	1.71 (1.36-2.17)	1.96 (1.52-2.55)	2.22 (1.68-2.96)	2.50 (1.84-3.42)	2.88 (2.03-4.12)	3.19 (2.17-4.73)
30-min	0.512 (0.426-0.620)	0.662 (0.550-0.806)	0.866 (0.718-1.06)	1.03 (0.850-1.27)	1.27 (1.01-1.62)	1.46 (1.13-1.89)	1.65 (1.25-2.20)	1.86 (1.37-2.55)	2.14 (1.51-3.07)	2.37 (1.62-3.52)
60-min	0.370 (0.308-0.449)	0.480 (0.399-0.583)	0.627 (0.519-0.764)	0.749 (0.616-0.921)	0.920 (0.730-1.17)	1.06 (0.820-1.37)	1.20 (0.906-1.59)	1.34 (0.990-1.84)	1.55 (1.10-2.22)	1.72 (1.17-2.55)
2-hr	0.264 (0.220-0.320)	0.339 (0.282-0.412)	0.438 (0.364-0.534)	0.522 (0.428-0.641)	0.636 (0.504-0.808)	0.725 (0.564-0.942)	0.817 (0.620-1.09)	0.914 (0.672-1.25)	1.05 (0.738-1.50)	1.15 (0.784-1.71)
3-hr	0.216 (0.180-0.262)	0.276 (0.230-0.336)	0.357 (0.296-0.435)	0.423 (0.347-0.520)	0.514 (0.408-0.654)	0.585 (0.455-0.760)	0.658 (0.499-0.876)	0.734 (0.540-1.01)	0.838 (0.591-1.20)	0.920 (0.627-1.36)
6-hr	0.152 (0.126-0.184)	0.194 (0.161-0.235)	0.249 (0.207-0.304)	0.295 (0.242-0.362)	0.357 (0.283-0.454)	0.405 (0.315-0.526)	0.454 (0.344-0.605)	0.505 (0.372-0.693)	0.575 (0.406-0.822)	0.629 (0.429-0.932)
12-hr	0.101 (0.084-0.122)	0.129 (0.107-0.157)	0.166 (0.138-0.203)	0.197 (0.162-0.242)	0.238 (0.189-0.303)	0.270 (0.210-0.351)	0.302 (0.229-0.402)	0.335 (0.247-0.459)	0.380 (0.268-0.543)	0.415 (0.282-0.615)
24-hr	0.068 (0.060-0.078)	0.088 (0.078-0.101)	0.114 (0.100-0.132)	0.135 (0.118-0.157)	0.163 (0.138-0.197)	0.185 (0.154-0.228)	0.207 (0.168-0.261)	0.230 (0.181-0.297)	0.260 (0.197-0.351)	0.284 (0.208-0.396)
2-day	0.042 (0.037-0.048)	0.055 (0.049-0.063)	0.072 (0.064-0.083)	0.086 (0.075-0.100)	0.105 (0.089-0.127)	0.120 (0.100-0.148)	0.135 (0.109-0.170)	0.151 (0.119-0.195)	0.172 (0.130-0.232)	0.188 (0.138-0.262)
3-day	0.030 (0.027-0.035)	0.040 (0.036-0.046)	0.053 (0.047-0.062)	0.064 (0.056-0.075)	0.079 (0.067-0.096)	0.091 (0.076-0.112)	0.103 (0.084-0.130)	0.116 (0.092-0.150)	0.134 (0.101-0.180)	0.147 (0.108-0.206)
4-day	0.024 (0.022-0.028)	0.033 (0.029-0.038)	0.044 (0.039-0.051)	0.053 (0.047-0.062)	0.066 (0.056-0.080)	0.076 (0.063-0.094)	0.087 (0.070-0.109)	0.098 (0.077-0.126)	0.113 (0.085-0.152)	0.125 (0.092-0.174)
7-day	0.016 (0.014-0.019)	0.022 (0.019-0.025)	0.029 (0.026-0.034)	0.036 (0.031-0.042)	0.045 (0.038-0.054)	0.052 (0.043-0.063)	0.059 (0.048-0.074)	0.066 (0.052-0.086)	0.077 (0.058-0.104)	0.085 (0.062-0.119)
10-day	0.012 (0.011-0.014)	0.017 (0.015-0.019)	0.023 (0.020-0.026)	0.027 (0.024-0.032)	0.034 (0.029-0.041)	0.040 (0.033-0.049)	0.045 (0.037-0.057)	0.051 (0.040-0.066)	0.060 (0.045-0.080)	0.066 (0.048-0.092)
20-day	0.008 (0.007-0.009)	0.010 (0.009-0.012)	0.014 (0.012-0.016)	0.017 (0.015-0.020)	0.022 (0.018-0.026)	0.025 (0.021-0.031)	0.029 (0.023-0.036)	0.033 (0.026-0.042)	0.038 (0.029-0.052)	0.043 (0.031-0.059)
30-day	0.006 (0.005-0.007)	0.008 (0.007-0.009)	0.011 (0.010-0.013)	0.014 (0.012-0.016)	0.017 (0.015-0.021)	0.020 (0.017-0.025)	0.023 (0.019-0.029)	0.026 (0.021-0.034)	0.030 (0.023-0.041)	0.034 (0.025-0.047)
45-day	0.005 (0.004-0.005)	0.006 (0.006-0.007)	0.009 (0.008-0.010)	0.011 (0.009-0.013)	0.014 (0.012-0.016)	0.016 (0.013-0.020)	0.018 (0.015-0.023)	0.021 (0.016-0.027)	0.024 (0.018-0.033)	0.027 (0.020-0.038)
60-day	0.004 (0.004-0.005)	0.006 (0.005-0.007)	0.008 (0.007-0.009)	0.009 (0.008-0.011)	0.012 (0.010-0.014)	0.014 (0.011-0.017)	0.016 (0.013-0.020)	0.018 (0.014-0.023)	0.021 (0.016-0.028)	0.023 (0.017-0.033)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

Estimates from the table in CSV format:

POINT PRECIPITATION FREQUENCY (PF) ESTIMATES

WITH 90% CONFIDENCE INTERVALS AND SUPPLEMENTARY INFORMATION
NOAA Atlas 14, Volume 6, Version 2

PF tabular

PF graphical

Supplementary information

Print page

PDS-based precipitation frequency estimates with 90% confidence intervals (in inches)¹

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.099 (0.082-0.120)	0.128 (0.107-0.156)	0.168 (0.139-0.205)	0.201 (0.165-0.247)	0.246 (0.196-0.313)	0.283 (0.220-0.367)	0.320 (0.243-0.427)	0.360 (0.265-0.494)	0.416 (0.293-0.595)	0.460 (0.313-0.682)
10-min	0.142 (0.118-0.172)	0.184 (0.153-0.224)	0.241 (0.199-0.293)	0.288 (0.236-0.354)	0.353 (0.280-0.449)	0.405 (0.315-0.526)	0.459 (0.348-0.612)	0.516 (0.380-0.708)	0.596 (0.420-0.852)	0.659 (0.449-0.977)
15-min	0.172 (0.143-0.209)	0.223 (0.185-0.271)	0.291 (0.241-0.355)	0.348 (0.286-0.428)	0.427 (0.339-0.543)	0.490 (0.381-0.637)	0.555 (0.421-0.740)	0.624 (0.460-0.856)	0.720 (0.503-1.03)	0.797 (0.543-1.18)
30-min	0.256 (0.213-0.310)	0.331 (0.275-0.403)	0.433 (0.359-0.528)	0.517 (0.425-0.636)	0.635 (0.504-0.808)	0.729 (0.566-0.947)	0.826 (0.626-1.10)	0.928 (0.684-1.27)	1.07 (0.756-1.53)	1.19 (0.808-1.76)
60-min	0.370 (0.308-0.449)	0.480 (0.399-0.583)	0.627 (0.519-0.764)	0.749 (0.616-0.921)	0.920 (0.730-1.17)	1.06 (0.820-1.37)	1.20 (0.906-1.59)	1.34 (0.990-1.84)	1.55 (1.10-2.22)	1.72 (1.17-2.55)
2-hr	0.528 (0.439-0.641)	0.678 (0.563-0.824)	0.877 (0.727-1.07)	1.04 (0.857-1.28)	1.27 (1.01-1.62)	1.45 (1.13-1.88)	1.63 (1.24-2.18)	1.83 (1.35-2.51)	2.09 (1.48-3.00)	2.30 (1.57-3.41)
3-hr	0.649 (0.540-0.788)	0.830 (0.690-1.01)	1.07 (0.888-1.31)	1.27 (1.04-1.56)	1.54 (1.23-1.96)	1.76 (1.37-2.28)	1.98 (1.50-2.63)	2.20 (1.62-3.02)	2.52 (1.76-3.60)	2.76 (1.88-4.09)
6-hr	0.908 (0.756-1.10)	1.16 (0.964-1.41)	1.49 (1.24-1.82)	1.77 (1.45-2.17)	2.14 (1.70-2.72)	2.42 (1.89-3.15)	2.72 (2.06-3.62)	3.03 (2.23-4.15)	3.44 (2.43-4.92)	3.77 (2.57-5.58)
12-hr	1.21 (1.01-1.47)	1.56 (1.29-1.89)	2.01 (1.66-2.44)	2.37 (1.95-2.91)	2.87 (2.28-3.65)	3.25 (2.53-4.22)	3.64 (2.76-4.85)	4.04 (2.97-5.53)	4.58 (3.23-6.55)	5.00 (3.40-7.40)
24-hr	1.63 (1.44-1.88)	2.11 (1.86-2.43)	2.73 (2.41-3.16)	3.24 (2.83-3.77)	3.92 (3.32-4.72)	4.44 (3.69-5.46)	4.97 (4.03-6.26)	5.51 (4.34-7.13)	6.24 (4.72-8.42)	6.81 (4.98-9.49)
2-day	2.01 (1.78-2.32)	2.64 (2.33-3.04)	3.46 (3.05-4.01)	4.14 (3.62-4.82)	5.05 (4.28-6.09)	5.76 (4.78-7.09)	6.48 (5.25-8.16)	7.23 (5.70-9.36)	8.24 (6.24-11.1)	9.03 (6.61-12.6)
3-day	2.18 (1.93-2.51)	2.89 (2.56-3.34)	3.85 (3.39-4.45)	4.63 (4.05-5.40)	5.72 (4.85-6.89)	6.57 (5.45-8.08)	7.45 (6.03-9.38)	8.36 (6.59-10.8)	9.62 (7.28-13.0)	10.6 (7.76-14.8)
4-day	2.35 (2.08-2.71)	3.15 (2.78-3.63)	4.21 (3.72-4.87)	5.10 (4.46-5.95)	6.34 (5.37-7.63)	7.31 (6.07-8.99)	8.32 (6.74-10.5)	9.37 (7.39-12.1)	10.8 (8.20-14.6)	12.0 (8.78-16.7)
7-day	2.71 (2.40-3.13)	3.67 (3.24-4.23)	4.95 (4.36-5.72)	6.01 (5.26-7.01)	7.50 (6.35-9.03)	8.66 (7.19-10.7)	9.88 (8.00-12.4)	11.2 (8.79-14.4)	12.9 (9.78-17.4)	14.3 (10.5-20.0)
10-day	2.94 (2.60-3.38)	3.99 (3.53-4.60)	5.41 (4.77-6.25)	6.59 (5.77-7.68)	8.24 (6.98-9.92)	9.54 (7.92-11.7)	10.9 (8.82-13.7)	12.3 (9.71-15.9)	14.3 (10.8-19.3)	15.9 (11.6-22.1)
20-day	3.63 (3.21-4.18)	4.97 (4.40-5.74)	6.79 (5.99-7.86)	8.31 (7.27-9.69)	10.4 (8.85-12.6)	12.1 (10.1-14.9)	13.9 (11.3-17.5)	15.8 (12.4-20.4)	18.4 (13.9-24.7)	20.4 (14.9-28.5)
30-day	4.27 (3.78-4.92)	5.87 (5.19-6.77)	8.03 (7.08-9.29)	9.84 (8.61-11.5)	12.4 (10.5-14.9)	14.4 (12.0-17.7)	16.5 (13.4-20.8)	18.8 (14.8-24.3)	21.9 (16.6-29.6)	24.4 (17.9-34.1)
45-day	5.11 (4.53-5.89)	7.00 (6.19-8.07)	9.56 (8.44-11.1)	11.7 (10.3-13.7)	14.8 (12.5-17.8)	17.2 (14.3-21.1)	19.7 (16.0-24.8)	22.4 (17.7-29.0)	26.2 (19.8-35.3)	29.2 (21.4-40.8)
60-day	5.99 (5.30-6.90)	8.15 (7.21-9.40)	11.1 (9.78-12.8)	13.6 (11.9-15.8)	17.1 (14.5-20.6)	19.9 (16.5-24.4)	22.8 (18.5-28.7)	25.9 (20.4-33.5)	30.3 (22.9-40.8)	33.8 (24.7-47.1)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Estimates from the table in CSV format:

February 10, 2020
J.N. 18-345

MLC HOLDINGS, INC.
5 Peters Canyon Road, Suite 310
Irvine, California 92606

Attention: Mr. Steven Cook

Subject: Preliminary Infiltration Test Results, *Citrus Valley Project*, North of West Domestic Avenue and West of Texas Street, City of Redlands, San Bernardino County, California

Dear Mr. Cook:

In accordance with your request, **Petra Geosciences, Inc. (Petra)** has completed preliminary field infiltration rate testing within the two proposed WQMP basins (Lots A and B), located in the Citrus Valley project site in the city of Redlands, California. Our preliminary percolation testing was performed to evaluate infiltration rates for preliminary design of proposed storm water retention basins in the noted planning areas, see Figure 1. This report presents the results of the falling-head percolation tests performed at three locations within the subject site to evaluate the infiltration rate of native soils in the zone approximately 5 feet below the bottom of the proposed basin floors.

The borings for the percolation tests were drilled with a hollow-stem auger drill rig to depths ranging from approximately 10 feet to 15 feet below the ground surface, which corresponds to approximately 5 feet below the anticipated floor elevation of potential retention basins. Natural alluvial soils were encountered in the test borings, generally consisting of medium dense fine- to medium-grained silty sands and sandy silt. Laboratory sieve analysis tests of soils sampled from the bottom of each test boring are included in Appendix B. The percolation tests were conducted in the bottom $5\pm$ feet of the boreholes.

The falling-head percolation test data was utilized in determining the test infiltration rate, I_t , expressed in units of inches/hour, utilizing the Porchet Method (RCFCWCD, 2011). Field testing was conducted in a perforated-cased borehole (with pea gravel surrounding the pipe) at 10-minute intervals for a period of approximately 2 hours. Test data are attached in Appendix A. The infiltration rate, I_t , was calculated by determining the volumetric water flow through the wetted borehole surface area, expressed in terms of inches per hour. Un-factored test results are summarized in the following table.

Infiltration Test Results

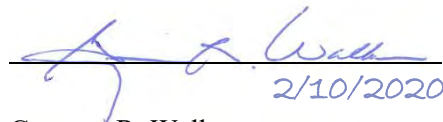
Test No.	Area Test Location	Approximate Test Zone (ft below natural grade)	Geologic Unit* / Soil Description	Infiltration Test Rate, I _t (in/hr)
P-1	Lot B	10 to 15	Silty SAND (SM)	6.8
P-2	Lot A Basin - east	10 to 15	Sandy SILT (ML)	4.8
P-3	Lot A Basin - west	5 to 10	Silty SAND (SM)	5.4

The test data indicate the subsurface native alluvial soils between 5 to 15 feet below grades exhibit a fairly consistent permeability at the three test locations with infiltration rates indicating moderate permeability. Although none of the tests indicated localized impermeability, variability is possible at other locations/depths within the site due to changes in both the material density and gradation.

This opportunity to be of service is sincerely appreciated. If you have any questions, please contact this office.

Respectfully submitted,

PETRA GEOSCIENCES, INC.


2/10/2020

Grayson R. Walker
Principal Engineer
GE 871



DJ/GRW/lv

Attachments: Figure 1 – Percolation Test Location Map
Appendix A – Percolation Test Data Sheets
Appendix B – Sieve Analysis Tests

Distribution: (1) Addressee
(1) Mr. Remi Candaele, Huitt-Zollars, Inc

W:\2014-2019\2018\300\18-345 MLC Holdings (46 acres, Citrus Valley, Redlands)\Reports\18-345 110 Preliminary Infiltration Testing.docx



Reference: Huitt-Zoliars, Inc., Conceptual Site Plan dated 1/24/20

PETRA GEOSCIENCES, INC.

40880 County Center Drive, Suite M
 Temecula, California 92591
 Phone: (951) 600-9271
 COSTA MESA TEMECULA VALENCIA PALM DESERT CORONA

Percolatoin Test Location Map

Citrus Valley Project
 City of Redlands, California



DATE: February 2020

J.N.: 18-345

Figure 1

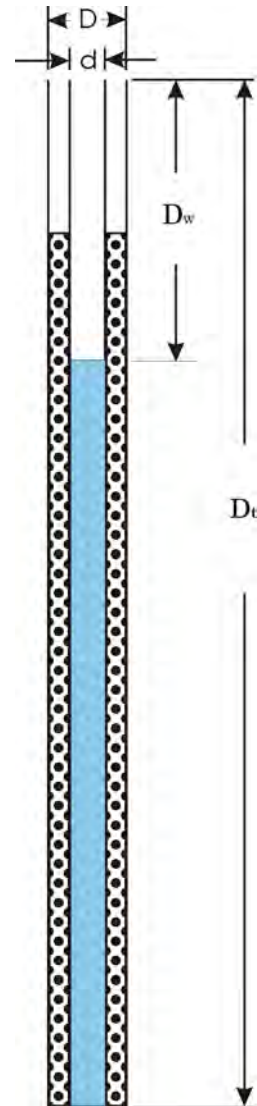
APPENDIX A

PERCOLATION TEST DATA SHEETS

Test Number: P-1
Deep Percolation Test Method

Total Depth of Boring, D_t (ft): 15
 Diameter of Hole, D (in): 8
 Diameter of Pipe, d (in): 2
 Agg. Correction (% Voids): 42
 Pre-soak depth (ft): 45

Time Interval (min)	Depth to Water Surface D_w (ft)		Change in Head (in)	Perc. Rate (min/in)	Perc. Rate (gal/day/ft ²)
	1st Reading	2nd Reading			
30	10.08	14.25	50.04	0.60	37.94
30	10.08	14.17	49.08	0.61	36.72
10	10.08	13.25	38.04	0.26	74.17
10	10.08	13.17	37.08	0.27	71.48
10	10.08	13.08	36.00	0.28	68.53
10	10.08	13.08	36.00	0.28	68.53
10	10.08	13.00	35.04	0.29	65.97
10	10.83	12.75	23.04	0.43	46.59
			0.00	#DIV/0!	#DIV/0!
			0.00	#DIV/0!	#DIV/0!
			0.00	#DIV/0!	#DIV/0!
			0.00	#DIV/0!	#DIV/0!



Percolation Rate: 0.43 min/in
46.59 gal/day/ft²

Infiltration Rate: 6.82 in/hr*
(Porchet Method)

where Infiltration Rate, $I_t = \Delta H (60r) / \Delta t (r + 2H_{avg})$

$$r = D / 2$$

$$H_o = D_t - D_o$$

$$H_f = D_t - D_f$$

$$\Delta H = \Delta D = H_o - H_f$$

$$H_{avg} = (H_o + H_f) / 2$$

*Raw Number, Does Not Include a Factor of Safety

Soil Description: (see Exploration Log)
fine SAND w/ Silt

Testing by: L.Holmes 2/05/2020

Reference: RCFCWCD, Design Handbook for LIDBMP, dated September, 2011


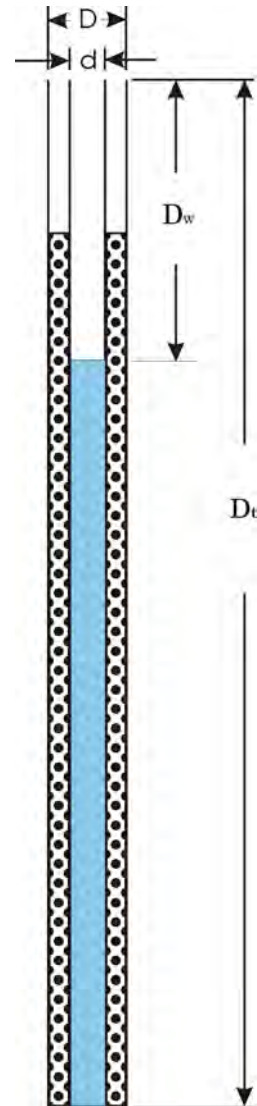
PETRA GEOSCIENCES, INC. 40880 County Center Drive, Ste. M Temecula, CA 92591 PHONE: (951) 600-9271 COSTA MESA TEMECULA VALENCIA PALM DESERT CORONA	
PERCOLATION TEST SUMMARY	
Citrus Valley Project Redlands, California	
	February 2020 J.N.: 18-345

Figure 1

Test Number: P-2
Deep Percolation Test Method

Total Depth of Boring, D_t (ft): 15
 Diameter of Hole, D (in): 8
 Diameter of Pipe, d (in): 2
 Agg. Correction (% Voids): 42
 Pre-soak depth (ft): 45

Time Interval (min)	Depth to Water Surface D_w (ft)		Change in Head (in)	Perc. Rate (min/in)	Perc. Rate (gal/day/ft ²)
	1st Reading	2nd Reading			
30	9.70	14.40	56.40	0.53	41.18
23	9.50	13.70	50.40	0.46	41.95
10	9.70	11.80	25.20	0.40	38.96
10	9.70	11.60	22.80	0.44	34.47
10	9.70	11.60	22.80	0.44	34.47
10	9.95	11.70	21.00	0.48	33.02
10	9.60	11.40	21.60	0.46	31.60
10	9.95	11.70	21.00	0.48	33.02
			0.00	#DIV/0!	#DIV/0!
			0.00	#DIV/0!	#DIV/0!
			0.00	#DIV/0!	#DIV/0!
			0.00	#DIV/0!	#DIV/0!



Percolation Rate: 0.48 min/in
33.02 gal/day/ft²

Infiltration Rate: 4.84 in/hr*
(Porchet Method)

where Infiltration Rate, $I_t = \Delta H (60r) / \Delta t (r + 2H_{avg})$

$$r = D / 2$$

$$H_o = D_t - D_o$$

$$H_f = D_t - D_f$$

$$\Delta H = \Delta D = H_o - H_f$$

$$H_{avg} = (H_o + H_f) / 2$$

*Raw Number, Does Not Include a Factor of Safety

Soil Description: (see Exploration Log)
Silty SAND

Testing by: L.Holmes 2/05/2020

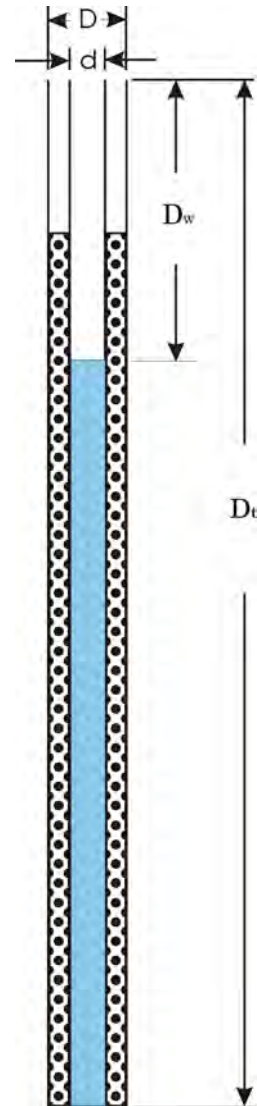
Reference: RCFCWCD, Design Handbook for LIDBMP, dated September, 2011

PETRA GEOSCIENCES, INC.		
40880 County Center Drive, Ste. M Temecula, CA 92591 PHONE: (951) 600-9271		
COSTA MESA	TEMECULA	VALENCIA PALM DESERT CORONA
PERCOLATION TEST SUMMARY		
Citrus Valley Project Redlands, California		
	February 2020 J.N.: 18-345	Figure 2

Test Number: P-3
Deep Percolation Test Method

Total Depth of Boring, D_t (ft): 10
 Diameter of Hole, D (in): 8
 Diameter of Pipe, d (in): 2
 Agg. Correction (% Voids): 42
 Pre-soak depth (ft): 45

Time Interval (min)	Depth to Water Surface D_w (ft)		Change in Head (in)	Perc. Rate (min/in)	Perc. Rate (gal/day/ft ²)
	1st Reading	2nd Reading			
28	4.50	9.30	57.60	0.49	43.00
7	4.80	7.90	37.20	0.19	95.07
10	4.95	7.30	28.20	0.35	47.64
10	4.85	7.05	26.40	0.38	42.75
10	4.85	6.95	25.20	0.40	40.33
10	4.80	6.80	24.00	0.42	37.53
10	4.90	6.90	24.00	0.42	38.40
10	4.85	6.80	23.40	0.43	36.80
			0.00	#DIV/0!	#DIV/0!
			0.00	#DIV/0!	#DIV/0!
			0.00	#DIV/0!	#DIV/0!
			0.00	#DIV/0!	#DIV/0!



Percolation Rate: 0.43 min/in
36.80 gal/day/ft²

Infiltration Rate: 5.39 in/hr*
 (Porchet Method)

where Infiltration Rate, $I_t = \Delta H (60r) / \Delta t (r + 2H_{avg})$

$$r = D / 2$$

$$H_o = D_t - D_o$$

$$H_f = D_t - D_f$$

$$\Delta H = \Delta D = H_o - H_f$$

$$H_{avg} = (H_o + H_f) / 2$$

*Raw Number, Does Not Include a Factor of Safety

Soil Description: (see Exploration Log)
 Silty SAND

Testing by: L.Holmes 2/05/2020

Reference: RCFCWCD, Design Handbook for LIDBMP, dated September, 2011

PETRA GEOSCIENCES, INC.		
40880 County Center Drive, Ste. M Temecula, CA 92591 PHONE: (951) 600-9271		
COSTA MESA	TEMECULA	VALENCIA PALM DESERT CORONA
PERCOLATION TEST SUMMARY		
Citrus Valley Project Redlands, California		
	February 2020 J.N.: 18-345	Figure 3

APPENDIX B

SIEVE ANALYSIS TESTS

March 13, 2019
J.N. 18-345

MLC HOLDINGS, INC.
5 Peters Canyon Road, Suite 310
Irvine, California 92606

Attention: Mr. Matt Maehara

Subject: Due-Diligence/Feasibility Geotechnical Assessment, Approximately 46-Acre± Property Off West Domestic Avenue, City of Redlands, San Bernardino County, California

Dear Mr. Maehara:

In accordance with your request, **Petra Geosciences, Inc. (Petra)** has performed a geotechnical due-diligence evaluation of the subject site for development of 178 residential lots and related utility and street improvements within two undesignated tracts. This report presents our findings and professional opinions with respect to the geotechnical feasibility of the proposed development, geotechnical constraints that should be taken into consideration during development of the site and potential mitigation measures to bring the site to compliance from a geotechnical engineering viewpoint.

It must be emphasized that that this report is intended as a feasibility-level geotechnical assessment only and is based solely on a review of the referenced background geologic literature and our limited subsurface exploration and laboratory testing. As such, the contents of this report are not suitable for submittal to regulatory agencies, nor should the findings or conclusions provided herein be relied upon for earthwork, quantity calculation or procedure, or structural engineering design. This geotechnical evaluation does not address soil contamination or other environmental issues affecting the property which will be provided under separate cover.

SITE GENERAL OVERVIEW

The subject 46±-acre property is comprised of two separate blocks of parcels, a westerly, rectangular site comprised of APN's 016-703-116 and 016-703-102, and a nearly square site approximately 150 feet± to the east, comprised of APN's 016-703-104, 106-703-105, 016-703-106 and 016-703-107; see Figures 1 and 2. Both blocks are located north of West Domestic Drive and east of Highway 210, in the city of Highland. West Domestic Drive is an unimproved dirt drive along the southern boundary of the site. The site is essentially covered by a former citrus orchard which is also located to the north and east and a high school campus is located south of West Domestic Drive.

DUE DILIGENCE ASSESSMENT

Literature Review

Petra has reviewed available published and unpublished geologic/geotechnical maps and literature, as well as online aerial imagery in the general area of the project site, see references. No geotechnical reports are known to exist for this site.

Site Reconnaissance and Subsurface Investigation

A preliminary subsurface exploration program was conducted within the site by representatives of Petra on October 12, 2018. The field investigation included the excavation of 6 exploratory borings (B-1 through B-6) to approximate depths ranging from 21.5 to 51.5 feet below existing ground surface (bgs) utilizing a conventional rubber-tired drill rig. Following drilling and logging, the borings were loosely backfilled with the soil cuttings and logs of the borings are shown in Appendix A. In addition, five Cone Penetrometer Test soundings (CPT-1 through CPT-5) were advanced to depths of between approximately 53 and 65 feet below existing grade. The approximate locations of the exploratory borings and CPT soundings are shown on Figure 2. The purpose of our preliminary investigation was to evaluate the subsurface surface soil materials to determine the unsuitable soil removal depths (remedial grading) and to evaluate the potential for dynamic settlement to affect the site.

Laboratory Testing

The preliminary laboratory program consisted of testing select undisturbed and/or bulk samples of onsite native soil materials for in-situ moisture and dry density, expansion index, maximum dry density, collapse potential, 200 wash analysis and general corrosion potential (sulfate, chloride, pH, resistivity). The laboratory data is tabulated in Appendix B and the results are included in the conclusions and recommendations section herein.

FINDINGS

Proposed Development

Although there are no preliminary grading plans, the current conceptual map as shown on Figure 2 indicates the development will consist of 178 building pads for single-family residences and based on the layout of the project, two tract designations are likely. 59 Lots will be located in the westerly parcel and 119 lots will be located in the easterly parcel. Other site improvements are expected to consist of WQMP facilities such as basins, improvements to West Domestic Avenue, new in-tract streets and underground utility lines

(sewer, water, storm drain and dry utilities), an offsite sewer line, masonry block screen walls, concrete sidewalks and landscaping etc.

Site Reconnaissance

A representative of Petra conducted a site reconnaissance and performed photo documentation during the field investigation on October 12, 2018 to observe the current surface conditions at subject site. The two project sites are accessed by either West Domestic Avenue, an unimproved dirt drive along the south, or by a dirt path along the northern boundary. Highway 215 is located just to the west and a drainage channel is located between the highway right-of-way and a natural descending slope at the project's westernmost boundary. A small drainage ditch is also located in the very northwest corner of the site. A high school campus is located further to the south of Domestic Avenue.

The subject site is essentially covered by an active or recently abandoned citrus grove that include related improvements such as irrigation or water lines and windmill-type structures. It is possible that a well supporting the grove is located within the site although not observed. The parcel in between the two sites is in a similar condition as well as the property to the north and east. Several dirt paths extend thru the grove. A mature stand of trees is located within the drainage in the northwest as well as along the descending natural slope of the western boundary. The natural descending slope at the westerly site boundary appears to be heavily eroded in some areas.

Preliminary Geotechnical Field and Laboratory Results

As noted, our preliminary field investigation included the excavation of six exploratory test borings (B-1 through B-6) to depths between approximately 21.5 to 51.5 feet bgs; and five CPT tests (CPT-1 through CPT-5) to depths ranging from 53 to 65 bgs. The following presents the results of subsurface and laboratory investigations.

Hollow Stem Auger Borings

Based on our six borings, the surface of the site is generally underlain by a thin veneer of very loose topsoil on the order of 1 to 2 feet in depth. Below the surficial topsoil, native younger alluvial soil deposits were observed to the maximum depth explored of 51.5 feet bgs. These alluvial soils generally consisted of thinly to thickly interbedded sequences of dry to slightly moist sand and silty sand with low to medium density in the upper 20 to 25 feet and increasing in density with greater depth. Thin interbeds of sandy silt were occasionally encountered as well as thin gravel layers. Logs of the borings are included as Appendix A.

CPT Field Testing and Analysis

CPT’s 1, 4 and 5 were advanced to the target depth of 65 feet and CPT’s 2 and 3 encountered refusal at 53 to 61 feet likely on concentrated gravel layers. Based on the CPT field data, the site is generally underlain by sequences of thinly to thickly bedded deposits consisting predominantly of sand and silty sand with minor thin beds of sandy silt. Density appeared to be generally low in the upper 35 to 40 feet with greater density below. Analysis of the CPT results was performed using Cliq liquefaction analysis software by GeoLogismiki following the guidelines contained in Special Publication 117A published by the California Geological Survey (1997, Revised 2008).

The result of our analysis indicates that the site is not susceptible to seismically induced liquefaction settlements; however, is susceptible to seismically induced dry sand/dynamic settlements. Based on our analysis, total liquefaction induced and dry sand settlement can range from 4 to 6 inches at the locations studied with a differential settlement of 2 inches. This represents a relatively uniform settlement potential across the site (see Table 1 below). It should be noted that the following results are for “free field” condition and the effects of the proposed structures and improvements may impact the predicted results.

TABLE 1
Free Field Seismic Settlement

CPT Number	Unsaturated Sandy Soil Settlement, in.	Liquefaction Settlement, in.	Total Settlement, in.
CPT-1	5 ½ - 6	< ½	≤ 6
CPT-2	5 ½ - 6	< ½	≤ 6
CPT-3	3 ½ - 4	< ½	≤ 4
CPT-4	4 ½ - 5	< ½	≤ 5
CPT-5	4 ½ - 5	< ½	≤ 5

The calculated liquefaction settlement is based on the occurrence of the design earthquake when groundwater is at its assumed historic high elevation. Typical tolerable level of total seismic settlement adopted by local and state codes varies from 4 to 6 inches. As such, our analysis shows that the site settlement is acceptable for liquefaction and dry sand settlement. It should be pointed out that the potential for concurrence of historic high groundwater level and design earthquake is low to moderate. As stated in the next section, the return to historic high ground water appears to be unlikely. Therefore, the total liquefaction settlement is anticipated to be less than those provided in the above table.

In the literature, prediction of the seismic settlement for unsaturated sandy soils, referred to as “dry sand” settlement, is based on observation of performance of 5 sites that were comprised of clean sands (i.e., sands with 5 percent fines or less). However, the shallow site soils, above the assumed historic high ground water level, are comprised of sands with substantial amounts of fines. This influences (reduces) the settlement potential under a seismic event. To overcome this, the measured parameters of soils with fines are first converted to clean sand values and then will be used in the predictive routines. This is an indirect approach and, therefore, lacks the performance-based verification requirements. For this reason, some review agencies do not require “dry sand” settlement calculations as a part of their approval process.

For the subject site, the total seismic settlement is considered to be within the tolerable range and mitigation of the adverse impact of 1 to 2 inches of differential settlement on proposed structures may include post tensioned slabs along with the structural engineer’s design calculations.

Laboratory Tests

Limited laboratory testing was conducted on various representative fill samples collected from drill rig locations for engineering and classification properties. The in-situ moisture and dry density results are indicated on the boring logs in Appendix A. The fill soils in the upper 5 feet across the site was found to generally consist of very dry to slightly moist sand to silty sand that have a very low expansion potential (EI of 2). Lab testing found site soils to have a negligible corrosion potential to concrete materials (soluble sulfate of 0.006 percent), very low exposure to chlorides (84 mg/L) and are considered moderately corrosive to buried metallic elements (soil pH of 7.0 and a minimum resistivity of 6,700 ohm-cm). Maximum dry density and optimum moisture content had a value of 124.0 pcf at 7.0 percent optimum moisture content. Collapse testing of the native alluvium soils indicated a collapse potential generally on the order of 0.15 to 0.45 percent indicating a relatively low collapse potential. The tabulated laboratory data is also included in Appendix B.

Compressible/Collapsible Soils

Based on our borings and laboratory testing, the existing soils, including all topsoil and the upper portions of low-density and dry alluvial soils, are considered unsuitable for support of proposed fills, structures, pavement or other improvements and should be removed to underlying competent alluvial soils and replaced as properly compacted fill. Based on our boring data, the upper 6 feet of site soils should be uniformly removed to competent alluvium and then the bottom excavation should be tested in the field. If the natural bottom excavation is found to have a minimum of 85 percent in-situ relative density, then the bottom surface may be properly processed to at least 12 inches in depth by moisture content to at least 2

percent above optimum moisture content and recompacted to at least 90 percent relative compaction. Then engineered fill placement may commence to design grades. Localized areas of deeper excavation/removal of unsuitable soils may be necessary and contingencies should be planned for.

Groundwater

Groundwater was not encountered in our borings or CPT's to the maximum explored depth of approximately 65 feet below grade. In addition, California Department of Water Resources website indicated that recent groundwater levels since 1990 in the nearby area are greater than 130 feet bgs. Groundwater may have been as shallow as 55 feet back in the 1940's however it is highly unlikely groundwater levels would rise to those previous elevations in the future. Groundwater is not anticipated to impact the proposed development.

Faulting

Based on our review of published geologic maps, no faults are known to project through the property, and no portion of the site lies within an Earthquake Fault Hazard Zone as designated by the State of California pursuant to the Alquist-Priolo Earthquake Zoning Act. Therefore, it is our opinion that surface-rupturing will not affect the site.

Strong Ground Motions

The site is located in a seismically active area of Southern California and will likely be subjected to very strong seismically-related ground shaking during the anticipated life span of the project. Structures within the site should therefore be designed and constructed to resist the effects of strong ground motion in accordance with the 2016 California Building Code (CBC).

Liquefaction and Dynamic Settlement Potential

Based on review of the San Bernardino County geologic hazard maps the site is not specifically located within a mapped the liquefaction hazard zone, however the site is in close proximity to an area mapped as high liquefaction potential. Regional groundwater depths from nearby in the area indicate recent depths of over 130 feet bgs or more, however historic high groundwater in the 1940's was as high as 55 feet± bgs. Our boings didn't not encountered groundwater to a depth of 51.5 feet bgs, therefore liquefaction does not appear to be a hazard at this site.

Based on the youth and low density of the underlying alluvium we also performed a seismic or "dry sand" settlement analysis. Based on our preliminary analysis, the potential for seismic (dynamic) settlement at

this site was determined to be between 4 to 6 inches. It is our professional opinion that the adverse impacts of this additional settlement on structural behavior could be mitigated by a placement of an engineered fill layer and a foundation design using a differential settlement of 2 inches in 40 feet.

CONCLUSIONS AND RECOMMENDATIONS

Based on our site reconnaissance, limited field investigation and laboratory testing, the development of the subject project site is considered feasible from a geotechnical engineering standpoint. It is recommended that the following geotechnical issues be considered by the Client during this due diligence period.

Primary Geotechnical Issues

Our professional opinion, from a geotechnical engineering viewpoint, regarding various aspects of site condition and/or proposed development is presented herein. The following presents the salient points of our due diligence assessment that we recommend be considered for future site development.

- **Design Level Geotechnical Report and Grading Plan Review Report:** The City of Redlands will require a formal geotechnical report during the review and approval process and may also require a geotechnical review of the final grading plans. Any formal geotechnical reports should include recommendations for site rough grading, post-grading improvements, and preliminary building foundation design based on the current 2016 California Building Code, however the 2019 CBC will take effect on January 1, 2020.
- **Demolition, Clearing and Grubbing:** All existing site improvements, underground utility lines and/or structures related to the former grove will need to be demolished or removed from the site. In addition, due to the past site usage, the possibility does exist that other unknown underground structures may be found below current grades. All existing trees, including the root ball, other vegetation, miscellaneous debris, trash and/or other deleterious materials will also require clearing and hauling offsite.
- **Removal of Unsuitable Soil Materials:** Based on our boring data, the upper 6 feet of native site were generally loose and dry and generally unsuitable for support of proposed fills or structures and should be removed to competent alluvium exhibiting at least 85 percent in-situ relative density. Additionally, any cut lots should be further overexcavated at least 3 feet below finish pad grades if not already accomplished by the remedial removals. Remedial grading removals in street and non-structural areas may be reduced to 2 feet below design grades or at least 3 feet below existing site grades, whichever is deeper. The bottom of all remedial excavations should be properly processed in-place prior to fill placement.
- **Western Descending Slope:** We are unsure if the proposed site grading will extend to the existing natural descending slope at the western boundary of the project site. The design/construction of any new slopes at or near the existing natural descending slope may require specialized grading recommendations. Supplemental investigation, analysis and recommendations may be needed depending on the grading concept along the western property boundary.

- Suitability of Onsite Soils for Fill: All onsite soils consisting of “clean” native alluvium are considered suitable for use in engineering fill provided they are free of organics or other deleterious materials. The near-surface site soils (upper 5± feet) may be in a very dry condition and may to be pre-watered for an extended period to bring the site soils to near optimum conditions at the onset of grading.
- Shrinkage/Importing of Fill: Although grading plans and preliminary grading quantities are not currently available, all earthwork calculations should take into account soil shrinkage and site subsidence during remedial alluvial removals and replacement as compacted fill. Estimated shrinkage of native alluvium could be on the order of 15 to 17 percent± when removed and compacted as engineered fill and site subsidence could be on the order of 0.1 to 0.2 feet. It should also be noted that the removal and exporting of the existing trees and their underground root ball system may affect the upper 1 to 1.5 feet across the site that should also be taken into account with preliminary earthwork calculations.

In the event that import is needed to complete grading of the site, the potential source(s) should be evaluated prior to importing to the site such that non-expansive, low corrosive soils that are free of deleterious materials will be used.

- Deep Utility Trenching: Based on the observed soil types, sands and silty sands with generally low fines content, these soils types are prone to caving and any deep trenching for utility lines may need to be laid back at a slope excavation flatter than normal or shoring may need to be employed.
- Expansion and Corrosion Potential of Site Soils: Our laboratory testing indicated site soils to be very low in expansion potential and have a negligible exposure to sulfates. Additionally, site soils are considered moderately corrosive to buried metallic elements. As site grading remains to be completed, additional sampling and laboratory testing should be performed during grading operations for expansion and general corrosion potential for the purposes of providing final foundation and other design recommendations.
- Building Foundation Design: Based on the observed soils types and anticipated engineered grading, conventional foundations are expected to be feasible, however based on our dynamic settlement analysis that indicated 2 inches of potential settlement, we recommend a post-tensioned slab on-grade for the proposed dwellings. Final foundation design would be provided at the completion of site grading depending on the as-graded conditions and expansion potential of soils at or near finish grades. Very low expansion soils are anticipated across the site at this time.
- Pavement Design: Based on the observed soil types, sands and silty sands, a preliminary pavement design of 3 inches of asphalt over 6 inches of base for in-tract streets may be utilized for budgeting purposes only. A thicker pavement section may be needed for West Domestic Avenue depending on the traffic index. Final pavement design should be provided at the completion of site and street grading based on final sampling and testing of subgrade soils for R-value.
- Onsite Stormwater Infiltration: Based on the observed soil types, sands and silty sands with generally low fines content, we expect to have reasonable percolation or infiltration rates and onsite storm water infiltration systems may be effective for transmitting water into the subsurface. However, any proposed basins near the top of the existing descending slope at the western boundary should be preliminarily setback of 15 feet. Once basin locations and depths are known, supplemental field infiltration testing should be performed and the required setback established.

REPORT LIMITATIONS

This report is based on the existing conditions of the subject property and the geotechnical observations made during our site reconnaissance and preliminary field investigation and limited laboratory testing. The soil conditions observed in our field investigation are believed to be representative of the general area conditions; however, soil conditions can vary in characteristics between excavations, both laterally and vertically and we recommend supplemental test pits for further evaluation during the design phase of the project. The conclusions and opinions contained in this report are based on the results of the described geotechnical evaluations and represent our professional judgment. This report has been prepared consistent with that level of care being provided by other professionals providing similar services at the same locale and in the same time period. The contents of this report are professional opinions and as such, are not to be considered a guaranty or warranty.

This report should be reviewed and updated after a period of one year or if the site ownership or project concept changes from that described herein. This report has not been prepared for use by parties or projects other than those named or described herein. This report may not contain sufficient information for other parties or other purposes.

This opportunity to be of service is sincerely appreciated. If you have any additional questions or concerns, please feel free contact this office.

Respectfully submitted,

PETRA GEOSCIENCES, INC.

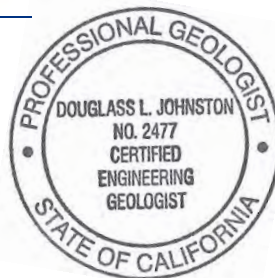


Douglass Johnston
Senior Associate Geologist
CEG 2477

DJ/SJ/lv

Attachments: References
 Figure 1 – Site Location Map
 Figure 2 – Exploration Location Map
 Appendix A – Boring Logs
 Appendix B – Laboratory Test Data

Distribution: Addressee (electronic)
 Mr. Aaron Talarico (electronic)



3/13/19

Siamak Jafroudi, PhD
Senior Principal Engineer
GE 2024



REFERENCES

California Department of Water Resources, 2019, Water Data Library, accessed March,
<http://www.water.ca.gov/waterdatalibrary/>

California Geologic Survey, 2019, Earthquake Zones of Required Investigation, accessed March,
<https://maps.conservation.ca.gov/cgs/EQZApp/app/>

Google Earth™ 2019, by Google Earth, Inc., accessed March,
<http://www.google.com/earth/index.html>

Huitt-Zoliars, 2018, Conceptual Site Plan, dated October 16.

Macrostrat, Creative Commons Attribution 4.0, 2018, accessed October,
<https://macrostrat.org/map/>

Matti, J. C. et. al., 2003, Geologic Map of the Redlands 7.5' Quadrangle, San Bernardino and Riverside Counties, California; USGS Open-file Report 03-302.

San Bernardino County Land Use Plan, 2010, General Plan Geologic Hazard Overlays, Figure FH31 C, Redlands.



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Site Location Map

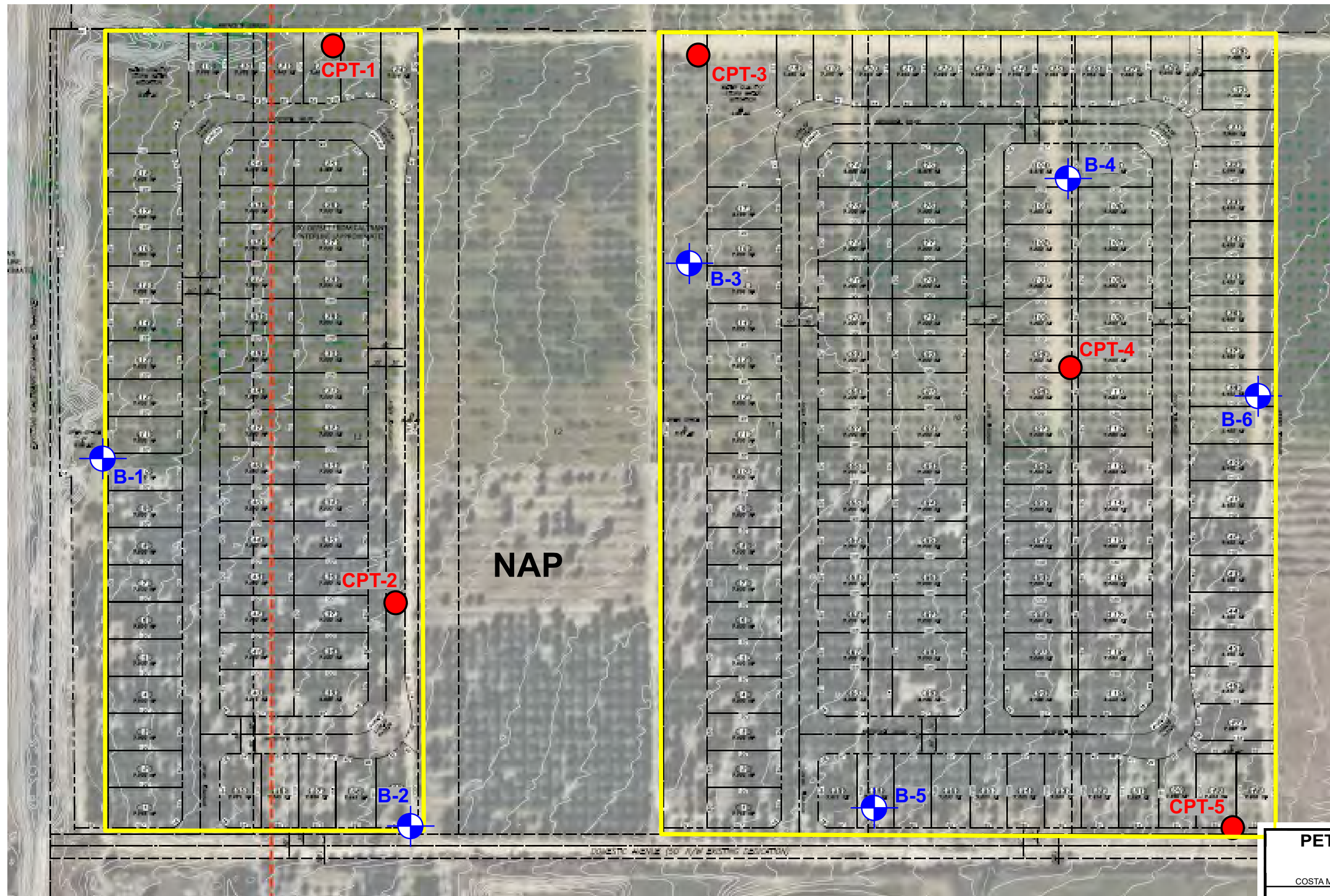
Redlands 46-acres Project
 City of Redlands, California



DATE: March 2019

J.N.: 18-345

Figure 1



Reference: Huitt-Zoliars, Inc., Conceptual Site Plan dated 10/16/18

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Exploration Location Map

Redlands 46-acre Project
 City of Redlands, California



DATE: March 2019
 J.N.: 18-345

Figure 2

APPENDIX A

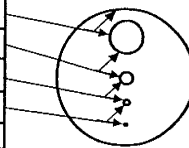
BORING LOGS

Key to Soil and Bedrock Symbols and Terms



Unified Soil Classification System			
Coarse-grained Soils > 1/2 of materials is larger than #200 sieve	GRAVELS more than half of coarse fraction is larger than #4 sieve	Clean Gravels (less than 5% fines)	GW Well-graded gravels, gravel-sand mixtures, little or no fines
		Gravels with fines	GP Poorly-graded gravels, gravel-sand mixtures, little or no fines
			GM Silty Gravels, poorly-graded gravel-sand-silt mixtures
	SANDS more than half of coarse fraction is smaller than #4 sieve	Clean Sands (less than 5% fines)	GC Clayey Gravels, poorly-graded gravel-sand-clay mixtures
		Sands with fines	SW Well-graded sands, gravelly sands, little or no fines
			SP Poorly-graded sands, gravelly sands, little or no fines
Fine-grained Soils > 1/2 of materials is smaller than #200 sieve	SILTS & CLAYS Liquid Limit Less Than 50		SM Silty Sands, poorly-graded sand-gravel-silt mixtures
			SC Clayey Sands, poorly-graded sand-gravel-clay mixtures
			ML Inorganic silts & very fine sands, silty or clayey fine sands, clayey silts with slight plasticity
			CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	SILTS & CLAYS Liquid Limit Greater Than 50		OL Organic silts & clays of low plasticity
			MH Inorganic silts, micaceous or diatomaceous fine sand or silt
			CH Inorganic clays of high plasticity, fat clays
			OH Organic silts and clays of medium-to-high plasticity
Highly Organic Soils			PT Peat, humus swamp soils with high organic content

Grain Size			
Description	Sieve Size	Grain Size	Approximate Size
Boulders	>12"	>12"	Larger than basketball-sized
Cobbles	3 - 12"	3 - 12"	Fist-sized to basketball-sized
Gravel	coarse 3/4 - 3"	3/4 - 3"	Thumb-sized to fist-sized
	fine #4 - 3/4"	0.19 - 0.75"	Pea-sized to thumb-sized
Sand	coarse #10 - #4	0.079 - 0.19"	Rock salt-sized to pea-sized
	medium #40 - #10	0.017 - 0.079"	Sugar-sized to rock salt-sized
	fine #200 - #40	0.0029 - 0.017"	Flour-sized to sugar-sized to
Fines	Passing #200	<0.0029"	Flour-sized and smaller



Laboratory Test Abbreviations			
MAX	Maximum Dry Density	MA	Mechanical (Particle Size) Analysis
EXP	Expansion Potential	AT	Atterberg Limits
SO4	Soluble Sulfate Content	#200	#200 Screen Wash
RES	Resistivity	DSU	Direct Shear (Undisturbed Sample)
pH	Acidity	DSR	Direct Shear (Remolded Sample)
CON	Consolidation	HYD	Hydrometer Analysis
SW	Swell	SE	Sand Equivalent
CL	Chloride Content	OC	Organic Content
RV	R-Value	COMP	Mortar Cylinder Compression

Modifiers	
Trace	< 1 %
Few	1 - 5 %
Some	5 - 12 %
Numerous	12 - 20 %

Sampler and Symbol Descriptions	
	Approximate Depth of Seepage
	Approximate Depth of Standing Groundwater
	Modified California Split Spoon Sample
	Standard Penetration Test
	Bulk Sample
	Shelby Tube
	No Recovery in Sampler

Bedrock Hardness	
Soft	Can be crushed and granulated by hand; "soil like" and structureless
Moderately Hard	Can be grooved with fingernails; gouged easily with butter knife; crumbles under light hammer blows
Hard	Cannot break by hand; can be grooved with a sharp knife; breaks with a moderate hammer blow
Very Hard	Sharp knife leaves scratch; chips with repeated hammer blows

Notes:
 Blows Per Foot: Number of blows required to advance sampler 1 foot (unless a lesser distance is specified). Samplers in general were driven into the soil or bedrock at the bottom of the hole with a standard (140 lb.) hammer dropping a standard 30 inches unless noted otherwise in Log Notes. Drive samples collected in bucket auger borings may be obtained by dropping non-standard weight from variable heights. When a SPT sampler is used the blow count conforms to ASTM D-1586

EXPLORATION LOG

Project: 46± Acres			Boring No.: B-1						
Location: City of Redlands			Elevation: ±1,265'						
Job No.: 18-345		Client: MLC Holdings, Inc.		Date: 10/12/18					
Drill Method: 8" Hollow Stem Auger		Driving Weight: 140lbs/30"		Logged By: KTM					
Depth (Feet)	Lithology	Material Description	W A T E R	Samples		Laboratory Tests			
				Blows per 6 in.	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
0	[Vertical lines]	TOPSOIL <u>Silty Sand (SM)</u> : Gray to grayish-brown, dry, loose, very fine- to fine-grained.							
2	[Vertical lines]	ALLUVIUM (Qal) <u>Sand (SP)</u> : Dark olive brown, dry, loose, fine- to coarse-grained sand, poorly graded. Same as above.		[Black bar]		3.3	103.3	MAX, EI, S04, pH, RES, CL	
3	[Vertical lines]			[Black bar]					
5	[Vertical lines]	Gray, very dry, medium-dense, medium- to coarse-grained sand.		[Black bar]		3.3	104.8		
6	[Vertical lines]			[Black bar]					
9	[Vertical lines]	<u>Sandy Silt (ML)</u> : Olive brown, slightly moist, medium-dense, fine-grained sand. Becomes gray.		[Black bar]		5.4	102.3	CON	
10	[Vertical lines]			[Black bar]					
15	[Vertical lines]	<u>Sand (SP)</u> : Gray, moist, medium-dense, fine- to medium-grained, poorly graded.		[Black bar]		5.2	106.3		
17	[Vertical lines]			[Black bar]					
20	[Vertical lines]	<u>Silty Sand (SM)</u> : Dark gray, moist, medium-dense, fine-grained sand.		[Black bar]		16.8	90.5		
21	[Vertical lines]			[Black bar]					
25	[Vertical lines]	<u>Sand (SP)</u> : Olive brown, dry, medium-dense, fine- to coarse-grained sand.		[Black bar]		4.8	107.4		
26	[Vertical lines]			[Black bar]					
30	[Vertical lines]	Becomes gray, medium- to coarse-grained and very dense.		[Black bar]		4.3	94.9		
31	[Vertical lines]		[Black bar]						

EXPLORATION LOG

Project: 46± Acres				Boring No.: B-1					
Location: City of Redlands				Elevation: ±1,265'					
Job No.: 18-345		Client: MLC Holdings, Inc.		Date: 10/12/18					
Drill Method: 8" Hollow Stem Auger		Driving Weight: 140lbs/30"		Logged By: KTM					
Depth (Feet)	Lithology	Material Description	W A T E R	Samples		Laboratory Tests			
				Blows per 6 in.	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
35	[Dotted pattern]	<u>Sand (SP)</u> : Brown, dry, medium-dense, fine- to coarse-grained sand, poorly graded.		13 16 17	█		4.6	111.9	
40	[Vertical lines pattern]	<u>Silty Sand (SM)</u> : Olive brown, moist, very dense, fine-grained.		11 20 42	█		15.0	101.6	
45	[Dotted pattern]	<u>Sand (SP)</u> : Olive brown, moist, very dense, fine- to medium-grained.		18 28 42	█		9.7	105.5	
50	[Dotted pattern]	Becomes gray with trace silt, very dense.		17 30 50	█		9.6	100.2	
55		Total Depth= 51.5' No groundwater encountered Boring backfilled with cuttings and tamped.							
60									
65									

EXPLORATION LOG

Project: 46± Acres			Boring No.: B-2					
Location: City of Redlands			Elevation: ±1,274'					
Job No.: 18-345		Client: MLC Holdings, Inc.		Date: 10/12/18				
Drill Method: 8" Hollow Stem Auger		Driving Weight: 140lbs/30"		Logged By: KTM				
Depth (Feet)	Lithology	Material Description	W A T E R	Samples		Laboratory Tests		
				Blows per 6 in.	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
0		TOPSOIL Silty Sand (SM): Gray, dry, loose, fine-grained sand.						
		ALLUVIUM (Qal) Sand (SP): Brown, moist, loose, fine-grained, poorly graded, with trace coarse-grained sand. Same as above.						
5		Silty Sand (SM): Dark gray, moist, loose, fine-grained.			3 3 5		6.2	99.5
					3 5 7		7.1	97.3
		Olive brown, moist, loose, fine-grained.			4 5 6		7.1	100.3
10		Silt (ML): Olive brown, moist, soft to firm, 6" thick.			3 3 7		14.1	93.4
		Silty Sand (SM): Olive brown, moist, medium-dense, fine-grained.						CON
15		Sand (SP): Gray, moist, medium-dense, fine-grained.			4 5 9		6.1	95.6
20		Becomes fine- to coarse-grained.			6 8 10		5.9	96.8
		Total Depth= 21.5' No groundwater encountered Boring backfilled with cuttings and tamped.						
25								
30								

EXPLORATION LOG

Project: 46± Acres			Boring No.: B-4					
Location: City of Redlands			Elevation: ±1,281'					
Job No.: 18-345		Client: MLC Holdings, Inc.		Date: 10/12/18				
Drill Method: 8" Hollow Stem Auger		Driving Weight: 140lbs/30"		Logged By: KTM				
Depth (Feet)	Lithology	Material Description	W A T E R	Samples		Laboratory Tests		
				Blows per 6 in.	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
0		TOPSOIL Silty Sand (SM): Gray, dry, loose, fine- to medium-grained sand.						
4		ALLUVIUM (Qal) Sand (SP): Orangish-brown, dry, loose, fine- to coarse-grained. Same as above.		2	█		4.3	104.4
5				4	█			
7		Sand (SP): Gray, very dry, loose to medium-dense, fine- to coarse-grained.		7	█		2.2	107.6
10		Becomes medium-grained		10	█			CON
11				7	█		1.8	101.2
11		Olive brown, moist, medium-dense, fine- to medium-grained.		11	█			
10				5	█		8.6	102.1
7				7	█			
10				10	█			
15		Gray, dry, medium-dense, medium-grained, with trace gravel up to 2" in diameter.		11	█		3.1	103.0
16				16	█			
20				20	█			
20		Silty Sand (SM): Olive brown, moist, medium-dense, fine-grained.		5	█		14.8	96.6
8				8	█			
10				10	█			
25		Sand (SP): Gray, dry, medium-dense, medium-grained.		8	█		4.7	102.3
12				12	█			
15				15	█			
30		Becomes slightly moist & fine-grained.		10	█		5.3	96.6
12				12	█			
15				15	█			

EXPLORATION LOG

Project: 46± Acres				Boring No.: B-4					
Location: City of Redlands				Elevation: ±1,281'					
Job No.: 18-345		Client: MLC Holdings, Inc.		Date: 10/12/18					
Drill Method: 8" Hollow Stem Auger		Driving Weight: 140lbs/30"		Logged By: KTM					
Depth (Feet)	Lithology	Material Description	W A T E R	Samples		Laboratory Tests			
				Blows per 6 in.	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
35		Becomes medium- to coarse-grained and dense, trace cobbles increased blow counts.		13 50			4.2	102.1	
40		Becomes fine- grained.		13 18 25			6.5	99.7	
45		Same as above except very dense with trace coarse-grained sand and trace gravel.		20 35 40			5.3	102.2	
50		Same as above except medium-grained with no gravel.		20 33 45			3.8	109.8	
		Total Depth= 51.5' No groundwater encountered Boring backfilled with cuttings and tamped.							
55									
60									
65									

EXPLORATION LOG

Project: 46± Acres			Boring No.: B-5						
Location: City of Redlands			Elevation: ±1,285'						
Job No.: 18-345		Client: MLC Holdings, Inc.		Date: 10/12/18					
Drill Method: 8" Hollow Stem Auger		Driving Weight: 140lbs/30"		Logged By: KTM					
Depth (Feet)	Lithology	Material Description	W A T E R	Samples		Laboratory Tests			
				Blows per 6 in.	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
0	[Vertical lines]	TOPSOIL Silty Sand (SM): Gray, dry, loose, fine- to medium-grained.							
4	[Dotted pattern]	ALLUVIUM (Qal) Sand (SP): Brown, dry, loose, fine- to coarse-grained.		4	█		2.3	110.3	
5	[Dotted pattern]	Same as above.		4 5 4	█ █ █		3.6	104.0	
7	[Vertical lines]	Silty Sand (SM): Gray to brown, moist, medium-dense, fine-grained.		3	█		8.3	95.7	CON
9	[Vertical lines]	Sand (SP): Gray, slightly moist, medium-dense, fine-grained.		7 9	█ █		6.7	98.4	
10	[Dotted pattern]	Olive brown, fine- to coarse-grained.		5 6 9	█ █ █		5.7	108.8	
15	[Dotted pattern]	Gray, dry, dense, medium- to coarse-grained. Same as above with few cobbles encountered.		5 7 11	█ █ █		3.4	107.8	
20	[Vertical lines]	Same as above with no cobbles.		13 20 25	█ █ █		9.3	97.4	
20	[Vertical lines]	Silty Sand (SM): Olive brown, moist, medium-dense, fine-grained.		6 10 13	█ █ █				
21.5		Total Depth= 21.5' No groundwater encountered Boring backfilled with cuttings and tamped.							
25									
30									

EXPLORATION LOG

Project: 46± Acres			Boring No.: B-6					
Location: City of Redlands			Elevation: ±1,289'					
Job No.: 18-345		Client: MLC Holdings, Inc.		Date: 10/12/18				
Drill Method: 8" Hollow Stem Auger		Driving Weight: 140lbs/30"		Logged By: KTM				
Depth (Feet)	Lithology	Material Description	W A T E R	Samples		Laboratory Tests		
				Blows per 6 in.	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
0		TOPSOIL Silty Sand (SM): Brown, dry, loose, fine-grained.						
3		ALLUVIUM (Qal) Sand (SP): Brown, dry, loose, fine- to coarse-grained.		3	█	5.5	106.1	MAX
4			4					
5			5					
5		Becomes gray, dry, medium-dense.		4	█	3.3	99.9	CON
7			7					
12			12					
5		Becomes very dry, medium-grained.		8	█	2.6	93.9	
18			18					
20			20					
10		Sand (SP): Olive brown, dry, medium-dense, fine-grained.		3	█	4.0	110.9	
			5					
			8					
15		Sand (SP): Gray, dry, medium-dense, medium-grained.		10	█	4.6	104.4	
			16					
			21					
20		Becomes dense & medium- to coarse-grained.		10	█	5.4	110.4	
			20					
			30					
		Total Depth= 21.5' No groundwater encountered Boring backfilled with cuttings and tamped.						
25								
30								

APPENDIX B

LABORATORY TEST DATA

Maximum Dry Density and Optimum Moisture Content Test Data

Boring/Depth (feet)	Soil Type	Optimum Moisture (%)	Maximum Dry Density (pcf)
B-1 @ 0-5	Silty Sand	7.0	124.0
B-6 @ 0-5	Silty Sand	7.0	124.0

Per ASTM Test Method ASTM D 1557

Expansion Index Test Data

Boring/Depth (feet)	Soil Type	Expansion Index	Expansion Potential
B-1 @ 0-5	Silty fine Sand	2	Very Low

Per ASTM Test Method ASTM D 4829

Corrosion Test Data

Boring/Depth (feet)	Sulfate (%)	Chloride (mg/L)	pH	Resistivity (ohm-cm)	Corrosivity Potential
B-1 @ 2	0.0006	84	7.0	6,700	Concrete: Negligible Steel: Moderate

Per California Test Method CTM 417, 422, 643

Collapse Potential

Boring/Depth (feet)	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	Collapse (%)
B-1 @ 8	102.3	5.4	0.20
B-2 @ 7	100.3	7.1	0.43
B-3 @ 10	97.2	11.8	0.15
B-4 @ 5	107.6	2.2	0.05
B-5 @ 6	95.7	8.3	0.16
B-6 @ 5	99.9	3.3	0.17

Per ASTM Test Method D 5333

No. 200 Wash

Boring/Depth (feet)	Percent Passing (%)
B-1 @ 10	59
B-2 @ 9	39
B-3 @ 10	45

Per California Test Method 202



WQMP Project Report

County of San Bernardino Stormwater Program

Santa Ana River Watershed Geodatabase

Sunday, June 28, 2020

Note: The information provided in this report and on the Stormwater Geodatabase for the County of San Bernardino Stormwater Program is intended to provide basic guidance in the preparation of the applicant's Water Quality Management Plan (WQMP) and should not be relied upon without independent verification.

Project Site Parcel Number(s):	016703103, 016703106, 016703105, 016703116, 016703102, 016703107, 016703104
Project Site Acreage:	58.004
HCOC Exempt Area:	Yes. Verify that the project is completely within the HCOC exemption area.
Closest Receiving Waters: <small>(Applicant to verify based on local drainage facilities and topography.)</small>	System Number - 101 Facility Name - Santa Ana River Owner - SBCFCD
Closest channel segment's susceptibility to Hydromodification:	EHM
Highest downstream hydromodification susceptibility:	High
Is this drainage segment subject to TMDLs?	No
Are there downstream drainage segments subject to TMDLs?	No
Is this drainage segment a 303d listed stream?	No
Are there 303d listed streams downstream?	Yes
Are there unlined downstream waterbodies?	No
Project Site Onsite Soil Group(s):	B
Environmentally Sensitive Areas within 200':	None
Groundwater Depth (FT):	-198
Parcels with potential septic tanks within 1000':	No
Known Groundwater Contamination Plumes within 1000':	Yes
Studies and Reports Related to Project Site:	CSDP No. 7 Storm Drain Systems CSDP No. 7 Storm Drain Systems CSDP No. 7 Storm Drain Systems CSDP No. 7 Storm Drain Hydraulic Design Data CSDP 4 CALC SHEET FOR HYDRO CSDP 4 Hydrological Design Criteria SBVMWD High Groundwater / Pressure Zone Area

Appendix C

Hydrology Analyses

C-1: Existing AES Hydrologic Analysis (10-, 100-yr)

C-2: Proposed AES Hydrologic Analysis (10-, 100-yr)

C-3: Hydrographs and Flood Routing Analysis (10-, 100-yr)

C-4: Stage-Outflow Relationship

C-5: Intensity Duration Curve

C-1: Existing AES Hydrologic Analysis (10-, 100-yr)

RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
(Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
(c) Copyright 1983-2014 Advanced Engineering Software (aes)
Ver. 21.0 Release Date: 06/01/2014 License ID 1202

Analysis prepared by:

Huitt-Zollars, Inc.
2603 Main Street, Irvine CA. 92614
Suite 400
949-988-5815

***** DESCRIPTION OF STUDY *****

* CITY OF REDLANDS ENTITLEMENT - TTM# 20336 - MLC HOLDINGS, INC. *
* 10-YEAR EXISTING CONDITIONS RATIONAL METHOD *
* RYAN KIM HC 6/26/2020 *

FILE NAME: RED10E.DAT
TIME/DATE OF STUDY: 07:24 06/26/2020

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 10.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 18.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 0.7490

ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT- / SIDE / SIDE / WAY	CURB HEIGHT (FT)	GUTTER WIDTH (FT)	GEOMETRIES: LIP (FT)	MANNING HIKE (FT)	FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00	0.0313	0.167	0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.67 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

SIZE PIPE WITH A FLOW CAPACITY GREATER THAN OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 101.00 TO NODE 102.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 655.50
ELEVATION DATA: UPSTREAM(FEET) = 1292.20 DOWNSTREAM(FEET) = 1283.30

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 16.605
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.619

SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
NATURAL POOR COVER "BARREN"	B	0.76	0.27	1.000	86	16.60

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 1.000
SUBAREA RUNOFF(CFS) = 0.92
TOTAL AREA(ACRES) = 0.76 PEAK FLOW RATE(CFS) = 0.92

FLOW PROCESS FROM NODE 102.00 TO NODE 103.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1283.30 DOWNSTREAM(FEET) = 1270.50
CHANNEL LENGTH THRU SUBAREA(FEET) = 728.10 CHANNEL SLOPE = 0.0176
NOTE: CHANNEL FLOW OF 1. CFS WAS ASSUMED IN VELOCITY ESTIMATION
CHANNEL FLOW THRU SUBAREA(CFS) = 0.92
FLOW VELOCITY(FEET/SEC) = 1.99 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 6.10 T_c (MIN.) = 22.71
LONGEST FLOWPATH FROM NODE 101.00 TO NODE 103.00 = 1383.60 FEET.

FLOW PROCESS FROM NODE 103.00 TO NODE 103.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE T_c (MIN.) = 22.71
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.342
SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL POOR COVER "BARREN"	B	0.83	0.27	1.000	86

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 1.000
SUBAREA AREA(ACRES) = 0.83 SUBAREA RUNOFF(CFS) = 0.80
EFFECTIVE AREA(ACRES) = 1.59 AREA-AVERAGED F_m (INCH/HR) = 0.27
AREA-AVERAGED F_p (INCH/HR) = 0.27 AREA-AVERAGED A_p = 1.00
TOTAL AREA(ACRES) = 1.6 PEAK FLOW RATE(CFS) = 1.53

FLOW PROCESS FROM NODE 103.00 TO NODE 104.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

```

=====
ELEVATION DATA: UPSTREAM(FEET) = 1270.50 DOWNSTREAM(FEET) = 1254.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 589.30 CHANNEL SLOPE = 0.0280
CHANNEL FLOW THRU SUBAREA(CFS) = 1.53
FLOW VELOCITY(FEET/SEC) = 2.73 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 3.60 Tc(MIN.) = 26.31
LONGEST FLOWPATH FROM NODE 101.00 TO NODE 104.00 = 1972.90 FEET.

```

FLOW PROCESS FROM NODE 104.00 TO NODE 104.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

```

=====
MAINLINE Tc(MIN.) = 26.31
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.228
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp        Ap      SCS
LAND USE              GROUP   (ACRES)   (INCH/HR) (DECIMAL) CN
NATURAL POOR COVER
"BARREN"                B        0.59      0.27      1.000    86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 0.59      SUBAREA RUNOFF(CFS) = 0.51
EFFECTIVE AREA(ACRES) = 2.18   AREA-AVERAGED Fm(INCH/HR) = 0.27
AREA-AVERAGED Fp(INCH/HR) = 0.27  AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 2.2      PEAK FLOW RATE(CFS) = 1.88

```

FLOW PROCESS FROM NODE 104.00 TO NODE 105.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

```

=====
ELEVATION DATA: UPSTREAM(FEET) = 1254.00 DOWNSTREAM(FEET) = 1244.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 220.40 CHANNEL SLOPE = 0.0454
CHANNEL BASE(FEET) = 9.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.035 MAXIMUM DEPTH(FEET) = 10.00
CHANNEL FLOW THRU SUBAREA(CFS) = 1.88
FLOW VELOCITY(FEET/SEC.) = 1.98 FLOW DEPTH(FEET) = 0.10
TRAVEL TIME(MIN.) = 1.85 Tc(MIN.) = 28.16
LONGEST FLOWPATH FROM NODE 101.00 TO NODE 105.00 = 2193.30 FEET.

```

FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 200.00 TO NODE 201.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<


```

=====
INITIAL SUBAREA FLOW-LENGTH(FEET) = 402.30
ELEVATION DATA: UPSTREAM(FEET) = 1277.00 DOWNSTREAM(FEET) = 1271.00

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 13.405
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.841
SUBAREA Tc AND LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp        Ap      SCS  Tc
    LAND USE              GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
AGRICULTURAL POOR COVER
"FALLOW"                  B         2.74      0.27      1.000     86  13.40
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA RUNOFF(CFS) = 3.87
TOTAL AREA(ACRES) = 2.74 PEAK FLOW RATE(CFS) = 3.87

*****
FLOW PROCESS FROM NODE 201.00 TO NODE 105.00 IS CODE = 52
-----
>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA<<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 1271.00 DOWNSTREAM(FEET) = 1244.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 599.50 CHANNEL SLOPE = 0.0450
CHANNEL FLOW THRU SUBAREA(CFS) = 3.87
FLOW VELOCITY(FEET/SEC) = 4.22 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 2.37 Tc(MIN.) = 15.77
LONGEST FLOWPATH FROM NODE 200.00 TO NODE 105.00 = 1001.80 FEET.

*****
FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
=====
MAINLINE Tc(MIN.) = 15.77
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.670
SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp        Ap      SCS
    LAND USE              GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL POOR COVER
"ORCHARDS"                 B         5.03      0.50      1.000     73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 5.03 SUBAREA RUNOFF(CFS) = 5.29
EFFECTIVE AREA(ACRES) = 7.77 AREA-AVERAGED Fm(INCH/HR) = 0.42
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 7.8 PEAK FLOW RATE(CFS) = 8.73

*****
FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 11
-----
>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
=====

```

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	8.73	15.77	1.670	0.42(0.42)	1.00	7.8	200.00

LONGEST FLOWPATH FROM NODE 200.00 TO NODE 105.00 = 1001.80 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	1.88	28.16	1.179	0.27(0.27)	1.00	2.2	101.00

LONGEST FLOWPATH FROM NODE 101.00 TO NODE 105.00 = 2193.30 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	10.35	15.77	1.670	0.40(0.40)	1.00	9.0	200.00
2	7.18	28.16	1.179	0.39(0.39)	1.00	10.0	101.00
TOTAL AREA(ACRES) =		10.0					

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 10.35 Tc(MIN.) = 15.773
EFFECTIVE AREA(ACRES) = 8.99 AREA-AVERAGED Fm(INCH/HR) = 0.40
AREA-AVERAGED Fp(INCH/HR) = 0.40 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 10.0
LONGEST FLOWPATH FROM NODE 101.00 TO NODE 105.00 = 2193.30 FEET.

FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<
=====

FLOW PROCESS FROM NODE 105.00 TO NODE 106.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
=====

ELEVATION DATA: UPSTREAM(FEET) = 1244.00 DOWNSTREAM(FEET) = 1239.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 509.40 CHANNEL SLOPE = 0.0098
CHANNEL BASE(FEET) = 9.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.035 MAXIMUM DEPTH(FEET) = 10.00
CHANNEL FLOW THRU SUBAREA(CFS) = 10.35
FLOW VELOCITY(FEET/SEC.) = 2.38 FLOW DEPTH(FEET) = 0.46
TRAVEL TIME(MIN.) = 3.57 Tc(MIN.) = 19.35
LONGEST FLOWPATH FROM NODE 101.00 TO NODE 106.00 = 2702.70 FEET.

FLOW PROCESS FROM NODE 106.00 TO NODE 106.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
=====

FLOW PROCESS FROM NODE 300.00 TO NODE 301.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 467.70
ELEVATION DATA: UPSTREAM(FEET) = 1275.50 DOWNSTREAM(FEET) = 1267.80

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 13.959
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.797

SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
AGRICULTURAL POOR COVER "FALLOW"	B	2.40	0.27	1.000	86	13.96

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA RUNOFF(CFS) = 3.29
TOTAL AREA(ACRES) = 2.40 PEAK FLOW RATE(CFS) = 3.29

FLOW PROCESS FROM NODE 301.00 TO NODE 106.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1267.80 DOWNSTREAM(FEET) = 1239.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 604.10 CHANNEL SLOPE = 0.0477
CHANNEL FLOW THRU SUBAREA(CFS) = 3.29
FLOW VELOCITY(FEET/SEC) = 4.19 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 2.41 Tc(MIN.) = 16.36
LONGEST FLOWPATH FROM NODE 300.00 TO NODE 106.00 = 1071.80 FEET.

FLOW PROCESS FROM NODE 106.00 TO NODE 106.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 16.36
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.633
SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	4.95	0.50	1.000	73

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 4.95 SUBAREA RUNOFF(CFS) = 5.04
EFFECTIVE AREA(ACRES) = 7.35 AREA-AVERAGED Fm(INCH/HR) = 0.43
AREA-AVERAGED Fp(INCH/HR) = 0.43 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 7.3 PEAK FLOW RATE(CFS) = 7.98

FLOW PROCESS FROM NODE 106.00 TO NODE 106.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

=====
** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	7.98	16.36	1.633	0.43(0.43)	1.00	7.3	300.00

LONGEST FLOWPATH FROM NODE 300.00 TO NODE 106.00 = 1071.80 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	10.35	19.35	1.477	0.40(0.40)	1.00	9.0	200.00
2	7.18	32.27	1.087	0.39(0.39)	1.00	10.0	101.00

LONGEST FLOWPATH FROM NODE 101.00 TO NODE 106.00 = 2702.70 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	18.01	16.36	1.633	0.41(0.41)	1.00	15.0	300.00
2	17.30	19.35	1.477	0.41(0.41)	1.00	16.3	200.00
3	11.54	32.27	1.087	0.40(0.40)	1.00	17.3	101.00

TOTAL AREA(ACRES) = 17.3

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 18.01 Tc(MIN.) = 16.364
EFFECTIVE AREA(ACRES) = 14.95 AREA-AVERAGED Fm(INCH/HR) = 0.41
AREA-AVERAGED Fp(INCH/HR) = 0.41 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 17.3
LONGEST FLOWPATH FROM NODE 101.00 TO NODE 106.00 = 2702.70 FEET.

FLOW PROCESS FROM NODE 106.00 TO NODE 106.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 106.00 TO NODE 107.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====
ELEVATION DATA: UPSTREAM(FEET) = 1239.00 DOWNSTREAM(FEET) = 1236.50
CHANNEL LENGTH THRU SUBAREA(FEET) = 212.30 CHANNEL SLOPE = 0.0118
CHANNEL BASE(FEET) = 9.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.035 MAXIMUM DEPTH(FEET) = 10.00
CHANNEL FLOW THRU SUBAREA(CFS) = 18.01
FLOW VELOCITY(FEET/SEC.) = 3.08 FLOW DEPTH(FEET) = 0.61
TRAVEL TIME(MIN.) = 1.15 Tc(MIN.) = 17.51
LONGEST FLOWPATH FROM NODE 101.00 TO NODE 107.00 = 2915.00 FEET.

FLOW PROCESS FROM NODE 107.00 TO NODE 107.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 900.00 TO NODE 901.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 1000.00

ELEVATION DATA: UPSTREAM(FEET) = 1311.00 DOWNSTREAM(FEET) = 1305.00

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 13.404

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.841

SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
COMMERCIAL	B	0.81	0.75	0.100	56	13.40

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.75

SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.100

SUBAREA RUNOFF(CFS) = 1.29

TOTAL AREA(ACRES) = 0.81 PEAK FLOW RATE(CFS) = 1.29

FLOW PROCESS FROM NODE 901.00 TO NODE 100.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>(STREET TABLE SECTION # 1 USED)<<<<<

UPSTREAM ELEVATION(FEET) = 1305.00 DOWNSTREAM ELEVATION(FEET) = 1303.80

STREET LENGTH(FEET) = 632.00 CURB HEIGHT(INCHES) = 8.0

STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00

INSIDE STREET CROSSFALL(DECIMAL) = 0.018

OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1

STREET PARKWAY CROSSFALL(DECIMAL) = 0.020

Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) = 0.0150

Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.58

STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:

STREET FLOW DEPTH(FEET) = 0.38

HALFSTREET FLOOD WIDTH(FEET) = 12.15

AVERAGE FLOW VELOCITY(FEET/SEC.) = 1.05

PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.40

STREET FLOW TRAVEL TIME(MIN.) = 10.07 T_c (MIN.) = 23.47

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.315

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.52	0.75	0.100	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
 SUBAREA AREA(ACRES) = 0.52 SUBAREA RUNOFF(CFS) = 0.58
 EFFECTIVE AREA(ACRES) = 1.33 AREA-AVERAGED Fm(INCH/HR) = 0.07
 AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.10
 TOTAL AREA(ACRES) = 1.3 PEAK FLOW RATE(CFS) = 1.49

END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.37 HALFSTREET FLOOD WIDTH(FEET) = 11.76
 FLOW VELOCITY(FEET/SEC.) = 1.04 DEPTH*VELOCITY(FT*FT/SEC.) = 0.39
 LONGEST FLOWPATH FROM NODE 900.00 TO NODE 100.00 = 1632.00 FEET.

FLOW PROCESS FROM NODE 100.00 TO NODE 800.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1303.80 DOWNSTREAM(FEET) = 1292.50
 CHANNEL LENGTH THRU SUBAREA(FEET) = 630.50 CHANNEL SLOPE = 0.0179
 CHANNEL FLOW THRU SUBAREA(CFS) = 1.49
 FLOW VELOCITY(FEET/SEC) = 2.17 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 4.84 Tc(MIN.) = 28.31
 LONGEST FLOWPATH FROM NODE 900.00 TO NODE 800.00 = 2262.50 FEET.

FLOW PROCESS FROM NODE 800.00 TO NODE 800.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 28.31
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.175
 SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL POOR COVER "BARREN"	B	0.72	0.27	1.000	86

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA AREA(ACRES) = 0.72 SUBAREA RUNOFF(CFS) = 0.59
 EFFECTIVE AREA(ACRES) = 2.05 AREA-AVERAGED Fm(INCH/HR) = 0.14
 AREA-AVERAGED Fp(INCH/HR) = 0.35 AREA-AVERAGED Ap = 0.42
 TOTAL AREA(ACRES) = 2.1 PEAK FLOW RATE(CFS) = 1.91

FLOW PROCESS FROM NODE 800.00 TO NODE 801.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1292.50 DOWNSTREAM(FEET) = 1281.80
 CHANNEL LENGTH THRU SUBAREA(FEET) = 668.40 CHANNEL SLOPE = 0.0160
 CHANNEL FLOW THRU SUBAREA(CFS) = 1.91
 FLOW VELOCITY(FEET/SEC) = 2.16 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 5.17 Tc(MIN.) = 33.48

LONGEST FLOWPATH FROM NODE 900.00 TO NODE 801.00 = 2930.90 FEET.

FLOW PROCESS FROM NODE 801.00 TO NODE 801.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 33.48

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.063

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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AGRICULTURAL POOR COVER

"ORCHARDS" B 1.08 0.50 1.000 73

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000

SUBAREA AREA(ACRES) = 1.08 SUBAREA RUNOFF(CFS) = 0.55

EFFECTIVE AREA(ACRES) = 3.13 AREA-AVERAGED Fm(INCH/HR) = 0.27

AREA-AVERAGED Fp(INCH/HR) = 0.43 AREA-AVERAGED Ap = 0.62

TOTAL AREA(ACRES) = 3.1 PEAK FLOW RATE(CFS) = 2.24

FLOW PROCESS FROM NODE 801.00 TO NODE 802.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1281.80 DOWNSTREAM(FEET) = 1276.70

CHANNEL LENGTH THRU SUBAREA(FEET) = 464.00 CHANNEL SLOPE = 0.0110

CHANNEL FLOW THRU SUBAREA(CFS) = 2.24

FLOW VELOCITY(FEET/SEC) = 1.85 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)

TRAVEL TIME(MIN.) = 4.18 Tc(MIN.) = 37.67

LONGEST FLOWPATH FROM NODE 900.00 TO NODE 802.00 = 3394.90 FEET.

FLOW PROCESS FROM NODE 802.00 TO NODE 802.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 37.67

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 0.990

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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AGRICULTURAL POOR COVER

"ORCHARDS" B 1.65 0.50 1.000 73

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000

SUBAREA AREA(ACRES) = 1.65 SUBAREA RUNOFF(CFS) = 0.73

EFFECTIVE AREA(ACRES) = 4.78 AREA-AVERAGED Fm(INCH/HR) = 0.35

AREA-AVERAGED Fp(INCH/HR) = 0.46 AREA-AVERAGED Ap = 0.75

TOTAL AREA(ACRES) = 4.8 PEAK FLOW RATE(CFS) = 2.76

FLOW PROCESS FROM NODE 802.00 TO NODE 702.00 IS CODE = 52


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>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA<<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 1276.70 DOWNSTREAM(FEET) = 1274.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 206.70 CHANNEL SLOPE = 0.0131
CHANNEL FLOW THRU SUBAREA(CFS) = 2.76
FLOW VELOCITY(FEET/SEC) = 2.11 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 1.63 Tc(MIN.) = 39.30
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 702.00 = 3601.60 FEET.

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*****
FLOW PROCESS FROM NODE 702.00 TO NODE 702.00 IS CODE = 10
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>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 3 <<<<<
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FLOW PROCESS FROM NODE 700.00 TO NODE 701.00 IS CODE = 21
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>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
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INITIAL SUBAREA FLOW-LENGTH(FEET) = 717.70
ELEVATION DATA: UPSTREAM(FEET) = 1292.50 DOWNSTREAM(FEET) = 1280.50

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Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 16.515
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.624
SUBAREA Tc AND LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp        Ap        SCS  Tc
LAND USE              GROUP  (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
AGRICULTURAL POOR COVER
"ORCHARDS"           B        4.79    0.50     1.000    73   16.52
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA RUNOFF(CFS) = 4.84
TOTAL AREA(ACRES) = 4.79 PEAK FLOW RATE(CFS) = 4.84

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*****
FLOW PROCESS FROM NODE 701.00 TO NODE 702.00 IS CODE = 52
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>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA<<<<<
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ELEVATION DATA: UPSTREAM(FEET) = 1280.50 DOWNSTREAM(FEET) = 1274.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 422.20 CHANNEL SLOPE = 0.0154
CHANNEL FLOW THRU SUBAREA(CFS) = 4.84
FLOW VELOCITY(FEET/SEC) = 2.60 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 2.71 Tc(MIN.) = 19.22
LONGEST FLOWPATH FROM NODE 700.00 TO NODE 702.00 = 1139.90 FEET.

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*****
FLOW PROCESS FROM NODE 702.00 TO NODE 702.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

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=====
MAINLINE Tc(MIN.) = 19.22
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.483
SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/      SCS SOIL  AREA    Fp      Ap      SCS
  LAND USE              GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL POOR COVER
"ORCHARDS"              B        1.85    0.50    1.000    73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 1.85      SUBAREA RUNOFF(CFS) = 1.63
EFFECTIVE AREA(ACRES) = 6.64    AREA-AVERAGED Fm(INCH/HR) = 0.50
AREA-AVERAGED Fp(INCH/HR) = 0.50  AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 6.6      PEAK FLOW RATE(CFS) = 5.86

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*****
FLOW PROCESS FROM NODE 702.00 TO NODE 702.00 IS CODE = 11
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>>>>CONFLUENCE MEMORY BANK # 3 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

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STREAM      Q      Tc  Intensity  Fp(Fm)    Ap      Ae      HEADWATER
NUMBER      (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES)  NODE
1           5.86  19.22   1.483  0.50( 0.50) 1.00    6.6    700.00
LONGEST FLOWPATH FROM NODE 700.00 TO NODE 702.00 = 1139.90 FEET.

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** MEMORY BANK # 3 CONFLUENCE DATA **

```

STREAM      Q      Tc  Intensity  Fp(Fm)    Ap      Ae      HEADWATER
NUMBER      (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES)  NODE
1           2.76  39.30   0.965  0.46( 0.35) 0.75    4.8    900.00
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 702.00 = 3601.60 FEET.

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** PEAK FLOW RATE TABLE **

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STREAM      Q      Tc  Intensity  Fp(Fm)    Ap      Ae      HEADWATER
NUMBER      (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES)  NODE
1           8.35  19.22   1.483  0.49( 0.46) 0.93    9.0    700.00
2           5.53  39.30   0.965  0.49( 0.44) 0.89   11.4    900.00
TOTAL AREA(ACRES) = 11.4

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COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

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PEAK FLOW RATE(CFS) = 8.35  Tc(MIN.) = 19.224
EFFECTIVE AREA(ACRES) = 8.98  AREA-AVERAGED Fm(INCH/HR) = 0.46
AREA-AVERAGED Fp(INCH/HR) = 0.49  AREA-AVERAGED Ap = 0.93
TOTAL AREA(ACRES) = 11.4
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 702.00 = 3601.60 FEET.

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FLOW PROCESS FROM NODE 702.00 TO NODE 702.00 IS CODE = 12
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>>>>CLEAR MEMORY BANK # 3 <<<<<

FLOW PROCESS FROM NODE 702.00 TO NODE 400.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1274.00 DOWNSTREAM(FEET) = 1273.20
CHANNEL LENGTH THRU SUBAREA(FEET) = 97.20 CHANNEL SLOPE = 0.0082
CHANNEL FLOW THRU SUBAREA(CFS) = 8.35
FLOW VELOCITY(FEET/SEC) = 2.17 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 0.75 Tc(MIN.) = 19.97
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 400.00 = 3698.80 FEET.

FLOW PROCESS FROM NODE 400.00 TO NODE 401.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1273.20 DOWNSTREAM(FEET) = 1267.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 439.90 CHANNEL SLOPE = 0.0141
CHANNEL FLOW THRU SUBAREA(CFS) = 8.35
FLOW VELOCITY(FEET/SEC) = 2.84 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 2.59 Tc(MIN.) = 22.56
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 401.00 = 4138.70 FEET.

FLOW PROCESS FROM NODE 401.00 TO NODE 401.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 22.56
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.347
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL POOR COVER
"FALLOW" B 4.22 0.27 1.000 86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 4.22 SUBAREA RUNOFF(CFS) = 4.08
EFFECTIVE AREA(ACRES) = 13.20 AREA-AVERAGED Fm(INCH/HR) = 0.40
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.96
TOTAL AREA(ACRES) = 15.6 PEAK FLOW RATE(CFS) = 11.24

FLOW PROCESS FROM NODE 401.00 TO NODE 107.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1267.00 DOWNSTREAM(FEET) = 1236.50
CHANNEL LENGTH THRU SUBAREA(FEET) = 626.30 CHANNEL SLOPE = 0.0487
CHANNEL FLOW THRU SUBAREA(CFS) = 11.24
FLOW VELOCITY(FEET/SEC) = 5.68 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 1.84 Tc(MIN.) = 24.40

LONGEST FLOWPATH FROM NODE 900.00 TO NODE 107.00 = 4765.00 FEET.

FLOW PROCESS FROM NODE 107.00 TO NODE 107.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 24.40

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.285

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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AGRICULTURAL POOR COVER "ORCHARDS"	B	5.49	0.50	1.000	73
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SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000

SUBAREA AREA(ACRES) = 5.49 SUBAREA RUNOFF(CFS) = 3.87

EFFECTIVE AREA(ACRES) = 18.69 AREA-AVERAGED Fm(INCH/HR) = 0.43

AREA-AVERAGED Fp(INCH/HR) = 0.44 AREA-AVERAGED Ap = 0.97

TOTAL AREA(ACRES) = 21.1 PEAK FLOW RATE(CFS) = 14.37

FLOW PROCESS FROM NODE 107.00 TO NODE 107.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	14.37	24.40	1.285	0.44(0.43)	0.97	18.7	700.00
2	8.91	45.03	0.890	0.45(0.42)	0.94	21.1	900.00

LONGEST FLOWPATH FROM NODE 900.00 TO NODE 107.00 = 4765.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	18.01	17.51	1.568	0.41(0.41)	1.00	15.0	300.00
2	17.30	20.51	1.426	0.41(0.41)	1.00	16.3	200.00
3	11.54	33.63	1.060	0.40(0.40)	1.00	17.3	101.00

LONGEST FLOWPATH FROM NODE 101.00 TO NODE 107.00 = 2915.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	31.74	17.51	1.568	0.43(0.42)	0.99	28.4	300.00
2	31.38	20.51	1.426	0.43(0.42)	0.98	32.1	200.00
3	29.97	24.40	1.285	0.43(0.42)	0.98	35.3	700.00
4	23.47	33.63	1.060	0.43(0.42)	0.98	37.1	101.00
5	17.45	45.03	0.890	0.43(0.41)	0.97	38.4	900.00

TOTAL AREA(ACRES) = 38.4

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 31.74 Tc(MIN.) = 17.511

EFFECTIVE AREA(ACRES) = 28.37 AREA-AVERAGED Fm(INCH/HR) = 0.42

AREA-AVERAGED Fp(INCH/HR) = 0.43 AREA-AVERAGED Ap = 0.98
TOTAL AREA(ACRES) = 38.4
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 107.00 = 4765.00 FEET.

FLOW PROCESS FROM NODE 107.00 TO NODE 107.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 107.00 TO NODE 108.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1236.50 DOWNSTREAM(FEET) = 1233.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 292.30 CHANNEL SLOPE = 0.0120
CHANNEL BASE(FEET) = 9.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.035 MAXIMUM DEPTH(FEET) = 10.00
CHANNEL FLOW THRU SUBAREA(CFS) = 31.74
FLOW VELOCITY(FEET/SEC.) = 3.78 FLOW DEPTH(FEET) = 0.85
TRAVEL TIME(MIN.) = 1.29 Tc(MIN.) = 18.80
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 108.00 = 5057.30 FEET.

FLOW PROCESS FROM NODE 108.00 TO NODE 108.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 18.80
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.503
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL POOR COVER
"ORCHARDS" B 3.92 0.50 1.000 73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 3.92 SUBAREA RUNOFF(CFS) = 3.53
EFFECTIVE AREA(ACRES) = 32.29 AREA-AVERAGED Fm(INCH/HR) = 0.43
AREA-AVERAGED Fp(INCH/HR) = 0.44 AREA-AVERAGED Ap = 0.99
TOTAL AREA(ACRES) = 42.4 PEAK FLOW RATE(CFS) = 31.74
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 108.00 TO NODE 109.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1233.00 DOWNSTREAM(FEET) = 1232.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 64.40 CHANNEL SLOPE = 0.0155
CHANNEL BASE(FEET) = 9.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.035 MAXIMUM DEPTH(FEET) = 10.00

CHANNEL FLOW THRU SUBAREA(CFS) = 31.74
FLOW VELOCITY(FEET/SEC.) = 4.11 FLOW DEPTH(FEET) = 0.79
TRAVEL TIME(MIN.) = 0.26 Tc(MIN.) = 19.06
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 109.00 = 5121.70 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 500.00 TO NODE 501.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 975.80
ELEVATION DATA: UPSTREAM(FEET) = 1304.00 DOWNSTREAM(FEET) = 1292.00

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 19.858

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.454

SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
AGRICULTURAL POOR COVER "ORCHARDS"	B	5.89	0.50	1.000	73	19.86

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000

SUBAREA RUNOFF(CFS) = 5.05

TOTAL AREA(ACRES) = 5.89 PEAK FLOW RATE(CFS) = 5.05

FLOW PROCESS FROM NODE 501.00 TO NODE 502.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1292.00 DOWNSTREAM(FEET) = 1284.10
CHANNEL LENGTH THRU SUBAREA(FEET) = 567.00 CHANNEL SLOPE = 0.0139
CHANNEL FLOW THRU SUBAREA(CFS) = 5.05
FLOW VELOCITY(FEET/SEC) = 2.50 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 3.79 Tc(MIN.) = 23.64
LONGEST FLOWPATH FROM NODE 500.00 TO NODE 502.00 = 1542.80 FEET.

FLOW PROCESS FROM NODE 502.00 TO NODE 502.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 23.64

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.310

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/	SCS SOIL	AREA	Fp	Ap	SCS
-------------------	----------	------	----	----	-----

LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
AGRICULTURAL POOR COVER					
"FALLOW"	B	5.89	0.27	1.000	86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000					
SUBAREA AREA(ACRES) =		5.89	SUBAREA RUNOFF(CFS) =		5.50
EFFECTIVE AREA(ACRES) =		11.78	AREA-AVERAGED Fm(INCH/HR) =		0.39
AREA-AVERAGED Fp(INCH/HR) =		0.39	AREA-AVERAGED Ap =		1.00
TOTAL AREA(ACRES) =		11.8	PEAK FLOW RATE(CFS) =		9.78

FLOW PROCESS FROM NODE 502.00 TO NODE 502.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc(MIN.) = 23.64
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.310
 SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL POOR COVER					
"BARREN"	B	0.83	0.27	1.000	86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000					
SUBAREA AREA(ACRES) =		0.83	SUBAREA RUNOFF(CFS) =		0.78
EFFECTIVE AREA(ACRES) =		12.61	AREA-AVERAGED Fm(INCH/HR) =		0.38
AREA-AVERAGED Fp(INCH/HR) =		0.38	AREA-AVERAGED Ap =		1.00
TOTAL AREA(ACRES) =		12.6	PEAK FLOW RATE(CFS) =		10.56

FLOW PROCESS FROM NODE 502.00 TO NODE 503.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1284.10 DOWNSTREAM(FEET) = 1274.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 665.30 CHANNEL SLOPE = 0.0152
 CHANNEL FLOW THRU SUBAREA(CFS) = 10.56
 FLOW VELOCITY(FEET/SEC) = 3.12 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 3.55 Tc(MIN.) = 27.20
 LONGEST FLOWPATH FROM NODE 500.00 TO NODE 503.00 = 2208.10 FEET.

FLOW PROCESS FROM NODE 503.00 TO NODE 503.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc(MIN.) = 27.20
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.204
 SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL POOR COVER					
"BARREN"	B	0.84	0.27	1.000	86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27					

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA AREA(ACRES) = 0.84 SUBAREA RUNOFF(CFS) = 0.71
 EFFECTIVE AREA(ACRES) = 13.46 AREA-AVERAGED Fm(INCH/HR) = 0.37
 AREA-AVERAGED Fp(INCH/HR) = 0.37 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 13.5 PEAK FLOW RATE(CFS) = 10.56
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 503.00 TO NODE 503.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 27.20
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.204
 SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	6.05	0.50	1.000	73

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA AREA(ACRES) = 6.05 SUBAREA RUNOFF(CFS) = 3.82
 EFFECTIVE AREA(ACRES) = 19.51 AREA-AVERAGED Fm(INCH/HR) = 0.41
 AREA-AVERAGED Fp(INCH/HR) = 0.41 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 19.5 PEAK FLOW RATE(CFS) = 13.89

FLOW PROCESS FROM NODE 503.00 TO NODE 504.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1274.00 DOWNSTREAM(FEET) = 1270.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 324.60 CHANNEL SLOPE = 0.0123
 CHANNEL FLOW THRU SUBAREA(CFS) = 13.89
 FLOW VELOCITY(FEET/SEC) = 3.02 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 1.79 Tc(MIN.) = 28.99
 LONGEST FLOWPATH FROM NODE 500.00 TO NODE 504.00 = 2532.70 FEET.

FLOW PROCESS FROM NODE 504.00 TO NODE 504.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 28.99
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.159
 SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL POOR COVER "BARREN"	B	0.41	0.27	1.000	86

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA AREA(ACRES) = 0.41 SUBAREA RUNOFF(CFS) = 0.33
 EFFECTIVE AREA(ACRES) = 19.92 AREA-AVERAGED Fm(INCH/HR) = 0.41

AREA-AVERAGED Fp(INCH/HR) = 0.41 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 19.9 PEAK FLOW RATE(CFS) = 13.89
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 FLOW PROCESS FROM NODE 504.00 TO NODE 504.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<

 FLOW PROCESS FROM NODE 600.00 TO NODE 601.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 570.10
 ELEVATION DATA: UPSTREAM(FEET) = 1298.50 DOWNSTREAM(FEET) = 1291.30

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 15.932

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.660

SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
AGRICULTURAL POOR COVER "FALLOW"	B	6.52	0.27	1.000	86	15.93

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000

SUBAREA RUNOFF(CFS) = 8.14

TOTAL AREA(ACRES) = 6.52 PEAK FLOW RATE(CFS) = 8.14

 FLOW PROCESS FROM NODE 601.00 TO NODE 602.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1291.30 DOWNSTREAM(FEET) = 1278.50
 CHANNEL LENGTH THRU SUBAREA(FEET) = 724.90 CHANNEL SLOPE = 0.0177
 CHANNEL FLOW THRU SUBAREA(CFS) = 8.14
 FLOW VELOCITY(FEET/SEC) = 3.15 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 3.83 Tc(MIN.) = 19.76
 LONGEST FLOWPATH FROM NODE 600.00 TO NODE 602.00 = 1295.00 FEET.

 FLOW PROCESS FROM NODE 602.00 TO NODE 602.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 19.76

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.458

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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AGRICULTURAL POOR COVER
 "ORCHARDS" B 7.34 0.50 1.000 73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA AREA(ACRES) = 7.34 SUBAREA RUNOFF(CFS) = 6.32
 EFFECTIVE AREA(ACRES) = 13.86 AREA-AVERAGED Fm(INCH/HR) = 0.39
 AREA-AVERAGED Fp(INCH/HR) = 0.39 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 13.9 PEAK FLOW RATE(CFS) = 13.28

FLOW PROCESS FROM NODE 602.00 TO NODE 603.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1278.50 DOWNSTREAM(FEET) = 1273.80
 CHANNEL LENGTH THRU SUBAREA(FEET) = 335.30 CHANNEL SLOPE = 0.0140
 CHANNEL FLOW THRU SUBAREA(CFS) = 13.28
 FLOW VELOCITY(FEET/SEC) = 3.18 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 1.76 Tc(MIN.) = 21.52
 LONGEST FLOWPATH FROM NODE 600.00 TO NODE 603.00 = 1630.30 FEET.

FLOW PROCESS FROM NODE 603.00 TO NODE 603.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 21.52
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.386
 SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	3.75	0.50	1.000	73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000					
SUBAREA AREA(ACRES) = 3.75 SUBAREA RUNOFF(CFS) = 2.98					
EFFECTIVE AREA(ACRES) = 17.61 AREA-AVERAGED Fm(INCH/HR) = 0.42					
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 1.00					
TOTAL AREA(ACRES) = 17.6 PEAK FLOW RATE(CFS) = 15.36					

FLOW PROCESS FROM NODE 603.00 TO NODE 504.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1273.80 DOWNSTREAM(FEET) = 1270.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 527.40 CHANNEL SLOPE = 0.0072
 CHANNEL FLOW THRU SUBAREA(CFS) = 15.36
 FLOW VELOCITY(FEET/SEC) = 2.37 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 3.71 Tc(MIN.) = 25.23
 LONGEST FLOWPATH FROM NODE 600.00 TO NODE 504.00 = 2157.70 FEET.

FLOW PROCESS FROM NODE 504.00 TO NODE 504.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

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=====
MAINLINE Tc(MIN.) = 25.23
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.260
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp          Ap      SCS
LAND USE                GROUP   (ACRES)  (INCH/HR)  (DECIMAL) CN
AGRICULTURAL POOR COVER
"ORCHARDS"              B        2.36      0.50      1.000     73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 2.36      SUBAREA RUNOFF(CFS) = 1.61
EFFECTIVE AREA(ACRES) = 19.97   AREA-AVERAGED Fm(INCH/HR) = 0.43
AREA-AVERAGED Fp(INCH/HR) = 0.43  AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 20.0      PEAK FLOW RATE(CFS) = 15.36
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

```

FLOW PROCESS FROM NODE 504.00 TO NODE 504.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	15.36	25.23	1.260	0.43(0.43)	1.00	20.0	600.00

LONGEST FLOWPATH FROM NODE 600.00 TO NODE 504.00 = 2157.70 FEET.

** MEMORY BANK # 2 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	13.89	28.99	1.159	0.41(0.41)	1.00	19.9	500.00

LONGEST FLOWPATH FROM NODE 500.00 TO NODE 504.00 = 2532.70 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	29.07	25.23	1.260	0.42(0.42)	1.00	37.3	600.00
2	27.39	28.99	1.159	0.42(0.42)	1.00	39.9	500.00
TOTAL AREA(ACRES) =		39.9					

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

```

PEAK FLOW RATE(CFS) = 29.07  Tc(MIN.) = 25.226
EFFECTIVE AREA(ACRES) = 37.30  AREA-AVERAGED Fm(INCH/HR) = 0.42
AREA-AVERAGED Fp(INCH/HR) = 0.42  AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 39.9
LONGEST FLOWPATH FROM NODE 500.00 TO NODE 504.00 = 2532.70 FEET.

```

FLOW PROCESS FROM NODE 504.00 TO NODE 504.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 2 <<<<<

=====

FLOW PROCESS FROM NODE 504.00 TO NODE 109.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1270.00 DOWNSTREAM(FEET) = 1232.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 988.30 CHANNEL SLOPE = 0.0384
CHANNEL FLOW THRU SUBAREA(CFS) = 29.07
FLOW VELOCITY(FEET/SEC) = 6.51 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 2.53 Tc(MIN.) = 27.76
LONGEST FLOWPATH FROM NODE 500.00 TO NODE 109.00 = 3521.00 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 27.76
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.189
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL POOR COVER
"FALLOW" B 0.83 0.27 1.000 86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 0.83 SUBAREA RUNOFF(CFS) = 0.68
EFFECTIVE AREA(ACRES) = 38.13 AREA-AVERAGED Fm(INCH/HR) = 0.42
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 40.7 PEAK FLOW RATE(CFS) = 29.07
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

=====

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	29.07	27.76	1.189	0.42(0.42)	1.00	38.1	600.00
2	27.39	31.56	1.101	0.42(0.42)	1.00	40.7	500.00

LONGEST FLOWPATH FROM NODE 500.00 TO NODE 109.00 = 3521.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	31.74	19.06	1.490	0.44(0.43)	0.99	32.3	300.00
2	31.38	22.06	1.365	0.44(0.43)	0.99	36.0	200.00
3	29.97	25.97	1.238	0.44(0.43)	0.99	39.2	700.00
4	23.47	35.36	1.029	0.43(0.42)	0.98	41.0	101.00

5 17.45 46.94 0.868 0.43(0.42) 0.97 42.4 900.00
 LONGEST FLOWPATH FROM NODE 900.00 TO NODE 109.00 = 5121.70 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE	
1	59.47	19.06	1.490	0.43(0.42)	0.99	58.5	300.00	
2	59.73	22.06	1.365	0.43(0.42)	0.99	66.3	200.00	
3	58.87	25.97	1.238	0.43(0.42)	0.99	74.9	700.00	
4	57.80	27.76	1.189	0.43(0.42)	0.99	77.7	600.00	
5	53.49	31.56	1.101	0.42(0.42)	0.99	81.0	500.00	
6	47.96	35.36	1.029	0.42(0.42)	0.99	81.7	101.00	
7	35.52	46.94	0.868	0.42(0.42)	0.99	83.1	900.00	
TOTAL AREA(ACRES) =			83.1					

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 59.73 Tc(MIN.) = 22.061
 EFFECTIVE AREA(ACRES) = 66.28 AREA-AVERAGED Fm(INCH/HR) = 0.42
 AREA-AVERAGED Fp(INCH/HR) = 0.43 AREA-AVERAGED Ap = 0.99
 TOTAL AREA(ACRES) = 83.1
 LONGEST FLOWPATH FROM NODE 900.00 TO NODE 109.00 = 5121.70 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

=====
 END OF STUDY SUMMARY:

TOTAL AREA(ACRES) = 83.1 TC(MIN.) = 22.06
 EFFECTIVE AREA(ACRES) = 66.28 AREA-AVERAGED Fm(INCH/HR)= 0.42
 AREA-AVERAGED Fp(INCH/HR) = 0.43 AREA-AVERAGED Ap = 0.993
 PEAK FLOW RATE(CFS) = 59.73

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	59.47	19.06	1.490	0.43(0.42)	0.99	58.5	300.00
2	59.73	22.06	1.365	0.43(0.42)	0.99	66.3	200.00
3	58.87	25.97	1.238	0.43(0.42)	0.99	74.9	700.00
4	57.80	27.76	1.189	0.43(0.42)	0.99	77.7	600.00
5	53.49	31.56	1.101	0.42(0.42)	0.99	81.0	500.00
6	47.96	35.36	1.029	0.42(0.42)	0.99	81.7	101.00
7	35.52	46.94	0.868	0.42(0.42)	0.99	83.1	900.00

=====
 END OF RATIONAL METHOD ANALYSIS



RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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FILE NAME: RED100E.DAT
TIME/DATE OF STUDY: 07:15 06/26/2020

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USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

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--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 100.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 18.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.2000

ANTECEDENT MOISTURE CONDITION (AMC) III ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	HALF-WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL IN- / OUT- / SIDE / SIDE / WAY	CURB HEIGHT (FT)	GUTTER WIDTH (FT)	GEOMETRIES LIP (FT)	MANNING HIKE (FT)	FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00	0.0313	0.167	0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.67 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

SIZE PIPE WITH A FLOW CAPACITY GREATER THAN OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 101.00 TO NODE 102.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 655.50
ELEVATION DATA: UPSTREAM(FEET) = 1292.20 DOWNSTREAM(FEET) = 1283.30

$$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$$

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 16.605

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.594

SUBAREA Tc AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
NATURAL POOR COVER "BARREN"	B	0.76	0.11	1.000	97	16.60

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.11
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA RUNOFF(CFS) = 1.69
 TOTAL AREA(ACRES) = 0.76 PEAK FLOW RATE(CFS) = 1.69

FLOW PROCESS FROM NODE 102.00 TO NODE 103.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1283.30 DOWNSTREAM(FEET) = 1270.50
 CHANNEL LENGTH THRU SUBAREA(FEET) = 728.10 CHANNEL SLOPE = 0.0176
 CHANNEL FLOW THRU SUBAREA(CFS) = 1.69
 FLOW VELOCITY(FEET/SEC) = 2.21 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 5.50 Tc(MIN.) = 22.11
 LONGEST FLOWPATH FROM NODE 101.00 TO NODE 103.00 = 1383.60 FEET.

FLOW PROCESS FROM NODE 103.00 TO NODE 103.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 22.11
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.185
 SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL POOR COVER "BARREN"	B	0.83	0.11	1.000	97

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.11
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA AREA(ACRES) = 0.83 SUBAREA RUNOFF(CFS) = 1.56
 EFFECTIVE AREA(ACRES) = 1.59 AREA-AVERAGED Fm(INCH/HR) = 0.11
 AREA-AVERAGED Fp(INCH/HR) = 0.11 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 1.6 PEAK FLOW RATE(CFS) = 2.97

FLOW PROCESS FROM NODE 103.00 TO NODE 104.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1270.50 DOWNSTREAM(FEET) = 1254.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 589.30 CHANNEL SLOPE = 0.0280
 CHANNEL FLOW THRU SUBAREA(CFS) = 2.97

FLOW VELOCITY(FEET/SEC) = 3.14 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 3.13 Tc(MIN.) = 25.24
LONGEST FLOWPATH FROM NODE 101.00 TO NODE 104.00 = 1972.90 FEET.

FLOW PROCESS FROM NODE 104.00 TO NODE 104.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 25.24

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.018

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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NATURAL POOR COVER

"BARREN"	B	0.59	0.11	1.000	97
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SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.11

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000

SUBAREA AREA(ACRES) = 0.59 SUBAREA RUNOFF(CFS) = 1.02

EFFECTIVE AREA(ACRES) = 2.18 AREA-AVERAGED Fm(INCH/HR) = 0.11

AREA-AVERAGED Fp(INCH/HR) = 0.11 AREA-AVERAGED Ap = 1.00

TOTAL AREA(ACRES) = 2.2 PEAK FLOW RATE(CFS) = 3.75

FLOW PROCESS FROM NODE 104.00 TO NODE 105.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1254.00 DOWNSTREAM(FEET) = 1244.00

CHANNEL LENGTH THRU SUBAREA(FEET) = 220.40 CHANNEL SLOPE = 0.0454

CHANNEL BASE(FEET) = 9.00 "Z" FACTOR = 1.000

MANNING'S FACTOR = 0.035 MAXIMUM DEPTH(FEET) = 10.00

CHANNEL FLOW THRU SUBAREA(CFS) = 3.75

FLOW VELOCITY(FEET/SEC.) = 2.60 FLOW DEPTH(FEET) = 0.16

TRAVEL TIME(MIN.) = 1.41 Tc(MIN.) = 26.65

LONGEST FLOWPATH FROM NODE 101.00 TO NODE 105.00 = 2193.30 FEET.

FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 200.00 TO NODE 201.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 402.30

ELEVATION DATA: UPSTREAM(FEET) = 1277.00 DOWNSTREAM(FEET) = 1271.00

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 13.405

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.949
 SUBAREA Tc AND LOSS RATE DATA(AMC III):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS Tc
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
 AGRICULTURAL POOR COVER
 "FALLOW" B 2.74 0.11 1.000 97 13.40
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.11
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA RUNOFF(CFS) = 7.01
 TOTAL AREA(ACRES) = 2.74 PEAK FLOW RATE(CFS) = 7.01

 FLOW PROCESS FROM NODE 201.00 TO NODE 105.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1271.00 DOWNSTREAM(FEET) = 1244.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 599.50 CHANNEL SLOPE = 0.0450
 CHANNEL FLOW THRU SUBAREA(CFS) = 7.01
 FLOW VELOCITY(FEET/SEC) = 4.86 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 2.06 Tc(MIN.) = 15.46
 LONGEST FLOWPATH FROM NODE 200.00 TO NODE 105.00 = 1001.80 FEET.

 FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 15.46
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.707
 SUBAREA LOSS RATE DATA(AMC III):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "ORCHARDS" B 5.03 0.23 1.000 89
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA AREA(ACRES) = 5.03 SUBAREA RUNOFF(CFS) = 11.21
 EFFECTIVE AREA(ACRES) = 7.77 AREA-AVERAGED Fm(INCH/HR) = 0.19
 AREA-AVERAGED Fp(INCH/HR) = 0.19 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 7.8 PEAK FLOW RATE(CFS) = 17.63

 FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	17.63	15.46	2.707	0.19(0.19)	1.00	7.8	200.00

LONGEST FLOWPATH FROM NODE 200.00 TO NODE 105.00 = 1001.80 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	3.75	26.65	1.953	0.11(0.11)	1.00	2.2	101.00

LONGEST FLOWPATH FROM NODE 101.00 TO NODE 105.00 = 2193.30 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	20.69	15.46	2.707	0.18(0.18)	1.00	9.0	200.00
2	16.10	26.65	1.953	0.17(0.17)	1.00	10.0	101.00

TOTAL AREA(ACRES) = 10.0

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 20.69 Tc(MIN.) = 15.463
EFFECTIVE AREA(ACRES) = 9.03 AREA-AVERAGED Fm(INCH/HR) = 0.18
AREA-AVERAGED Fp(INCH/HR) = 0.18 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 10.0
LONGEST FLOWPATH FROM NODE 101.00 TO NODE 105.00 = 2193.30 FEET.

FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

=====

FLOW PROCESS FROM NODE 105.00 TO NODE 106.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1244.00 DOWNSTREAM(FEET) = 1239.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 509.40 CHANNEL SLOPE = 0.0098
CHANNEL BASE(FEET) = 9.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.035 MAXIMUM DEPTH(FEET) = 10.00
CHANNEL FLOW THRU SUBAREA(CFS) = 20.69
FLOW VELOCITY(FEET/SEC.) = 3.05 FLOW DEPTH(FEET) = 0.70
TRAVEL TIME(MIN.) = 2.78 Tc(MIN.) = 18.24
LONGEST FLOWPATH FROM NODE 101.00 TO NODE 106.00 = 2702.70 FEET.

FLOW PROCESS FROM NODE 106.00 TO NODE 106.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

=====

FLOW PROCESS FROM NODE 300.00 TO NODE 301.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 467.70
ELEVATION DATA: UPSTREAM(FEET) = 1275.50 DOWNSTREAM(FEET) = 1267.80

$$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$$

SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 13.959

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.879

SUBAREA T_c AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
AGRICULTURAL POOR COVER "FALLOW"	B	2.40	0.11	1.000	97	13.96

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.11
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 1.000
 SUBAREA RUNOFF(CFS) = 5.99
 TOTAL AREA(ACRES) = 2.40 PEAK FLOW RATE(CFS) = 5.99

FLOW PROCESS FROM NODE 301.00 TO NODE 106.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1267.80 DOWNSTREAM(FEET) = 1239.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 604.10 CHANNEL SLOPE = 0.0477
 CHANNEL FLOW THRU SUBAREA(CFS) = 5.99
 FLOW VELOCITY(FEET/SEC) = 4.81 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 2.09 T_c (MIN.) = 16.05
 LONGEST FLOWPATH FROM NODE 300.00 TO NODE 106.00 = 1071.80 FEET.

FLOW PROCESS FROM NODE 106.00 TO NODE 106.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE T_c (MIN.) = 16.05
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.647
 SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	4.95	0.23	1.000	89

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 1.000
 SUBAREA AREA(ACRES) = 4.95 SUBAREA RUNOFF(CFS) = 10.77
 EFFECTIVE AREA(ACRES) = 7.35 AREA-AVERAGED F_m (INCH/HR) = 0.19
 AREA-AVERAGED F_p (INCH/HR) = 0.19 AREA-AVERAGED A_p = 1.00
 TOTAL AREA(ACRES) = 7.3 PEAK FLOW RATE(CFS) = 16.26

FLOW PROCESS FROM NODE 106.00 TO NODE 106.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	T_c (MIN.)	Intensity (INCH/HR)	F_p (F_m) (INCH/HR)	A_p	A_e (ACRES)	HEADWATER NODE
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1 16.26 16.05 2.647 0.19(0.19) 1.00 7.3 300.00
LONGEST FLOWPATH FROM NODE 300.00 TO NODE 106.00 = 1071.80 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	20.69	18.24	2.451	0.18(0.18)	1.00	9.0	200.00
2	16.10	29.69	1.830	0.17(0.17)	1.00	10.0	101.00

LONGEST FLOWPATH FROM NODE 101.00 TO NODE 106.00 = 2702.70 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	36.03	16.05	2.647	0.18(0.18)	1.00	15.3	300.00
2	35.65	18.24	2.451	0.18(0.18)	1.00	16.4	200.00
3	26.96	29.69	1.830	0.18(0.18)	1.00	17.3	101.00

TOTAL AREA(ACRES) = 17.3

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 36.03 Tc(MIN.) = 16.053
EFFECTIVE AREA(ACRES) = 15.30 AREA-AVERAGED Fm(INCH/HR) = 0.18
AREA-AVERAGED Fp(INCH/HR) = 0.18 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 17.3
LONGEST FLOWPATH FROM NODE 101.00 TO NODE 106.00 = 2702.70 FEET.

FLOW PROCESS FROM NODE 106.00 TO NODE 106.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<
=====

FLOW PROCESS FROM NODE 106.00 TO NODE 107.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1239.00 DOWNSTREAM(FEET) = 1236.50
CHANNEL LENGTH THRU SUBAREA(FEET) = 212.30 CHANNEL SLOPE = 0.0118
CHANNEL BASE(FEET) = 9.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.035 MAXIMUM DEPTH(FEET) = 10.00
CHANNEL FLOW THRU SUBAREA(CFS) = 36.03
FLOW VELOCITY(FEET/SEC.) = 3.95 FLOW DEPTH(FEET) = 0.92
TRAVEL TIME(MIN.) = 0.90 Tc(MIN.) = 16.95
LONGEST FLOWPATH FROM NODE 101.00 TO NODE 107.00 = 2915.00 FEET.

FLOW PROCESS FROM NODE 107.00 TO NODE 107.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
=====

FLOW PROCESS FROM NODE 900.00 TO NODE 901.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 1000.00
ELEVATION DATA: UPSTREAM(FEET) = 1311.00 DOWNSTREAM(FEET) = 1305.00

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 13.404
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.949

SUBAREA Tc AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
COMMERCIAL	B	0.81	0.42	0.100	76	13.40

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
SUBAREA RUNOFF(CFS) = 2.12
TOTAL AREA(ACRES) = 0.81 PEAK FLOW RATE(CFS) = 2.12

FLOW PROCESS FROM NODE 901.00 TO NODE 100.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1305.00 DOWNSTREAM ELEVATION(FEET) = 1303.80
STREET LENGTH(FEET) = 632.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
INSIDE STREET CROSSFALL(DECIMAL) = 0.018
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 2.62
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.43
HALFSTREET FLOOD WIDTH(FEET) = 15.04
AVERAGE FLOW VELOCITY(FEET/SEC.) = 1.19
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.51
STREET FLOW TRAVEL TIME(MIN.) = 8.89 Tc(MIN.) = 22.29
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.174

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.52	0.42	0.100	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
SUBAREA AREA(ACRES) = 0.52 SUBAREA RUNOFF(CFS) = 1.00
EFFECTIVE AREA(ACRES) = 1.33 AREA-AVERAGED Fm(INCH/HR) = 0.04
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.10
TOTAL AREA(ACRES) = 1.3 PEAK FLOW RATE(CFS) = 2.56

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.43 HALFSTREET FLOOD WIDTH(FEET) = 14.88
FLOW VELOCITY(FEET/SEC.) = 1.18 DEPTH*VELOCITY(FT*FT/SEC.) = 0.50
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 100.00 = 1632.00 FEET.

FLOW PROCESS FROM NODE 100.00 TO NODE 800.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1303.80 DOWNSTREAM(FEET) = 1292.50
CHANNEL LENGTH THRU SUBAREA(FEET) = 630.50 CHANNEL SLOPE = 0.0179
CHANNEL FLOW THRU SUBAREA(CFS) = 2.56
FLOW VELOCITY(FEET/SEC) = 2.43 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 4.33 Tc(MIN.) = 26.62
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 800.00 = 2262.50 FEET.

FLOW PROCESS FROM NODE 800.00 TO NODE 800.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 26.62
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.954
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL POOR COVER "BARREN"	B	0.72	0.11	1.000	97

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.11
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 0.72 SUBAREA RUNOFF(CFS) = 1.20
EFFECTIVE AREA(ACRES) = 2.05 AREA-AVERAGED Fm(INCH/HR) = 0.06
AREA-AVERAGED Fp(INCH/HR) = 0.16 AREA-AVERAGED Ap = 0.42
TOTAL AREA(ACRES) = 2.1 PEAK FLOW RATE(CFS) = 3.49

FLOW PROCESS FROM NODE 800.00 TO NODE 801.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1292.50 DOWNSTREAM(FEET) = 1281.80
CHANNEL LENGTH THRU SUBAREA(FEET) = 668.40 CHANNEL SLOPE = 0.0160
CHANNEL FLOW THRU SUBAREA(CFS) = 3.49
FLOW VELOCITY(FEET/SEC) = 2.46 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 4.53 Tc(MIN.) = 31.15
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 801.00 = 2930.90 FEET.

FLOW PROCESS FROM NODE 801.00 TO NODE 801.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

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=====
MAINLINE Tc(MIN.) = 31.15
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.778
SUBAREA LOSS RATE DATA(AMC III):
  DEVELOPMENT TYPE/      SCS SOIL  AREA    Fp      Ap      SCS
    LAND USE            GROUP  (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL POOR COVER
"ORCHARDS"              B        1.08    0.23    1.000    89
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 1.08      SUBAREA RUNOFF(CFS) = 1.50
EFFECTIVE AREA(ACRES) = 3.13    AREA-AVERAGED Fm(INCH/HR) = 0.12
AREA-AVERAGED Fp(INCH/HR) = 0.20  AREA-AVERAGED Ap = 0.62
TOTAL AREA(ACRES) = 3.1      PEAK FLOW RATE(CFS) = 4.67

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FLOW PROCESS FROM NODE 801.00 TO NODE 802.00 IS CODE = 52
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>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA<<<<<

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=====
ELEVATION DATA: UPSTREAM(FEET) = 1281.80 DOWNSTREAM(FEET) = 1276.70
CHANNEL LENGTH THRU SUBAREA(FEET) = 464.00 CHANNEL SLOPE = 0.0110
CHANNEL FLOW THRU SUBAREA(CFS) = 4.67
FLOW VELOCITY(FEET/SEC) = 2.18 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 3.55 Tc(MIN.) = 34.71
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 802.00 = 3394.90 FEET.

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*****
FLOW PROCESS FROM NODE 802.00 TO NODE 802.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

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=====
MAINLINE Tc(MIN.) = 34.71
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.667
SUBAREA LOSS RATE DATA(AMC III):
  DEVELOPMENT TYPE/      SCS SOIL  AREA    Fp      Ap      SCS
    LAND USE            GROUP  (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL POOR COVER
"ORCHARDS"              B        1.65    0.23    1.000    89
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 1.65      SUBAREA RUNOFF(CFS) = 2.13
EFFECTIVE AREA(ACRES) = 4.78    AREA-AVERAGED Fm(INCH/HR) = 0.16
AREA-AVERAGED Fp(INCH/HR) = 0.21  AREA-AVERAGED Ap = 0.75
TOTAL AREA(ACRES) = 4.8      PEAK FLOW RATE(CFS) = 6.49

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*****
FLOW PROCESS FROM NODE 802.00 TO NODE 702.00 IS CODE = 52
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>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA<<<<<

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=====
ELEVATION DATA: UPSTREAM(FEET) = 1276.70 DOWNSTREAM(FEET) = 1274.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 206.70 CHANNEL SLOPE = 0.0131

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CHANNEL FLOW THRU SUBAREA(CFS) = 6.49
FLOW VELOCITY(FEET/SEC) = 2.57 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 1.34 Tc(MIN.) = 36.05
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 702.00 = 3601.60 FEET.

FLOW PROCESS FROM NODE 702.00 TO NODE 702.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 3 <<<<<

FLOW PROCESS FROM NODE 700.00 TO NODE 701.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 717.70
ELEVATION DATA: UPSTREAM(FEET) = 1292.50 DOWNSTREAM(FEET) = 1280.50

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 16.515

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.602

SUBAREA Tc AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
AGRICULTURAL POOR COVER "ORCHARDS"	B	4.79	0.23	1.000	89	16.52

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000

SUBAREA RUNOFF(CFS) = 10.23

TOTAL AREA(ACRES) = 4.79 PEAK FLOW RATE(CFS) = 10.23

FLOW PROCESS FROM NODE 701.00 TO NODE 702.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1280.50 DOWNSTREAM(FEET) = 1274.00

CHANNEL LENGTH THRU SUBAREA(FEET) = 422.20 CHANNEL SLOPE = 0.0154

CHANNEL FLOW THRU SUBAREA(CFS) = 10.23

FLOW VELOCITY(FEET/SEC) = 3.12 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)

TRAVEL TIME(MIN.) = 2.26 Tc(MIN.) = 18.77

LONGEST FLOWPATH FROM NODE 700.00 TO NODE 702.00 = 1139.90 FEET.

FLOW PROCESS FROM NODE 702.00 TO NODE 702.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 18.77

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.410

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/	SCS SOIL	AREA	Fp	Ap	SCS
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LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	1.85	0.23	1.000	89
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000					
SUBAREA AREA(ACRES) =		1.85	SUBAREA RUNOFF(CFS) =		3.63
EFFECTIVE AREA(ACRES) =		6.64	AREA-AVERAGED Fm(INCH/HR) =		0.23
AREA-AVERAGED Fp(INCH/HR) =		0.23	AREA-AVERAGED Ap =		1.00
TOTAL AREA(ACRES) =		6.6	PEAK FLOW RATE(CFS) =		13.03

 FLOW PROCESS FROM NODE 702.00 TO NODE 702.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 3 WITH THE MAIN-STREAM MEMORY<<<<<
 =====

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	13.03	18.77	2.410	0.23(0.23)	1.00	6.6	700.00
LONGEST FLOWPATH FROM NODE 700.00 TO NODE 702.00 = 1139.90 FEET.							

** MEMORY BANK # 3 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	6.49	36.05	1.629	0.21(0.16)	0.75	4.8	900.00
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 702.00 = 3601.60 FEET.							

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	18.20	18.77	2.410	0.23(0.21)	0.93	9.1	700.00
2	14.85	36.05	1.629	0.22(0.20)	0.89	11.4	900.00
TOTAL AREA(ACRES) = 11.4							

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 18.20 Tc(MIN.) = 18.772
 EFFECTIVE AREA(ACRES) = 9.13 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.93
 TOTAL AREA(ACRES) = 11.4
 LONGEST FLOWPATH FROM NODE 900.00 TO NODE 702.00 = 3601.60 FEET.

 FLOW PROCESS FROM NODE 702.00 TO NODE 702.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 3 <<<<<
 =====

 FLOW PROCESS FROM NODE 702.00 TO NODE 400.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA<<<<<
 =====

ELEVATION DATA: UPSTREAM(FEET) = 1274.00 DOWNSTREAM(FEET) = 1273.20

CHANNEL LENGTH THRU SUBAREA(FEET) = 97.20 CHANNEL SLOPE = 0.0082
CHANNEL FLOW THRU SUBAREA(CFS) = 18.20
FLOW VELOCITY(FEET/SEC) = 2.65 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 0.61 Tc(MIN.) = 19.38
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 400.00 = 3698.80 FEET.

FLOW PROCESS FROM NODE 400.00 TO NODE 401.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1273.20 DOWNSTREAM(FEET) = 1267.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 439.90 CHANNEL SLOPE = 0.0141
CHANNEL FLOW THRU SUBAREA(CFS) = 18.20
FLOW VELOCITY(FEET/SEC) = 3.47 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 2.11 Tc(MIN.) = 21.50
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 401.00 = 4138.70 FEET.

FLOW PROCESS FROM NODE 401.00 TO NODE 401.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 21.50
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.222
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "FALLOW"	B	4.22	0.11	1.000	97

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.11
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 4.22 SUBAREA RUNOFF(CFS) = 8.03
EFFECTIVE AREA(ACRES) = 13.35 AREA-AVERAGED Fm(INCH/HR) = 0.18
AREA-AVERAGED Fp(INCH/HR) = 0.19 AREA-AVERAGED Ap = 0.95
TOTAL AREA(ACRES) = 15.6 PEAK FLOW RATE(CFS) = 24.56

FLOW PROCESS FROM NODE 401.00 TO NODE 107.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1267.00 DOWNSTREAM(FEET) = 1236.50
CHANNEL LENGTH THRU SUBAREA(FEET) = 626.30 CHANNEL SLOPE = 0.0487
CHANNEL FLOW THRU SUBAREA(CFS) = 24.56
FLOW VELOCITY(FEET/SEC) = 6.99 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 1.49 Tc(MIN.) = 22.99
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 107.00 = 4765.00 FEET.

FLOW PROCESS FROM NODE 107.00 TO NODE 107.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

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=====
MAINLINE Tc(MIN.) = 22.99
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.134
SUBAREA LOSS RATE DATA(AMC III):
  DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp        Ap        SCS
  LAND USE                GROUP  (ACRES)  (INCH/HR) (DECIMAL) CN
AGRICULTURAL POOR COVER
"ORCHARDS"                B        5.49      0.23      1.000     89
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 5.49      SUBAREA RUNOFF(CFS) = 9.41
EFFECTIVE AREA(ACRES) = 18.84   AREA-AVERAGED Fm(INCH/HR) = 0.19
AREA-AVERAGED Fp(INCH/HR) = 0.20  AREA-AVERAGED Ap = 0.97
TOTAL AREA(ACRES) = 21.1      PEAK FLOW RATE(CFS) = 32.91

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*****
FLOW PROCESS FROM NODE 107.00 TO NODE 107.00 IS CODE = 11
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>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
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** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	32.91	22.99	2.134	0.20(0.19)	0.97	18.8	700.00
2	25.29	40.51	1.519	0.20(0.19)	0.94	21.1	900.00

LONGEST FLOWPATH FROM NODE 900.00 TO NODE 107.00 = 4765.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	36.03	16.95	2.562	0.18(0.18)	1.00	15.3	300.00
2	35.65	19.15	2.381	0.18(0.18)	1.00	16.4	200.00
3	26.96	30.68	1.795	0.18(0.18)	1.00	17.3	101.00

LONGEST FLOWPATH FROM NODE 101.00 TO NODE 107.00 = 2915.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	65.65	16.95	2.562	0.19(0.19)	0.98	29.2	300.00
2	66.56	19.15	2.381	0.19(0.19)	0.98	32.1	200.00
3	65.67	22.99	2.134	0.19(0.19)	0.98	35.5	700.00
4	56.52	30.68	1.795	0.19(0.18)	0.98	37.1	101.00
5	47.65	40.51	1.519	0.19(0.18)	0.97	38.4	900.00

TOTAL AREA(ACRES) = 38.4

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 66.56 Tc(MIN.) = 19.148
 EFFECTIVE AREA(ACRES) = 32.08 AREA-AVERAGED Fm(INCH/HR) = 0.19
 AREA-AVERAGED Fp(INCH/HR) = 0.19 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 38.4
 LONGEST FLOWPATH FROM NODE 900.00 TO NODE 107.00 = 4765.00 FEET.

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*****
FLOW PROCESS FROM NODE 107.00 TO NODE 107.00 IS CODE = 12

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>>>>CLEAR MEMORY BANK # 1 <<<<<
=====

FLOW PROCESS FROM NODE 107.00 TO NODE 108.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
=====

ELEVATION DATA: UPSTREAM(FEET) = 1236.50 DOWNSTREAM(FEET) = 1233.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 292.30 CHANNEL SLOPE = 0.0120
CHANNEL BASE(FEET) = 9.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.035 MAXIMUM DEPTH(FEET) = 10.00
CHANNEL FLOW THRU SUBAREA(CFS) = 66.56
FLOW VELOCITY(FEET/SEC.) = 4.87 FLOW DEPTH(FEET) = 1.32
TRAVEL TIME(MIN.) = 1.00 Tc(MIN.) = 20.15
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 108.00 = 5057.30 FEET.

FLOW PROCESS FROM NODE 108.00 TO NODE 108.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
=====

MAINLINE Tc(MIN.) = 20.15
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.309
SUBAREA LOSS RATE DATA(AMC III):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL POOR COVER
"ORCHARDS" B 3.92 0.23 1.000 89
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 3.92 SUBAREA RUNOFF(CFS) = 7.34
EFFECTIVE AREA(ACRES) = 36.00 AREA-AVERAGED Fm(INCH/HR) = 0.19
AREA-AVERAGED Fp(INCH/HR) = 0.19 AREA-AVERAGED Ap = 0.99
TOTAL AREA(ACRES) = 42.4 PEAK FLOW RATE(CFS) = 68.61

FLOW PROCESS FROM NODE 108.00 TO NODE 109.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
=====

ELEVATION DATA: UPSTREAM(FEET) = 1233.00 DOWNSTREAM(FEET) = 1232.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 64.40 CHANNEL SLOPE = 0.0155
CHANNEL BASE(FEET) = 9.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.035 MAXIMUM DEPTH(FEET) = 10.00
CHANNEL FLOW THRU SUBAREA(CFS) = 68.61
FLOW VELOCITY(FEET/SEC.) = 5.36 FLOW DEPTH(FEET) = 1.25
TRAVEL TIME(MIN.) = 0.20 Tc(MIN.) = 20.35
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 109.00 = 5121.70 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
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FLOW PROCESS FROM NODE 500.00 TO NODE 501.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 975.80
ELEVATION DATA: UPSTREAM(FEET) = 1304.00 DOWNSTREAM(FEET) = 1292.00

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 19.858

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.330

SUBAREA T_c AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
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AGRICULTURAL POOR COVER

"ORCHARDS" B 5.89 0.23 1.000 89 19.86

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.23

SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 1.000

SUBAREA RUNOFF(CFS) = 11.13

TOTAL AREA(ACRES) = 5.89 PEAK FLOW RATE(CFS) = 11.13

FLOW PROCESS FROM NODE 501.00 TO NODE 502.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA<<<<<
=====

ELEVATION DATA: UPSTREAM(FEET) = 1292.00 DOWNSTREAM(FEET) = 1284.10

CHANNEL LENGTH THRU SUBAREA(FEET) = 567.00 CHANNEL SLOPE = 0.0139

CHANNEL FLOW THRU SUBAREA(CFS) = 11.13

FLOW VELOCITY(FEET/SEC) = 3.03 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)

TRAVEL TIME(MIN.) = 3.12 T_c (MIN.) = 22.98

LONGEST FLOWPATH FROM NODE 500.00 TO NODE 502.00 = 1542.80 FEET.

FLOW PROCESS FROM NODE 502.00 TO NODE 502.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
=====

MAINLINE T_c (MIN.) = 22.98

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.135

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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AGRICULTURAL POOR COVER

"FALLOW" B 5.89 0.11 1.000 97

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.11

SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 1.000

SUBAREA AREA(ACRES) = 5.89 SUBAREA RUNOFF(CFS) = 10.75

EFFECTIVE AREA(ACRES) = 11.78 AREA-AVERAGED F_m (INCH/HR) = 0.17

AREA-AVERAGED Fp(INCH/HR) = 0.17 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 11.8 PEAK FLOW RATE(CFS) = 20.85

FLOW PROCESS FROM NODE 502.00 TO NODE 502.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 22.98
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.135
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL POOR COVER "BARREN"	B	0.83	0.11	1.000	97

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.11
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 0.83 SUBAREA RUNOFF(CFS) = 1.52
EFFECTIVE AREA(ACRES) = 12.61 AREA-AVERAGED Fm(INCH/HR) = 0.16
AREA-AVERAGED Fp(INCH/HR) = 0.16 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 12.6 PEAK FLOW RATE(CFS) = 22.37

FLOW PROCESS FROM NODE 502.00 TO NODE 503.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1284.10 DOWNSTREAM(FEET) = 1274.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 665.30 CHANNEL SLOPE = 0.0152
CHANNEL FLOW THRU SUBAREA(CFS) = 22.37
FLOW VELOCITY(FEET/SEC) = 3.81 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 2.91 Tc(MIN.) = 25.89
LONGEST FLOWPATH FROM NODE 500.00 TO NODE 503.00 = 2208.10 FEET.

FLOW PROCESS FROM NODE 503.00 TO NODE 503.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 25.89
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.987
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL POOR COVER "BARREN"	B	0.84	0.11	1.000	97

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.11
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 0.84 SUBAREA RUNOFF(CFS) = 1.43
EFFECTIVE AREA(ACRES) = 13.46 AREA-AVERAGED Fm(INCH/HR) = 0.16
AREA-AVERAGED Fp(INCH/HR) = 0.16 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 13.5 PEAK FLOW RATE(CFS) = 22.37

NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 503.00 TO NODE 503.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 25.89
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.987
 SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	6.05	0.23	1.000	89

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA AREA(ACRES) = 6.05 SUBAREA RUNOFF(CFS) = 9.57
 EFFECTIVE AREA(ACRES) = 19.51 AREA-AVERAGED Fm(INCH/HR) = 0.18
 AREA-AVERAGED Fp(INCH/HR) = 0.18 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 19.5 PEAK FLOW RATE(CFS) = 31.69

FLOW PROCESS FROM NODE 503.00 TO NODE 504.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1274.00 DOWNSTREAM(FEET) = 1270.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 324.60 CHANNEL SLOPE = 0.0123
 CHANNEL FLOW THRU SUBAREA(CFS) = 31.69
 FLOW VELOCITY(FEET/SEC) = 3.77 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 1.43 Tc(MIN.) = 27.32
 LONGEST FLOWPATH FROM NODE 500.00 TO NODE 504.00 = 2532.70 FEET.

FLOW PROCESS FROM NODE 504.00 TO NODE 504.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 27.32
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.924
 SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL POOR COVER "BARREN"	B	0.41	0.11	1.000	97

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.11
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA AREA(ACRES) = 0.41 SUBAREA RUNOFF(CFS) = 0.68
 EFFECTIVE AREA(ACRES) = 19.92 AREA-AVERAGED Fm(INCH/HR) = 0.18
 AREA-AVERAGED Fp(INCH/HR) = 0.18 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 19.9 PEAK FLOW RATE(CFS) = 31.69
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 504.00 TO NODE 504.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 600.00 TO NODE 601.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 570.10

ELEVATION DATA: UPSTREAM(FEET) = 1298.50 DOWNSTREAM(FEET) = 1291.30

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 15.932

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.659

SUBAREA T_c AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
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AGRICULTURAL POOR COVER

"FALLOW" B 6.52 0.11 1.000 97 15.93

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.11

SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 1.000

SUBAREA RUNOFF(CFS) = 14.98

TOTAL AREA(ACRES) = 6.52 PEAK FLOW RATE(CFS) = 14.98

FLOW PROCESS FROM NODE 601.00 TO NODE 602.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1291.30 DOWNSTREAM(FEET) = 1278.50

CHANNEL LENGTH THRU SUBAREA(FEET) = 724.90 CHANNEL SLOPE = 0.0177

CHANNEL FLOW THRU SUBAREA(CFS) = 14.98

FLOW VELOCITY(FEET/SEC) = 3.69 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)

TRAVEL TIME(MIN.) = 3.28 T_c (MIN.) = 19.21

LONGEST FLOWPATH FROM NODE 600.00 TO NODE 602.00 = 1295.00 FEET.

FLOW PROCESS FROM NODE 602.00 TO NODE 602.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE T_c (MIN.) = 19.21

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.377

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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AGRICULTURAL POOR COVER

"ORCHARDS" B 7.34 0.23 1.000 89

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.23

SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 1.000

SUBAREA AREA(ACRES) = 7.34 SUBAREA RUNOFF(CFS) = 14.18

EFFECTIVE AREA(ACRES) = 13.86 AREA-AVERAGED F_m (INCH/HR) = 0.17

AREA-AVERAGED F_p (INCH/HR) = 0.17 AREA-AVERAGED A_p = 1.00

TOTAL AREA(ACRES) = 13.9 PEAK FLOW RATE(CFS) = 27.51

FLOW PROCESS FROM NODE 602.00 TO NODE 603.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1278.50 DOWNSTREAM(FEET) = 1273.80
CHANNEL LENGTH THRU SUBAREA(FEET) = 335.30 CHANNEL SLOPE = 0.0140
CHANNEL FLOW THRU SUBAREA(CFS) = 27.51
FLOW VELOCITY(FEET/SEC) = 3.87 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 1.44 Tc(MIN.) = 20.65
LONGEST FLOWPATH FROM NODE 600.00 TO NODE 603.00 = 1630.30 FEET.

FLOW PROCESS FROM NODE 603.00 TO NODE 603.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 20.65
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.276
SUBAREA LOSS RATE DATA(AMC III):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL POOR COVER
"ORCHARDS" B 3.75 0.23 1.000 89
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 3.75 SUBAREA RUNOFF(CFS) = 6.90
EFFECTIVE AREA(ACRES) = 17.61 AREA-AVERAGED Fm(INCH/HR) = 0.18
AREA-AVERAGED Fp(INCH/HR) = 0.18 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 17.6 PEAK FLOW RATE(CFS) = 33.15

FLOW PROCESS FROM NODE 603.00 TO NODE 504.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1273.80 DOWNSTREAM(FEET) = 1270.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 527.40 CHANNEL SLOPE = 0.0072
CHANNEL FLOW THRU SUBAREA(CFS) = 33.15
FLOW VELOCITY(FEET/SEC) = 2.92 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 3.01 Tc(MIN.) = 23.66
LONGEST FLOWPATH FROM NODE 600.00 TO NODE 504.00 = 2157.70 FEET.

FLOW PROCESS FROM NODE 504.00 TO NODE 504.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 23.66
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.097
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	2.36	0.23	1.000	89
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000					
SUBAREA AREA(ACRES) =		2.36	SUBAREA RUNOFF(CFS) =		3.97
EFFECTIVE AREA(ACRES) =		19.97	AREA-AVERAGED Fm(INCH/HR) =		0.19
AREA-AVERAGED Fp(INCH/HR) =		0.19	AREA-AVERAGED Ap =		1.00
TOTAL AREA(ACRES) =		20.0	PEAK FLOW RATE(CFS) =		34.29

FLOW PROCESS FROM NODE 504.00 TO NODE 504.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	34.29	23.66	2.097	0.19(0.19)	1.00	20.0	600.00
LONGEST FLOWPATH FROM NODE 600.00 TO NODE 504.00 = 2157.70 FEET.							

** MEMORY BANK # 2 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	31.69	27.32	1.924	0.18(0.18)	1.00	19.9	500.00
LONGEST FLOWPATH FROM NODE 500.00 TO NODE 504.00 = 2532.70 FEET.							

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	64.46	23.66	2.097	0.19(0.19)	1.00	37.2	600.00
2	62.86	27.32	1.924	0.18(0.18)	1.00	39.9	500.00
TOTAL AREA(ACRES) = 39.9							

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 64.46 Tc(MIN.) = 23.660
EFFECTIVE AREA(ACRES) = 37.22 AREA-AVERAGED Fm(INCH/HR) = 0.19
AREA-AVERAGED Fp(INCH/HR) = 0.19 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 39.9
LONGEST FLOWPATH FROM NODE 500.00 TO NODE 504.00 = 2532.70 FEET.

FLOW PROCESS FROM NODE 504.00 TO NODE 504.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 504.00 TO NODE 109.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1270.00 DOWNSTREAM(FEET) = 1232.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 988.30 CHANNEL SLOPE = 0.0384
 CHANNEL FLOW THRU SUBAREA(CFS) = 64.46
 FLOW VELOCITY(FEET/SEC) = 8.17 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 2.02 Tc(MIN.) = 25.68
 LONGEST FLOWPATH FROM NODE 500.00 TO NODE 109.00 = 3521.00 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 25.68
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.997
 SUBAREA LOSS RATE DATA(AMC III):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW" B 0.83 0.11 1.000 97
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.11
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA AREA(ACRES) = 0.83 SUBAREA RUNOFF(CFS) = 1.41
 EFFECTIVE AREA(ACRES) = 38.05 AREA-AVERAGED Fm(INCH/HR) = 0.18
 AREA-AVERAGED Fp(INCH/HR) = 0.18 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 40.7 PEAK FLOW RATE(CFS) = 64.46
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

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** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	64.46	25.68	1.997	0.18(0.18)	1.00	38.0	600.00
2	62.86	29.35	1.843	0.18(0.18)	1.00	40.7	500.00

LONGEST FLOWPATH FROM NODE 500.00 TO NODE 109.00 = 3521.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	68.02	18.16	2.458	0.19(0.19)	0.99	33.1	300.00
2	68.61	20.35	2.296	0.19(0.19)	0.99	36.0	200.00
3	67.05	24.20	2.069	0.19(0.19)	0.98	39.5	700.00
4	58.00	31.95	1.751	0.19(0.19)	0.98	41.1	101.00
5	49.78	41.86	1.489	0.19(0.19)	0.97	42.4	900.00

LONGEST FLOWPATH FROM NODE 900.00 TO NODE 109.00 = 5121.70 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	125.20	18.16	2.458	0.19(0.19)	0.99	60.0	300.00
2	128.12	20.35	2.296	0.19(0.19)	0.99	66.2	200.00

3	130.22	24.20	2.069	0.19(0.19)	0.99	75.3	700.00
4	129.79	25.68	1.997	0.19(0.19)	0.99	77.8	600.00
5	123.89	29.35	1.843	0.19(0.19)	0.99	81.2	500.00
6	117.40	31.95	1.751	0.19(0.19)	0.99	81.8	101.00
7	99.25	41.86	1.489	0.19(0.19)	0.99	83.1	900.00
TOTAL AREA(ACRES) =			83.1				

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 130.22 Tc(MIN.) = 24.198
EFFECTIVE AREA(ACRES) = 75.31 AREA-AVERAGED Fm(INCH/HR) = 0.19
AREA-AVERAGED Fp(INCH/HR) = 0.19 AREA-AVERAGED Ap = 0.99
TOTAL AREA(ACRES) = 83.1
LONGEST FLOWPATH FROM NODE 900.00 TO NODE 109.00 = 5121.70 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

=====

END OF STUDY SUMMARY:

TOTAL AREA(ACRES) = 83.1 TC(MIN.) = 24.20
EFFECTIVE AREA(ACRES) = 75.31 AREA-AVERAGED Fm(INCH/HR)= 0.19
AREA-AVERAGED Fp(INCH/HR) = 0.19 AREA-AVERAGED Ap = 0.992
PEAK FLOW RATE(CFS) = 130.22

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	125.20	18.16	2.458	0.19(0.19)	0.99	60.0	300.00
2	128.12	20.35	2.296	0.19(0.19)	0.99	66.2	200.00
3	130.22	24.20	2.069	0.19(0.19)	0.99	75.3	700.00
4	129.79	25.68	1.997	0.19(0.19)	0.99	77.8	600.00
5	123.89	29.35	1.843	0.19(0.19)	0.99	81.2	500.00
6	117.40	31.95	1.751	0.19(0.19)	0.99	81.8	101.00
7	99.25	41.86	1.489	0.19(0.19)	0.99	83.1	900.00

=====

END OF RATIONAL METHOD ANALYSIS

↑

C-2: Proposed AES Hydrologic Analysis (10-, 100-yr)

RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
(Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
(c) Copyright 1983-2014 Advanced Engineering Software (aes)
Ver. 21.0 Release Date: 06/01/2014 License ID 1202

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****

* CITY OF REDLANDS ENTITLEMENT - TTM# 20336 - MLC HOLDINGS,INC *
* 10-YEAR PROPOSED CONDITIONS RATIONAL METHOD *
* RYAN KIM HC 6/30/20 *

FILE NAME: RED10P.DAT
TIME/DATE OF STUDY: 17:03 06/30/2020

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 10.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 18.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 0.7490

ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	HALF- WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT- / PARK- SIDE / SIDE / WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH (FT)	LIP (FT)	HIKE (FT)	MANNING FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00	0.0312	0.167	0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.67 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 4.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 100.00 TO NODE 101.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 822.00
ELEVATION DATA: UPSTREAM(FEET) = 1287.10 DOWNSTREAM(FEET) = 1276.10

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 12.987
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.876

SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
RESIDENTIAL						
"8-10 DWELLINGS/ACRE"	B	3.31	0.75	0.400	56	12.99

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.75
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.400
SUBAREA RUNOFF(CFS) = 4.70
TOTAL AREA(ACRES) = 3.31 PEAK FLOW RATE(CFS) = 4.70

FLOW PROCESS FROM NODE 101.00 TO NODE 102.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1276.10 DOWNSTREAM ELEVATION(FEET) = 1273.00
STREET LENGTH(FEET) = 217.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
INSIDE STREET CROSSFALL(DECIMAL) = 0.018
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 6.19
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.41
HALFSTREET FLOOD WIDTH(FEET) = 14.10
AVERAGE FLOW VELOCITY(FEET/SEC.) = 3.14
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.30
STREET FLOW TRAVEL TIME(MIN.) = 1.15 T_c (MIN.) = 14.14
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.783

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	2.23	0.75	0.400	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.75
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.400
SUBAREA AREA(ACRES) = 2.23 SUBAREA RUNOFF(CFS) = 2.98
EFFECTIVE AREA(ACRES) = 5.54 AREA-AVERAGED F_m (INCH/HR) = 0.30

AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.40
TOTAL AREA(ACRES) = 5.5 PEAK FLOW RATE(CFS) = 7.40

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.44 HALFSTREET FLOOD WIDTH(FEET) = 15.27
FLOW VELOCITY(FEET/SEC.) = 3.25 DEPTH*VELOCITY(FT*FT/SEC.) = 1.41
LONGEST FLOWPATH FROM NODE 100.00 TO NODE 102.00 = 1039.00 FEET.

FLOW PROCESS FROM NODE 102.00 TO NODE 103.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1273.00 DOWNSTREAM ELEVATION(FEET) = 1270.00
STREET LENGTH(FEET) = 172.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
INSIDE STREET CROSSFALL(DECIMAL) = 0.018
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 8.83
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.44
HALFSTREET FLOOD WIDTH(FEET) = 15.74
AVERAGE FLOW VELOCITY(FEET/SEC.) = 3.67
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.63
STREET FLOW TRAVEL TIME(MIN.) = 0.78 Tc(MIN.) = 14.92

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.726

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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RESIDENTIAL

"8-10 DWELLINGS/ACRE"	B	2.23	0.75	0.400	56
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SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400

SUBAREA AREA(ACRES) = 2.23 SUBAREA RUNOFF(CFS) = 2.86

EFFECTIVE AREA(ACRES) = 7.77 AREA-AVERAGED Fm(INCH/HR) = 0.30

AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.40

TOTAL AREA(ACRES) = 7.8 PEAK FLOW RATE(CFS) = 9.98

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.46 HALFSTREET FLOOD WIDTH(FEET) = 16.60
FLOW VELOCITY(FEET/SEC.) = 3.76 DEPTH*VELOCITY(FT*FT/SEC.) = 1.73
LONGEST FLOWPATH FROM NODE 100.00 TO NODE 103.00 = 1211.00 FEET.

FLOW PROCESS FROM NODE 103.00 TO NODE 103.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 14.92
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.726
SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	1.12	0.75	0.400	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
SUBAREA AREA(ACRES) = 1.12 SUBAREA RUNOFF(CFS) = 1.44
EFFECTIVE AREA(ACRES) = 8.89 AREA-AVERAGED Fm(INCH/HR) = 0.30
AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.40
TOTAL AREA(ACRES) = 8.9 PEAK FLOW RATE(CFS) = 11.42

FLOW PROCESS FROM NODE 103.00 TO NODE 104.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1264.00 DOWNSTREAM(FEET) = 1263.70
FLOW LENGTH(FEET) = 60.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 24.0 INCH PIPE IS 15.5 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 5.30
ESTIMATED PIPE DIAMETER(INCH) = 24.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 11.42
PIPE TRAVEL TIME(MIN.) = 0.19 Tc(MIN.) = 15.11
LONGEST FLOWPATH FROM NODE 100.00 TO NODE 104.00 = 1271.00 FEET.

FLOW PROCESS FROM NODE 104.00 TO NODE 104.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 15.11
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.713
SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	1.36	0.75	0.400	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
SUBAREA AREA(ACRES) = 1.36 SUBAREA RUNOFF(CFS) = 1.73
EFFECTIVE AREA(ACRES) = 10.25 AREA-AVERAGED Fm(INCH/HR) = 0.30
AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.40
TOTAL AREA(ACRES) = 10.2 PEAK FLOW RATE(CFS) = 13.05

FLOW PROCESS FROM NODE 104.00 TO NODE 104.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

=====

FLOW PROCESS FROM NODE 114.00 TO NODE 115.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====
INITIAL SUBAREA FLOW-LENGTH(FEET) = 663.00
ELEVATION DATA: UPSTREAM(FEET) = 1289.00 DOWNSTREAM(FEET) = 1281.50

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 12.324

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.936

SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS Tc
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)

RESIDENTIAL

"8-10 DWELLINGS/ACRE" B 1.89 0.75 0.400 56 12.32

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400

SUBAREA RUNOFF(CFS) = 2.78

TOTAL AREA(ACRES) = 1.89 PEAK FLOW RATE(CFS) = 2.78

FLOW PROCESS FROM NODE 115.00 TO NODE 116.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====
UPSTREAM ELEVATION(FEET) = 1281.50 DOWNSTREAM ELEVATION(FEET) = 1274.90
STREET LENGTH(FEET) = 487.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00

INSIDE STREET CROSSFALL(DECIMAL) = 0.018

OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1

STREET PARKWAY CROSSFALL(DECIMAL) = 0.020

Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150

Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 3.61

STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:

STREET FLOW DEPTH(FEET) = 0.36

HALFSTREET FLOOD WIDTH(FEET) = 11.29

AVERAGE FLOW VELOCITY(FEET/SEC.) = 2.71

PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.99

STREET FLOW TRAVEL TIME(MIN.) = 2.99 Tc(MIN.) = 15.32

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.699

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN

RESIDENTIAL

"8-10 DWELLINGS/ACRE" B 1.31 0.75 0.400 56

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.75
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.400
 SUBAREA AREA(ACRES) = 1.31 SUBAREA RUNOFF(CFS) = 1.65
 EFFECTIVE AREA(ACRES) = 3.20 AREA-AVERAGED F_m (INCH/HR) = 0.30
 AREA-AVERAGED F_p (INCH/HR) = 0.75 AREA-AVERAGED A_p = 0.40
 TOTAL AREA(ACRES) = 3.2 PEAK FLOW RATE(CFS) = 4.03

END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.37 HALFSTREET FLOOD WIDTH(FEET) = 11.84
 FLOW VELOCITY(FEET/SEC.) = 2.79 DEPTH*VELOCITY(FT*FT/SEC.) = 1.04
 LONGEST FLOWPATH FROM NODE 114.00 TO NODE 116.00 = 1150.00 FEET.

FLOW PROCESS FROM NODE 116.00 TO NODE 104.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>(STREET TABLE SECTION # 1 USED)<<<<<

UPSTREAM ELEVATION(FEET) = 1274.90 DOWNSTREAM ELEVATION(FEET) = 1269.70
 STREET LENGTH(FEET) = 352.00 CURB HEIGHT(INCHES) = 8.0
 STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
 INSIDE STREET CROSSFALL(DECIMAL) = 0.018
 OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
 STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
 Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 4.57
 STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
 STREET FLOW DEPTH(FEET) = 0.38
 HALFSTREET FLOOD WIDTH(FEET) = 12.30
 AVERAGE FLOW VELOCITY(FEET/SEC.) = 2.95
 PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.13
 STREET FLOW TRAVEL TIME(MIN.) = 1.99 T_c (MIN.) = 17.30
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.579

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	F_p (INCH/HR)	A_p (DECIMAL)	SCS CN
RESIDENTIAL					

"8-10 DWELLINGS/ACRE"	B	0.93	0.75	0.400	56
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SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.75
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.400
 SUBAREA AREA(ACRES) = 0.93 SUBAREA RUNOFF(CFS) = 1.07
 EFFECTIVE AREA(ACRES) = 4.13 AREA-AVERAGED F_m (INCH/HR) = 0.30
 AREA-AVERAGED F_p (INCH/HR) = 0.75 AREA-AVERAGED A_p = 0.40
 TOTAL AREA(ACRES) = 4.1 PEAK FLOW RATE(CFS) = 4.76

END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.39 HALFSTREET FLOOD WIDTH(FEET) = 12.54
 FLOW VELOCITY(FEET/SEC.) = 2.98 DEPTH*VELOCITY(FT*FT/SEC.) = 1.15
 LONGEST FLOWPATH FROM NODE 114.00 TO NODE 104.00 = 1502.00 FEET.

FLOW PROCESS FROM NODE 104.00 TO NODE 104.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
=====

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	4.76	17.30	1.579	0.75(0.30)	0.40	4.1	114.00

LONGEST FLOWPATH FROM NODE 114.00 TO NODE 104.00 = 1502.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	13.05	15.11	1.713	0.75(0.30)	0.40	10.2	100.00

LONGEST FLOWPATH FROM NODE 100.00 TO NODE 104.00 = 1271.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	17.63	15.11	1.713	0.75(0.30)	0.40	13.9	100.00
2	16.57	17.30	1.579	0.75(0.30)	0.40	14.4	114.00

TOTAL AREA(ACRES) = 14.4

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 17.63 Tc(MIN.) = 15.109
EFFECTIVE AREA(ACRES) = 13.86 AREA-AVERAGED Fm(INCH/HR) = 0.30
AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.40
TOTAL AREA(ACRES) = 14.4
LONGEST FLOWPATH FROM NODE 114.00 TO NODE 104.00 = 1502.00 FEET.

FLOW PROCESS FROM NODE 104.00 TO NODE 104.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<
=====

FLOW PROCESS FROM NODE 104.00 TO NODE 105.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
=====

ELEVATION DATA: UPSTREAM(FEET) = 1263.70 DOWNSTREAM(FEET) = 1261.80
FLOW LENGTH(FEET) = 162.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 24.0 INCH PIPE IS 15.6 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 8.14
ESTIMATED PIPE DIAMETER(INCH) = 24.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 17.63
PIPE TRAVEL TIME(MIN.) = 0.33 Tc(MIN.) = 15.44
LONGEST FLOWPATH FROM NODE 114.00 TO NODE 105.00 = 1664.00 FEET.

FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 117.00 TO NODE 118.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 999.00
ELEVATION DATA: UPSTREAM(FEET) = 1286.50 DOWNSTREAM(FEET) = 1265.00

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 14.065

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.788

SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
RESIDENTIAL "3-4 DWELLINGS/ACRE"	B	2.24	0.75	0.600	56	14.07

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.600
SUBAREA RUNOFF(CFS) = 2.70
TOTAL AREA(ACRES) = 2.24 PEAK FLOW RATE(CFS) = 2.70

FLOW PROCESS FROM NODE 118.00 TO NODE 105.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1262.50 DOWNSTREAM(FEET) = 1261.80
FLOW LENGTH(FEET) = 134.00 MANNING'S N = 0.013
ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 18.000
DEPTH OF FLOW IN 18.0 INCH PIPE IS 7.6 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 3.78
ESTIMATED PIPE DIAMETER(INCH) = 18.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 2.70
PIPE TRAVEL TIME(MIN.) = 0.59 T_c (MIN.) = 14.66
LONGEST FLOWPATH FROM NODE 117.00 TO NODE 105.00 = 1133.00 FEET.

FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	T_c (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	2.70	14.66	1.745	0.75(0.45)	0.60	2.2	117.00

LONGEST FLOWPATH FROM NODE 117.00 TO NODE 105.00 = 1133.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	17.63	15.44	1.691	0.75(0.30)	0.40	13.9	100.00
2	16.57	17.64	1.561	0.75(0.30)	0.40	14.4	114.00

LONGEST FLOWPATH FROM NODE 114.00 TO NODE 105.00 = 1664.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	20.09	14.66	1.745	0.75(0.32)	0.43	15.4	117.00
2	20.22	15.44	1.691	0.75(0.32)	0.43	16.1	100.00
3	18.89	17.64	1.561	0.75(0.32)	0.43	16.6	114.00

TOTAL AREA(ACRES) = 16.6

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 20.22 Tc(MIN.) = 15.440
EFFECTIVE AREA(ACRES) = 16.10 AREA-AVERAGED Fm(INCH/HR) = 0.32
AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.43
TOTAL AREA(ACRES) = 16.6
LONGEST FLOWPATH FROM NODE 114.00 TO NODE 105.00 = 1664.00 FEET.

FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

=====

FLOW PROCESS FROM NODE 105.00 TO NODE 106.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1261.80 DOWNSTREAM(FEET) = 1255.00
FLOW LENGTH(FEET) = 41.00 MANNING'S N = 0.013
ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 18.000
DEPTH OF FLOW IN 18.0 INCH PIPE IS 9.0 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 22.94
ESTIMATED PIPE DIAMETER(INCH) = 18.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 20.22
PIPE TRAVEL TIME(MIN.) = 0.03 Tc(MIN.) = 15.47
LONGEST FLOWPATH FROM NODE 114.00 TO NODE 106.00 = 1705.00 FEET.

FLOW PROCESS FROM NODE 106.00 TO NODE 107.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1255.00 DOWNSTREAM(FEET) = 1254.30
FLOW LENGTH(FEET) = 150.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 30.0 INCH PIPE IS 19.6 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 5.96
ESTIMATED PIPE DIAMETER(INCH) = 30.00 NUMBER OF PIPES = 1

PIPE-FLOW(CFS) = 20.22
 PIPE TRAVEL TIME(MIN.) = 0.42 Tc(MIN.) = 15.89
 LONGEST FLOWPATH FROM NODE 114.00 TO NODE 107.00 = 1855.00 FEET.

FLOW PROCESS FROM NODE 107.00 TO NODE 107.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 15.89
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.662
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "8-10 DWELLINGS/ACRE" B 4.78 0.75 0.400 56
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA AREA(ACRES) = 4.78 SUBAREA RUNOFF(CFS) = 5.86
 EFFECTIVE AREA(ACRES) = 20.88 AREA-AVERAGED Fm(INCH/HR) = 0.32
 AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.42
 TOTAL AREA(ACRES) = 21.4 PEAK FLOW RATE(CFS) = 25.31

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	25.37	15.11	1.714	0.75(0.32)	0.42	20.2	117.00
2	25.31	15.89	1.662	0.75(0.32)	0.42	20.9	100.00
3	23.54	18.11	1.537	0.75(0.31)	0.42	21.4	114.00

NEW PEAK FLOW DATA ARE:

PEAK FLOW RATE(CFS) = 25.37 Tc(MIN.) = 15.11
 AREA-AVERAGED Fm(INCH/HR) = 0.32 AREA-AVERAGED Fp(INCH/HR) = 0.75
 AREA-AVERAGED Ap = 0.42 EFFECTIVE AREA(ACRES) = 20.17

FLOW PROCESS FROM NODE 107.00 TO NODE 108.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1254.30 DOWNSTREAM(FEET) = 1254.10
 FLOW LENGTH(FEET) = 40.00 MANNING'S N = 0.013
 DEPTH OF FLOW IN 30.0 INCH PIPE IS 22.7 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) = 6.36
 ESTIMATED PIPE DIAMETER(INCH) = 30.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 25.37
 PIPE TRAVEL TIME(MIN.) = 0.10 Tc(MIN.) = 15.21
 LONGEST FLOWPATH FROM NODE 114.00 TO NODE 108.00 = 1895.00 FEET.

FLOW PROCESS FROM NODE 108.00 TO NODE 108.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 15.21

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.706
 SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL "8-10 DWELLINGS/ACRE"	B	4.08	0.75	0.400	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA AREA(ACRES) = 4.08 SUBAREA RUNOFF(CFS) = 5.17
 EFFECTIVE AREA(ACRES) = 24.25 AREA-AVERAGED Fm(INCH/HR) = 0.31
 AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.42
 TOTAL AREA(ACRES) = 25.5 PEAK FLOW RATE(CFS) = 30.41

FLOW PROCESS FROM NODE 108.00 TO NODE 109.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1254.10 DOWNSTREAM(FEET) = 1253.00
 FLOW LENGTH(FEET) = 221.00 MANNING'S N = 0.013
 DEPTH OF FLOW IN 33.0 INCH PIPE IS 23.6 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) = 6.70
 ESTIMATED PIPE DIAMETER(INCH) = 33.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 30.41
 PIPE TRAVEL TIME(MIN.) = 0.55 Tc(MIN.) = 15.76
 LONGEST FLOWPATH FROM NODE 114.00 TO NODE 109.00 = 2116.00 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 119.00 TO NODE 120.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

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INITIAL SUBAREA FLOW-LENGTH(FEET) = 621.00
 ELEVATION DATA: UPSTREAM(FEET) = 1302.20 DOWNSTREAM(FEET) = 1291.30

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 8.938
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 2.348
 SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
COMMERCIAL	B	0.91	0.75	0.100	56	8.94

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
 SUBAREA RUNOFF(CFS) = 1.86
 TOTAL AREA(ACRES) = 0.91 PEAK FLOW RATE(CFS) = 1.86

FLOW PROCESS FROM NODE 120.00 TO NODE 121.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>(STREET TABLE SECTION # 1 USED)<<<<<

UPSTREAM ELEVATION(FEET) = 1291.30 DOWNSTREAM ELEVATION(FEET) = 1281.00
STREET LENGTH(FEET) = 710.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
INSIDE STREET CROSSFALL(DECIMAL) = 0.018
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 2.66
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.33
HALFSTREET FLOOD WIDTH(FEET) = 9.59
AVERAGE FLOW VELOCITY(FEET/SEC.) = 2.61
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.87
STREET FLOW TRAVEL TIME(MIN.) = 4.53 Tc(MIN.) = 13.46
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.836

SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
COMMERCIAL B 1.00 0.75 0.100 56
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
SUBAREA AREA(ACRES) = 1.00 SUBAREA RUNOFF(CFS) = 1.59
EFFECTIVE AREA(ACRES) = 1.91 AREA-AVERAGED Fm(INCH/HR) = 0.07
AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.10
TOTAL AREA(ACRES) = 1.9 PEAK FLOW RATE(CFS) = 3.03

END OF SUBAREA STREET FLOW HYDRAULICS:
DEPTH(FEET) = 0.35 HALFSTREET FLOOD WIDTH(FEET) = 10.27
FLOW VELOCITY(FEET/SEC.) = 2.66 DEPTH*VELOCITY(FT*FT/SEC.) = 0.92
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 121.00 = 1331.00 FEET.

FLOW PROCESS FROM NODE 121.00 TO NODE 121.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 13.46
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.836
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"8-10 DWELLINGS/ACRE" B 1.08 0.75 0.400 56

SUBAREA AVERAGE PERVIOUS LOSS RATE, $F_p(\text{INCH/HR}) = 0.75$
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, $A_p = 0.400$
 SUBAREA AREA(ACRES) = 1.08 SUBAREA RUNOFF(CFS) = 1.49
 EFFECTIVE AREA(ACRES) = 2.99 AREA-AVERAGED $F_m(\text{INCH/HR}) = 0.16$
 AREA-AVERAGED $F_p(\text{INCH/HR}) = 0.75$ AREA-AVERAGED $A_p = 0.21$
 TOTAL AREA(ACRES) = 3.0 PEAK FLOW RATE(CFS) = 4.52

FLOW PROCESS FROM NODE 121.00 TO NODE 122.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1281.00 DOWNSTREAM ELEVATION(FEET) = 1276.70
 STREET LENGTH(FEET) = 264.00 CURB HEIGHT(INCHES) = 8.0
 STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
 INSIDE STREET CROSSFALL(DECIMAL) = 0.018
 OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
 STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
 Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 4.81
 STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
 STREET FLOW DEPTH(FEET) = 0.38
 HALFSTREET FLOOD WIDTH(FEET) = 12.30
 AVERAGE FLOW VELOCITY(FEET/SEC.) = 3.11
 PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.19
 STREET FLOW TRAVEL TIME(MIN.) = 1.42 $T_c(\text{MIN.}) = 14.88$
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.729

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	F_p (INCH/HR)	A_p (DECIMAL)	SCS CN
COMMERCIAL	B	0.38	0.75	0.100	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, $F_p(\text{INCH/HR}) = 0.75$
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, $A_p = 0.100$
 SUBAREA AREA(ACRES) = 0.38 SUBAREA RUNOFF(CFS) = 0.57
 EFFECTIVE AREA(ACRES) = 3.37 AREA-AVERAGED $F_m(\text{INCH/HR}) = 0.15$
 AREA-AVERAGED $F_p(\text{INCH/HR}) = 0.75$ AREA-AVERAGED $A_p = 0.20$
 TOTAL AREA(ACRES) = 3.4 PEAK FLOW RATE(CFS) = 4.80

END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.38 HALFSTREET FLOOD WIDTH(FEET) = 12.30
 FLOW VELOCITY(FEET/SEC.) = 3.11 DEPTH*VELOCITY(FT*FT/SEC.) = 1.19
 LONGEST FLOWPATH FROM NODE 119.00 TO NODE 122.00 = 1595.00 FEET.

FLOW PROCESS FROM NODE 122.00 TO NODE 122.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

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MAINLINE Tc(MIN.) = 14.88
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.729
 SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	0.48	0.75	0.400	56

 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA AREA(ACRES) = 0.48 SUBAREA RUNOFF(CFS) = 0.61
 EFFECTIVE AREA(ACRES) = 3.85 AREA-AVERAGED Fm(INCH/HR) = 0.17
 AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.22
 TOTAL AREA(ACRES) = 3.9 PEAK FLOW RATE(CFS) = 5.42

FLOW PROCESS FROM NODE 122.00 TO NODE 122.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 111.00 TO NODE 112.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 591.00
 ELEVATION DATA: UPSTREAM(FEET) = 1289.00 DOWNSTREAM(FEET) = 1280.40

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 11.192
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 2.051
 SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
RESIDENTIAL						
"8-10 DWELLINGS/ACRE"	B	1.12	0.75	0.400	56	11.19

 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA RUNOFF(CFS) = 1.77
 TOTAL AREA(ACRES) = 1.12 PEAK FLOW RATE(CFS) = 1.77

FLOW PROCESS FROM NODE 112.00 TO NODE 122.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>(STREET TABLE SECTION # 1 USED)<<<<<

UPSTREAM ELEVATION(FEET) = 1280.40 DOWNSTREAM ELEVATION(FEET) = 1276.70
 STREET LENGTH(FEET) = 617.00 CURB HEIGHT(INCHES) = 8.0
 STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
 INSIDE STREET CROSSFALL(DECIMAL) = 0.018
 OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
 STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
 Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 2.71
 STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
 STREET FLOW DEPTH(FEET) = 0.38
 HALFSTREET FLOOD WIDTH(FEET) = 11.91
 AVERAGE FLOW VELOCITY(FEET/SEC.) = 1.85
 PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.70
 STREET FLOW TRAVEL TIME(MIN.) = 5.55 Tc(MIN.) = 16.74
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.611
 SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	1.59	0.75	0.400	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA AREA(ACRES) = 1.59 SUBAREA RUNOFF(CFS) = 1.88
 EFFECTIVE AREA(ACRES) = 2.71 AREA-AVERAGED Fm(INCH/HR) = 0.30
 AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.40
 TOTAL AREA(ACRES) = 2.7 PEAK FLOW RATE(CFS) = 3.20

END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.39 HALFSTREET FLOOD WIDTH(FEET) = 12.85
 FLOW VELOCITY(FEET/SEC.) = 1.92 DEPTH*VELOCITY(FT*FT/SEC.) = 0.75
 LONGEST FLOWPATH FROM NODE 111.00 TO NODE 122.00 = 1208.00 FEET.

 FLOW PROCESS FROM NODE 122.00 TO NODE 122.00 IS CODE = 11

 >>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<
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** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	3.20	16.74	1.611	0.75(0.30)	0.40	2.7	111.00

LONGEST FLOWPATH FROM NODE 111.00 TO NODE 122.00 = 1208.00 FEET.

** MEMORY BANK # 2 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	5.42	14.88	1.729	0.75(0.17)	0.22	3.9	119.00

LONGEST FLOWPATH FROM NODE 119.00 TO NODE 122.00 = 1595.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	8.52	14.88	1.729	0.75(0.22)	0.29	6.3	119.00
2	8.21	16.74	1.611	0.75(0.22)	0.30	6.6	111.00

TOTAL AREA(ACRES) = 6.6

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 8.52 Tc(MIN.) = 14.880
EFFECTIVE AREA(ACRES) = 6.26 AREA-AVERAGED Fm(INCH/HR) = 0.22
AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.30
TOTAL AREA(ACRES) = 6.6
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 122.00 = 1595.00 FEET.

FLOW PROCESS FROM NODE 122.00 TO NODE 122.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 122.00 TO NODE 123.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>(STREET TABLE SECTION # 1 USED)<<<<<

UPSTREAM ELEVATION(FEET) = 1276.70 DOWNSTREAM ELEVATION(FEET) = 1266.00
STREET LENGTH(FEET) = 621.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
INSIDE STREET CROSSFALL(DECIMAL) = 0.018
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 9.17
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.45
HALFSTREET FLOOD WIDTH(FEET) = 16.05
AVERAGE FLOW VELOCITY(FEET/SEC.) = 3.67
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.65
STREET FLOW TRAVEL TIME(MIN.) = 2.82 Tc(MIN.) = 17.70

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.558

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.97	0.75	0.100	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
SUBAREA AREA(ACRES) = 0.97 SUBAREA RUNOFF(CFS) = 1.30
EFFECTIVE AREA(ACRES) = 7.23 AREA-AVERAGED Fm(INCH/HR) = 0.20
AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.26
TOTAL AREA(ACRES) = 7.5 PEAK FLOW RATE(CFS) = 8.85

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.45 HALFSTREET FLOOD WIDTH(FEET) = 15.82
FLOW VELOCITY(FEET/SEC.) = 3.64 DEPTH*VELOCITY(FT*FT/SEC.) = 1.62

LONGEST FLOWPATH FROM NODE 119.00 TO NODE 123.00 = 2216.00 FEET.

FLOW PROCESS FROM NODE 123.00 TO NODE 109.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1260.00 DOWNSTREAM(FEET) = 1253.00
FLOW LENGTH(FEET) = 680.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 18.0 INCH PIPE IS 13.1 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 6.45
ESTIMATED PIPE DIAMETER(INCH) = 18.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 8.85
PIPE TRAVEL TIME(MIN.) = 1.76 Tc(MIN.) = 19.45
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 109.00 = 2896.00 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

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** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	8.85	19.45	1.472	0.75(0.20)	0.26	7.2	119.00
2	8.58	21.33	1.393	0.75(0.20)	0.27	7.5	111.00

LONGEST FLOWPATH FROM NODE 119.00 TO NODE 109.00 = 2896.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	30.41	15.76	1.670	0.75(0.31)	0.42	24.3	117.00
2	30.17	16.55	1.622	0.75(0.31)	0.42	25.0	100.00
3	27.96	18.77	1.504	0.75(0.31)	0.42	25.5	114.00

LONGEST FLOWPATH FROM NODE 114.00 TO NODE 109.00 = 2116.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	38.70	15.76	1.670	0.75(0.29)	0.39	30.1	117.00
2	38.58	16.55	1.622	0.75(0.29)	0.39	31.1	100.00
3	36.72	18.77	1.504	0.75(0.29)	0.38	32.5	114.00
4	36.06	19.45	1.472	0.75(0.29)	0.38	32.7	119.00
5	33.93	21.33	1.393	0.75(0.29)	0.38	33.0	111.00

TOTAL AREA(ACRES) = 33.0

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 38.70 Tc(MIN.) = 15.760
EFFECTIVE AREA(ACRES) = 30.11 AREA-AVERAGED Fm(INCH/HR) = 0.29
AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.38
TOTAL AREA(ACRES) = 33.0
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 109.00 = 2896.00 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 124.00 TO NODE 125.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 906.00
ELEVATION DATA: UPSTREAM(FEET) = 1269.50 DOWNSTREAM(FEET) = 1261.50

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 18.401

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.522

SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	F_p (INCH/HR)	A_p (DECIMAL)	SCS CN	T_c (MIN.)
RESIDENTIAL "1 DWELLING/ACRE"	B	6.02	0.75	0.800	56	18.40
SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.75						
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.800						
SUBAREA RUNOFF(CFS) = 5.01						
TOTAL AREA(ACRES) = 6.02 PEAK FLOW RATE(CFS) = 5.01						

FLOW PROCESS FROM NODE 125.00 TO NODE 109.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1255.50 DOWNSTREAM(FEET) = 1253.00
FLOW LENGTH(FEET) = 425.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 18.0 INCH PIPE IS 10.6 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 4.62
ESTIMATED PIPE DIAMETER(INCH) = 18.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 5.01
PIPE TRAVEL TIME(MIN.) = 1.53 T_c (MIN.) = 19.94
LONGEST FLOWPATH FROM NODE 124.00 TO NODE 109.00 = 1331.00 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE T_c (MIN.) = 19.94

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.451

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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RESIDENTIAL

"1 DWELLING/ACRE" B 3.60 0.75 0.800 56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.800

SUBAREA AREA(ACRES) = 3.60 SUBAREA RUNOFF(CFS) = 2.76

EFFECTIVE AREA(ACRES) = 9.62 AREA-AVERAGED Fm(INCH/HR) = 0.60

AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.80

TOTAL AREA(ACRES) = 9.6 PEAK FLOW RATE(CFS) = 7.38

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	7.38	19.94	1.451	0.75(0.60)	0.80	9.6	124.00

LONGEST FLOWPATH FROM NODE 124.00 TO NODE 109.00 = 1331.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	38.70	15.76	1.670	0.75(0.29)	0.39	30.1	117.00
2	38.58	16.55	1.622	0.75(0.29)	0.39	31.1	100.00
3	36.72	18.77	1.504	0.75(0.29)	0.38	32.5	114.00
4	36.06	19.45	1.472	0.75(0.29)	0.38	32.7	119.00
5	33.93	21.33	1.393	0.75(0.29)	0.38	33.0	111.00

LONGEST FLOWPATH FROM NODE 119.00 TO NODE 109.00 = 2896.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	46.04	15.76	1.670	0.75(0.35)	0.47	37.7	117.00
2	45.94	16.55	1.622	0.75(0.35)	0.47	39.1	100.00
3	44.10	18.77	1.504	0.75(0.36)	0.48	41.5	114.00
4	43.44	19.45	1.472	0.75(0.36)	0.48	42.1	119.00
5	42.90	19.94	1.451	0.75(0.36)	0.48	42.4	124.00
6	40.81	21.33	1.393	0.75(0.36)	0.48	42.6	111.00

TOTAL AREA(ACRES) = 42.6

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 46.04 Tc(MIN.) = 15.760
EFFECTIVE AREA(ACRES) = 37.71 AREA-AVERAGED Fm(INCH/HR) = 0.35
AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.47
TOTAL AREA(ACRES) = 42.6
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 109.00 = 2896.00 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 12


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>>>>CLEAR MEMORY BANK # 1 <<<<<
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*****
FLOW PROCESS FROM NODE    110.00 TO NODE    401.00 IS CODE = 31
-----
>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 1247.00  DOWNSTREAM(FEET) = 1237.00
FLOW LENGTH(FEET) = 359.00  MANNING'S N = 0.013
DEPTH OF FLOW IN 27.0 INCH PIPE IS 20.8 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 14.02
ESTIMATED PIPE DIAMETER(INCH) = 27.00  NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 46.04
PIPE TRAVEL TIME(MIN.) = 0.43  Tc(MIN.) = 16.19
LONGEST FLOWPATH FROM NODE    119.00 TO NODE    401.00 = 3255.00 FEET.
*****
FLOW PROCESS FROM NODE    401.00 TO NODE    401.00 IS CODE = 10
-----
>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
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*****
FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE = 21
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>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====
INITIAL SUBAREA FLOW-LENGTH(FEET) = 1242.00
ELEVATION DATA: UPSTREAM(FEET) = 1266.00  DOWNSTREAM(FEET) = 1237.00

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 19.238
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.482
SUBAREA Tc AND LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp        Ap        SCS  Tc
LAND USE              GROUP  (ACRES)  (INCH/HR) (DECIMAL) CN  (MIN.)
NATURAL POOR COVER
"BARREN"                B      1.10     0.27     1.000     86   19.24
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA RUNOFF(CFS) = 1.20
TOTAL AREA(ACRES) = 1.10  PEAK FLOW RATE(CFS) = 1.20
*****
FLOW PROCESS FROM NODE    401.00 TO NODE    401.00 IS CODE = 11
-----
>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
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** MAIN STREAM CONFLUENCE DATA **
STREAM      Q      Tc  Intensity  Fp(Fm)    Ap    Ae    HEADWATER

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NUMBER	(CFS)	(MIN.)	(INCH/HR)	(INCH/HR)		(ACRES)	NODE
1	1.20	19.24	1.482	0.27(0.27)	1.00	1.1	400.00

LONGEST FLOWPATH FROM NODE 400.00 TO NODE 401.00 = 1242.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	46.04	16.19	1.644	0.75(0.35)	0.47	37.7	117.00
2	45.94	16.97	1.598	0.75(0.35)	0.47	39.1	100.00
3	44.10	19.20	1.484	0.75(0.36)	0.48	41.5	114.00
4	43.44	19.88	1.453	0.75(0.36)	0.48	42.1	119.00
5	42.90	20.37	1.432	0.75(0.36)	0.48	42.4	124.00
6	40.81	21.76	1.376	0.75(0.36)	0.48	42.6	111.00

LONGEST FLOWPATH FROM NODE 119.00 TO NODE 401.00 = 3255.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	47.18	16.19	1.644	0.72(0.35)	0.48	38.6	117.00
2	47.10	16.97	1.598	0.72(0.35)	0.48	40.1	100.00
3	45.29	19.20	1.484	0.72(0.35)	0.49	42.6	114.00
4	45.26	19.24	1.482	0.72(0.35)	0.49	42.6	400.00
5	44.61	19.88	1.453	0.72(0.35)	0.49	43.2	119.00
6	44.04	20.37	1.432	0.72(0.36)	0.49	43.5	124.00
7	41.91	21.76	1.376	0.72(0.36)	0.49	43.7	111.00

TOTAL AREA(ACRES) = 43.7

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 47.18 Tc(MIN.) = 16.187
EFFECTIVE AREA(ACRES) = 38.64 AREA-AVERAGED Fm(INCH/HR) = 0.35
AREA-AVERAGED Fp(INCH/HR) = 0.72 AREA-AVERAGED Ap = 0.48
TOTAL AREA(ACRES) = 43.7
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 401.00 = 3255.00 FEET.

FLOW PROCESS FROM NODE 401.00 TO NODE 401.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 401.00 TO NODE 402.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1237.00 DOWNSTREAM(FEET) = 1232.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 445.00 CHANNEL SLOPE = 0.0112
CHANNEL BASE(FEET) = 10.00 "Z" FACTOR = 0.011
MANNING'S FACTOR = 0.035 MAXIMUM DEPTH(FEET) = 17.00
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.546

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL POOR COVER					

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
INSIDE STREET CROSSFALL(DECIMAL) = 0.018
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 3.64
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.36
HALFSTREET FLOOD WIDTH(FEET) = 10.98
AVERAGE FLOW VELOCITY(FEET/SEC.) = 2.87
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.03
STREET FLOW TRAVEL TIME(MIN.) = 2.38 Tc(MIN.) = 14.42
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.762

SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"8-10 DWELLINGS/ACRE" B 1.69 0.75 0.400 56
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
SUBAREA AREA(ACRES) = 1.69 SUBAREA RUNOFF(CFS) = 2.22
EFFECTIVE AREA(ACRES) = 3.38 AREA-AVERAGED Fm(INCH/HR) = 0.30
AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.40
TOTAL AREA(ACRES) = 3.4 PEAK FLOW RATE(CFS) = 4.45

END OF SUBAREA STREET FLOW HYDRAULICS:
DEPTH(FEET) = 0.38 HALFSTREET FLOOD WIDTH(FEET) = 12.07
FLOW VELOCITY(FEET/SEC.) = 2.98 DEPTH*VELOCITY(FT*FT/SEC.) = 1.13
LONGEST FLOWPATH FROM NODE 200.00 TO NODE 202.00 = 1107.00 FEET.

FLOW PROCESS FROM NODE 202.00 TO NODE 203.00 IS CODE = 31

<<<<<COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
<<<<<USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1257.70 DOWNSTREAM(FEET) = 1257.40
FLOW LENGTH(FEET) = 60.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 18.0 INCH PIPE IS 10.4 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 4.21
ESTIMATED PIPE DIAMETER(INCH) = 18.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 4.45
PIPE TRAVEL TIME(MIN.) = 0.24 Tc(MIN.) = 14.66
LONGEST FLOWPATH FROM NODE 200.00 TO NODE 203.00 = 1167.00 FEET.

FLOW PROCESS FROM NODE 203.00 TO NODE 203.00 IS CODE = 10

<<<<<MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<

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FLOW PROCESS FROM NODE 204.00 TO NODE 205.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 288.00
ELEVATION DATA: UPSTREAM(FEET) = 1279.80 DOWNSTREAM(FEET) = 1276.10

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 8.607

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 2.401

SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS Tc
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
RESIDENTIAL

"8-10 DWELLINGS/ACRE" B 1.26 0.75 0.400 56 8.61

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400

SUBAREA RUNOFF(CFS) = 2.38

TOTAL AREA(ACRES) = 1.26 PEAK FLOW RATE(CFS) = 2.38

FLOW PROCESS FROM NODE 205.00 TO NODE 203.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>(STREET TABLE SECTION # 1 USED)<<<<<

UPSTREAM ELEVATION(FEET) = 1276.10 DOWNSTREAM ELEVATION(FEET) = 1263.40
STREET LENGTH(FEET) = 698.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00

INSIDE STREET CROSSFALL(DECIMAL) = 0.018

OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1

STREET PARKWAY CROSSFALL(DECIMAL) = 0.020

Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150

Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 5.77

STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:

STREET FLOW DEPTH(FEET) = 0.39

HALFSTREET FLOOD WIDTH(FEET) = 13.01

AVERAGE FLOW VELOCITY(FEET/SEC.) = 3.38

PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.34

STREET FLOW TRAVEL TIME(MIN.) = 3.44 Tc(MIN.) = 12.04

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.963

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN

RESIDENTIAL

"8-10 DWELLINGS/ACRE" B 4.50 0.75 0.400 56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA AREA(ACRES) = 4.50 SUBAREA RUNOFF(CFS) = 6.74
 EFFECTIVE AREA(ACRES) = 5.76 AREA-AVERAGED Fm(INCH/HR) = 0.30
 AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.40
 TOTAL AREA(ACRES) = 5.8 PEAK FLOW RATE(CFS) = 8.62

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.44 HALFSTREET FLOOD WIDTH(FEET) = 15.43
 FLOW VELOCITY(FEET/SEC.) = 3.72 DEPTH*VELOCITY(FT*FT/SEC.) = 1.63
 LONGEST FLOWPATH FROM NODE 204.00 TO NODE 203.00 = 986.00 FEET.

FLOW PROCESS FROM NODE 203.00 TO NODE 203.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	8.62	12.04	1.963	0.75(0.30)	0.40	5.8	204.00

LONGEST FLOWPATH FROM NODE 204.00 TO NODE 203.00 = 986.00 FEET.

** MEMORY BANK # 2 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	4.45	14.66	1.744	0.75(0.30)	0.40	3.4	200.00

LONGEST FLOWPATH FROM NODE 200.00 TO NODE 203.00 = 1167.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	12.83	12.04	1.963	0.75(0.30)	0.40	8.5	204.00
2	11.94	14.66	1.744	0.75(0.30)	0.40	9.1	200.00
TOTAL AREA(ACRES) =		9.1					

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 12.83 Tc(MIN.) = 12.044
 EFFECTIVE AREA(ACRES) = 8.54 AREA-AVERAGED Fm(INCH/HR) = 0.30
 AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.40
 TOTAL AREA(ACRES) = 9.1
 LONGEST FLOWPATH FROM NODE 200.00 TO NODE 203.00 = 1167.00 FEET.

FLOW PROCESS FROM NODE 203.00 TO NODE 203.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 203.00 TO NODE 206.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1257.40 DOWNSTREAM(FEET) = 1255.40
 FLOW LENGTH(FEET) = 400.00 MANNING'S N = 0.013
 DEPTH OF FLOW IN 24.0 INCH PIPE IS 16.9 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) = 5.42
 ESTIMATED PIPE DIAMETER(INCH) = 24.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 12.83
 PIPE TRAVEL TIME(MIN.) = 1.23 Tc(MIN.) = 13.27
 LONGEST FLOWPATH FROM NODE 200.00 TO NODE 206.00 = 1567.00 FEET.

 FLOW PROCESS FROM NODE 206.00 TO NODE 206.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<

 FLOW PROCESS FROM NODE 211.00 TO NODE 212.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

 INITIAL SUBAREA FLOW-LENGTH(FEET) = 646.00
 ELEVATION DATA: UPSTREAM(FEET) = 1284.10 DOWNSTREAM(FEET) = 1282.40

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 13.272
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.852
 SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
COMMERCIAL	B	0.44	0.75	0.100	56	13.27

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
 SUBAREA RUNOFF(CFS) = 0.71
 TOTAL AREA(ACRES) = 0.44 PEAK FLOW RATE(CFS) = 0.71

 FLOW PROCESS FROM NODE 212.00 TO NODE 213.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>(STREET TABLE SECTION # 1 USED)<<<<<

 UPSTREAM ELEVATION(FEET) = 1282.40 DOWNSTREAM ELEVATION(FEET) = 1273.00
 STREET LENGTH(FEET) = 600.00 CURB HEIGHT(INCHES) = 8.0
 STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
 INSIDE STREET CROSSFALL(DECIMAL) = 0.018
 OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
 STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
 Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.99
 STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
 STREET FLOW DEPTH(FEET) = 0.25
 HALFSTREET FLOOD WIDTH(FEET) = 5.16
 AVERAGE FLOW VELOCITY(FEET/SEC.) = 2.29
 PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.58
 STREET FLOW TRAVEL TIME(MIN.) = 4.37 Tc(MIN.) = 17.65
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.561
 SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.42	0.75	0.100	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
 SUBAREA AREA(ACRES) = 0.42 SUBAREA RUNOFF(CFS) = 0.56
 EFFECTIVE AREA(ACRES) = 0.86 AREA-AVERAGED Fm(INCH/HR) = 0.07
 AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.10
 TOTAL AREA(ACRES) = 0.9 PEAK FLOW RATE(CFS) = 1.15

END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.27 HALFSTREET FLOOD WIDTH(FEET) = 5.78
 FLOW VELOCITY(FEET/SEC.) = 2.33 DEPTH*VELOCITY(FT*FT/SEC.) = 0.62
 LONGEST FLOWPATH FROM NODE 211.00 TO NODE 213.00 = 1246.00 FEET.

 FLOW PROCESS FROM NODE 213.00 TO NODE 213.00 IS CODE = 81

 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 17.65
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.561
 SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL "8-10 DWELLINGS/ACRE"	B	1.16	0.75	0.400	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA AREA(ACRES) = 1.16 SUBAREA RUNOFF(CFS) = 1.32
 EFFECTIVE AREA(ACRES) = 2.02 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.27
 TOTAL AREA(ACRES) = 2.0 PEAK FLOW RATE(CFS) = 2.47

 FLOW PROCESS FROM NODE 213.00 TO NODE 214.00 IS CODE = 62

 >>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1273.00 DOWNSTREAM ELEVATION(FEET) = 1266.70
 STREET LENGTH(FEET) = 599.00 CURB HEIGHT(INCHES) = 8.0
 STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
 INSIDE STREET CROSSFALL(DECIMAL) = 0.018

OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1

STREET PARKWAY CROSSFALL(DECIMAL) = 0.020

Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150

Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 2.75

STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:

STREET FLOW DEPTH(FEET) = 0.35

HALFSTREET FLOOD WIDTH(FEET) = 10.59

AVERAGE FLOW VELOCITY(FEET/SEC.) = 2.30

PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.81

STREET FLOW TRAVEL TIME(MIN.) = 4.34 Tc(MIN.) = 21.99

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.368

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.48	0.75	0.100	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100

SUBAREA AREA(ACRES) = 0.48 SUBAREA RUNOFF(CFS) = 0.56

EFFECTIVE AREA(ACRES) = 2.50 AREA-AVERAGED Fm(INCH/HR) = 0.18

AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.24

TOTAL AREA(ACRES) = 2.5 PEAK FLOW RATE(CFS) = 2.68

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.35 HALFSTREET FLOOD WIDTH(FEET) = 10.43

FLOW VELOCITY(FEET/SEC.) = 2.30 DEPTH*VELOCITY(FT*FT/SEC.) = 0.80

LONGEST FLOWPATH FROM NODE 211.00 TO NODE 214.00 = 1845.00 FEET.

FLOW PROCESS FROM NODE 214.00 TO NODE 214.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 21.99

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.368

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	1.16	0.75	0.400	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400

SUBAREA AREA(ACRES) = 1.16 SUBAREA RUNOFF(CFS) = 1.12

EFFECTIVE AREA(ACRES) = 3.66 AREA-AVERAGED Fm(INCH/HR) = 0.22

AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.29

TOTAL AREA(ACRES) = 3.7 PEAK FLOW RATE(CFS) = 3.79

FLOW PROCESS FROM NODE 214.00 TO NODE 206.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

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ELEVATION DATA: UPSTREAM(FEET) = 1260.70  DOWNSTREAM(FEET) = 1256.40
FLOW LENGTH(FEET) = 287.00  MANNING'S N = 0.013
ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 18.000
DEPTH OF FLOW IN 18.0 INCH PIPE IS 6.9 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 6.09
ESTIMATED PIPE DIAMETER(INCH) = 18.00  NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 3.79
PIPE TRAVEL TIME(MIN.) = 0.78  Tc(MIN.) = 22.77
LONGEST FLOWPATH FROM NODE 211.00 TO NODE 206.00 = 2132.00 FEET.

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FLOW PROCESS FROM NODE 206.00 TO NODE 206.00 IS CODE = 11

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>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<
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** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	3.79	22.77	1.340	0.75(0.22)	0.29	3.7	211.00

LONGEST FLOWPATH FROM NODE 211.00 TO NODE 206.00 = 2132.00 FEET.

** MEMORY BANK # 2 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	12.83	13.27	1.852	0.75(0.30)	0.40	8.5	204.00
2	11.94	15.91	1.661	0.75(0.30)	0.40	9.1	200.00

LONGEST FLOWPATH FROM NODE 200.00 TO NODE 206.00 = 1567.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	16.05	13.27	1.852	0.75(0.28)	0.38	10.7	204.00
2	15.35	15.91	1.661	0.75(0.28)	0.38	11.7	200.00
3	12.92	22.77	1.340	0.75(0.28)	0.37	12.8	211.00

TOTAL AREA(ACRES) = 12.8

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

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PEAK FLOW RATE(CFS) = 16.05  Tc(MIN.) = 13.275
EFFECTIVE AREA(ACRES) = 10.67  AREA-AVERAGED Fm(INCH/HR) = 0.28
AREA-AVERAGED Fp(INCH/HR) = 0.75  AREA-AVERAGED Ap = 0.38
TOTAL AREA(ACRES) = 12.8
LONGEST FLOWPATH FROM NODE 211.00 TO NODE 206.00 = 2132.00 FEET.

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FLOW PROCESS FROM NODE 206.00 TO NODE 206.00 IS CODE = 12

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>>>>CLEAR MEMORY BANK # 2 <<<<<
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FLOW PROCESS FROM NODE 206.00 TO NODE 207.00 IS CODE = 31

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>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<

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>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1255.40 DOWNSTREAM(FEET) = 1252.50
FLOW LENGTH(FEET) = 547.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 27.0 INCH PIPE IS 17.5 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 5.91
ESTIMATED PIPE DIAMETER(INCH) = 27.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 16.05
PIPE TRAVEL TIME(MIN.) = 1.54 Tc(MIN.) = 14.82
LONGEST FLOWPATH FROM NODE 211.00 TO NODE 207.00 = 2679.00 FEET.

FLOW PROCESS FROM NODE 207.00 TO NODE 207.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 14.82
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.733
SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL "8-10 DWELLINGS/ACRE"	B	5.49	0.75	0.400	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
SUBAREA AREA(ACRES) = 5.49 SUBAREA RUNOFF(CFS) = 7.09
EFFECTIVE AREA(ACRES) = 16.16 AREA-AVERAGED Fm(INCH/HR) = 0.29
AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.39
TOTAL AREA(ACRES) = 18.3 PEAK FLOW RATE(CFS) = 21.02

FLOW PROCESS FROM NODE 208.00 TO NODE 209.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1247.20 DOWNSTREAM(FEET) = 1246.70
FLOW LENGTH(FEET) = 90.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 27.0 INCH PIPE IS 21.2 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 6.27
ESTIMATED PIPE DIAMETER(INCH) = 27.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 21.02
PIPE TRAVEL TIME(MIN.) = 0.24 Tc(MIN.) = 15.06
LONGEST FLOWPATH FROM NODE 211.00 TO NODE 209.00 = 2769.00 FEET.

FLOW PROCESS FROM NODE 209.00 TO NODE 209.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 305.00 TO NODE 306.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 1000.00
ELEVATION DATA: UPSTREAM(FEET) = 1311.00 DOWNSTREAM(FEET) = 1305.00

$T_c = K * [(LENGTH^{**} 3.00) / (ELEVATION CHANGE)]^{**0.20}$

SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 13.404

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.841

SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
COMMERCIAL	B	0.81	0.75	0.100	56	13.40

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.75

SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.100

SUBAREA RUNOFF(CFS) = 1.29

TOTAL AREA(ACRES) = 0.81 PEAK FLOW RATE(CFS) = 1.29

FLOW PROCESS FROM NODE 306.00 TO NODE 300.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1305.00 DOWNSTREAM ELEVATION(FEET) = 1303.50
STREET LENGTH(FEET) = 683.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00

INSIDE STREET CROSSFALL(DECIMAL) = 0.018

OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1

STREET PARKWAY CROSSFALL(DECIMAL) = 0.020

Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150

Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.58

STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:

STREET FLOW DEPTH(FEET) = 0.37

HALFSTREET FLOOD WIDTH(FEET) = 11.76

AVERAGE FLOW VELOCITY(FEET/SEC.) = 1.11

PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.41

STREET FLOW TRAVEL TIME(MIN.) = 10.29 T_c (MIN.) = 23.69

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.308

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.52	0.75	0.100	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.75

SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.100

SUBAREA AREA(ACRES) = 0.52 SUBAREA RUNOFF(CFS) = 0.58

EFFECTIVE AREA(ACRES) = 1.33 AREA-AVERAGED F_m (INCH/HR) = 0.07

AREA-AVERAGED F_p (INCH/HR) = 0.75 AREA-AVERAGED A_p = 0.10

TOTAL AREA(ACRES) = 1.3 PEAK FLOW RATE(CFS) = 1.48

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.37 HALFSTREET FLOOD WIDTH(FEET) = 11.37
FLOW VELOCITY(FEET/SEC.) = 1.10 DEPTH*VELOCITY(FT*FT/SEC.) = 0.40
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 300.00 = 1683.00 FEET.

FLOW PROCESS FROM NODE 300.00 TO NODE 301.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1303.50 DOWNSTREAM(FEET) = 1292.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 944.00 CHANNEL SLOPE = 0.0122
CHANNEL FLOW THRU SUBAREA(CFS) = 1.48
FLOW VELOCITY(FEET/SEC) = 1.79 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 8.81 Tc(MIN.) = 32.50
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 301.00 = 2627.00 FEET.

FLOW PROCESS FROM NODE 301.00 TO NODE 301.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 32.50
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.082
SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	6.61	0.50	1.000	73

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 6.61 SUBAREA RUNOFF(CFS) = 3.45
EFFECTIVE AREA(ACRES) = 7.94 AREA-AVERAGED Fm(INCH/HR) = 0.43
AREA-AVERAGED Fp(INCH/HR) = 0.51 AREA-AVERAGED Ap = 0.85
TOTAL AREA(ACRES) = 7.9 PEAK FLOW RATE(CFS) = 4.66

FLOW PROCESS FROM NODE 301.00 TO NODE 302.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1292.00 DOWNSTREAM(FEET) = 1284.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 523.00 CHANNEL SLOPE = 0.0153
CHANNEL FLOW THRU SUBAREA(CFS) = 4.66
FLOW VELOCITY(FEET/SEC) = 2.57 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 3.40 Tc(MIN.) = 35.90
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 302.00 = 3150.00 FEET.

FLOW PROCESS FROM NODE 302.00 TO NODE 302.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 35.90
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.019
 SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	5.92	0.50	1.000	73

 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA AREA(ACRES) = 5.92 SUBAREA RUNOFF(CFS) = 2.76
 EFFECTIVE AREA(ACRES) = 13.86 AREA-AVERAGED Fm(INCH/HR) = 0.46
 AREA-AVERAGED Fp(INCH/HR) = 0.50 AREA-AVERAGED Ap = 0.91
 TOTAL AREA(ACRES) = 13.9 PEAK FLOW RATE(CFS) = 6.97

FLOW PROCESS FROM NODE 302.00 TO NODE 302.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 3 <<<<<

FLOW PROCESS FROM NODE 303.00 TO NODE 304.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 999.00
 ELEVATION DATA: UPSTREAM(FEET) = 1298.00 DOWNSTREAM(FEET) = 1288.00

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 20.888
 * 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.411
 SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
AGRICULTURAL POOR COVER "ORCHARDS"	B	6.50	0.50	1.000	73	20.89

 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 SUBAREA RUNOFF(CFS) = 5.32
 TOTAL AREA(ACRES) = 6.50 PEAK FLOW RATE(CFS) = 5.32

FLOW PROCESS FROM NODE 304.00 TO NODE 302.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1288.00 DOWNSTREAM(FEET) = 1284.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 375.00 CHANNEL SLOPE = 0.0107
 CHANNEL FLOW THRU SUBAREA(CFS) = 5.32
 FLOW VELOCITY(FEET/SEC) = 2.21 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) = 2.83 Tc(MIN.) = 23.72
 LONGEST FLOWPATH FROM NODE 303.00 TO NODE 302.00 = 1374.00 FEET.

FLOW PROCESS FROM NODE 302.00 TO NODE 302.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 3 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	5.32	23.72	1.307	0.50(0.50)	1.00	6.5	303.00

LONGEST FLOWPATH FROM NODE 303.00 TO NODE 302.00 = 1374.00 FEET.

** MEMORY BANK # 3 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	6.97	35.90	1.019	0.50(0.46)	0.91	13.9	305.00

LONGEST FLOWPATH FROM NODE 305.00 TO NODE 302.00 = 3150.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	12.28	23.72	1.307	0.50(0.48)	0.95	15.7	303.00
2	10.38	35.90	1.019	0.50(0.47)	0.94	20.4	305.00

TOTAL AREA(ACRES) = 20.4

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 12.28 Tc(MIN.) = 23.715
EFFECTIVE AREA(ACRES) = 15.66 AREA-AVERAGED Fm(INCH/HR) = 0.48
AREA-AVERAGED Fp(INCH/HR) = 0.50 AREA-AVERAGED Ap = 0.95
TOTAL AREA(ACRES) = 20.4
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 302.00 = 3150.00 FEET.

FLOW PROCESS FROM NODE 302.00 TO NODE 302.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 3 <<<<<

FLOW PROCESS FROM NODE 302.00 TO NODE 209.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1280.00 DOWNSTREAM(FEET) = 1246.70
FLOW LENGTH(FEET) = 1831.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 18.0 INCH PIPE IS 13.5 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 8.62
ESTIMATED PIPE DIAMETER(INCH) = 18.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 12.28
PIPE TRAVEL TIME(MIN.) = 3.54 Tc(MIN.) = 27.26
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 209.00 = 4981.00 FEET.

FLOW PROCESS FROM NODE 209.00 TO NODE 209.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<
=====

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	12.28	27.26	1.203	0.50(0.48)	0.95	15.7	303.00
2	10.38	39.53	0.962	0.50(0.47)	0.94	20.4	305.00

LONGEST FLOWPATH FROM NODE 305.00 TO NODE 209.00 = 4981.00 FEET.

** MEMORY BANK # 2 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	21.02	15.06	1.717	0.75(0.29)	0.39	16.2	204.00
2	19.82	17.76	1.555	0.75(0.29)	0.38	17.2	200.00
3	16.50	24.66	1.277	0.75(0.28)	0.38	18.3	211.00

LONGEST FLOWPATH FROM NODE 211.00 TO NODE 209.00 = 2769.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	32.62	15.06	1.717	0.61(0.35)	0.58	24.8	204.00
2	31.71	17.76	1.555	0.60(0.36)	0.59	27.4	200.00
3	28.75	24.66	1.277	0.59(0.37)	0.63	32.5	211.00
4	27.54	27.26	1.203	0.58(0.37)	0.64	34.0	303.00
5	21.65	39.53	0.962	0.57(0.38)	0.67	38.7	305.00

TOTAL AREA(ACRES) = 38.7

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 32.62 Tc(MIN.) = 15.058
EFFECTIVE AREA(ACRES) = 24.81 AREA-AVERAGED Fm(INCH/HR) = 0.35
AREA-AVERAGED Fp(INCH/HR) = 0.59 AREA-AVERAGED Ap = 0.63
TOTAL AREA(ACRES) = 38.7
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 209.00 = 4981.00 FEET.

FLOW PROCESS FROM NODE 209.00 TO NODE 209.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 2 <<<<<
=====

FLOW PROCESS FROM NODE 209.00 TO NODE 209.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<
=====

FLOW PROCESS FROM NODE 307.00 TO NODE 308.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 826.00

ELEVATION DATA: UPSTREAM(FEET) = 1291.70 DOWNSTREAM(FEET) = 1277.60

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 10.074

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 2.185

SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
COMMERCIAL	B	0.62	0.75	0.100	56	10.07

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100

SUBAREA RUNOFF(CFS) = 1.17

TOTAL AREA(ACRES) = 0.62 PEAK FLOW RATE(CFS) = 1.17

FLOW PROCESS FROM NODE 308.00 TO NODE 309.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1277.60 DOWNSTREAM ELEVATION(FEET) = 1264.00
 STREET LENGTH(FEET) = 974.00 CURB HEIGHT(INCHES) = 8.0
 STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00

INSIDE STREET CROSSFALL(DECIMAL) = 0.018

OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1

STREET PARKWAY CROSSFALL(DECIMAL) = 0.020

Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150

Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.64

STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:

STREET FLOW DEPTH(FEET) = 0.30

HALFSTREET FLOOD WIDTH(FEET) = 7.53

AVERAGE FLOW VELOCITY(FEET/SEC.) = 2.34

PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.70

STREET FLOW TRAVEL TIME(MIN.) = 6.94 Tc(MIN.) = 17.01

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.596

SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.68	0.75	0.100	56

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.75

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100

SUBAREA AREA(ACRES) = 0.68 SUBAREA RUNOFF(CFS) = 0.93

EFFECTIVE AREA(ACRES) = 1.30 AREA-AVERAGED Fm(INCH/HR) = 0.07

AREA-AVERAGED Fp(INCH/HR) = 0.75 AREA-AVERAGED Ap = 0.10

TOTAL AREA(ACRES) = 1.3 PEAK FLOW RATE(CFS) = 1.78

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.30 HALFSTREET FLOOD WIDTH(FEET) = 7.91

FLOW VELOCITY(FEET/SEC.) = 2.36 DEPTH*VELOCITY(FT*FT/SEC.) = 0.72

LONGEST FLOWPATH FROM NODE 307.00 TO NODE 309.00 = 1800.00 FEET.

FLOW PROCESS FROM NODE 309.00 TO NODE 209.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====
ELEVATION DATA: UPSTREAM(FEET) = 1258.00 DOWNSTREAM(FEET) = 1246.70
FLOW LENGTH(FEET) = 444.00 MANNING'S N = 0.013
ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 18.000
DEPTH OF FLOW IN 18.0 INCH PIPE IS 4.1 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 5.93
ESTIMATED PIPE DIAMETER(INCH) = 18.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 1.78
PIPE TRAVEL TIME(MIN.) = 1.25 Tc(MIN.) = 18.26
LONGEST FLOWPATH FROM NODE 307.00 TO NODE 209.00 = 2244.00 FEET.

FLOW PROCESS FROM NODE 209.00 TO NODE 209.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

Table with 8 columns: STREAM NUMBER, Q (CFS), Tc (MIN.), Intensity (INCH/HR), Fp(Fm) (INCH/HR), Ap, Ae (ACRES), HEADWATER NODE. Row 1: 1, 1.78, 18.26, 1.529, 0.75(0.07), 0.10, 1.3, 307.00. LONGEST FLOWPATH FROM NODE 307.00 TO NODE 209.00 = 2244.00 FEET.

** MEMORY BANK # 2 CONFLUENCE DATA **

Table with 8 columns: STREAM NUMBER, Q (CFS), Tc (MIN.), Intensity (INCH/HR), Fp(Fm) (INCH/HR), Ap, Ae (ACRES), HEADWATER NODE. Rows 1-5: 1(32.62, 15.06, 1.717, 0.61(0.35), 0.58, 24.8, 204.00), 2(31.71, 17.76, 1.555, 0.60(0.36), 0.59, 27.4, 200.00), 3(28.75, 24.66, 1.277, 0.59(0.37), 0.63, 32.5, 211.00), 4(27.54, 27.26, 1.203, 0.58(0.37), 0.64, 34.0, 303.00), 5(21.65, 39.53, 0.962, 0.57(0.38), 0.67, 38.7, 305.00). LONGEST FLOWPATH FROM NODE 305.00 TO NODE 209.00 = 4981.00 FEET.

** PEAK FLOW RATE TABLE **

Table with 8 columns: STREAM NUMBER, Q (CFS), Tc (MIN.), Intensity (INCH/HR), Fp(Fm) (INCH/HR), Ap, Ae (ACRES), HEADWATER NODE. Rows 1-6: 1(34.28, 15.06, 1.717, 0.61(0.34), 0.56, 25.9, 204.00), 2(33.47, 17.76, 1.555, 0.60(0.35), 0.57, 28.7, 200.00), 3(33.27, 18.26, 1.529, 0.60(0.35), 0.57, 29.1, 307.00), 4(30.22, 24.66, 1.277, 0.59(0.36), 0.61, 33.8, 211.00), 5(28.92, 27.26, 1.203, 0.58(0.36), 0.62, 35.2, 303.00), 6(22.74, 39.53, 0.962, 0.57(0.37), 0.66, 40.0, 305.00). TOTAL AREA(ACRES) = 40.0

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
PEAK FLOW RATE(CFS) = 34.28 Tc(MIN.) = 15.058
EFFECTIVE AREA(ACRES) = 25.88 AREA-AVERAGED Fm(INCH/HR) = 0.34
AREA-AVERAGED Fp(INCH/HR) = 0.60 AREA-AVERAGED Ap = 0.57

TOTAL AREA(ACRES) = 40.0
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 209.00 = 4981.00 FEET.

FLOW PROCESS FROM NODE 209.00 TO NODE 209.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 209.00 TO NODE 210.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1246.70 DOWNSTREAM(FEET) = 1245.00
FLOW LENGTH(FEET) = 153.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 30.0 INCH PIPE IS 21.0 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 9.35
ESTIMATED PIPE DIAMETER(INCH) = 30.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 34.28
PIPE TRAVEL TIME(MIN.) = 0.27 Tc(MIN.) = 15.33
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 210.00 = 5134.00 FEET.

FLOW PROCESS FROM NODE 210.00 TO NODE 402.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1245.00 DOWNSTREAM(FEET) = 1232.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 85.00 CHANNEL SLOPE = 0.1529
NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
CHANNEL FLOW THRU SUBAREA(CFS) = 34.28
FLOW VELOCITY(FEET/SEC) = 10.99 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 0.13 Tc(MIN.) = 15.46
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 402.00 = 5219.00 FEET.

FLOW PROCESS FROM NODE 402.00 TO NODE 402.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 15.46
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.690
SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	1.38	0.50	1.000	73

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.50
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 1.38 SUBAREA RUNOFF(CFS) = 1.48
EFFECTIVE AREA(ACRES) = 27.26 AREA-AVERAGED Fm(INCH/HR) = 0.35
AREA-AVERAGED Fp(INCH/HR) = 0.60 AREA-AVERAGED Ap = 0.58

TOTAL AREA(ACRES) = 41.3 PEAK FLOW RATE(CFS) = 34.28
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 402.00 TO NODE 402.00 IS CODE = 11

 >>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
 =====

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	34.28	15.46	1.690	0.60(0.35)	0.58	27.3	204.00
2	33.47	18.16	1.534	0.60(0.35)	0.59	30.0	200.00
3	33.27	18.66	1.509	0.59(0.35)	0.59	30.4	307.00
4	30.22	25.08	1.264	0.58(0.36)	0.62	35.1	211.00
5	28.92	27.68	1.191	0.58(0.37)	0.64	36.6	303.00
6	22.74	39.98	0.956	0.57(0.38)	0.67	41.3	305.00

LONGEST FLOWPATH FROM NODE 305.00 TO NODE 402.00 = 5219.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	47.18	17.94	1.546	0.72(0.35)	0.49	38.9	117.00
2	47.10	18.73	1.506	0.72(0.35)	0.49	40.4	100.00
3	45.29	20.97	1.407	0.72(0.35)	0.49	42.9	114.00
4	45.26	21.01	1.406	0.72(0.35)	0.49	43.0	400.00
5	44.61	21.67	1.380	0.72(0.35)	0.49	43.5	119.00
6	44.04	22.16	1.362	0.72(0.35)	0.49	43.8	124.00
7	41.91	23.59	1.311	0.72(0.35)	0.49	44.0	111.00

LONGEST FLOWPATH FROM NODE 119.00 TO NODE 402.00 = 3700.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	79.84	15.46	1.690	0.66(0.35)	0.53	60.8	204.00
2	80.72	17.94	1.546	0.66(0.35)	0.53	68.8	117.00
3	80.63	18.16	1.534	0.66(0.35)	0.53	69.4	200.00
4	80.38	18.66	1.509	0.66(0.35)	0.53	70.7	307.00
5	80.34	18.73	1.506	0.66(0.35)	0.53	70.9	100.00
6	77.47	20.97	1.407	0.66(0.35)	0.54	75.1	114.00
7	77.41	21.01	1.406	0.66(0.35)	0.54	75.1	400.00
8	76.45	21.67	1.380	0.66(0.36)	0.54	76.2	119.00
9	75.66	22.16	1.362	0.65(0.36)	0.54	76.8	124.00
10	72.83	23.59	1.311	0.65(0.36)	0.55	78.1	111.00
11	70.06	25.08	1.264	0.65(0.36)	0.55	79.2	211.00
12	65.58	27.68	1.191	0.64(0.36)	0.56	80.7	303.00
13	49.06	39.98	0.956	0.63(0.37)	0.58	85.4	305.00

TOTAL AREA(ACRES) = 85.4

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 80.72 Tc(MIN.) = 17.938
 EFFECTIVE AREA(ACRES) = 68.75 AREA-AVERAGED Fm(INCH/HR) = 0.35
 AREA-AVERAGED Fp(INCH/HR) = 0.66 AREA-AVERAGED Ap = 0.54
 TOTAL AREA(ACRES) = 85.4

LONGEST FLOWPATH FROM NODE 305.00 TO NODE 402.00 = 5219.00 FEET.

FLOW PROCESS FROM NODE 402.00 TO NODE 402.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

=====

END OF STUDY SUMMARY:

TOTAL AREA(ACRES) = 85.4 TC(MIN.) = 17.94
EFFECTIVE AREA(ACRES) = 68.75 AREA-AVERAGED Fm(INCH/HR)= 0.35
AREA-AVERAGED Fp(INCH/HR) = 0.66 AREA-AVERAGED Ap = 0.533
PEAK FLOW RATE(CFS) = 80.72

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	79.84	15.46	1.690	0.66(0.35)	0.53	60.8	204.00
2	80.72	17.94	1.546	0.66(0.35)	0.53	68.8	117.00
3	80.63	18.16	1.534	0.66(0.35)	0.53	69.4	200.00
4	80.38	18.66	1.509	0.66(0.35)	0.53	70.7	307.00
5	80.34	18.73	1.506	0.66(0.35)	0.53	70.9	100.00
6	77.47	20.97	1.407	0.66(0.35)	0.54	75.1	114.00
7	77.41	21.01	1.406	0.66(0.35)	0.54	75.1	400.00
8	76.45	21.67	1.380	0.66(0.36)	0.54	76.2	119.00
9	75.66	22.16	1.362	0.65(0.36)	0.54	76.8	124.00
10	72.83	23.59	1.311	0.65(0.36)	0.55	78.1	111.00
11	70.06	25.08	1.264	0.65(0.36)	0.55	79.2	211.00
12	65.58	27.68	1.191	0.64(0.36)	0.56	80.7	303.00
13	49.06	39.98	0.956	0.63(0.37)	0.58	85.4	305.00

=====

END OF RATIONAL METHOD ANALYSIS

↑

RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
(Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
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Ver. 21.0 Release Date: 06/01/2014 License ID 1202

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****

* CITY OF REDLANDS ENTITLEMENT - TTM # 20336 - MLC HOLDINGS, INC. *
* 100-YEAR PROPOSED CONDITIONS RATIONAL METHOD *
* RYAN KIM HC 6/30/20 *

FILE NAME: RED100P.DAT
TIME/DATE OF STUDY: 17:00 06/30/2020

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 100.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 18.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.2000

ANTECEDENT MOISTURE CONDITION (AMC) III ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	HALF- WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT- / PARK- SIDE / SIDE / WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH (FT)	LIP (FT)	HIKE (FT)	MANNING FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00	0.0313	0.167	0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.67 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 4.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 100.00 TO NODE 101.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 822.00
ELEVATION DATA: UPSTREAM(FEET) = 1287.10 DOWNSTREAM(FEET) = 1276.10

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 12.987
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.006

SUBAREA T_c AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
RESIDENTIAL						
"8-10 DWELLINGS/ACRE"	B	3.31	0.42	0.400	76	12.99

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.400
SUBAREA RUNOFF(CFS) = 8.45
TOTAL AREA(ACRES) = 3.31 PEAK FLOW RATE(CFS) = 8.45

FLOW PROCESS FROM NODE 101.00 TO NODE 102.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1276.10 DOWNSTREAM ELEVATION(FEET) = 1273.00
STREET LENGTH(FEET) = 217.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
INSIDE STREET CROSSFALL(DECIMAL) = 0.018
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 11.16
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.49
HALFSTREET FLOOD WIDTH(FEET) = 18.09
AVERAGE FLOW VELOCITY(FEET/SEC.) = 3.58
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.74
STREET FLOW TRAVEL TIME(MIN.) = 1.01 T_c (MIN.) = 14.00
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.874

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	2.23	0.42	0.400	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.400
SUBAREA AREA(ACRES) = 2.23 SUBAREA RUNOFF(CFS) = 5.43
EFFECTIVE AREA(ACRES) = 5.54 AREA-AVERAGED F_m (INCH/HR) = 0.17

AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.40
TOTAL AREA(ACRES) = 5.5 PEAK FLOW RATE(CFS) = 13.49

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.51 HALFSTREET FLOOD WIDTH(FEET) = 19.49
FLOW VELOCITY(FEET/SEC.) = 3.76 DEPTH*VELOCITY(FT*FT/SEC.) = 1.92
LONGEST FLOWPATH FROM NODE 100.00 TO NODE 102.00 = 1039.00 FEET.

FLOW PROCESS FROM NODE 102.00 TO NODE 103.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1273.00 DOWNSTREAM ELEVATION(FEET) = 1270.00
STREET LENGTH(FEET) = 172.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
INSIDE STREET CROSSFALL(DECIMAL) = 0.018
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 16.12
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.52
HALFSTREET FLOOD WIDTH(FEET) = 20.12
AVERAGE FLOW VELOCITY(FEET/SEC.) = 4.23
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 2.21
STREET FLOW TRAVEL TIME(MIN.) = 0.68 Tc(MIN.) = 14.67
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.794

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	2.23	0.42	0.400	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400

SUBAREA AREA(ACRES) = 2.23 SUBAREA RUNOFF(CFS) = 5.27

EFFECTIVE AREA(ACRES) = 7.77 AREA-AVERAGED Fm(INCH/HR) = 0.17

AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.40

TOTAL AREA(ACRES) = 7.8 PEAK FLOW RATE(CFS) = 18.35

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.54 HALFSTREET FLOOD WIDTH(FEET) = 21.21
FLOW VELOCITY(FEET/SEC.) = 4.36 DEPTH*VELOCITY(FT*FT/SEC.) = 2.36
LONGEST FLOWPATH FROM NODE 100.00 TO NODE 103.00 = 1211.00 FEET.

FLOW PROCESS FROM NODE 103.00 TO NODE 103.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 14.67
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.794
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	1.12	0.42	0.400	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
SUBAREA AREA(ACRES) = 1.12 SUBAREA RUNOFF(CFS) = 2.65
EFFECTIVE AREA(ACRES) = 8.89 AREA-AVERAGED Fm(INCH/HR) = 0.17
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.40
TOTAL AREA(ACRES) = 8.9 PEAK FLOW RATE(CFS) = 21.00

FLOW PROCESS FROM NODE 103.00 TO NODE 104.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1264.00 DOWNSTREAM(FEET) = 1263.70
FLOW LENGTH(FEET) = 60.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 30.0 INCH PIPE IS 19.6 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 6.17
ESTIMATED PIPE DIAMETER(INCH) = 30.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 21.00
PIPE TRAVEL TIME(MIN.) = 0.16 Tc(MIN.) = 14.84
LONGEST FLOWPATH FROM NODE 100.00 TO NODE 104.00 = 1271.00 FEET.

FLOW PROCESS FROM NODE 104.00 TO NODE 104.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 14.84
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.775
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	1.36	0.42	0.400	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
SUBAREA AREA(ACRES) = 1.36 SUBAREA RUNOFF(CFS) = 3.19
EFFECTIVE AREA(ACRES) = 10.25 AREA-AVERAGED Fm(INCH/HR) = 0.17
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.40
TOTAL AREA(ACRES) = 10.2 PEAK FLOW RATE(CFS) = 24.04

FLOW PROCESS FROM NODE 104.00 TO NODE 104.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

=====

FLOW PROCESS FROM NODE 114.00 TO NODE 115.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====
INITIAL SUBAREA FLOW-LENGTH(FEET) = 663.00
ELEVATION DATA: UPSTREAM(FEET) = 1289.00 DOWNSTREAM(FEET) = 1281.50

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 12.324

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.102

SUBAREA Tc AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS Tc
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)

RESIDENTIAL

"8-10 DWELLINGS/ACRE" B 1.89 0.42 0.400 76 12.32

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400

SUBAREA RUNOFF(CFS) = 4.99

TOTAL AREA(ACRES) = 1.89 PEAK FLOW RATE(CFS) = 4.99

FLOW PROCESS FROM NODE 115.00 TO NODE 116.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====
UPSTREAM ELEVATION(FEET) = 1281.50 DOWNSTREAM ELEVATION(FEET) = 1274.90
STREET LENGTH(FEET) = 487.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00

INSIDE STREET CROSSFALL(DECIMAL) = 0.018

OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1

STREET PARKWAY CROSSFALL(DECIMAL) = 0.020

Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150

Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 6.52

STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:

STREET FLOW DEPTH(FEET) = 0.42

HALFSTREET FLOOD WIDTH(FEET) = 14.65

AVERAGE FLOW VELOCITY(FEET/SEC.) = 3.09

PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.31

STREET FLOW TRAVEL TIME(MIN.) = 2.63 Tc(MIN.) = 14.95

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.762

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN

RESIDENTIAL

"8-10 DWELLINGS/ACRE" B 1.31 0.42 0.400 76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA AREA(ACRES) = 1.31 SUBAREA RUNOFF(CFS) = 3.06
 EFFECTIVE AREA(ACRES) = 3.20 AREA-AVERAGED Fm(INCH/HR) = 0.17
 AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.40
 TOTAL AREA(ACRES) = 3.2 PEAK FLOW RATE(CFS) = 7.47

END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.44 HALFSTREET FLOOD WIDTH(FEET) = 15.51
 FLOW VELOCITY(FEET/SEC.) = 3.19 DEPTH*VELOCITY(FT*FT/SEC.) = 1.40
 LONGEST FLOWPATH FROM NODE 114.00 TO NODE 116.00 = 1150.00 FEET.

FLOW PROCESS FROM NODE 116.00 TO NODE 104.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>(STREET TABLE SECTION # 1 USED)<<<<<

UPSTREAM ELEVATION(FEET) = 1274.90 DOWNSTREAM ELEVATION(FEET) = 1269.70
 STREET LENGTH(FEET) = 352.00 CURB HEIGHT(INCHES) = 8.0
 STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
 INSIDE STREET CROSSFALL(DECIMAL) = 0.018
 OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
 STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
 Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 8.48
 STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
 STREET FLOW DEPTH(FEET) = 0.45
 HALFSTREET FLOOD WIDTH(FEET) = 16.05
 AVERAGE FLOW VELOCITY(FEET/SEC.) = 3.40
 PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.53
 STREET FLOW TRAVEL TIME(MIN.) = 1.73 Tc(MIN.) = 16.68
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.587

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					

"8-10 DWELLINGS/ACRE"	B	0.93	0.42	0.400	76
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SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA AREA(ACRES) = 0.93 SUBAREA RUNOFF(CFS) = 2.02
 EFFECTIVE AREA(ACRES) = 4.13 AREA-AVERAGED Fm(INCH/HR) = 0.17
 AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.40
 TOTAL AREA(ACRES) = 4.1 PEAK FLOW RATE(CFS) = 8.99

END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.46 HALFSTREET FLOOD WIDTH(FEET) = 16.45
 FLOW VELOCITY(FEET/SEC.) = 3.44 DEPTH*VELOCITY(FT*FT/SEC.) = 1.57
 LONGEST FLOWPATH FROM NODE 114.00 TO NODE 104.00 = 1502.00 FEET.

FLOW PROCESS FROM NODE 104.00 TO NODE 104.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
=====

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	8.99	16.68	2.587	0.42(0.17)	0.40	4.1	114.00

LONGEST FLOWPATH FROM NODE 114.00 TO NODE 104.00 = 1502.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	24.04	14.84	2.775	0.42(0.17)	0.40	10.2	100.00

LONGEST FLOWPATH FROM NODE 100.00 TO NODE 104.00 = 1271.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	32.66	14.84	2.775	0.42(0.17)	0.40	13.9	100.00
2	31.29	16.68	2.587	0.42(0.17)	0.40	14.4	114.00

TOTAL AREA(ACRES) = 14.4

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 32.66 Tc(MIN.) = 14.835
EFFECTIVE AREA(ACRES) = 13.92 AREA-AVERAGED Fm(INCH/HR) = 0.17
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.40
TOTAL AREA(ACRES) = 14.4
LONGEST FLOWPATH FROM NODE 114.00 TO NODE 104.00 = 1502.00 FEET.

FLOW PROCESS FROM NODE 104.00 TO NODE 104.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<
=====

FLOW PROCESS FROM NODE 104.00 TO NODE 105.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
=====

ELEVATION DATA: UPSTREAM(FEET) = 1263.70 DOWNSTREAM(FEET) = 1261.80
FLOW LENGTH(FEET) = 162.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 30.0 INCH PIPE IS 19.8 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 9.48
ESTIMATED PIPE DIAMETER(INCH) = 30.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 32.66
PIPE TRAVEL TIME(MIN.) = 0.28 Tc(MIN.) = 15.12
LONGEST FLOWPATH FROM NODE 114.00 TO NODE 105.00 = 1664.00 FEET.

FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 117.00 TO NODE 118.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 999.00
ELEVATION DATA: UPSTREAM(FEET) = 1286.50 DOWNSTREAM(FEET) = 1265.00

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 14.065

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.865

SUBAREA T_c AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
RESIDENTIAL "3-4 DWELLINGS/ACRE"	B	2.24	0.42	0.600	76	14.07

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.600
SUBAREA RUNOFF(CFS) = 5.26
TOTAL AREA(ACRES) = 2.24 PEAK FLOW RATE(CFS) = 5.26

FLOW PROCESS FROM NODE 118.00 TO NODE 105.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1262.50 DOWNSTREAM(FEET) = 1261.80
FLOW LENGTH(FEET) = 134.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 18.0 INCH PIPE IS 11.4 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 4.45
ESTIMATED PIPE DIAMETER(INCH) = 18.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 5.26
PIPE TRAVEL TIME(MIN.) = 0.50 T_c (MIN.) = 14.57
LONGEST FLOWPATH FROM NODE 117.00 TO NODE 105.00 = 1133.00 FEET.

FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	T_c (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	5.26	14.57	2.806	0.42(0.25)	0.60	2.2	117.00

LONGEST FLOWPATH FROM NODE 117.00 TO NODE 105.00 = 1133.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	32.66	15.12	2.744	0.42(0.17)	0.40	13.9	100.00
2	31.29	16.97	2.560	0.42(0.17)	0.40	14.4	114.00

LONGEST FLOWPATH FROM NODE 114.00 TO NODE 105.00 = 1664.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	37.49	14.57	2.806	0.42(0.18)	0.43	15.7	117.00
2	37.79	15.12	2.744	0.42(0.18)	0.43	16.2	100.00
3	36.05	16.97	2.560	0.42(0.18)	0.43	16.6	114.00
TOTAL AREA(ACRES) =			16.6				

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 37.79 Tc(MIN.) = 15.120
EFFECTIVE AREA(ACRES) = 16.16 AREA-AVERAGED Fm(INCH/HR) = 0.18
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.43
TOTAL AREA(ACRES) = 16.6
LONGEST FLOWPATH FROM NODE 114.00 TO NODE 105.00 = 1664.00 FEET.

FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

=====

FLOW PROCESS FROM NODE 105.00 TO NODE 106.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1261.80 DOWNSTREAM(FEET) = 1255.00
FLOW LENGTH(FEET) = 41.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 18.0 INCH PIPE IS 13.8 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 26.09
ESTIMATED PIPE DIAMETER(INCH) = 18.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 37.79
PIPE TRAVEL TIME(MIN.) = 0.03 Tc(MIN.) = 15.15
LONGEST FLOWPATH FROM NODE 114.00 TO NODE 106.00 = 1705.00 FEET.

FLOW PROCESS FROM NODE 106.00 TO NODE 107.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1255.00 DOWNSTREAM(FEET) = 1254.30
FLOW LENGTH(FEET) = 150.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 36.0 INCH PIPE IS 26.1 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 6.89
ESTIMATED PIPE DIAMETER(INCH) = 36.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 37.79
PIPE TRAVEL TIME(MIN.) = 0.36 Tc(MIN.) = 15.51

LONGEST FLOWPATH FROM NODE 114.00 TO NODE 107.00 = 1855.00 FEET.

FLOW PROCESS FROM NODE 107.00 TO NODE 107.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 15.51

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.702

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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RESIDENTIAL

"8-10 DWELLINGS/ACRE"	B	4.78	0.42	0.400	76
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SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400

SUBAREA AREA(ACRES) = 4.78 SUBAREA RUNOFF(CFS) = 10.90

EFFECTIVE AREA(ACRES) = 20.94 AREA-AVERAGED Fm(INCH/HR) = 0.18

AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.42

TOTAL AREA(ACRES) = 21.4 PEAK FLOW RATE(CFS) = 47.58

FLOW PROCESS FROM NODE 107.00 TO NODE 108.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1254.30 DOWNSTREAM(FEET) = 1254.10

FLOW LENGTH(FEET) = 40.00 MANNING'S N = 0.013

DEPTH OF FLOW IN 39.0 INCH PIPE IS 27.8 INCHES

PIPE-FLOW VELOCITY(FEET/SEC.) = 7.51

ESTIMATED PIPE DIAMETER(INCH) = 39.00 NUMBER OF PIPES = 1

PIPE-FLOW(CFS) = 47.58

PIPE TRAVEL TIME(MIN.) = 0.09 Tc(MIN.) = 15.60

LONGEST FLOWPATH FROM NODE 114.00 TO NODE 108.00 = 1895.00 FEET.

FLOW PROCESS FROM NODE 108.00 TO NODE 108.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 15.60

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.693

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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RESIDENTIAL

"8-10 DWELLINGS/ACRE"	B	4.08	0.42	0.400	76
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SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400

SUBAREA AREA(ACRES) = 4.08 SUBAREA RUNOFF(CFS) = 9.27

EFFECTIVE AREA(ACRES) = 25.02 AREA-AVERAGED Fm(INCH/HR) = 0.18

AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.42

TOTAL AREA(ACRES) = 25.5 PEAK FLOW RATE(CFS) = 56.67

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	56.81	15.05	2.752	0.42(0.18)	0.42	24.5	117.00
2	56.67	15.60	2.693	0.42(0.18)	0.42	25.0	100.00
3	53.67	17.46	2.517	0.42(0.18)	0.42	25.5	114.00

NEW PEAK FLOW DATA ARE:

PEAK FLOW RATE(CFS) = 56.81 Tc(MIN.) = 15.05
 AREA-AVERAGED Fm(INCH/HR) = 0.18 AREA-AVERAGED Fp(INCH/HR) = 0.42
 AREA-AVERAGED Ap = 0.42 EFFECTIVE AREA(ACRES) = 24.51

 FLOW PROCESS FROM NODE 108.00 TO NODE 109.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1254.10 DOWNSTREAM(FEET) = 1253.00
 FLOW LENGTH(FEET) = 221.00 MANNING'S N = 0.013
 DEPTH OF FLOW IN 42.0 INCH PIPE IS 29.6 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) = 7.85
 ESTIMATED PIPE DIAMETER(INCH) = 42.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 56.81
 PIPE TRAVEL TIME(MIN.) = 0.47 Tc(MIN.) = 15.51
 LONGEST FLOWPATH FROM NODE 114.00 TO NODE 109.00 = 2116.00 FEET.

 FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

 FLOW PROCESS FROM NODE 119.00 TO NODE 120.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 621.00
 ELEVATION DATA: UPSTREAM(FEET) = 1302.20 DOWNSTREAM(FEET) = 1291.30

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 8.938

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.761

SUBAREA Tc AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
COMMERCIAL	B	0.91	0.42	0.100	76	8.94
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =			0.42			
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =			0.100			
SUBAREA RUNOFF(CFS) =			3.05			
TOTAL AREA(ACRES) =			0.91		PEAK FLOW RATE(CFS) = 3.05	

 FLOW PROCESS FROM NODE 120.00 TO NODE 121.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1291.30 DOWNSTREAM ELEVATION(FEET) = 1281.00
STREET LENGTH(FEET) = 710.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
INSIDE STREET CROSSFALL(DECIMAL) = 0.018
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 4.38
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.38
HALFSTREET FLOOD WIDTH(FEET) = 12.15
AVERAGE FLOW VELOCITY(FEET/SEC.) = 2.90
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.10
STREET FLOW TRAVEL TIME(MIN.) = 4.08 Tc(MIN.) = 13.02
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.001

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	1.00	0.42	0.100	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
SUBAREA AREA(ACRES) = 1.00 SUBAREA RUNOFF(CFS) = 2.66
EFFECTIVE AREA(ACRES) = 1.91 AREA-AVERAGED Fm(INCH/HR) = 0.04
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.10
TOTAL AREA(ACRES) = 1.9 PEAK FLOW RATE(CFS) = 5.09

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.39 HALFSTREET FLOOD WIDTH(FEET) = 12.93
FLOW VELOCITY(FEET/SEC.) = 3.02 DEPTH*VELOCITY(FT*FT/SEC.) = 1.19
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 121.00 = 1331.00 FEET.

FLOW PROCESS FROM NODE 121.00 TO NODE 121.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 13.02
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.001
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL "8-10 DWELLINGS/ACRE"	B	1.08	0.42	0.400	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400

SUBAREA AREA(ACRES) = 1.08 SUBAREA RUNOFF(CFS) = 2.75
EFFECTIVE AREA(ACRES) = 2.99 AREA-AVERAGED Fm(INCH/HR) = 0.09
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.21
TOTAL AREA(ACRES) = 3.0 PEAK FLOW RATE(CFS) = 7.84

FLOW PROCESS FROM NODE 121.00 TO NODE 122.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1281.00 DOWNSTREAM ELEVATION(FEET) = 1276.70
STREET LENGTH(FEET) = 264.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
INSIDE STREET CROSSFALL(DECIMAL) = 0.018
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 8.32
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.44
HALFSTREET FLOOD WIDTH(FEET) = 15.59
AVERAGE FLOW VELOCITY(FEET/SEC.) = 3.52
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.55
STREET FLOW TRAVEL TIME(MIN.) = 1.25 Tc(MIN.) = 14.27
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.841
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.38	0.42	0.100	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
SUBAREA AREA(ACRES) = 0.38 SUBAREA RUNOFF(CFS) = 0.96
EFFECTIVE AREA(ACRES) = 3.37 AREA-AVERAGED Fm(INCH/HR) = 0.08
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.20
TOTAL AREA(ACRES) = 3.4 PEAK FLOW RATE(CFS) = 8.37

END OF SUBAREA STREET FLOW HYDRAULICS:
DEPTH(FEET) = 0.44 HALFSTREET FLOOD WIDTH(FEET) = 15.59
FLOW VELOCITY(FEET/SEC.) = 3.54 DEPTH*VELOCITY(FT*FT/SEC.) = 1.56
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 122.00 = 1595.00 FEET.

FLOW PROCESS FROM NODE 122.00 TO NODE 122.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 14.27
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.841

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	0.48	0.42	0.400	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA AREA(ACRES) = 0.48 SUBAREA RUNOFF(CFS) = 1.15
 EFFECTIVE AREA(ACRES) = 3.85 AREA-AVERAGED Fm(INCH/HR) = 0.09
 AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.22
 TOTAL AREA(ACRES) = 3.9 PEAK FLOW RATE(CFS) = 9.52

FLOW PROCESS FROM NODE 122.00 TO NODE 122.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 111.00 TO NODE 112.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 591.00
 ELEVATION DATA: UPSTREAM(FEET) = 1289.00 DOWNSTREAM(FEET) = 1280.40

$$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$$

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 11.192

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.286

SUBAREA Tc AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
RESIDENTIAL						
"8-10 DWELLINGS/ACRE"	B	1.12	0.42	0.400	76	11.19

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA RUNOFF(CFS) = 3.14
 TOTAL AREA(ACRES) = 1.12 PEAK FLOW RATE(CFS) = 3.14

FLOW PROCESS FROM NODE 112.00 TO NODE 122.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>(STREET TABLE SECTION # 1 USED)<<<<<

UPSTREAM ELEVATION(FEET) = 1280.40 DOWNSTREAM ELEVATION(FEET) = 1276.70
 STREET LENGTH(FEET) = 617.00 CURB HEIGHT(INCHES) = 8.0
 STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00

INSIDE STREET CROSSFALL(DECIMAL) = 0.018

OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1

STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 4.92
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.44
HALFSTREET FLOOD WIDTH(FEET) = 15.43
AVERAGE FLOW VELOCITY(FEET/SEC.) = 2.12
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.93
STREET FLOW TRAVEL TIME(MIN.) = 4.84 Tc(MIN.) = 16.04
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.648
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	1.59	0.42	0.400	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
SUBAREA AREA(ACRES) = 1.59 SUBAREA RUNOFF(CFS) = 3.55
EFFECTIVE AREA(ACRES) = 2.71 AREA-AVERAGED Fm(INCH/HR) = 0.17
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.40
TOTAL AREA(ACRES) = 2.7 PEAK FLOW RATE(CFS) = 6.05

END OF SUBAREA STREET FLOW HYDRAULICS:
DEPTH(FEET) = 0.46 HALFSTREET FLOOD WIDTH(FEET) = 16.76
FLOW VELOCITY(FEET/SEC.) = 2.24 DEPTH*VELOCITY(FT*FT/SEC.) = 1.03
LONGEST FLOWPATH FROM NODE 111.00 TO NODE 122.00 = 1208.00 FEET.

FLOW PROCESS FROM NODE 122.00 TO NODE 122.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<
=====

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	6.05	16.04	2.648	0.42(0.17)	0.40	2.7	111.00

LONGEST FLOWPATH FROM NODE 111.00 TO NODE 122.00 = 1208.00 FEET.

** MEMORY BANK # 2 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	9.52	14.27	2.841	0.42(0.09)	0.22	3.9	119.00

LONGEST FLOWPATH FROM NODE 119.00 TO NODE 122.00 = 1595.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	15.32	14.27	2.841	0.42(0.12)	0.29	6.3	119.00
2	14.90	16.04	2.648	0.42(0.12)	0.30	6.6	111.00

TOTAL AREA(ACRES) = 6.6

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 15.32 Tc(MIN.) = 14.270
 EFFECTIVE AREA(ACRES) = 6.26 AREA-AVERAGED Fm(INCH/HR) = 0.12
 AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.30
 TOTAL AREA(ACRES) = 6.6
 LONGEST FLOWPATH FROM NODE 119.00 TO NODE 122.00 = 1595.00 FEET.

FLOW PROCESS FROM NODE 122.00 TO NODE 122.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 2 <<<<<

=====

FLOW PROCESS FROM NODE 122.00 TO NODE 123.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1276.70 DOWNSTREAM ELEVATION(FEET) = 1266.00
 STREET LENGTH(FEET) = 621.00 CURB HEIGHT(INCHES) = 8.0
 STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
 INSIDE STREET CROSSFALL(DECIMAL) = 0.018
 OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
 STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
 Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 16.43
 STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
 STREET FLOW DEPTH(FEET) = 0.53
 HALFSTREET FLOOD WIDTH(FEET) = 20.35
 AVERAGE FLOW VELOCITY(FEET/SEC.) = 4.22
 PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 2.22
 STREET FLOW TRAVEL TIME(MIN.) = 2.45 Tc(MIN.) = 16.72
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.583

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.97	0.42	0.100	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
 SUBAREA AREA(ACRES) = 0.97 SUBAREA RUNOFF(CFS) = 2.22
 EFFECTIVE AREA(ACRES) = 7.23 AREA-AVERAGED Fm(INCH/HR) = 0.11
 AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.26
 TOTAL AREA(ACRES) = 7.5 PEAK FLOW RATE(CFS) = 16.09

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.52 HALFSTREET FLOOD WIDTH(FEET) = 20.12
 FLOW VELOCITY(FEET/SEC.) = 4.22 DEPTH*VELOCITY(FT*FT/SEC.) = 2.20
 LONGEST FLOWPATH FROM NODE 119.00 TO NODE 123.00 = 2216.00 FEET.

FLOW PROCESS FROM NODE 123.00 TO NODE 109.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1260.00 DOWNSTREAM(FEET) = 1253.00
FLOW LENGTH(FEET) = 680.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 24.0 INCH PIPE IS 15.3 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 7.58
ESTIMATED PIPE DIAMETER(INCH) = 24.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 16.09
PIPE TRAVEL TIME(MIN.) = 1.49 Tc(MIN.) = 18.22
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 109.00 = 2896.00 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

Table with 8 columns: STREAM NUMBER, Q (CFS), Tc (MIN.), Intensity (INCH/HR), Fp(Fm) (INCH/HR), Ap, Ae (ACRES), HEADWATER NODE. Contains 2 rows of data and a longest flowpath summary.

** MEMORY BANK # 1 CONFLUENCE DATA **

Table with 8 columns: STREAM NUMBER, Q (CFS), Tc (MIN.), Intensity (INCH/HR), Fp(Fm) (INCH/HR), Ap, Ae (ACRES), HEADWATER NODE. Contains 3 rows of data and a longest flowpath summary.

** PEAK FLOW RATE TABLE **

Table with 8 columns: STREAM NUMBER, Q (CFS), Tc (MIN.), Intensity (INCH/HR), Fp(Fm) (INCH/HR), Ap, Ae (ACRES), HEADWATER NODE. Contains 5 rows of data and a total area calculation.

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 72.02 Tc(MIN.) = 16.067
EFFECTIVE AREA(ACRES) = 31.40 AREA-AVERAGED Fm(INCH/HR) = 0.16
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.38
TOTAL AREA(ACRES) = 33.0
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 109.00 = 2896.00 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<
=====

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
=====

FLOW PROCESS FROM NODE 124.00 TO NODE 125.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 906.00
ELEVATION DATA: UPSTREAM(FEET) = 1269.50 DOWNSTREAM(FEET) = 1261.50

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 18.401
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.439

SUBAREA T_c AND LOSS RATE DATA(AMC III):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS Tc
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
RESIDENTIAL
"1 DWELLING/ACRE" B 6.02 0.42 0.800 76 18.40
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.800
SUBAREA RUNOFF(CFS) = 11.38
TOTAL AREA(ACRES) = 6.02 PEAK FLOW RATE(CFS) = 11.38

FLOW PROCESS FROM NODE 125.00 TO NODE 109.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
=====

ELEVATION DATA: UPSTREAM(FEET) = 1255.50 DOWNSTREAM(FEET) = 1253.00
FLOW LENGTH(FEET) = 425.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 21.0 INCH PIPE IS 17.0 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 5.46
ESTIMATED PIPE DIAMETER(INCH) = 21.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 11.38
PIPE TRAVEL TIME(MIN.) = 1.30 T_c (MIN.) = 19.70
LONGEST FLOWPATH FROM NODE 124.00 TO NODE 109.00 = 1331.00 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
=====

MAINLINE T_c (MIN.) = 19.70
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.341
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL					
"1 DWELLING/ACRE"	B	3.60	0.42	0.800	76
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.800					
SUBAREA AREA(ACRES) =		3.60	SUBAREA RUNOFF(CFS) =		6.49
EFFECTIVE AREA(ACRES) =		9.62	AREA-AVERAGED Fm(INCH/HR) =		0.34
AREA-AVERAGED Fp(INCH/HR) =		0.42	AREA-AVERAGED Ap =		0.80
TOTAL AREA(ACRES) =		9.6	PEAK FLOW RATE(CFS) =		17.34

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	17.34	19.70	2.341	0.42(0.34)	0.80	9.6	124.00
LONGEST FLOWPATH FROM NODE 124.00 TO NODE 109.00 = 1331.00 FEET.							

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	71.96	15.51	2.702	0.42(0.16)	0.39	30.7	117.00
2	72.02	16.07	2.645	0.42(0.16)	0.39	31.4	100.00
3	69.67	17.94	2.476	0.42(0.16)	0.38	32.6	114.00
4	69.23	18.22	2.453	0.42(0.16)	0.38	32.7	119.00
5	65.75	19.99	2.320	0.42(0.16)	0.38	33.0	111.00
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 109.00 = 2896.00 FEET.							

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	88.08	15.51	2.702	0.42(0.20)	0.47	38.3	117.00
2	88.31	16.07	2.645	0.42(0.20)	0.47	39.3	100.00
3	86.53	17.94	2.476	0.42(0.20)	0.47	41.4	114.00
4	86.17	18.22	2.453	0.42(0.20)	0.47	41.6	119.00
5	83.67	19.70	2.341	0.42(0.20)	0.48	42.6	124.00
6	82.91	19.99	2.320	0.42(0.20)	0.48	42.6	111.00
TOTAL AREA(ACRES) = 42.6							

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 88.31 Tc(MIN.) = 16.067
 EFFECTIVE AREA(ACRES) = 39.25 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.47
 TOTAL AREA(ACRES) = 42.6
 LONGEST FLOWPATH FROM NODE 119.00 TO NODE 109.00 = 2896.00 FEET.

FLOW PROCESS FROM NODE 109.00 TO NODE 109.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

=====

FLOW PROCESS FROM NODE 110.00 TO NODE 401.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1247.00 DOWNSTREAM(FEET) = 1237.00
FLOW LENGTH(FEET) = 359.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 36.0 INCH PIPE IS 25.2 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 16.73
ESTIMATED PIPE DIAMETER(INCH) = 36.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 88.31
PIPE TRAVEL TIME(MIN.) = 0.36 Tc(MIN.) = 16.43
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 401.00 = 3255.00 FEET.

FLOW PROCESS FROM NODE 401.00 TO NODE 401.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

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FLOW PROCESS FROM NODE 400.00 TO NODE 401.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 1242.00
ELEVATION DATA: UPSTREAM(FEET) = 1266.00 DOWNSTREAM(FEET) = 1237.00

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 19.238

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.375

SUBAREA Tc AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
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NATURAL POOR COVER "BARREN"	B	1.10	0.11	1.000	97	19.24
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SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.11

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000

SUBAREA RUNOFF(CFS) = 2.25

TOTAL AREA(ACRES) = 1.10 PEAK FLOW RATE(CFS) = 2.25

FLOW PROCESS FROM NODE 401.00 TO NODE 401.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

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** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	2.25	19.24	2.375	0.11(0.11)	1.00	1.1	400.00

LONGEST FLOWPATH FROM NODE 400.00 TO NODE 401.00 = 1242.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	88.08	15.87	2.665	0.42(0.20)	0.47	38.3	117.00
2	88.31	16.43	2.611	0.42(0.20)	0.47	39.3	100.00
3	86.53	18.30	2.447	0.42(0.20)	0.47	41.4	114.00
4	86.17	18.58	2.425	0.42(0.20)	0.47	41.6	119.00
5	83.67	20.07	2.315	0.42(0.20)	0.48	42.6	124.00
6	82.91	20.36	2.295	0.42(0.20)	0.48	42.6	111.00

LONGEST FLOWPATH FROM NODE 119.00 TO NODE 401.00 = 3255.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	90.17	15.87	2.665	0.41(0.20)	0.48	39.2	117.00
2	90.43	16.43	2.611	0.41(0.20)	0.48	40.2	100.00
3	88.73	18.30	2.447	0.41(0.20)	0.49	42.4	114.00
4	88.38	18.58	2.425	0.41(0.20)	0.49	42.7	119.00
5	87.31	19.24	2.375	0.41(0.20)	0.49	43.1	400.00
6	85.85	20.07	2.315	0.41(0.20)	0.49	43.7	124.00
7	85.07	20.36	2.295	0.41(0.20)	0.49	43.7	111.00

TOTAL AREA(ACRES) = 43.7

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 90.43 Tc(MIN.) = 16.425
EFFECTIVE AREA(ACRES) = 40.19 AREA-AVERAGED Fm(INCH/HR) = 0.20
AREA-AVERAGED Fp(INCH/HR) = 0.41 AREA-AVERAGED Ap = 0.49
TOTAL AREA(ACRES) = 43.7
LONGEST FLOWPATH FROM NODE 119.00 TO NODE 401.00 = 3255.00 FEET.

FLOW PROCESS FROM NODE 401.00 TO NODE 401.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

FLOW PROCESS FROM NODE 401.00 TO NODE 402.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1237.00 DOWNSTREAM(FEET) = 1232.00

CHANNEL LENGTH THRU SUBAREA(FEET) = 445.00 CHANNEL SLOPE = 0.0112

CHANNEL BASE(FEET) = 10.00 "Z" FACTOR = 0.011

MANNING'S FACTOR = 0.035 MAXIMUM DEPTH(FEET) = 17.00

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.486

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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NATURAL POOR COVER

"BARREN" B 0.31 0.11 1.000 97

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.11

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 90.76
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 5.29
 AVERAGE FLOW DEPTH(FEET) = 1.71 TRAVEL TIME(MIN.) = 1.40
 Tc(MIN.) = 17.83
 SUBAREA AREA(ACRES) = 0.31 SUBAREA RUNOFF(CFS) = 0.66
 EFFECTIVE AREA(ACRES) = 40.50 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp(INCH/HR) = 0.40 AREA-AVERAGED Ap = 0.49
 TOTAL AREA(ACRES) = 44.0 PEAK FLOW RATE(CFS) = 90.43
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 1.71 FLOW VELOCITY(FEET/SEC.) = 5.29
 LONGEST FLOWPATH FROM NODE 119.00 TO NODE 402.00 = 3700.00 FEET.

FLOW PROCESS FROM NODE 401.00 TO NODE 401.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<

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FLOW PROCESS FROM NODE 200.00 TO NODE 201.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

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INITIAL SUBAREA FLOW-LENGTH(FEET) = 698.00
 ELEVATION DATA: UPSTREAM(FEET) = 1279.80 DOWNSTREAM(FEET) = 1270.00

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 12.049
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.144
 SUBAREA Tc AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
RESIDENTIAL						
"8-10 DWELLINGS/ACRE"	B	1.69	0.42	0.400	76	12.05

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA RUNOFF(CFS) = 4.52
 TOTAL AREA(ACRES) = 1.69 PEAK FLOW RATE(CFS) = 4.52

FLOW PROCESS FROM NODE 201.00 TO NODE 202.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>(STREET TABLE SECTION # 1 USED)<<<<<

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UPSTREAM ELEVATION(FEET) = 1270.00 DOWNSTREAM ELEVATION(FEET) = 1263.70
 STREET LENGTH(FEET) = 409.00 CURB HEIGHT(INCHES) = 8.0
 STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
 INSIDE STREET CROSSFALL(DECIMAL) = 0.018

OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1

STREET PARKWAY CROSSFALL(DECIMAL) = 0.020

Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150

Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 6.57

STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:

STREET FLOW DEPTH(FEET) = 0.42

HALFSTREET FLOOD WIDTH(FEET) = 14.26

AVERAGE FLOW VELOCITY(FEET/SEC.) = 3.27

PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.36

STREET FLOW TRAVEL TIME(MIN.) = 2.08 Tc(MIN.) = 14.13

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.857

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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RESIDENTIAL

"8-10 DWELLINGS/ACRE" B 1.69 0.42 0.400 76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400

SUBAREA AREA(ACRES) = 1.69 SUBAREA RUNOFF(CFS) = 4.09

EFFECTIVE AREA(ACRES) = 3.38 AREA-AVERAGED Fm(INCH/HR) = 0.17

AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.40

TOTAL AREA(ACRES) = 3.4 PEAK FLOW RATE(CFS) = 8.18

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.44 HALFSTREET FLOOD WIDTH(FEET) = 15.66

FLOW VELOCITY(FEET/SEC.) = 3.43 DEPTH*VELOCITY(FT*FT/SEC.) = 1.52

LONGEST FLOWPATH FROM NODE 200.00 TO NODE 202.00 = 1107.00 FEET.

FLOW PROCESS FROM NODE 202.00 TO NODE 203.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1257.70 DOWNSTREAM(FEET) = 1257.40

FLOW LENGTH(FEET) = 60.00 MANNING'S N = 0.013

DEPTH OF FLOW IN 21.0 INCH PIPE IS 13.8 INCHES

PIPE-FLOW VELOCITY(FEET/SEC.) = 4.87

ESTIMATED PIPE DIAMETER(INCH) = 21.00 NUMBER OF PIPES = 1

PIPE-FLOW(CFS) = 8.18

PIPE TRAVEL TIME(MIN.) = 0.21 Tc(MIN.) = 14.34

LONGEST FLOWPATH FROM NODE 200.00 TO NODE 203.00 = 1167.00 FEET.

FLOW PROCESS FROM NODE 203.00 TO NODE 203.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 204.00 TO NODE 205.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 288.00
ELEVATION DATA: UPSTREAM(FEET) = 1279.80 DOWNSTREAM(FEET) = 1276.10

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 8.607

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.847

SUBAREA T_c AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
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RESIDENTIAL

"8-10 DWELLINGS/ACRE"	B	1.26	0.42	0.400	76	8.61
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SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.42

SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.400

SUBAREA RUNOFF(CFS) = 4.17

TOTAL AREA(ACRES) = 1.26 PEAK FLOW RATE(CFS) = 4.17

FLOW PROCESS FROM NODE 205.00 TO NODE 203.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>(STREET TABLE SECTION # 1 USED)<<<<<
=====

UPSTREAM ELEVATION(FEET) = 1276.10 DOWNSTREAM ELEVATION(FEET) = 1263.40

STREET LENGTH(FEET) = 698.00 CURB HEIGHT(INCHES) = 8.0

STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00

INSIDE STREET CROSSFALL(DECIMAL) = 0.018

OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1

STREET PARKWAY CROSSFALL(DECIMAL) = 0.020

Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) = 0.0150

Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 10.37

STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:

STREET FLOW DEPTH(FEET) = 0.46

HALFSTREET FLOOD WIDTH(FEET) = 16.68

AVERAGE FLOW VELOCITY(FEET/SEC.) = 3.87

PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.78

STREET FLOW TRAVEL TIME(MIN.) = 3.01 T_c (MIN.) = 11.61

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.214

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
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RESIDENTIAL

"8-10 DWELLINGS/ACRE"	B	4.50	0.42	0.400	76
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SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.42

SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.400

SUBAREA AREA(ACRES) = 4.50 SUBAREA RUNOFF(CFS) = 12.33

EFFECTIVE AREA(ACRES) = 5.76 AREA-AVERAGED Fm(INCH/HR) = 0.17
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.40
TOTAL AREA(ACRES) = 5.8 PEAK FLOW RATE(CFS) = 15.79

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.52 HALFSTREET FLOOD WIDTH(FEET) = 19.80
FLOW VELOCITY(FEET/SEC.) = 4.27 DEPTH*VELOCITY(FT*FT/SEC.) = 2.20
LONGEST FLOWPATH FROM NODE 204.00 TO NODE 203.00 = 986.00 FEET.

FLOW PROCESS FROM NODE 203.00 TO NODE 203.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	15.79	11.61	3.214	0.42(0.17)	0.40	5.8	204.00

LONGEST FLOWPATH FROM NODE 204.00 TO NODE 203.00 = 986.00 FEET.

** MEMORY BANK # 2 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	8.18	14.34	2.832	0.42(0.17)	0.40	3.4	200.00

LONGEST FLOWPATH FROM NODE 200.00 TO NODE 203.00 = 1167.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	23.36	11.61	3.214	0.42(0.17)	0.40	8.5	204.00
2	21.98	14.34	2.832	0.42(0.17)	0.40	9.1	200.00

TOTAL AREA(ACRES) = 9.1

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 23.36 Tc(MIN.) = 11.613
EFFECTIVE AREA(ACRES) = 8.50 AREA-AVERAGED Fm(INCH/HR) = 0.17
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.40
TOTAL AREA(ACRES) = 9.1
LONGEST FLOWPATH FROM NODE 200.00 TO NODE 203.00 = 1167.00 FEET.

FLOW PROCESS FROM NODE 203.00 TO NODE 203.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 203.00 TO NODE 206.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1257.40 DOWNSTREAM(FEET) = 1255.40
FLOW LENGTH(FEET) = 400.00 MANNING'S N = 0.013

DEPTH OF FLOW IN 30.0 INCH PIPE IS 21.2 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 6.29
ESTIMATED PIPE DIAMETER(INCH) = 30.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 23.36
PIPE TRAVEL TIME(MIN.) = 1.06 Tc(MIN.) = 12.67
LONGEST FLOWPATH FROM NODE 200.00 TO NODE 206.00 = 1567.00 FEET.

FLOW PROCESS FROM NODE 206.00 TO NODE 206.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 211.00 TO NODE 212.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 646.00
ELEVATION DATA: UPSTREAM(FEET) = 1284.10 DOWNSTREAM(FEET) = 1282.40

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 13.272

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.967

SUBAREA Tc AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
COMMERCIAL	B	0.44	0.42	0.100	76	13.27

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100

SUBAREA RUNOFF(CFS) = 1.16

TOTAL AREA(ACRES) = 0.44 PEAK FLOW RATE(CFS) = 1.16

FLOW PROCESS FROM NODE 212.00 TO NODE 213.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>(STREET TABLE SECTION # 1 USED)<<<<<

UPSTREAM ELEVATION(FEET) = 1282.40 DOWNSTREAM ELEVATION(FEET) = 1273.00
STREET LENGTH(FEET) = 600.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00

INSIDE STREET CROSSFALL(DECIMAL) = 0.018

OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1

STREET PARKWAY CROSSFALL(DECIMAL) = 0.020

Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150

Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.63

STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:

STREET FLOW DEPTH(FEET) = 0.29
 HALFSTREET FLOOD WIDTH(FEET) = 7.28
 AVERAGE FLOW VELOCITY(FEET/SEC.) = 2.44
 PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.71
 STREET FLOW TRAVEL TIME(MIN.) = 4.09 Tc(MIN.) = 17.36
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.525

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.42	0.42	0.100	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
 SUBAREA AREA(ACRES) = 0.42 SUBAREA RUNOFF(CFS) = 0.93
 EFFECTIVE AREA(ACRES) = 0.86 AREA-AVERAGED Fm(INCH/HR) = 0.04
 AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.10
 TOTAL AREA(ACRES) = 0.9 PEAK FLOW RATE(CFS) = 1.92

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.30 HALFSTREET FLOOD WIDTH(FEET) = 7.97
 FLOW VELOCITY(FEET/SEC.) = 2.52 DEPTH*VELOCITY(FT*FT/SEC.) = 0.77
 LONGEST FLOWPATH FROM NODE 211.00 TO NODE 213.00 = 1246.00 FEET.

FLOW PROCESS FROM NODE 213.00 TO NODE 213.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 17.36
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.525
 SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL "8-10 DWELLINGS/ACRE"	B	1.16	0.42	0.400	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA AREA(ACRES) = 1.16 SUBAREA RUNOFF(CFS) = 2.46
 EFFECTIVE AREA(ACRES) = 2.02 AREA-AVERAGED Fm(INCH/HR) = 0.12
 AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.27
 TOTAL AREA(ACRES) = 2.0 PEAK FLOW RATE(CFS) = 4.38

FLOW PROCESS FROM NODE 213.00 TO NODE 214.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>(STREET TABLE SECTION # 1 USED)<<<<<

UPSTREAM ELEVATION(FEET) = 1273.00 DOWNSTREAM ELEVATION(FEET) = 1266.70
 STREET LENGTH(FEET) = 599.00 CURB HEIGHT(INCHES) = 8.0
 STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
 INSIDE STREET CROSSFALL(DECIMAL) = 0.018
 OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
 STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
 Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 4.86
 STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
 STREET FLOW DEPTH(FEET) = 0.41
 HALFSTREET FLOOD WIDTH(FEET) = 13.63
 AVERAGE FLOW VELOCITY(FEET/SEC.) = 2.62
 PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 1.06
 STREET FLOW TRAVEL TIME(MIN.) = 3.81 Tc(MIN.) = 21.17
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.242
 SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.48	0.42	0.100	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
 SUBAREA AREA(ACRES) = 0.48 SUBAREA RUNOFF(CFS) = 0.96
 EFFECTIVE AREA(ACRES) = 2.50 AREA-AVERAGED Fm(INCH/HR) = 0.10
 AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.24
 TOTAL AREA(ACRES) = 2.5 PEAK FLOW RATE(CFS) = 4.82

END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.40 HALFSTREET FLOOD WIDTH(FEET) = 13.55
 FLOW VELOCITY(FEET/SEC.) = 2.63 DEPTH*VELOCITY(FT*FT/SEC.) = 1.06
 LONGEST FLOWPATH FROM NODE 211.00 TO NODE 214.00 = 1845.00 FEET.

 FLOW PROCESS FROM NODE 214.00 TO NODE 214.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN.) = 21.17
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.242
 SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
RESIDENTIAL "8-10 DWELLINGS/ACRE"	B	1.16	0.42	0.400	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
 SUBAREA AREA(ACRES) = 1.16 SUBAREA RUNOFF(CFS) = 2.16
 EFFECTIVE AREA(ACRES) = 3.66 AREA-AVERAGED Fm(INCH/HR) = 0.12
 AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.29
 TOTAL AREA(ACRES) = 3.7 PEAK FLOW RATE(CFS) = 6.99

 FLOW PROCESS FROM NODE 214.00 TO NODE 206.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1260.70 DOWNSTREAM(FEET) = 1256.40

FLOW LENGTH(FEET) = 287.00 MANNING'S N = 0.013
 ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 18.000
 DEPTH OF FLOW IN 18.0 INCH PIPE IS 9.8 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) = 7.13
 ESTIMATED PIPE DIAMETER(INCH) = 18.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 6.99
 PIPE TRAVEL TIME(MIN.) = 0.67 Tc(MIN.) = 21.84
 LONGEST FLOWPATH FROM NODE 211.00 TO NODE 206.00 = 2132.00 FEET.

FLOW PROCESS FROM NODE 206.00 TO NODE 206.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	6.99	21.84	2.200	0.42(0.12)	0.29	3.7	211.00

LONGEST FLOWPATH FROM NODE 211.00 TO NODE 206.00 = 2132.00 FEET.

** MEMORY BANK # 2 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	23.36	12.67	3.050	0.42(0.17)	0.40	8.5	204.00
2	21.98	15.41	2.713	0.42(0.17)	0.40	9.1	200.00

LONGEST FLOWPATH FROM NODE 200.00 TO NODE 206.00 = 1567.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	29.07	12.67	3.050	0.42(0.16)	0.38	10.6	204.00
2	28.13	15.41	2.713	0.42(0.16)	0.38	11.7	200.00
3	24.54	21.84	2.200	0.42(0.16)	0.37	12.8	211.00

TOTAL AREA(ACRES) = 12.8

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 29.07 Tc(MIN.) = 12.673
 EFFECTIVE AREA(ACRES) = 10.62 AREA-AVERAGED Fm(INCH/HR) = 0.16
 AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.38
 TOTAL AREA(ACRES) = 12.8
 LONGEST FLOWPATH FROM NODE 211.00 TO NODE 206.00 = 2132.00 FEET.

FLOW PROCESS FROM NODE 206.00 TO NODE 206.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 206.00 TO NODE 207.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1255.40 DOWNSTREAM(FEET) = 1252.50
FLOW LENGTH(FEET) = 547.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 33.0 INCH PIPE IS 22.2 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 6.83
ESTIMATED PIPE DIAMETER(INCH) = 33.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 29.07
PIPE TRAVEL TIME(MIN.) = 1.34 Tc(MIN.) = 14.01
LONGEST FLOWPATH FROM NODE 211.00 TO NODE 207.00 = 2679.00 FEET.

FLOW PROCESS FROM NODE 207.00 TO NODE 207.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) =	14.01				
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =	2.872				
SUBAREA LOSS RATE DATA(AMC III):					
DEVELOPMENT TYPE/	SCS SOIL	AREA	Fp	Ap	SCS
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
RESIDENTIAL					
"8-10 DWELLINGS/ACRE"	B	5.49	0.42	0.400	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.400
SUBAREA AREA(ACRES) = 5.49 SUBAREA RUNOFF(CFS) = 13.36
EFFECTIVE AREA(ACRES) = 16.11 AREA-AVERAGED Fm(INCH/HR) = 0.16
AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.39
TOTAL AREA(ACRES) = 18.3 PEAK FLOW RATE(CFS) = 39.29

FLOW PROCESS FROM NODE 208.00 TO NODE 209.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) =	1247.20	DOWNSTREAM(FEET) =	1246.70
FLOW LENGTH(FEET) =	90.00	MANNING'S N =	0.013
DEPTH OF FLOW IN	36.0 INCH PIPE IS	25.1 INCHES	
PIPE-FLOW VELOCITY(FEET/SEC.) =	7.46		
ESTIMATED PIPE DIAMETER(INCH) =	36.00	NUMBER OF PIPES =	1
PIPE-FLOW(CFS) =	39.29		
PIPE TRAVEL TIME(MIN.) =	0.20	Tc(MIN.) =	14.21
LONGEST FLOWPATH FROM NODE	211.00 TO NODE	209.00 =	2769.00 FEET.

FLOW PROCESS FROM NODE 209.00 TO NODE 209.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 305.00 TO NODE 306.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 1000.00
ELEVATION DATA: UPSTREAM(FEET) = 1311.00 DOWNSTREAM(FEET) = 1305.00

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 13.404

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.949

SUBAREA T_c AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
COMMERCIAL	B	0.81	0.42	0.100	76	13.40

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100

SUBAREA RUNOFF(CFS) = 2.12

TOTAL AREA(ACRES) = 0.81 PEAK FLOW RATE(CFS) = 2.12

FLOW PROCESS FROM NODE 306.00 TO NODE 300.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<

>>>>(STREET TABLE SECTION # 1 USED)<<<<<

=====

UPSTREAM ELEVATION(FEET) = 1305.00 DOWNSTREAM ELEVATION(FEET) = 1303.50

STREET LENGTH(FEET) = 683.00 CURB HEIGHT(INCHES) = 8.0

STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00

INSIDE STREET CROSSFALL(DECIMAL) = 0.018

OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1

STREET PARKWAY CROSSFALL(DECIMAL) = 0.020

Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150

Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 2.62

STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:

STREET FLOW DEPTH(FEET) = 0.42

HALFSTREET FLOOD WIDTH(FEET) = 14.65

AVERAGE FLOW VELOCITY(FEET/SEC.) = 1.24

PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.53

STREET FLOW TRAVEL TIME(MIN.) = 9.16 T_c (MIN.) = 22.57

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.158

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.52	0.42	0.100	76

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.42

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100

SUBAREA AREA(ACRES) = 0.52 SUBAREA RUNOFF(CFS) = 0.99

EFFECTIVE AREA(ACRES) = 1.33 AREA-AVERAGED Fm(INCH/HR) = 0.04

AREA-AVERAGED Fp(INCH/HR) = 0.42 AREA-AVERAGED Ap = 0.10

TOTAL AREA(ACRES) = 1.3 PEAK FLOW RATE(CFS) = 2.54

END OF SUBAREA STREET FLOW HYDRAULICS:

DEPTH(FEET) = 0.42 HALFSTREET FLOOD WIDTH(FEET) = 14.41

FLOW VELOCITY(FEET/SEC.) = 1.24 DEPTH*VELOCITY(FT*FT/SEC.) = 0.52
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 300.00 = 1683.00 FEET.

FLOW PROCESS FROM NODE 300.00 TO NODE 301.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1303.50 DOWNSTREAM(FEET) = 1292.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 944.00 CHANNEL SLOPE = 0.0122
CHANNEL FLOW THRU SUBAREA(CFS) = 2.54
FLOW VELOCITY(FEET/SEC) = 2.00 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 7.87 Tc(MIN.) = 30.44
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 301.00 = 2627.00 FEET.

FLOW PROCESS FROM NODE 301.00 TO NODE 301.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 30.44
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.803
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	6.61	0.23	1.000	89

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 6.61 SUBAREA RUNOFF(CFS) = 9.36
EFFECTIVE AREA(ACRES) = 7.94 AREA-AVERAGED Fm(INCH/HR) = 0.20
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.85
TOTAL AREA(ACRES) = 7.9 PEAK FLOW RATE(CFS) = 11.47

FLOW PROCESS FROM NODE 301.00 TO NODE 302.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1292.00 DOWNSTREAM(FEET) = 1284.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 523.00 CHANNEL SLOPE = 0.0153
CHANNEL FLOW THRU SUBAREA(CFS) = 11.47
FLOW VELOCITY(FEET/SEC) = 3.20 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 2.72 Tc(MIN.) = 33.16
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 302.00 = 3150.00 FEET.

FLOW PROCESS FROM NODE 302.00 TO NODE 302.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 33.16
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.713

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	5.92	0.23	1.000	89

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 5.92 SUBAREA RUNOFF(CFS) = 7.90
EFFECTIVE AREA(ACRES) = 13.86 AREA-AVERAGED Fm(INCH/HR) = 0.21
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.91
TOTAL AREA(ACRES) = 13.9 PEAK FLOW RATE(CFS) = 18.72

FLOW PROCESS FROM NODE 302.00 TO NODE 302.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 3 <<<<<

FLOW PROCESS FROM NODE 303.00 TO NODE 304.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 999.00
ELEVATION DATA: UPSTREAM(FEET) = 1298.00 DOWNSTREAM(FEET) = 1288.00

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 20.888

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.260

SUBAREA Tc AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
AGRICULTURAL POOR COVER "ORCHARDS"	B	6.50	0.23	1.000	89	20.89

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA RUNOFF(CFS) = 11.88
TOTAL AREA(ACRES) = 6.50 PEAK FLOW RATE(CFS) = 11.88

FLOW PROCESS FROM NODE 304.00 TO NODE 302.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1288.00 DOWNSTREAM(FEET) = 1284.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 375.00 CHANNEL SLOPE = 0.0107
CHANNEL FLOW THRU SUBAREA(CFS) = 11.88
FLOW VELOCITY(FEET/SEC) = 2.70 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 2.32 Tc(MIN.) = 23.21
LONGEST FLOWPATH FROM NODE 303.00 TO NODE 302.00 = 1374.00 FEET.

FLOW PROCESS FROM NODE 302.00 TO NODE 302.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 3 WITH THE MAIN-STREAM MEMORY<<<<<
=====

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	11.88	23.21	2.122	0.23(0.23)	1.00	6.5	303.00

LONGEST FLOWPATH FROM NODE 303.00 TO NODE 302.00 = 1374.00 FEET.

** MEMORY BANK # 3 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	18.72	33.16	1.713	0.23(0.21)	0.91	13.9	305.00

LONGEST FLOWPATH FROM NODE 305.00 TO NODE 302.00 = 3150.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	28.55	23.21	2.122	0.23(0.22)	0.95	16.2	303.00
2	28.03	33.16	1.713	0.23(0.22)	0.94	20.4	305.00

TOTAL AREA(ACRES) = 20.4

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 28.55 Tc(MIN.) = 23.205
EFFECTIVE AREA(ACRES) = 16.20 AREA-AVERAGED Fm(INCH/HR) = 0.22
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.95
TOTAL AREA(ACRES) = 20.4
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 302.00 = 3150.00 FEET.

FLOW PROCESS FROM NODE 302.00 TO NODE 302.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 3 <<<<<
=====

FLOW PROCESS FROM NODE 302.00 TO NODE 209.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
=====

ELEVATION DATA: UPSTREAM(FEET) = 1280.00 DOWNSTREAM(FEET) = 1246.70
FLOW LENGTH(FEET) = 1831.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 24.0 INCH PIPE IS 19.4 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 10.50
ESTIMATED PIPE DIAMETER(INCH) = 24.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 28.55
PIPE TRAVEL TIME(MIN.) = 2.91 Tc(MIN.) = 26.11
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 209.00 = 4981.00 FEET.

FLOW PROCESS FROM NODE 209.00 TO NODE 209.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<

=====
 ** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	28.55	26.11	1.977	0.23(0.22)	0.95	16.2	303.00
2	28.03	36.07	1.628	0.23(0.22)	0.94	20.4	305.00

LONGEST FLOWPATH FROM NODE 305.00 TO NODE 209.00 = 4981.00 FEET.

** MEMORY BANK # 2 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	39.29	14.21	2.848	0.42(0.16)	0.39	16.1	204.00
2	37.40	17.00	2.558	0.42(0.16)	0.38	17.2	200.00
3	32.26	23.46	2.108	0.42(0.16)	0.38	18.3	211.00

LONGEST FLOWPATH FROM NODE 211.00 TO NODE 209.00 = 2769.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	62.52	14.21	2.848	0.31(0.18)	0.58	24.9	204.00
2	62.12	17.00	2.558	0.31(0.18)	0.60	27.8	200.00
3	59.83	23.46	2.108	0.30(0.19)	0.63	32.8	211.00
4	58.64	26.11	1.977	0.29(0.19)	0.65	34.5	303.00
5	52.35	36.07	1.628	0.28(0.19)	0.67	38.7	305.00

TOTAL AREA(ACRES) = 38.7

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 62.52 Tc(MIN.) = 14.209
 EFFECTIVE AREA(ACRES) = 24.93 AREA-AVERAGED Fm(INCH/HR) = 0.18
 AREA-AVERAGED Fp(INCH/HR) = 0.30 AREA-AVERAGED Ap = 0.63
 TOTAL AREA(ACRES) = 38.7
 LONGEST FLOWPATH FROM NODE 305.00 TO NODE 209.00 = 4981.00 FEET.

FLOW PROCESS FROM NODE 209.00 TO NODE 209.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 209.00 TO NODE 209.00 IS CODE = 10

>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 307.00 TO NODE 308.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 826.00

ELEVATION DATA: UPSTREAM(FEET) = 1291.70 DOWNSTREAM(FEET) = 1277.60

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
 SUBAREA ANALYSIS USED MINIMUM $T_c(MIN.) = 10.074$
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.501
 SUBAREA T_c AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
COMMERCIAL	B	0.62	0.42	0.100	76	10.07

 SUBAREA AVERAGE PERVIOUS LOSS RATE, $F_p(INCH/HR) = 0.42$
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, $A_p = 0.100$
 SUBAREA RUNOFF(CFS) = 1.92
 TOTAL AREA(ACRES) = 0.62 PEAK FLOW RATE(CFS) = 1.92

FLOW PROCESS FROM NODE 308.00 TO NODE 309.00 IS CODE = 62

>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>(STREET TABLE SECTION # 1 USED)<<<<<

UPSTREAM ELEVATION(FEET) = 1277.60 DOWNSTREAM ELEVATION(FEET) = 1264.00
 STREET LENGTH(FEET) = 974.00 CURB HEIGHT(INCHES) = 8.0
 STREET HALFWIDTH(FEET) = 30.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
 INSIDE STREET CROSSFALL(DECIMAL) = 0.018
 OUTSIDE STREET CROSSFALL(DECIMAL) = 0.018

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
 STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
 Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 2.71
 STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
 STREET FLOW DEPTH(FEET) = 0.34
 HALFSTREET FLOOD WIDTH(FEET) = 9.78
 AVERAGE FLOW VELOCITY(FEET/SEC.) = 2.59
 PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 0.87
 STREET FLOW TRAVEL TIME(MIN.) = 6.28 $T_c(MIN.) = 16.35$
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.618

SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	0.68	0.42	0.100	76

 SUBAREA AVERAGE PERVIOUS LOSS RATE, $F_p(INCH/HR) = 0.42$
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, $A_p = 0.100$
 SUBAREA AREA(ACRES) = 0.68 SUBAREA RUNOFF(CFS) = 1.58
 EFFECTIVE AREA(ACRES) = 1.30 AREA-AVERAGED $F_m(INCH/HR) = 0.04$
 AREA-AVERAGED $F_p(INCH/HR) = 0.42$ AREA-AVERAGED $A_p = 0.10$
 TOTAL AREA(ACRES) = 1.3 PEAK FLOW RATE(CFS) = 3.01

END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.35 HALFSTREET FLOOD WIDTH(FEET) = 10.27
 FLOW VELOCITY(FEET/SEC.) = 2.65 DEPTH*VELOCITY(FT*FT/SEC.) = 0.92
 LONGEST FLOWPATH FROM NODE 307.00 TO NODE 309.00 = 1800.00 FEET.

FLOW PROCESS FROM NODE 309.00 TO NODE 209.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1258.00 DOWNSTREAM(FEET) = 1246.70
FLOW LENGTH(FEET) = 444.00 MANNING'S N = 0.013
ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 18.000
DEPTH OF FLOW IN 18.0 INCH PIPE IS 5.3 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 6.92
ESTIMATED PIPE DIAMETER(INCH) = 18.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 3.01
PIPE TRAVEL TIME(MIN.) = 1.07 Tc(MIN.) = 17.42
LONGEST FLOWPATH FROM NODE 307.00 TO NODE 209.00 = 2244.00 FEET.

FLOW PROCESS FROM NODE 209.00 TO NODE 209.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM Q Tc Intensity Fp(Fm) Ap Ae HEADWATER
NUMBER (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
1 3.01 17.42 2.520 0.42(0.04) 0.10 1.3 307.00
LONGEST FLOWPATH FROM NODE 307.00 TO NODE 209.00 = 2244.00 FEET.

** MEMORY BANK # 2 CONFLUENCE DATA **

STREAM Q Tc Intensity Fp(Fm) Ap Ae HEADWATER
NUMBER (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
1 62.52 14.21 2.848 0.31(0.18) 0.58 24.9 204.00
2 62.12 17.00 2.558 0.31(0.18) 0.60 27.8 200.00
3 59.83 23.46 2.108 0.30(0.19) 0.63 32.8 211.00
4 58.64 26.11 1.977 0.29(0.19) 0.65 34.5 303.00
5 52.35 36.07 1.628 0.28(0.19) 0.67 38.7 305.00
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 209.00 = 4981.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM Q Tc Intensity Fp(Fm) Ap Ae HEADWATER
NUMBER (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
1 65.30 14.21 2.848 0.31(0.18) 0.56 26.0 204.00
2 65.10 17.00 2.558 0.31(0.18) 0.58 29.0 200.00
3 64.98 17.42 2.520 0.31(0.18) 0.58 29.4 307.00
4 62.34 23.46 2.108 0.30(0.18) 0.61 34.1 211.00
5 60.99 26.11 1.977 0.29(0.18) 0.63 35.8 303.00
6 54.28 36.07 1.628 0.28(0.19) 0.66 40.0 305.00
TOTAL AREA(ACRES) = 40.0

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 65.30 Tc(MIN.) = 14.209
EFFECTIVE AREA(ACRES) = 25.99 AREA-AVERAGED Fm(INCH/HR) = 0.18
AREA-AVERAGED Fp(INCH/HR) = 0.31 AREA-AVERAGED Ap = 0.58
TOTAL AREA(ACRES) = 40.0
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 209.00 = 4981.00 FEET.

FLOW PROCESS FROM NODE 209.00 TO NODE 209.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 2 <<<<<

FLOW PROCESS FROM NODE 209.00 TO NODE 210.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1246.70 DOWNSTREAM(FEET) = 1245.00
FLOW LENGTH(FEET) = 153.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 36.0 INCH PIPE IS 28.9 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 10.75
ESTIMATED PIPE DIAMETER(INCH) = 36.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 65.30
PIPE TRAVEL TIME(MIN.) = 0.24 Tc(MIN.) = 14.45
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 210.00 = 5134.00 FEET.

FLOW PROCESS FROM NODE 210.00 TO NODE 402.00 IS CODE = 52

>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1245.00 DOWNSTREAM(FEET) = 1232.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 85.00 CHANNEL SLOPE = 0.1529
NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
CHANNEL FLOW THRU SUBAREA(CFS) = 65.30
FLOW VELOCITY(FEET/SEC) = 13.23 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 0.11 Tc(MIN.) = 14.55
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 402.00 = 5219.00 FEET.

FLOW PROCESS FROM NODE 402.00 TO NODE 402.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

MAINLINE Tc(MIN.) = 14.55
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.807
SUBAREA LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "ORCHARDS"	B	1.38	0.23	1.000	89

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000
SUBAREA AREA(ACRES) = 1.38 SUBAREA RUNOFF(CFS) = 3.20
EFFECTIVE AREA(ACRES) = 27.37 AREA-AVERAGED Fm(INCH/HR) = 0.18
AREA-AVERAGED Fp(INCH/HR) = 0.31 AREA-AVERAGED Ap = 0.59
TOTAL AREA(ACRES) = 41.3 PEAK FLOW RATE(CFS) = 65.30
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 402.00 TO NODE 402.00 IS CODE = 11

>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<

** MAIN STREAM CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	65.30	14.55	2.807	0.31(0.18)	0.59	27.4	204.00
2	65.10	17.34	2.527	0.30(0.18)	0.60	30.4	200.00
3	64.98	17.77	2.491	0.30(0.18)	0.60	30.8	307.00
4	62.34	23.81	2.090	0.29(0.18)	0.63	35.5	211.00
5	60.99	26.46	1.961	0.29(0.18)	0.64	37.2	303.00
6	54.28	36.43	1.619	0.28(0.19)	0.67	41.3	305.00

LONGEST FLOWPATH FROM NODE 305.00 TO NODE 402.00 = 5219.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	90.17	17.27	2.533	0.40(0.20)	0.49	39.5	117.00
2	90.43	17.83	2.486	0.40(0.20)	0.49	40.5	100.00
3	88.73	19.71	2.340	0.40(0.20)	0.49	42.7	114.00
4	88.38	19.99	2.321	0.40(0.20)	0.49	43.0	119.00
5	87.31	20.65	2.276	0.40(0.20)	0.49	43.5	400.00
6	85.85	21.50	2.222	0.40(0.20)	0.49	44.0	124.00
7	85.07	21.80	2.203	0.40(0.20)	0.49	44.0	111.00

LONGEST FLOWPATH FROM NODE 119.00 TO NODE 402.00 = 3700.00 FEET.

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	150.19	14.55	2.807	0.35(0.19)	0.53	60.6	204.00
2	155.28	17.27	2.533	0.35(0.19)	0.53	69.8	117.00
3	155.30	17.34	2.527	0.35(0.19)	0.53	70.0	200.00
4	155.38	17.77	2.491	0.35(0.19)	0.53	71.2	307.00
5	155.38	17.83	2.486	0.35(0.19)	0.53	71.3	100.00
6	152.86	19.71	2.340	0.35(0.19)	0.54	75.0	114.00
7	152.39	19.99	2.321	0.35(0.19)	0.54	75.5	119.00
8	151.02	20.65	2.276	0.35(0.19)	0.54	76.5	400.00
9	149.20	21.50	2.222	0.35(0.19)	0.55	77.7	124.00
10	148.29	21.80	2.203	0.35(0.19)	0.55	78.0	111.00
11	142.59	23.81	2.090	0.35(0.19)	0.55	79.6	211.00
12	135.79	26.46	1.961	0.34(0.19)	0.56	81.2	303.00
13	114.55	36.43	1.619	0.33(0.19)	0.58	85.4	305.00

TOTAL AREA(ACRES) = 85.4

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 155.38 Tc(MIN.) = 17.827
EFFECTIVE AREA(ACRES) = 71.32 AREA-AVERAGED Fm(INCH/HR) = 0.19
AREA-AVERAGED Fp(INCH/HR) = 0.35 AREA-AVERAGED Ap = 0.54
TOTAL AREA(ACRES) = 85.4
LONGEST FLOWPATH FROM NODE 305.00 TO NODE 402.00 = 5219.00 FEET.

FLOW PROCESS FROM NODE 402.00 TO NODE 402.00 IS CODE = 12

>>>>CLEAR MEMORY BANK # 1 <<<<<

END OF STUDY SUMMARY:

TOTAL AREA(ACRES) = 85.4 TC(MIN.) = 17.83
 EFFECTIVE AREA(ACRES) = 71.32 AREA-AVERAGED Fm(INCH/HR)= 0.19
 AREA-AVERAGED Fp(INCH/HR) = 0.35 AREA-AVERAGED Ap = 0.534
 PEAK FLOW RATE(CFS) = 155.38

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	150.19	14.55	2.807	0.35(0.19)	0.53	60.6	204.00
2	155.28	17.27	2.533	0.35(0.19)	0.53	69.8	117.00
3	155.30	17.34	2.527	0.35(0.19)	0.53	70.0	200.00
4	155.38	17.77	2.491	0.35(0.19)	0.53	71.2	307.00
5	155.38	17.83	2.486	0.35(0.19)	0.53	71.3	100.00
6	152.86	19.71	2.340	0.35(0.19)	0.54	75.0	114.00
7	152.39	19.99	2.321	0.35(0.19)	0.54	75.5	119.00
8	151.02	20.65	2.276	0.35(0.19)	0.54	76.5	400.00
9	149.20	21.50	2.222	0.35(0.19)	0.55	77.7	124.00
10	148.29	21.80	2.203	0.35(0.19)	0.55	78.0	111.00
11	142.59	23.81	2.090	0.35(0.19)	0.55	79.6	211.00
12	135.79	26.46	1.961	0.34(0.19)	0.56	81.2	303.00
13	114.55	36.43	1.619	0.33(0.19)	0.58	85.4	305.00

END OF RATIONAL METHOD ANALYSIS



C-3: Hydrographs and Flood Routing Analysis (10-, 100-yr)

F L O O D R O U T I N G A N A L Y S I S
USING COUNTY HYDROLOGY MANUAL OF SAN BERNARDINO(1986)
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Ver. 21.0 Release Date: 06/01/2014 License ID 1202

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****

- * CITY OF REDLANDS ENTITLEMENT - TTM#20336 - MLC HOLDINGS, INC. *
 - * 10-YEAR FLOOD ROUTING *
 - * RYAN KIM HC 6/30/20 *
- *****

FILE NAME: RED10PR.DAT
TIME/DATE OF STUDY: 17:17 06/30/2020

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

FLOW PROCESS FROM NODE 100.00 TO NODE 101.00 IS CODE = 1.2

>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<

=====

(SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

- RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
- TOTAL CATCHMENT AREA(ACRES) = 24.45
- SOIL-LOSS RATE, Fm,(INCH/HR) = 0.448
- LOW LOSS FRACTION = 0.622
- TIME OF CONCENTRATION(MIN.) = 14.96
- SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
- USER SPECIFIED RAINFALL VALUES ARE USED:
- RETURN FREQUENCY(YEARS) = 10
- 5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.20
- 30-MINUTE POINT RAINFALL VALUE(INCHES) = 0.52
- 1-HOUR POINT RAINFALL VALUE(INCHES) = 0.75
- 3-HOUR POINT RAINFALL VALUE(INCHES) = 1.27
- 6-HOUR POINT RAINFALL VALUE(INCHES) = 1.77
- 24-HOUR POINT RAINFALL VALUE(INCHES) = 3.24

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 2.44
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 4.16

↑

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

=====

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)
(Notes: Time indicated is at END of Each Unit Intervals.
Peak 5-minute rainfall intensity is modeled as
a constant value for entire 5-minute period.)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	5.4	10.9	16.3	21.8
0.017	0.0000	0.00	Q	.	.	.	.
0.033	0.0000	0.00	Q	.	.	.	.
0.050	0.0000	0.00	Q	.	.	.	.
0.067	0.0000	0.03	Q	.	.	.	.
0.083	0.0001	0.06	Q	.	.	.	.
0.100	0.0002	0.09	Q	.	.	.	.
0.117	0.0004	0.13	Q	.	.	.	.
0.133	0.0006	0.16	Q	.	.	.	.
0.150	0.0009	0.19	Q	.	.	.	.
0.167	0.0012	0.22	Q	.	.	.	.
0.183	0.0016	0.26	Q	.	.	.	.
0.200	0.0020	0.29	Q	.	.	.	.
0.217	0.0024	0.32	Q	.	.	.	.
0.233	0.0029	0.36	Q	.	.	.	.
0.250	0.0034	0.39	Q	.	.	.	.
0.267	0.0040	0.42	Q	.	.	.	.
0.283	0.0046	0.45	Q	.	.	.	.
0.300	0.0053	0.49	Q	.	.	.	.
0.317	0.0060	0.49	Q	.	.	.	.
0.333	0.0067	0.49	Q	.	.	.	.
0.350	0.0073	0.49	Q	.	.	.	.
0.367	0.0080	0.49	Q	.	.	.	.
0.383	0.0087	0.49	Q	.	.	.	.
0.400	0.0094	0.49	Q	.	.	.	.
0.417	0.0101	0.49	Q	.	.	.	.
0.433	0.0107	0.49	Q	.	.	.	.
0.450	0.0114	0.49	Q	.	.	.	.
0.467	0.0121	0.49	Q	.	.	.	.
0.483	0.0128	0.49	Q	.	.	.	.
0.500	0.0135	0.49	Q	.	.	.	.
0.517	0.0141	0.49	Q	.	.	.	.
0.533	0.0148	0.49	Q	.	.	.	.
0.550	0.0155	0.49	Q	.	.	.	.
0.567	0.0162	0.50	Q	.	.	.	.
0.583	0.0169	0.50	Q	.	.	.	.

0.600	0.0176	0.50	Q	.	.	.	.
0.617	0.0182	0.50	Q	.	.	.	.
0.633	0.0189	0.50	Q	.	.	.	.
0.650	0.0196	0.50	Q	.	.	.	.
0.667	0.0203	0.50	Q	.	.	.	.
0.683	0.0210	0.50	Q	.	.	.	.
0.700	0.0217	0.50	Q	.	.	.	.
0.717	0.0224	0.50	Q	.	.	.	.
0.733	0.0230	0.50	Q	.	.	.	.
0.750	0.0237	0.50	Q	.	.	.	.
0.767	0.0244	0.50	Q	.	.	.	.
0.783	0.0251	0.50	Q	.	.	.	.
0.800	0.0258	0.50	Q	.	.	.	.
0.817	0.0265	0.50	Q	.	.	.	.
0.833	0.0272	0.50	Q	.	.	.	.
0.850	0.0279	0.50	Q	.	.	.	.
0.867	0.0286	0.50	Q	.	.	.	.
0.883	0.0292	0.50	Q	.	.	.	.
0.900	0.0299	0.50	Q	.	.	.	.
0.917	0.0306	0.50	Q	.	.	.	.
0.933	0.0313	0.50	Q	.	.	.	.
0.950	0.0320	0.50	Q	.	.	.	.
0.967	0.0327	0.50	Q	.	.	.	.
0.983	0.0334	0.50	Q	.	.	.	.
1.000	0.0341	0.50	Q	.	.	.	.
1.017	0.0348	0.50	Q	.	.	.	.
1.033	0.0355	0.50	Q	.	.	.	.
1.050	0.0362	0.50	Q	.	.	.	.
1.067	0.0369	0.50	Q	.	.	.	.
1.083	0.0376	0.50	Q	.	.	.	.
1.100	0.0383	0.51	Q	.	.	.	.
1.117	0.0390	0.51	Q	.	.	.	.
1.133	0.0397	0.51	Q	.	.	.	.
1.150	0.0404	0.51	Q	.	.	.	.
1.167	0.0411	0.51	Q	.	.	.	.
1.183	0.0418	0.51	Q	.	.	.	.
1.200	0.0425	0.51	Q	.	.	.	.
1.217	0.0432	0.51	Q	.	.	.	.
1.233	0.0439	0.51	Q	.	.	.	.
1.250	0.0446	0.51	Q	.	.	.	.
1.267	0.0453	0.51	Q	.	.	.	.
1.283	0.0460	0.51	Q	.	.	.	.
1.300	0.0467	0.51	Q	.	.	.	.
1.317	0.0474	0.51	Q	.	.	.	.
1.333	0.0481	0.51	Q	.	.	.	.
1.350	0.0488	0.51	Q	.	.	.	.
1.367	0.0495	0.51	Q	.	.	.	.
1.383	0.0502	0.51	Q	.	.	.	.
1.400	0.0509	0.51	Q	.	.	.	.
1.417	0.0516	0.51	Q	.	.	.	.
1.433	0.0523	0.51	Q	.	.	.	.
1.450	0.0530	0.51	Q	.	.	.	.
1.467	0.0537	0.51	Q	.	.	.	.
1.483	0.0544	0.51	Q	.	.	.	.
1.500	0.0551	0.51	Q	.	.	.	.

1.517	0.0558	0.51	Q	.	.	.	.
1.533	0.0565	0.51	Q	.	.	.	.
1.550	0.0572	0.51	Q	.	.	.	.
1.567	0.0579	0.51	Q	.	.	.	.
1.583	0.0587	0.51	Q	.	.	.	.
1.600	0.0594	0.51	Q	.	.	.	.
1.617	0.0601	0.52	Q	.	.	.	.
1.633	0.0608	0.52	Q	.	.	.	.
1.650	0.0615	0.52	QV	.	.	.	.
1.667	0.0622	0.52	QV	.	.	.	.
1.683	0.0629	0.52	QV	.	.	.	.
1.700	0.0636	0.52	QV	.	.	.	.
1.717	0.0643	0.52	QV	.	.	.	.
1.733	0.0651	0.52	QV	.	.	.	.
1.750	0.0658	0.52	QV	.	.	.	.
1.767	0.0665	0.52	QV	.	.	.	.
1.783	0.0672	0.52	QV	.	.	.	.
1.800	0.0679	0.52	QV	.	.	.	.
1.817	0.0686	0.52	QV	.	.	.	.
1.833	0.0694	0.52	QV	.	.	.	.
1.850	0.0701	0.52	QV	.	.	.	.
1.867	0.0708	0.52	QV	.	.	.	.
1.883	0.0715	0.52	QV	.	.	.	.
1.900	0.0722	0.52	QV	.	.	.	.
1.917	0.0729	0.52	QV	.	.	.	.
1.933	0.0737	0.52	QV	.	.	.	.
1.950	0.0744	0.52	QV	.	.	.	.
1.967	0.0751	0.52	QV	.	.	.	.
1.983	0.0758	0.52	QV	.	.	.	.
2.000	0.0765	0.52	QV	.	.	.	.
2.017	0.0773	0.52	QV	.	.	.	.
2.033	0.0780	0.52	QV	.	.	.	.
2.050	0.0787	0.52	QV	.	.	.	.
2.067	0.0794	0.52	QV	.	.	.	.
2.083	0.0802	0.52	QV	.	.	.	.
2.100	0.0809	0.53	QV	.	.	.	.
2.117	0.0816	0.53	QV	.	.	.	.
2.133	0.0823	0.53	QV	.	.	.	.
2.150	0.0831	0.53	QV	.	.	.	.
2.167	0.0838	0.53	QV	.	.	.	.
2.183	0.0845	0.53	QV	.	.	.	.
2.200	0.0852	0.53	QV	.	.	.	.
2.217	0.0860	0.53	QV	.	.	.	.
2.233	0.0867	0.53	QV	.	.	.	.
2.250	0.0874	0.53	QV	.	.	.	.
2.267	0.0881	0.53	QV	.	.	.	.
2.283	0.0889	0.53	QV	.	.	.	.
2.300	0.0896	0.53	QV	.	.	.	.
2.317	0.0903	0.53	QV	.	.	.	.
2.333	0.0911	0.53	QV	.	.	.	.
2.350	0.0918	0.53	QV	.	.	.	.
2.367	0.0925	0.53	QV	.	.	.	.
2.383	0.0933	0.53	QV	.	.	.	.
2.400	0.0940	0.53	QV	.	.	.	.
2.417	0.0947	0.53	QV	.	.	.	.

2.433	0.0955	0.53	QV	.	.	.	.
2.450	0.0962	0.53	QV	.	.	.	.
2.467	0.0969	0.53	QV	.	.	.	.
2.483	0.0977	0.53	QV	.	.	.	.
2.500	0.0984	0.53	QV	.	.	.	.
2.517	0.0991	0.53	QV	.	.	.	.
2.533	0.0999	0.53	QV	.	.	.	.
2.550	0.1006	0.53	QV	.	.	.	.
2.567	0.1014	0.53	QV	.	.	.	.
2.583	0.1021	0.54	QV	.	.	.	.
2.600	0.1028	0.54	QV	.	.	.	.
2.617	0.1036	0.54	QV	.	.	.	.
2.633	0.1043	0.54	QV	.	.	.	.
2.650	0.1050	0.54	QV	.	.	.	.
2.667	0.1058	0.54	QV	.	.	.	.
2.683	0.1065	0.54	QV	.	.	.	.
2.700	0.1073	0.54	QV	.	.	.	.
2.717	0.1080	0.54	QV	.	.	.	.
2.733	0.1088	0.54	QV	.	.	.	.
2.750	0.1095	0.54	QV	.	.	.	.
2.767	0.1102	0.54	QV	.	.	.	.
2.783	0.1110	0.54	QV	.	.	.	.
2.800	0.1117	0.54	QV	.	.	.	.
2.817	0.1125	0.54	QV	.	.	.	.
2.833	0.1132	0.54	QV	.	.	.	.
2.850	0.1140	0.54	QV	.	.	.	.
2.867	0.1147	0.54	QV	.	.	.	.
2.883	0.1155	0.54	QV	.	.	.	.
2.900	0.1162	0.54	QV	.	.	.	.
2.917	0.1170	0.54	QV	.	.	.	.
2.933	0.1177	0.54	QV	.	.	.	.
2.950	0.1185	0.54	.Q	.	.	.	.
2.967	0.1192	0.54	.Q	.	.	.	.
2.983	0.1200	0.54	.Q	.	.	.	.
3.000	0.1207	0.54	.Q	.	.	.	.
3.017	0.1215	0.55	.Q	.	.	.	.
3.033	0.1222	0.55	.QV	.	.	.	.
3.050	0.1230	0.55	.QV	.	.	.	.
3.067	0.1237	0.55	.QV	.	.	.	.
3.083	0.1245	0.55	.QV	.	.	.	.
3.100	0.1252	0.55	.QV	.	.	.	.
3.117	0.1260	0.55	.QV	.	.	.	.
3.133	0.1267	0.55	.QV	.	.	.	.
3.150	0.1275	0.55	.QV	.	.	.	.
3.167	0.1283	0.55	.QV	.	.	.	.
3.183	0.1290	0.55	.QV	.	.	.	.
3.200	0.1298	0.55	.QV	.	.	.	.
3.217	0.1305	0.55	.QV	.	.	.	.
3.233	0.1313	0.55	.QV	.	.	.	.
3.250	0.1321	0.55	.QV	.	.	.	.
3.267	0.1328	0.55	.QV	.	.	.	.
3.283	0.1336	0.55	.QV	.	.	.	.
3.300	0.1343	0.55	.QV	.	.	.	.
3.317	0.1351	0.55	.QV	.	.	.	.
3.333	0.1359	0.55	.QV	.	.	.	.

3.350	0.1366	0.55	.QV	.	.	.	.
3.367	0.1374	0.55	.QV	.	.	.	.
3.383	0.1382	0.55	.QV	.	.	.	.
3.400	0.1389	0.56	.QV	.	.	.	.
3.417	0.1397	0.56	.QV	.	.	.	.
3.433	0.1405	0.56	.QV	.	.	.	.
3.450	0.1412	0.56	.QV	.	.	.	.
3.467	0.1420	0.56	.QV	.	.	.	.
3.483	0.1427	0.56	.QV	.	.	.	.
3.500	0.1435	0.56	.QV	.	.	.	.
3.517	0.1443	0.56	.QV	.	.	.	.
3.533	0.1451	0.56	.QV	.	.	.	.
3.550	0.1458	0.56	.QV	.	.	.	.
3.567	0.1466	0.56	.QV	.	.	.	.
3.583	0.1474	0.56	.QV	.	.	.	.
3.600	0.1481	0.56	.QV	.	.	.	.
3.617	0.1489	0.56	.QV	.	.	.	.
3.633	0.1497	0.56	.QV	.	.	.	.
3.650	0.1504	0.56	.QV	.	.	.	.
3.667	0.1512	0.56	.QV	.	.	.	.
3.683	0.1520	0.56	.QV	.	.	.	.
3.700	0.1528	0.56	.QV	.	.	.	.
3.717	0.1535	0.56	.QV	.	.	.	.
3.733	0.1543	0.56	.QV	.	.	.	.
3.750	0.1551	0.56	.QV	.	.	.	.
3.767	0.1559	0.57	.QV	.	.	.	.
3.783	0.1567	0.57	.QV	.	.	.	.
3.800	0.1574	0.57	.QV	.	.	.	.
3.817	0.1582	0.57	.QV	.	.	.	.
3.833	0.1590	0.57	.QV	.	.	.	.
3.850	0.1598	0.57	.QV	.	.	.	.
3.867	0.1606	0.57	.QV	.	.	.	.
3.883	0.1613	0.57	.QV	.	.	.	.
3.900	0.1621	0.57	.QV	.	.	.	.
3.917	0.1629	0.57	.QV	.	.	.	.
3.933	0.1637	0.57	.QV	.	.	.	.
3.950	0.1645	0.57	.QV	.	.	.	.
3.967	0.1653	0.57	.QV	.	.	.	.
3.983	0.1660	0.57	.QV	.	.	.	.
4.000	0.1668	0.57	.QV	.	.	.	.
4.017	0.1676	0.57	.QV	.	.	.	.
4.033	0.1684	0.57	.QV	.	.	.	.
4.050	0.1692	0.57	.QV	.	.	.	.
4.067	0.1700	0.57	.QV	.	.	.	.
4.083	0.1708	0.57	.QV	.	.	.	.
4.100	0.1715	0.57	.QV	.	.	.	.
4.117	0.1723	0.57	.QV	.	.	.	.
4.133	0.1731	0.57	.QV	.	.	.	.
4.150	0.1739	0.57	.QV	.	.	.	.
4.167	0.1747	0.57	.QV	.	.	.	.
4.183	0.1755	0.58	.QV	.	.	.	.
4.200	0.1763	0.58	.QV	.	.	.	.
4.217	0.1771	0.58	.QV	.	.	.	.
4.233	0.1779	0.58	.QV	.	.	.	.
4.250	0.1787	0.58	.QV	.	.	.	.

4.267	0.1795	0.58	.QV	.	.	.	.
4.283	0.1803	0.58	.QV	.	.	.	.
4.300	0.1811	0.58	.QV	.	.	.	.
4.317	0.1819	0.58	.QV	.	.	.	.
4.333	0.1827	0.58	.QV	.	.	.	.
4.350	0.1835	0.58	.Q V	.	.	.	.
4.367	0.1843	0.58	.Q V	.	.	.	.
4.383	0.1851	0.58	.Q V	.	.	.	.
4.400	0.1859	0.58	.Q V	.	.	.	.
4.417	0.1867	0.58	.Q V	.	.	.	.
4.433	0.1875	0.58	.Q V	.	.	.	.
4.450	0.1883	0.58	.Q V	.	.	.	.
4.467	0.1891	0.58	.Q V	.	.	.	.
4.483	0.1899	0.58	.Q V	.	.	.	.
4.500	0.1907	0.58	.Q V	.	.	.	.
4.517	0.1915	0.58	.Q V	.	.	.	.
4.533	0.1923	0.58	.Q V	.	.	.	.
4.550	0.1931	0.58	.Q V	.	.	.	.
4.567	0.1939	0.58	.Q V	.	.	.	.
4.583	0.1947	0.59	.Q V	.	.	.	.
4.600	0.1955	0.59	.Q V	.	.	.	.
4.617	0.1963	0.59	.Q V	.	.	.	.
4.633	0.1971	0.59	.Q V	.	.	.	.
4.650	0.1979	0.59	.Q V	.	.	.	.
4.667	0.1987	0.59	.Q V	.	.	.	.
4.683	0.1996	0.59	.Q V	.	.	.	.
4.700	0.2004	0.59	.Q V	.	.	.	.
4.717	0.2012	0.59	.Q V	.	.	.	.
4.733	0.2020	0.59	.Q V	.	.	.	.
4.750	0.2028	0.59	.Q V	.	.	.	.
4.767	0.2036	0.59	.Q V	.	.	.	.
4.783	0.2044	0.59	.Q V	.	.	.	.
4.800	0.2053	0.59	.Q V	.	.	.	.
4.817	0.2061	0.59	.Q V	.	.	.	.
4.833	0.2069	0.59	.Q V	.	.	.	.
4.850	0.2077	0.59	.Q V	.	.	.	.
4.867	0.2085	0.59	.Q V	.	.	.	.
4.883	0.2094	0.60	.Q V	.	.	.	.
4.900	0.2102	0.60	.Q V	.	.	.	.
4.917	0.2110	0.60	.Q V	.	.	.	.
4.933	0.2118	0.60	.Q V	.	.	.	.
4.950	0.2126	0.60	.Q V	.	.	.	.
4.967	0.2135	0.60	.Q V	.	.	.	.
4.983	0.2143	0.60	.Q V	.	.	.	.
5.000	0.2151	0.60	.Q V	.	.	.	.
5.017	0.2159	0.60	.Q V	.	.	.	.
5.033	0.2168	0.60	.Q V	.	.	.	.
5.050	0.2176	0.60	.Q V	.	.	.	.
5.067	0.2184	0.60	.Q V	.	.	.	.
5.083	0.2192	0.60	.Q V	.	.	.	.
5.100	0.2201	0.60	.Q V	.	.	.	.
5.117	0.2209	0.60	.Q V	.	.	.	.
5.133	0.2217	0.60	.Q V	.	.	.	.
5.150	0.2225	0.60	.Q V	.	.	.	.
5.167	0.2234	0.60	.Q V	.	.	.	.

5.183	0.2242	0.60	.Q V	.	.	.	.
5.200	0.2250	0.60	.Q V	.	.	.	.
5.217	0.2259	0.61	.Q V	.	.	.	.
5.233	0.2267	0.61	.Q V	.	.	.	.
5.250	0.2275	0.61	.Q V	.	.	.	.
5.267	0.2284	0.61	.Q V	.	.	.	.
5.283	0.2292	0.61	.Q V	.	.	.	.
5.300	0.2301	0.61	.Q V	.	.	.	.
5.317	0.2309	0.61	.Q V	.	.	.	.
5.333	0.2317	0.61	.Q V	.	.	.	.
5.350	0.2326	0.61	.Q V	.	.	.	.
5.367	0.2334	0.61	.Q V	.	.	.	.
5.383	0.2343	0.61	.Q V	.	.	.	.
5.400	0.2351	0.61	.Q V	.	.	.	.
5.417	0.2359	0.61	.Q V	.	.	.	.
5.433	0.2368	0.61	.Q V	.	.	.	.
5.450	0.2376	0.61	.Q V	.	.	.	.
5.467	0.2385	0.61	.Q V	.	.	.	.
5.483	0.2393	0.61	.Q V	.	.	.	.
5.500	0.2402	0.61	.Q V	.	.	.	.
5.517	0.2410	0.61	.Q V	.	.	.	.
5.533	0.2419	0.61	.Q V	.	.	.	.
5.550	0.2427	0.61	.Q V	.	.	.	.
5.567	0.2435	0.62	.Q V	.	.	.	.
5.583	0.2444	0.62	.Q V	.	.	.	.
5.600	0.2452	0.62	.Q V	.	.	.	.
5.617	0.2461	0.62	.Q V	.	.	.	.
5.633	0.2469	0.62	.Q V	.	.	.	.
5.650	0.2478	0.62	.Q V	.	.	.	.
5.667	0.2487	0.62	.Q V	.	.	.	.
5.683	0.2495	0.62	.Q V	.	.	.	.
5.700	0.2504	0.62	.Q V	.	.	.	.
5.717	0.2512	0.62	.Q V	.	.	.	.
5.733	0.2521	0.62	.Q V	.	.	.	.
5.750	0.2529	0.62	.Q V	.	.	.	.
5.767	0.2538	0.62	.Q V	.	.	.	.
5.783	0.2547	0.62	.Q V	.	.	.	.
5.800	0.2555	0.63	.Q V	.	.	.	.
5.817	0.2564	0.63	.Q V	.	.	.	.
5.833	0.2572	0.63	.Q V	.	.	.	.
5.850	0.2581	0.63	.Q V	.	.	.	.
5.867	0.2590	0.63	.Q V	.	.	.	.
5.883	0.2598	0.63	.Q V	.	.	.	.
5.900	0.2607	0.63	.Q V	.	.	.	.
5.917	0.2616	0.63	.Q V	.	.	.	.
5.933	0.2624	0.63	.Q V	.	.	.	.
5.950	0.2633	0.63	.Q V	.	.	.	.
5.967	0.2642	0.63	.Q V	.	.	.	.
5.983	0.2650	0.63	.Q V	.	.	.	.
6.000	0.2659	0.63	.Q V	.	.	.	.
6.017	0.2668	0.63	.Q V	.	.	.	.
6.033	0.2676	0.63	.Q V	.	.	.	.
6.050	0.2685	0.63	.Q V	.	.	.	.
6.067	0.2694	0.63	.Q V	.	.	.	.
6.083	0.2702	0.63	.Q V	.	.	.	.

6.100	0.2711	0.63	.Q	V	.	.	.	.
6.117	0.2720	0.63	.Q	V	.	.	.	.
6.133	0.2729	0.64	.Q	V	.	.	.	.
6.150	0.2737	0.64	.Q	V	.	.	.	.
6.167	0.2746	0.64	.Q	V	.	.	.	.
6.183	0.2755	0.64	.Q	V	.	.	.	.
6.200	0.2764	0.64	.Q	V	.	.	.	.
6.217	0.2772	0.64	.Q	V	.	.	.	.
6.233	0.2781	0.64	.Q	V	.	.	.	.
6.250	0.2790	0.64	.Q	V	.	.	.	.
6.267	0.2799	0.64	.Q	V	.	.	.	.
6.283	0.2808	0.64	.Q	V	.	.	.	.
6.300	0.2817	0.64	.Q	V	.	.	.	.
6.317	0.2826	0.64	.Q	V	.	.	.	.
6.333	0.2834	0.64	.Q	V	.	.	.	.
6.350	0.2843	0.64	.Q	V	.	.	.	.
6.367	0.2852	0.64	.Q	V	.	.	.	.
6.383	0.2861	0.64	.Q	V	.	.	.	.
6.400	0.2870	0.65	.Q	V	.	.	.	.
6.417	0.2879	0.65	.Q	V	.	.	.	.
6.433	0.2888	0.65	.Q	V	.	.	.	.
6.450	0.2897	0.65	.Q	V	.	.	.	.
6.467	0.2906	0.65	.Q	V	.	.	.	.
6.483	0.2914	0.65	.Q	V	.	.	.	.
6.500	0.2923	0.65	.Q	V	.	.	.	.
6.517	0.2932	0.65	.Q	V	.	.	.	.
6.533	0.2941	0.65	.Q	V	.	.	.	.
6.550	0.2950	0.65	.Q	V	.	.	.	.
6.567	0.2959	0.65	.Q	V	.	.	.	.
6.583	0.2968	0.65	.Q	V	.	.	.	.
6.600	0.2977	0.65	.Q	V	.	.	.	.
6.617	0.2986	0.65	.Q	V	.	.	.	.
6.633	0.2995	0.65	.Q	V	.	.	.	.
6.650	0.3004	0.65	.Q	V	.	.	.	.
6.667	0.3013	0.66	.Q	V	.	.	.	.
6.683	0.3022	0.66	.Q	V	.	.	.	.
6.700	0.3031	0.66	.Q	V	.	.	.	.
6.717	0.3040	0.66	.Q	V	.	.	.	.
6.733	0.3049	0.66	.Q	V	.	.	.	.
6.750	0.3058	0.66	.Q	V	.	.	.	.
6.767	0.3068	0.66	.Q	V	.	.	.	.
6.783	0.3077	0.66	.Q	V	.	.	.	.
6.800	0.3086	0.66	.Q	V	.	.	.	.
6.817	0.3095	0.66	.Q	V	.	.	.	.
6.833	0.3104	0.66	.Q	V	.	.	.	.
6.850	0.3113	0.66	.Q	V	.	.	.	.
6.867	0.3122	0.66	.Q	V	.	.	.	.
6.883	0.3131	0.66	.Q	V	.	.	.	.
6.900	0.3141	0.66	.Q	V	.	.	.	.
6.917	0.3150	0.66	.Q	V	.	.	.	.
6.933	0.3159	0.67	.Q	V	.	.	.	.
6.950	0.3168	0.67	.Q	V	.	.	.	.
6.967	0.3177	0.67	.Q	V	.	.	.	.
6.983	0.3186	0.67	.Q	V	.	.	.	.
7.000	0.3196	0.67	.Q	V	.	.	.	.

7.017	0.3205	0.67	.Q	V	.	.	.	.
7.033	0.3214	0.67	.Q	V	.	.	.	.
7.050	0.3223	0.67	.Q	V	.	.	.	.
7.067	0.3232	0.67	.Q	V	.	.	.	.
7.083	0.3242	0.67	.Q	V	.	.	.	.
7.100	0.3251	0.67	.Q	V	.	.	.	.
7.117	0.3260	0.67	.Q	V	.	.	.	.
7.133	0.3269	0.67	.Q	V	.	.	.	.
7.150	0.3279	0.67	.Q	V	.	.	.	.
7.167	0.3288	0.68	.Q	V	.	.	.	.
7.183	0.3297	0.68	.Q	V	.	.	.	.
7.200	0.3307	0.68	.Q	V	.	.	.	.
7.217	0.3316	0.68	.Q	V	.	.	.	.
7.233	0.3325	0.68	.Q	V	.	.	.	.
7.250	0.3335	0.68	.Q	V	.	.	.	.
7.267	0.3344	0.68	.Q	V	.	.	.	.
7.283	0.3354	0.68	.Q	V	.	.	.	.
7.300	0.3363	0.68	.Q	V	.	.	.	.
7.317	0.3372	0.68	.Q	V	.	.	.	.
7.333	0.3382	0.68	.Q	V	.	.	.	.
7.350	0.3391	0.68	.Q	V	.	.	.	.
7.367	0.3401	0.68	.Q	V	.	.	.	.
7.383	0.3410	0.69	.Q	V	.	.	.	.
7.400	0.3420	0.69	.Q	V	.	.	.	.
7.417	0.3429	0.69	.Q	V	.	.	.	.
7.433	0.3438	0.69	.Q	V	.	.	.	.
7.450	0.3448	0.69	.Q	V	.	.	.	.
7.467	0.3457	0.69	.Q	V	.	.	.	.
7.483	0.3467	0.69	.Q	V	.	.	.	.
7.500	0.3476	0.69	.Q	V	.	.	.	.
7.517	0.3486	0.69	.Q	V	.	.	.	.
7.533	0.3495	0.69	.Q	V	.	.	.	.
7.550	0.3505	0.69	.Q	V	.	.	.	.
7.567	0.3514	0.69	.Q	V	.	.	.	.
7.583	0.3524	0.69	.Q	V	.	.	.	.
7.600	0.3533	0.69	.Q	V	.	.	.	.
7.617	0.3543	0.69	.Q	V	.	.	.	.
7.633	0.3553	0.70	.Q	V	.	.	.	.
7.650	0.3562	0.70	.Q	V	.	.	.	.
7.667	0.3572	0.70	.Q	V	.	.	.	.
7.683	0.3581	0.70	.Q	V	.	.	.	.
7.700	0.3591	0.70	.Q	V	.	.	.	.
7.717	0.3601	0.70	.Q	V	.	.	.	.
7.733	0.3610	0.70	.Q	V	.	.	.	.
7.750	0.3620	0.70	.Q	V	.	.	.	.
7.767	0.3630	0.70	.Q	V	.	.	.	.
7.783	0.3639	0.70	.Q	V	.	.	.	.
7.800	0.3649	0.71	.Q	V	.	.	.	.
7.817	0.3659	0.71	.Q	V	.	.	.	.
7.833	0.3669	0.71	.Q	V	.	.	.	.
7.850	0.3678	0.71	.Q	V	.	.	.	.
7.867	0.3688	0.71	.Q	V	.	.	.	.
7.883	0.3698	0.71	.Q	V	.	.	.	.
7.900	0.3708	0.71	.Q	V	.	.	.	.
7.917	0.3717	0.71	.Q	V	.	.	.	.

7.933	0.3727	0.71	.Q	V	.	.	.	.
7.950	0.3737	0.71	.Q	V	.	.	.	.
7.967	0.3747	0.71	.Q	V	.	.	.	.
7.983	0.3757	0.71	.Q	V	.	.	.	.
8.000	0.3766	0.71	.Q	V	.	.	.	.
8.017	0.3776	0.71	.Q	V	.	.	.	.
8.033	0.3786	0.71	.Q	V	.	.	.	.
8.050	0.3796	0.71	.Q	V	.	.	.	.
8.067	0.3806	0.72	.Q	V	.	.	.	.
8.083	0.3816	0.72	.Q	V	.	.	.	.
8.100	0.3825	0.72	.Q	V	.	.	.	.
8.117	0.3835	0.72	.Q	V	.	.	.	.
8.133	0.3845	0.72	.Q	V	.	.	.	.
8.150	0.3855	0.72	.Q	V	.	.	.	.
8.167	0.3865	0.72	.Q	V	.	.	.	.
8.183	0.3875	0.72	.Q	V	.	.	.	.
8.200	0.3885	0.72	.Q	V	.	.	.	.
8.217	0.3895	0.73	.Q	V	.	.	.	.
8.233	0.3905	0.73	.Q	V	.	.	.	.
8.250	0.3915	0.73	.Q	V	.	.	.	.
8.267	0.3925	0.73	.Q	V	.	.	.	.
8.283	0.3935	0.73	.Q	V	.	.	.	.
8.300	0.3945	0.73	.Q	V	.	.	.	.
8.317	0.3955	0.73	.Q	V	.	.	.	.
8.333	0.3965	0.73	.Q	V	.	.	.	.
8.350	0.3975	0.73	.Q	V	.	.	.	.
8.367	0.3985	0.73	.Q	V	.	.	.	.
8.383	0.3996	0.73	.Q	V	.	.	.	.
8.400	0.4006	0.73	.Q	V	.	.	.	.
8.417	0.4016	0.73	.Q	V	.	.	.	.
8.433	0.4026	0.73	.Q	V	.	.	.	.
8.450	0.4036	0.74	.Q	V	.	.	.	.
8.467	0.4046	0.74	.Q	V	.	.	.	.
8.483	0.4056	0.74	.Q	V	.	.	.	.
8.500	0.4066	0.74	.Q	V	.	.	.	.
8.517	0.4077	0.74	.Q	V	.	.	.	.
8.533	0.4087	0.74	.Q	V	.	.	.	.
8.550	0.4097	0.74	.Q	V	.	.	.	.
8.567	0.4107	0.74	.Q	V	.	.	.	.
8.583	0.4117	0.74	.Q	V	.	.	.	.
8.600	0.4128	0.74	.Q	V	.	.	.	.
8.617	0.4138	0.74	.Q	V	.	.	.	.
8.633	0.4148	0.75	.Q	V	.	.	.	.
8.650	0.4158	0.75	.Q	V	.	.	.	.
8.667	0.4169	0.75	.Q	V	.	.	.	.
8.683	0.4179	0.75	.Q	V	.	.	.	.
8.700	0.4189	0.75	.Q	V	.	.	.	.
8.717	0.4200	0.75	.Q	V	.	.	.	.
8.733	0.4210	0.75	.Q	V	.	.	.	.
8.750	0.4221	0.75	.Q	V	.	.	.	.
8.767	0.4231	0.76	.Q	V	.	.	.	.
8.783	0.4241	0.76	.Q	V	.	.	.	.
8.800	0.4252	0.76	.Q	V	.	.	.	.
8.817	0.4262	0.76	.Q	V	.	.	.	.
8.833	0.4273	0.76	.Q	V	.	.	.	.

8.850	0.4283	0.76	.Q	V	.	.	.
8.867	0.4294	0.76	.Q	V	.	.	.
8.883	0.4304	0.76	.Q	V	.	.	.
8.900	0.4315	0.76	.Q	V	.	.	.
8.917	0.4325	0.76	.Q	V	.	.	.
8.933	0.4336	0.76	.Q	V	.	.	.
8.950	0.4346	0.76	.Q	V	.	.	.
8.967	0.4357	0.76	.Q	V	.	.	.
8.983	0.4367	0.76	.Q	V	.	.	.
9.000	0.4378	0.77	.Q	V	.	.	.
9.017	0.4388	0.77	.Q	V	.	.	.
9.033	0.4399	0.77	.Q	V	.	.	.
9.050	0.4409	0.77	.Q	V	.	.	.
9.067	0.4420	0.77	.Q	V	.	.	.
9.083	0.4431	0.77	.Q	V	.	.	.
9.100	0.4441	0.77	.Q	V	.	.	.
9.117	0.4452	0.77	.Q	V	.	.	.
9.133	0.4463	0.78	.Q	V	.	.	.
9.150	0.4473	0.78	.Q	V	.	.	.
9.167	0.4484	0.78	.Q	V	.	.	.
9.183	0.4495	0.78	.Q	V	.	.	.
9.200	0.4506	0.78	.Q	V	.	.	.
9.217	0.4516	0.78	.Q	V	.	.	.
9.233	0.4527	0.78	.Q	V	.	.	.
9.250	0.4538	0.78	.Q	V	.	.	.
9.267	0.4549	0.79	.Q	V	.	.	.
9.283	0.4560	0.79	.Q	V	.	.	.
9.300	0.4570	0.79	.Q	V	.	.	.
9.317	0.4581	0.79	.Q	V	.	.	.
9.333	0.4592	0.79	.Q	V	.	.	.
9.350	0.4603	0.79	.Q	V	.	.	.
9.367	0.4614	0.79	.Q	V	.	.	.
9.383	0.4625	0.79	.Q	V	.	.	.
9.400	0.4636	0.79	.Q	V	.	.	.
9.417	0.4647	0.79	.Q	V	.	.	.
9.433	0.4658	0.79	.Q	V	.	.	.
9.450	0.4669	0.79	.Q	V	.	.	.
9.467	0.4680	0.80	.Q	V	.	.	.
9.483	0.4691	0.80	.Q	V	.	.	.
9.500	0.4702	0.80	.Q	V	.	.	.
9.517	0.4713	0.80	.Q	V	.	.	.
9.533	0.4724	0.80	.Q	V	.	.	.
9.550	0.4735	0.80	.Q	V	.	.	.
9.567	0.4746	0.80	.Q	V	.	.	.
9.583	0.4757	0.80	.Q	V	.	.	.
9.600	0.4768	0.80	.Q	V	.	.	.
9.617	0.4779	0.81	.Q	V	.	.	.
9.633	0.4790	0.81	.Q	V	.	.	.
9.650	0.4801	0.81	.Q	V	.	.	.
9.667	0.4812	0.81	.Q	V	.	.	.
9.683	0.4823	0.81	.Q	V	.	.	.
9.700	0.4835	0.81	.Q	V	.	.	.
9.717	0.4846	0.82	.Q	V	.	.	.
9.733	0.4857	0.82	.Q	V	.	.	.
9.750	0.4868	0.82	.Q	V	.	.	.

9.767	0.4880	0.82	.Q	V .	.	.	.
9.783	0.4891	0.82	.Q	V .	.	.	.
9.800	0.4902	0.82	.Q	V .	.	.	.
9.817	0.4914	0.82	.Q	V .	.	.	.
9.833	0.4925	0.82	.Q	V .	.	.	.
9.850	0.4936	0.82	.Q	V .	.	.	.
9.867	0.4948	0.83	.Q	V .	.	.	.
9.883	0.4959	0.83	.Q	V .	.	.	.
9.900	0.4971	0.83	.Q	V .	.	.	.
9.917	0.4982	0.83	.Q	V .	.	.	.
9.933	0.4993	0.83	.Q	V .	.	.	.
9.950	0.5005	0.83	.Q	V .	.	.	.
9.967	0.5016	0.83	.Q	V .	.	.	.
9.983	0.5028	0.83	.Q	V .	.	.	.
10.000	0.5039	0.83	.Q	V .	.	.	.
10.017	0.5051	0.83	.Q	V .	.	.	.
10.033	0.5062	0.83	.Q	V .	.	.	.
10.050	0.5074	0.84	.Q	V .	.	.	.
10.067	0.5085	0.84	.Q	V .	.	.	.
10.083	0.5097	0.84	.Q	V .	.	.	.
10.100	0.5108	0.84	.Q	V .	.	.	.
10.117	0.5120	0.84	.Q	V .	.	.	.
10.133	0.5132	0.84	.Q	V .	.	.	.
10.150	0.5143	0.85	.Q	V .	.	.	.
10.167	0.5155	0.85	.Q	V .	.	.	.
10.183	0.5167	0.85	.Q	V .	.	.	.
10.200	0.5178	0.85	.Q	V .	.	.	.
10.217	0.5190	0.85	.Q	V .	.	.	.
10.233	0.5202	0.86	.Q	V .	.	.	.
10.250	0.5214	0.86	.Q	V .	.	.	.
10.267	0.5226	0.86	.Q	V .	.	.	.
10.283	0.5237	0.86	.Q	V .	.	.	.
10.300	0.5249	0.86	.Q	V .	.	.	.
10.317	0.5261	0.86	.Q	V .	.	.	.
10.333	0.5273	0.86	.Q	V .	.	.	.
10.350	0.5285	0.86	.Q	V .	.	.	.
10.367	0.5297	0.86	.Q	V .	.	.	.
10.383	0.5309	0.87	.Q	V .	.	.	.
10.400	0.5321	0.87	.Q	V .	.	.	.
10.417	0.5333	0.87	.Q	V .	.	.	.
10.433	0.5345	0.87	.Q	V .	.	.	.
10.450	0.5357	0.87	.Q	V .	.	.	.
10.467	0.5369	0.87	.Q	V .	.	.	.
10.483	0.5381	0.87	.Q	V .	.	.	.
10.500	0.5393	0.87	.Q	V .	.	.	.
10.517	0.5405	0.87	.Q	V .	.	.	.
10.533	0.5417	0.87	.Q	V .	.	.	.
10.550	0.5429	0.88	.Q	V .	.	.	.
10.567	0.5441	0.88	.Q	V .	.	.	.
10.583	0.5453	0.88	.Q	V .	.	.	.
10.600	0.5465	0.88	.Q	V .	.	.	.
10.617	0.5477	0.88	.Q	V .	.	.	.
10.633	0.5490	0.89	.Q	V.	.	.	.
10.650	0.5502	0.89	.Q	V.	.	.	.
10.667	0.5514	0.89	.Q	V.	.	.	.

10.683	0.5526	0.89	.Q	V.	.	.	.
10.700	0.5539	0.89	.Q	V.	.	.	.
10.717	0.5551	0.90	.Q	V.	.	.	.
10.733	0.5563	0.90	.Q	V.	.	.	.
10.750	0.5576	0.90	.Q	V.	.	.	.
10.767	0.5588	0.90	.Q	V.	.	.	.
10.783	0.5601	0.90	.Q	V.	.	.	.
10.800	0.5613	0.91	.Q	V.	.	.	.
10.817	0.5626	0.91	.Q	V.	.	.	.
10.833	0.5638	0.91	.Q	V.	.	.	.
10.850	0.5651	0.91	.Q	V.	.	.	.
10.867	0.5663	0.91	.Q	V.	.	.	.
10.883	0.5676	0.91	.Q	V.	.	.	.
10.900	0.5688	0.91	.Q	V.	.	.	.
10.917	0.5701	0.91	.Q	V.	.	.	.
10.933	0.5713	0.91	.Q	V.	.	.	.
10.950	0.5726	0.91	.Q	V.	.	.	.
10.967	0.5739	0.92	.Q	V.	.	.	.
10.983	0.5751	0.92	.Q	V.	.	.	.
11.000	0.5764	0.92	.Q	V.	.	.	.
11.017	0.5777	0.92	.Q	V.	.	.	.
11.033	0.5789	0.92	.Q	V.	.	.	.
11.050	0.5802	0.92	.Q	V.	.	.	.
11.067	0.5815	0.93	.Q	V.	.	.	.
11.083	0.5828	0.93	.Q	V.	.	.	.
11.100	0.5840	0.93	.Q	V.	.	.	.
11.117	0.5853	0.93	.Q	V.	.	.	.
11.133	0.5866	0.93	.Q	V.	.	.	.
11.150	0.5879	0.94	.Q	V.	.	.	.
11.167	0.5892	0.94	.Q	V.	.	.	.
11.183	0.5905	0.94	.Q	V.	.	.	.
11.200	0.5918	0.94	.Q	V.	.	.	.
11.217	0.5931	0.95	.Q	V.	.	.	.
11.233	0.5944	0.95	.Q	V.	.	.	.
11.250	0.5957	0.95	.Q	V.	.	.	.
11.267	0.5970	0.95	.Q	V.	.	.	.
11.283	0.5983	0.96	.Q	V.	.	.	.
11.300	0.5997	0.96	.Q	V.	.	.	.
11.317	0.6010	0.96	.Q	V.	.	.	.
11.333	0.6023	0.96	.Q	V.	.	.	.
11.350	0.6036	0.96	.Q	V.	.	.	.
11.367	0.6049	0.96	.Q	V.	.	.	.
11.383	0.6063	0.96	.Q	V.	.	.	.
11.400	0.6076	0.96	.Q	V.	.	.	.
11.417	0.6089	0.97	.Q	V.	.	.	.
11.433	0.6103	0.97	.Q	V	.	.	.
11.450	0.6116	0.97	.Q	V	.	.	.
11.467	0.6129	0.97	.Q	V	.	.	.
11.483	0.6143	0.97	.Q	V	.	.	.
11.500	0.6156	0.97	.Q	V	.	.	.
11.517	0.6169	0.97	.Q	V	.	.	.
11.533	0.6183	0.97	.Q	V	.	.	.
11.550	0.6196	0.98	.Q	V	.	.	.
11.567	0.6210	0.98	.Q	V	.	.	.
11.583	0.6223	0.98	.Q	V	.	.	.

11.600	0.6237	0.99	.Q	V	.	.	.
11.617	0.6251	0.99	.Q	V	.	.	.
11.633	0.6264	0.99	.Q	V	.	.	.
11.650	0.6278	0.99	.Q	V	.	.	.
11.667	0.6292	1.00	.Q	V	.	.	.
11.683	0.6305	1.00	.Q	V	.	.	.
11.700	0.6319	1.00	.Q	V	.	.	.
11.717	0.6333	1.00	.Q	V	.	.	.
11.733	0.6347	1.01	.Q	V	.	.	.
11.750	0.6361	1.01	.Q	V	.	.	.
11.767	0.6375	1.01	.Q	V	.	.	.
11.783	0.6389	1.01	.Q	V	.	.	.
11.800	0.6403	1.02	.Q	V	.	.	.
11.817	0.6417	1.02	.Q	V	.	.	.
11.833	0.6431	1.02	.Q	V	.	.	.
11.850	0.6445	1.02	.Q	V	.	.	.
11.867	0.6459	1.02	.Q	V	.	.	.
11.883	0.6473	1.02	.Q	V	.	.	.
11.900	0.6487	1.03	.Q	V	.	.	.
11.917	0.6501	1.03	.Q	V	.	.	.
11.933	0.6515	1.03	.Q	V	.	.	.
11.950	0.6530	1.03	.Q	V	.	.	.
11.967	0.6544	1.03	.Q	V	.	.	.
11.983	0.6558	1.03	.Q	V	.	.	.
12.000	0.6572	1.03	.Q	V	.	.	.
12.017	0.6587	1.04	.Q	V	.	.	.
12.033	0.6601	1.04	.Q	V	.	.	.
12.050	0.6616	1.05	.Q	V	.	.	.
12.067	0.6630	1.07	.Q	V	.	.	.
12.083	0.6645	1.08	.Q	V	.	.	.
12.100	0.6660	1.09	.Q	V	.	.	.
12.117	0.6675	1.10	.Q	V	.	.	.
12.133	0.6690	1.11	.Q	V	.	.	.
12.150	0.6706	1.12	.Q	.V	.	.	.
12.167	0.6721	1.13	.Q	.V	.	.	.
12.183	0.6737	1.14	.Q	.V	.	.	.
12.200	0.6753	1.15	.Q	.V	.	.	.
12.217	0.6769	1.16	.Q	.V	.	.	.
12.233	0.6785	1.17	.Q	.V	.	.	.
12.250	0.6801	1.18	.Q	.V	.	.	.
12.267	0.6817	1.19	.Q	.V	.	.	.
12.283	0.6834	1.19	.Q	.V	.	.	.
12.300	0.6850	1.19	.Q	.V	.	.	.
12.317	0.6867	1.20	.Q	.V	.	.	.
12.333	0.6883	1.20	.Q	.V	.	.	.
12.350	0.6900	1.20	.Q	.V	.	.	.
12.367	0.6916	1.20	.Q	.V	.	.	.
12.383	0.6933	1.20	.Q	.V	.	.	.
12.400	0.6949	1.20	.Q	.V	.	.	.
12.417	0.6966	1.21	.Q	.V	.	.	.
12.433	0.6983	1.21	.Q	.V	.	.	.
12.450	0.6999	1.21	.Q	.V	.	.	.
12.467	0.7016	1.21	.Q	.V	.	.	.
12.483	0.7033	1.21	.Q	.V	.	.	.
12.500	0.7049	1.22	.Q	.V	.	.	.

12.517	0.7066	1.22	. Q	.V	.	.	.
12.533	0.7083	1.22	. Q	.V	.	.	.
12.550	0.7100	1.23	. Q	.V	.	.	.
12.567	0.7117	1.23	. Q	.V	.	.	.
12.583	0.7134	1.23	. Q	.V	.	.	.
12.600	0.7151	1.24	. Q	.V	.	.	.
12.617	0.7168	1.24	. Q	.V	.	.	.
12.633	0.7185	1.25	. Q	.V	.	.	.
12.650	0.7202	1.25	. Q	.V	.	.	.
12.667	0.7220	1.25	. Q	.V	.	.	.
12.683	0.7237	1.26	. Q	.V	.	.	.
12.700	0.7254	1.26	. Q	.V	.	.	.
12.717	0.7272	1.27	. Q	.V	.	.	.
12.733	0.7289	1.27	. Q	.V	.	.	.
12.750	0.7307	1.27	. Q	.V	.	.	.
12.767	0.7324	1.28	. Q	. V	.	.	.
12.783	0.7342	1.28	. Q	. V	.	.	.
12.800	0.7360	1.28	. Q	. V	.	.	.
12.817	0.7377	1.28	. Q	. V	.	.	.
12.833	0.7395	1.29	. Q	. V	.	.	.
12.850	0.7413	1.29	. Q	. V	.	.	.
12.867	0.7431	1.29	. Q	. V	.	.	.
12.883	0.7448	1.29	. Q	. V	.	.	.
12.900	0.7466	1.30	. Q	. V	.	.	.
12.917	0.7484	1.30	. Q	. V	.	.	.
12.933	0.7502	1.30	. Q	. V	.	.	.
12.950	0.7520	1.30	. Q	. V	.	.	.
12.967	0.7538	1.30	. Q	. V	.	.	.
12.983	0.7556	1.31	. Q	. V	.	.	.
13.000	0.7574	1.31	. Q	. V	.	.	.
13.017	0.7592	1.31	. Q	. V	.	.	.
13.033	0.7610	1.32	. Q	. V	.	.	.
13.050	0.7628	1.32	. Q	. V	.	.	.
13.067	0.7647	1.33	. Q	. V	.	.	.
13.083	0.7665	1.33	. Q	. V	.	.	.
13.100	0.7683	1.34	. Q	. V	.	.	.
13.117	0.7702	1.34	. Q	. V	.	.	.
13.133	0.7720	1.35	. Q	. V	.	.	.
13.150	0.7739	1.35	. Q	. V	.	.	.
13.167	0.7758	1.36	. Q	. V	.	.	.
13.183	0.7776	1.36	. Q	. V	.	.	.
13.200	0.7795	1.37	. Q	. V	.	.	.
13.217	0.7814	1.37	. Q	. V	.	.	.
13.233	0.7833	1.38	. Q	. V	.	.	.
13.250	0.7852	1.38	. Q	. V	.	.	.
13.267	0.7871	1.39	. Q	. V	.	.	.
13.283	0.7891	1.39	. Q	. V	.	.	.
13.300	0.7910	1.39	. Q	. V	.	.	.
13.317	0.7929	1.40	. Q	. V	.	.	.
13.333	0.7948	1.40	. Q	. V	.	.	.
13.350	0.7968	1.40	. Q	. V	.	.	.
13.367	0.7987	1.41	. Q	. V	.	.	.
13.383	0.8006	1.41	. Q	. V	.	.	.
13.400	0.8026	1.41	. Q	. V	.	.	.
13.417	0.8045	1.41	. Q	. V	.	.	.

13.433	0.8065	1.42	. Q	. V	.	.	.
13.450	0.8084	1.42	. Q	. V	.	.	.
13.467	0.8104	1.42	. Q	. V	.	.	.
13.483	0.8123	1.43	. Q	. V	.	.	.
13.500	0.8143	1.43	. Q	. V	.	.	.
13.517	0.8163	1.43	. Q	. V	.	.	.
13.533	0.8183	1.44	. Q	. V	.	.	.
13.550	0.8203	1.44	. Q	. V	.	.	.
13.567	0.8223	1.45	. Q	. V	.	.	.
13.583	0.8243	1.46	. Q	. V	.	.	.
13.600	0.8263	1.46	. Q	. V	.	.	.
13.617	0.8283	1.47	. Q	. V	.	.	.
13.633	0.8303	1.48	. Q	. V	.	.	.
13.650	0.8324	1.48	. Q	. V	.	.	.
13.667	0.8344	1.49	. Q	. V	.	.	.
13.683	0.8365	1.50	. Q	. V	.	.	.
13.700	0.8386	1.50	. Q	. V	.	.	.
13.717	0.8407	1.51	. Q	. V	.	.	.
13.733	0.8428	1.52	. Q	. V	.	.	.
13.750	0.8449	1.52	. Q	. V	.	.	.
13.767	0.8470	1.53	. Q	. V	.	.	.
13.783	0.8491	1.53	. Q	. V	.	.	.
13.800	0.8512	1.54	. Q	. V	.	.	.
13.817	0.8533	1.54	. Q	. V	.	.	.
13.833	0.8555	1.55	. Q	. V	.	.	.
13.850	0.8576	1.55	. Q	. V	.	.	.
13.867	0.8597	1.55	. Q	. V	.	.	.
13.883	0.8619	1.56	. Q	. V	.	.	.
13.900	0.8640	1.56	. Q	. V	.	.	.
13.917	0.8662	1.57	. Q	. V	.	.	.
13.933	0.8683	1.57	. Q	. V	.	.	.
13.950	0.8705	1.57	. Q	. V	.	.	.
13.967	0.8727	1.58	. Q	. V	.	.	.
13.983	0.8749	1.58	. Q	. V	.	.	.
14.000	0.8770	1.59	. Q	. V	.	.	.
14.017	0.8792	1.59	. Q	. V	.	.	.
14.033	0.8814	1.60	. Q	. V	.	.	.
14.050	0.8837	1.61	. Q	. V	.	.	.
14.067	0.8859	1.62	. Q	. V	.	.	.
14.083	0.8881	1.63	. Q	. V	.	.	.
14.100	0.8904	1.64	. Q	. V	.	.	.
14.117	0.8927	1.65	. Q	. V	.	.	.
14.133	0.8949	1.66	. Q	. V	.	.	.
14.150	0.8972	1.67	. Q	. V	.	.	.
14.167	0.8996	1.68	. Q	. V	.	.	.
14.183	0.9019	1.69	. Q	. V	.	.	.
14.200	0.9042	1.70	. Q	. V	.	.	.
14.217	0.9066	1.71	. Q	. V	.	.	.
14.233	0.9089	1.72	. Q	. V	.	.	.
14.250	0.9113	1.73	. Q	. V	.	.	.
14.267	0.9137	1.73	. Q	. V	.	.	.
14.283	0.9161	1.74	. Q	. V	.	.	.
14.300	0.9185	1.75	. Q	. V	.	.	.
14.317	0.9209	1.75	. Q	. V	.	.	.
14.333	0.9233	1.76	. Q	. V	.	.	.

14.350	0.9258	1.76	.	Q	.	V	.	.	.
14.367	0.9282	1.77	.	Q	.	V	.	.	.
14.383	0.9306	1.77	.	Q	.	V	.	.	.
14.400	0.9331	1.78	.	Q	.	V	.	.	.
14.417	0.9355	1.78	.	Q	.	V	.	.	.
14.433	0.9380	1.79	.	Q	.	V	.	.	.
14.450	0.9405	1.80	.	Q	.	V	.	.	.
14.467	0.9430	1.80	.	Q	.	V	.	.	.
14.483	0.9455	1.81	.	Q	.	V	.	.	.
14.500	0.9479	1.81	.	Q	.	V	.	.	.
14.517	0.9505	1.82	.	Q	.	V	.	.	.
14.533	0.9530	1.83	.	Q	.	V	.	.	.
14.550	0.9555	1.85	.	Q	.	V	.	.	.
14.567	0.9581	1.86	.	Q	.	V	.	.	.
14.583	0.9607	1.88	.	Q	.	V	.	.	.
14.600	0.9633	1.89	.	Q	.	V	.	.	.
14.617	0.9659	1.91	.	Q	.	V	.	.	.
14.633	0.9686	1.92	.	Q	.	V	.	.	.
14.650	0.9712	1.93	.	Q	.	V	.	.	.
14.667	0.9739	1.95	.	Q	.	V	.	.	.
14.683	0.9766	1.96	.	Q	.	V	.	.	.
14.700	0.9793	1.98	.	Q	.	V	.	.	.
14.717	0.9821	1.99	.	Q	.	V	.	.	.
14.733	0.9848	2.00	.	Q	.	V	.	.	.
14.750	0.9876	2.02	.	Q	.	V	.	.	.
14.767	0.9904	2.03	.	Q	.	V	.	.	.
14.783	0.9932	2.04	.	Q	.	V	.	.	.
14.800	0.9960	2.05	.	Q	.	V	.	.	.
14.817	0.9989	2.06	.	Q	.	V	.	.	.
14.833	1.0017	2.07	.	Q	.	V	.	.	.
14.850	1.0046	2.08	.	Q	.	V	.	.	.
14.867	1.0075	2.09	.	Q	.	V	.	.	.
14.883	1.0103	2.09	.	Q	.	V	.	.	.
14.900	1.0132	2.10	.	Q	.	V	.	.	.
14.917	1.0162	2.11	.	Q	.	V	.	.	.
14.933	1.0191	2.12	.	Q	.	V	.	.	.
14.950	1.0220	2.13	.	Q	.	V	.	.	.
14.967	1.0250	2.14	.	Q	.	V	.	.	.
14.983	1.0279	2.15	.	Q	.	V	.	.	.
15.000	1.0309	2.16	.	Q	.	V	.	.	.
15.017	1.0339	2.17	.	Q	.	V	.	.	.
15.033	1.0369	2.20	.	Q	.	V	.	.	.
15.050	1.0400	2.22	.	Q	.	V	.	.	.
15.067	1.0431	2.25	.	Q	.	V	.	.	.
15.083	1.0462	2.27	.	Q	.	V	.	.	.
15.100	1.0494	2.30	.	Q	.	V	.	.	.
15.117	1.0526	2.33	.	Q	.	V	.	.	.
15.133	1.0558	2.35	.	Q	.	V	.	.	.
15.150	1.0591	2.38	.	Q	.	V	.	.	.
15.167	1.0624	2.40	.	Q	.	V	.	.	.
15.183	1.0657	2.43	.	Q	.	V	.	.	.
15.200	1.0691	2.45	.	Q	.	V	.	.	.
15.217	1.0725	2.48	.	Q	.	V	.	.	.
15.233	1.0760	2.50	.	Q	.	V	.	.	.
15.250	1.0795	2.53	.	Q	.	V	.	.	.

15.267	1.0830	2.55	.	Q	.	V	.	.	.
15.283	1.0865	2.57	.	Q	.	V	.	.	.
15.300	1.0901	2.59	.	Q	.	V	.	.	.
15.317	1.0937	2.61	.	Q	.	V	.	.	.
15.333	1.0973	2.63	.	Q	.	V	.	.	.
15.350	1.1009	2.65	.	Q	.	V	.	.	.
15.367	1.1046	2.67	.	Q	.	V	.	.	.
15.383	1.1083	2.68	.	Q	.	V	.	.	.
15.400	1.1120	2.70	.	Q	.	V	.	.	.
15.417	1.1158	2.72	.	Q	.	V	.	.	.
15.433	1.1196	2.74	.	Q	.	V	.	.	.
15.450	1.1234	2.76	.	Q	.	V	.	.	.
15.467	1.1272	2.78	.	Q	.	V	.	.	.
15.483	1.1311	2.80	.	Q	.	V	.	.	.
15.500	1.1349	2.82	.	Q	.	V	.	.	.
15.517	1.1389	2.87	.	Q	.	V	.	.	.
15.533	1.1430	2.96	.	Q	.	V	.	.	.
15.550	1.1472	3.05	.	Q	.	V	.	.	.
15.567	1.1515	3.14	.	Q	.	V	.	.	.
15.583	1.1559	3.23	.	Q	.	V	.	.	.
15.600	1.1605	3.31	.	Q	.	V	.	.	.
15.617	1.1652	3.40	.	Q	.	V	.	.	.
15.633	1.1700	3.49	.	Q	.	V	.	.	.
15.650	1.1749	3.58	.	Q	.	V	.	.	.
15.667	1.1800	3.67	.	Q	.	V	.	.	.
15.683	1.1852	3.76	.	Q	.	V	.	.	.
15.700	1.1905	3.85	.	Q	.	V	.	.	.
15.717	1.1959	3.94	.	Q	.	V	.	.	.
15.733	1.2015	4.03	.	Q	.	V	.	.	.
15.750	1.2071	4.12	.	Q	.	V	.	.	.
15.767	1.2129	4.20	.	Q	.	V	.	.	.
15.783	1.2188	4.28	.	Q	.	V	.	.	.
15.800	1.2248	4.35	.	Q	.	V	.	.	.
15.817	1.2309	4.43	.	Q	.	V	.	.	.
15.833	1.2371	4.50	.	Q	.	V	.	.	.
15.850	1.2434	4.57	.	Q	.	V	.	.	.
15.867	1.2498	4.65	.	Q	.	V	.	.	.
15.883	1.2563	4.72	.	Q	.	V	.	.	.
15.900	1.2629	4.79	.	Q	.	V	.	.	.
15.917	1.2696	4.87	.	Q	.	V	.	.	.
15.933	1.2764	4.94	.	Q	.	V	.	.	.
15.950	1.2833	5.02	.	Q	.	.V	.	.	.
15.967	1.2903	5.09	.	Q	.	.V	.	.	.
15.983	1.2975	5.16	.	Q	.	.V	.	.	.
16.000	1.3047	5.24	.	Q	.	.V	.	.	.
16.017	1.3127	5.82	.	Q	.	.V	.	.	.
16.033	1.3222	6.93	.	.	Q	.V	.	.	.
16.050	1.3333	8.03	.	.	.	.V	.	.	.
16.067	1.3459	9.13	.	.	.	.V	.	.	.
16.083	1.3600	10.23	.	.	.	.V	.	.	.
16.100	1.3756	11.34	.	.	.	Q.V	.	.	.
16.117	1.3927	12.44	.	.	.	.Q	.	.	.
16.133	1.4114	13.54	.	.	.	.VQ	.	.	.
16.150	1.4315	14.64	.	.	.	.V	Q	.	.
16.167	1.4532	15.74	.	.	.	.V	.Q	.	.

16.183	1.4764	16.85	.	.	.	V	Q	.	.
16.200	1.5011	17.95	.	.	.	V	.	Q	.
16.217	1.5274	19.05	.	.	.	V	.	Q	.
16.233	1.5551	20.15	.	.	.	V	.	Q	.
16.250	1.5851	21.76	.	.	.	V	.	Q	.
16.267	1.6142	21.10	.	.	.	V	.	Q	.
16.283	1.6416	19.88	.	.	.	V	.	Q	.
16.300	1.6673	18.67	.	.	.	V	.	Q	.
16.317	1.6913	17.45	.	.	.	V	.	Q	.
16.333	1.7137	16.23	.	.	.	VQ.	.	.	.
16.350	1.7343	15.02	.	.	.	QV	.	.	.
16.367	1.7534	13.80	.	.	.	Q	V	.	.
16.383	1.7707	12.58	.	.	.	Q	V.	.	.
16.400	1.7863	11.37	.	.	.	Q	V.	.	.
16.417	1.8003	10.15	.	.	.	Q	V.	.	.
16.433	1.8126	8.93	.	.	.	Q	V.	.	.
16.450	1.8232	7.72	.	.	.	Q	V.	.	.
16.467	1.8322	6.50	.	.	.	Q	V	.	.
16.483	1.8395	5.28	.	.	.	Q.	V	.	.
16.500	1.8451	4.07	.	.	.	Q	V	.	.
16.517	1.8499	3.51	.	.	.	Q	V	.	.
16.533	1.8546	3.43	.	.	.	Q	V	.	.
16.550	1.8592	3.35	.	.	.	Q	V	.	.
16.567	1.8637	3.26	.	.	.	Q	V	.	.
16.583	1.8681	3.18	.	.	.	Q	V	.	.
16.600	1.8724	3.10	.	.	.	Q	V	.	.
16.617	1.8766	3.02	.	.	.	Q	V	.	.
16.633	1.8806	2.94	.	.	.	Q	V	.	.
16.650	1.8845	2.85	.	.	.	Q	V	.	.
16.667	1.8884	2.77	.	.	.	Q	V	.	.
16.683	1.8921	2.69	.	.	.	Q	.V	.	.
16.700	1.8957	2.61	.	.	.	Q	.V	.	.
16.717	1.8991	2.53	.	.	.	Q	.V	.	.
16.733	1.9025	2.44	.	.	.	Q	.V	.	.
16.750	1.9058	2.36	.	.	.	Q	.V	.	.
16.767	1.9089	2.31	.	.	.	Q	.V	.	.
16.783	1.9121	2.29	.	.	.	Q	.V	.	.
16.800	1.9152	2.26	.	.	.	Q	.V	.	.
16.817	1.9183	2.23	.	.	.	Q	.V	.	.
16.833	1.9213	2.20	.	.	.	Q	.V	.	.
16.850	1.9243	2.18	.	.	.	Q	.V	.	.
16.867	1.9273	2.15	.	.	.	Q	.V	.	.
16.883	1.9302	2.12	.	.	.	Q	.V	.	.
16.900	1.9331	2.09	.	.	.	Q	.V	.	.
16.917	1.9359	2.06	.	.	.	Q	.V	.	.
16.933	1.9387	2.04	.	.	.	Q	.V	.	.
16.950	1.9415	2.01	.	.	.	Q	.V	.	.
16.967	1.9442	1.98	.	.	.	Q	.V	.	.
16.983	1.9469	1.95	.	.	.	Q	.V	.	.
17.000	1.9495	1.92	.	.	.	Q	.V	.	.
17.017	1.9522	1.90	.	.	.	Q	.V	.	.
17.033	1.9548	1.89	.	.	.	Q	.V	.	.
17.050	1.9573	1.87	.	.	.	Q	.V	.	.
17.067	1.9599	1.85	.	.	.	Q	.V	.	.
17.083	1.9624	1.83	.	.	.	Q	.V	.	.

17.100	1.9649	1.82	.	Q	.	.	.	V	.
17.117	1.9674	1.80	.	Q	.	.	.	V	.
17.133	1.9698	1.78	.	Q	.	.	.	V	.
17.150	1.9723	1.76	.	Q	.	.	.	V	.
17.167	1.9747	1.75	.	Q	.	.	.	V	.
17.183	1.9771	1.73	.	Q	.	.	.	V	.
17.200	1.9794	1.71	.	Q	.	.	.	V	.
17.217	1.9817	1.69	.	Q	.	.	.	V	.
17.233	1.9841	1.68	.	Q	.	.	.	V	.
17.250	1.9863	1.66	.	Q	.	.	.	V	.
17.267	1.9886	1.65	.	Q	.	.	.	V	.
17.283	1.9909	1.63	.	Q	.	.	.	V	.
17.300	1.9931	1.62	.	Q	.	.	.	V	.
17.317	1.9953	1.61	.	Q	.	.	.	V	.
17.333	1.9975	1.60	.	Q	.	.	.	V	.
17.350	1.9997	1.59	.	Q	.	.	.	V	.
17.367	2.0019	1.58	.	Q	.	.	.	V	.
17.383	2.0040	1.56	.	Q	.	.	.	V	.
17.400	2.0062	1.55	.	Q	.	.	.	V	.
17.417	2.0083	1.54	.	Q	.	.	.	V	.
17.433	2.0104	1.53	.	Q	.	.	.	V	.
17.450	2.0125	1.52	.	Q	.	.	.	V	.
17.467	2.0145	1.50	.	Q	.	.	.	V	.
17.483	2.0166	1.49	.	Q	.	.	.	V	.
17.500	2.0186	1.48	.	Q	.	.	.	V	.
17.517	2.0207	1.47	.	Q	.	.	.	V	.
17.533	2.0227	1.46	.	Q	.	.	.	V	.
17.550	2.0247	1.45	.	Q	.	.	.	V	.
17.567	2.0267	1.45	.	Q	.	.	.	V	.
17.583	2.0287	1.44	.	Q	.	.	.	V	.
17.600	2.0306	1.43	.	Q	.	.	.	V	.
17.617	2.0326	1.42	.	Q	.	.	.	V	.
17.633	2.0345	1.41	.	Q	.	.	.	V	.
17.650	2.0365	1.40	.	Q	.	.	.	V	.
17.667	2.0384	1.39	.	Q	.	.	.	V	.
17.683	2.0403	1.38	.	Q	.	.	.	V	.
17.700	2.0422	1.38	.	Q	.	.	.	V	.
17.717	2.0441	1.37	.	Q	.	.	.	V	.
17.733	2.0459	1.36	.	Q	.	.	.	V	.
17.750	2.0478	1.35	.	Q	.	.	.	V	.
17.767	2.0496	1.34	.	Q	.	.	.	V	.
17.783	2.0515	1.34	.	Q	.	.	.	V	.
17.800	2.0533	1.33	.	Q	.	.	.	V	.
17.817	2.0551	1.32	.	Q	.	.	.	V	.
17.833	2.0569	1.32	.	Q	.	.	.	V	.
17.850	2.0587	1.31	.	Q	.	.	.	V	.
17.867	2.0605	1.30	.	Q	.	.	.	V	.
17.883	2.0623	1.30	.	Q	.	.	.	V	.
17.900	2.0641	1.29	.	Q	.	.	.	V	.
17.917	2.0659	1.28	.	Q	.	.	.	V	.
17.933	2.0676	1.27	.	Q	.	.	.	V	.
17.950	2.0694	1.27	.	Q	.	.	.	V	.
17.967	2.0711	1.26	.	Q	.	.	.	V	.
17.983	2.0728	1.25	.	Q	.	.	.	V	.
18.000	2.0745	1.25	.	Q	.	.	.	V	.

18.017	2.0762	1.24	. Q	.	.	.	V	.
18.033	2.0779	1.22	. Q	.	.	.	V	.
18.050	2.0796	1.21	. Q	.	.	.	V	.
18.067	2.0813	1.20	. Q	.	.	.	V	.
18.083	2.0829	1.19	. Q	.	.	.	V	.
18.100	2.0845	1.18	. Q	.	.	.	V	.
18.117	2.0861	1.16	. Q	.	.	.	V	.
18.133	2.0877	1.15	. Q	.	.	.	V	.
18.150	2.0893	1.14	. Q	.	.	.	V	.
18.167	2.0908	1.13	. Q	.	.	.	V	.
18.183	2.0924	1.12	. Q	.	.	.	V	.
18.200	2.0939	1.10	. Q	.	.	.	V	.
18.217	2.0954	1.09	. Q	.	.	.	V	.
18.233	2.0969	1.08	.Q	.	.	.	V	.
18.250	2.0984	1.07	.Q	.	.	.	V	.
18.267	2.0998	1.06	.Q	.	.	.	V	.
18.283	2.1013	1.06	.Q	.	.	.	V	.
18.300	2.1027	1.05	.Q	.	.	.	V	.
18.317	2.1042	1.05	.Q	.	.	.	V	.
18.333	2.1056	1.04	.Q	.	.	.	V	.
18.350	2.1070	1.04	.Q	.	.	.	V	.
18.367	2.1085	1.03	.Q	.	.	.	V	.
18.383	2.1099	1.03	.Q	.	.	.	V	.
18.400	2.1113	1.02	.Q	.	.	.	V	.
18.417	2.1127	1.02	.Q	.	.	.	V	.
18.433	2.1141	1.01	.Q	.	.	.	V	.
18.450	2.1155	1.01	.Q	.	.	.	V	.
18.467	2.1168	1.00	.Q	.	.	.	V	.
18.483	2.1182	1.00	.Q	.	.	.	V	.
18.500	2.1196	0.99	.Q	.	.	.	V	.
18.517	2.1209	0.99	.Q	.	.	.	V	.
18.533	2.1223	0.99	.Q	.	.	.	V	.
18.550	2.1237	0.98	.Q	.	.	.	V	.
18.567	2.1250	0.98	.Q	.	.	.	V	.
18.583	2.1263	0.97	.Q	.	.	.	V	.
18.600	2.1277	0.97	.Q	.	.	.	V	.
18.617	2.1290	0.97	.Q	.	.	.	V	.
18.633	2.1303	0.96	.Q	.	.	.	V	.
18.650	2.1317	0.96	.Q	.	.	.	V	.
18.667	2.1330	0.96	.Q	.	.	.	V	.
18.683	2.1343	0.95	.Q	.	.	.	V	.
18.700	2.1356	0.95	.Q	.	.	.	V	.
18.717	2.1369	0.94	.Q	.	.	.	V	.
18.733	2.1382	0.94	.Q	.	.	.	V	.
18.750	2.1395	0.94	.Q	.	.	.	V	.
18.767	2.1408	0.93	.Q	.	.	.	V	.
18.783	2.1420	0.93	.Q	.	.	.	V	.
18.800	2.1433	0.93	.Q	.	.	.	V	.
18.817	2.1446	0.92	.Q	.	.	.	V	.
18.833	2.1459	0.92	.Q	.	.	.	V	.
18.850	2.1471	0.92	.Q	.	.	.	V	.
18.867	2.1484	0.91	.Q	.	.	.	V	.
18.883	2.1496	0.91	.Q	.	.	.	V	.
18.900	2.1509	0.91	.Q	.	.	.	V	.
18.917	2.1521	0.90	.Q	.	.	.	V	.

18.933	2.1534	0.90	.Q	.	.	.	V	.
18.950	2.1546	0.90	.Q	.	.	.	V	.
18.967	2.1558	0.89	.Q	.	.	.	V	.
18.983	2.1571	0.89	.Q	.	.	.	V	.
19.000	2.1583	0.89	.Q	.	.	.	V	.
19.017	2.1595	0.89	.Q	.	.	.	V	.
19.033	2.1607	0.88	.Q	.	.	.	V	.
19.050	2.1619	0.88	.Q	.	.	.	V	.
19.067	2.1632	0.88	.Q	.	.	.	V	.
19.083	2.1644	0.87	.Q	.	.	.	V	.
19.100	2.1656	0.87	.Q	.	.	.	V	.
19.117	2.1668	0.87	.Q	.	.	.	V	.
19.133	2.1679	0.87	.Q	.	.	.	V	.
19.150	2.1691	0.86	.Q	.	.	.	V	.
19.167	2.1703	0.86	.Q	.	.	.	V	.
19.183	2.1715	0.86	.Q	.	.	.	V	.
19.200	2.1727	0.85	.Q	.	.	.	V	.
19.217	2.1739	0.85	.Q	.	.	.	V	.
19.233	2.1750	0.85	.Q	.	.	.	V	.
19.250	2.1762	0.85	.Q	.	.	.	V	.
19.267	2.1773	0.84	.Q	.	.	.	V	.
19.283	2.1785	0.84	.Q	.	.	.	V	.
19.300	2.1797	0.84	.Q	.	.	.	V	.
19.317	2.1808	0.84	.Q	.	.	.	V	.
19.333	2.1820	0.83	.Q	.	.	.	V	.
19.350	2.1831	0.83	.Q	.	.	.	V	.
19.367	2.1842	0.83	.Q	.	.	.	V	.
19.383	2.1854	0.83	.Q	.	.	.	V	.
19.400	2.1865	0.82	.Q	.	.	.	V	.
19.417	2.1877	0.82	.Q	.	.	.	V	.
19.433	2.1888	0.82	.Q	.	.	.	V	.
19.450	2.1899	0.82	.Q	.	.	.	V	.
19.467	2.1910	0.81	.Q	.	.	.	V	.
19.483	2.1921	0.81	.Q	.	.	.	V	.
19.500	2.1933	0.81	.Q	.	.	.	V	.
19.517	2.1944	0.81	.Q	.	.	.	V	.
19.533	2.1955	0.80	.Q	.	.	.	V	.
19.550	2.1966	0.80	.Q	.	.	.	V	.
19.567	2.1977	0.80	.Q	.	.	.	V	.
19.583	2.1988	0.80	.Q	.	.	.	V	.
19.600	2.1999	0.80	.Q	.	.	.	V	.
19.617	2.2010	0.79	.Q	.	.	.	V	.
19.633	2.2021	0.79	.Q	.	.	.	V	.
19.650	2.2032	0.79	.Q	.	.	.	V	.
19.667	2.2042	0.79	.Q	.	.	.	V	.
19.683	2.2053	0.79	.Q	.	.	.	V	.
19.700	2.2064	0.78	.Q	.	.	.	V	.
19.717	2.2075	0.78	.Q	.	.	.	V	.
19.733	2.2085	0.78	.Q	.	.	.	V	.
19.750	2.2096	0.78	.Q	.	.	.	V	.
19.767	2.2107	0.77	.Q	.	.	.	V	.
19.783	2.2117	0.77	.Q	.	.	.	V	.
19.800	2.2128	0.77	.Q	.	.	.	V	.
19.817	2.2139	0.77	.Q	.	.	.	V	.
19.833	2.2149	0.77	.Q	.	.	.	V	.

19.850	2.2160	0.76	.Q	.	.	.	V	.
19.867	2.2170	0.76	.Q	.	.	.	V	.
19.883	2.2181	0.76	.Q	.	.	.	V	.
19.900	2.2191	0.76	.Q	.	.	.	V	.
19.917	2.2202	0.76	.Q	.	.	.	V	.
19.933	2.2212	0.75	.Q	.	.	.	V	.
19.950	2.2222	0.75	.Q	.	.	.	V	.
19.967	2.2233	0.75	.Q	.	.	.	V	.
19.983	2.2243	0.75	.Q	.	.	.	V	.
20.000	2.2253	0.75	.Q	.	.	.	V	.
20.017	2.2264	0.75	.Q	.	.	.	V	.
20.033	2.2274	0.74	.Q	.	.	.	V	.
20.050	2.2284	0.74	.Q	.	.	.	V	.
20.067	2.2294	0.74	.Q	.	.	.	V	.
20.083	2.2304	0.74	.Q	.	.	.	V	.
20.100	2.2315	0.74	.Q	.	.	.	V	.
20.117	2.2325	0.73	.Q	.	.	.	V	.
20.133	2.2335	0.73	.Q	.	.	.	V	.
20.150	2.2345	0.73	.Q	.	.	.	V	.
20.167	2.2355	0.73	.Q	.	.	.	V	.
20.183	2.2365	0.73	.Q	.	.	.	V	.
20.200	2.2375	0.73	.Q	.	.	.	V	.
20.217	2.2385	0.72	.Q	.	.	.	V	.
20.233	2.2395	0.72	.Q	.	.	.	V	.
20.250	2.2405	0.72	.Q	.	.	.	V	.
20.267	2.2415	0.72	.Q	.	.	.	V	.
20.283	2.2425	0.72	.Q	.	.	.	V	.
20.300	2.2434	0.72	.Q	.	.	.	V	.
20.317	2.2444	0.71	.Q	.	.	.	V	.
20.333	2.2454	0.71	.Q	.	.	.	V	.
20.350	2.2464	0.71	.Q	.	.	.	V	.
20.367	2.2474	0.71	.Q	.	.	.	V	.
20.383	2.2483	0.71	.Q	.	.	.	V	.
20.400	2.2493	0.71	.Q	.	.	.	V	.
20.417	2.2503	0.70	.Q	.	.	.	V	.
20.433	2.2512	0.70	.Q	.	.	.	V	.
20.450	2.2522	0.70	.Q	.	.	.	V	.
20.467	2.2532	0.70	.Q	.	.	.	V	.
20.483	2.2541	0.70	.Q	.	.	.	V	.
20.500	2.2551	0.70	.Q	.	.	.	V	.
20.517	2.2561	0.70	.Q	.	.	.	V	.
20.533	2.2570	0.69	.Q	.	.	.	V	.
20.550	2.2580	0.69	.Q	.	.	.	V	.
20.567	2.2589	0.69	.Q	.	.	.	V	.
20.583	2.2599	0.69	.Q	.	.	.	V	.
20.600	2.2608	0.69	.Q	.	.	.	V	.
20.617	2.2618	0.69	.Q	.	.	.	V	.
20.633	2.2627	0.68	.Q	.	.	.	V	.
20.650	2.2636	0.68	.Q	.	.	.	V	.
20.667	2.2646	0.68	.Q	.	.	.	V	.
20.683	2.2655	0.68	.Q	.	.	.	V	.
20.700	2.2665	0.68	.Q	.	.	.	V	.
20.717	2.2674	0.68	.Q	.	.	.	V	.
20.733	2.2683	0.68	.Q	.	.	.	V	.
20.750	2.2692	0.67	.Q	.	.	.	V	.

20.767	2.2702	0.67	.Q	.	.	.	V	.
20.783	2.2711	0.67	.Q	.	.	.	V	.
20.800	2.2720	0.67	.Q	.	.	.	V	.
20.817	2.2729	0.67	.Q	.	.	.	V	.
20.833	2.2739	0.67	.Q	.	.	.	V	.
20.850	2.2748	0.67	.Q	.	.	.	V	.
20.867	2.2757	0.67	.Q	.	.	.	V	.
20.883	2.2766	0.66	.Q	.	.	.	V	.
20.900	2.2775	0.66	.Q	.	.	.	V	.
20.917	2.2784	0.66	.Q	.	.	.	V	.
20.933	2.2793	0.66	.Q	.	.	.	V	.
20.950	2.2803	0.66	.Q	.	.	.	V	.
20.967	2.2812	0.66	.Q	.	.	.	V	.
20.983	2.2821	0.66	.Q	.	.	.	V	.
21.000	2.2830	0.65	.Q	.	.	.	V	.
21.017	2.2839	0.65	.Q	.	.	.	V	.
21.033	2.2848	0.65	.Q	.	.	.	V	.
21.050	2.2857	0.65	.Q	.	.	.	V	.
21.067	2.2866	0.65	.Q	.	.	.	V	.
21.083	2.2874	0.65	.Q	.	.	.	V	.
21.100	2.2883	0.65	.Q	.	.	.	V	.
21.117	2.2892	0.65	.Q	.	.	.	V	.
21.133	2.2901	0.64	.Q	.	.	.	V	.
21.150	2.2910	0.64	.Q	.	.	.	V	.
21.167	2.2919	0.64	.Q	.	.	.	V	.
21.183	2.2928	0.64	.Q	.	.	.	V	.
21.200	2.2936	0.64	.Q	.	.	.	V	.
21.217	2.2945	0.64	.Q	.	.	.	V	.
21.233	2.2954	0.64	.Q	.	.	.	V	.
21.250	2.2963	0.64	.Q	.	.	.	V	.
21.267	2.2972	0.63	.Q	.	.	.	V	.
21.283	2.2980	0.63	.Q	.	.	.	V	.
21.300	2.2989	0.63	.Q	.	.	.	V	.
21.317	2.2998	0.63	.Q	.	.	.	V	.
21.333	2.3006	0.63	.Q	.	.	.	V	.
21.350	2.3015	0.63	.Q	.	.	.	V	.
21.367	2.3024	0.63	.Q	.	.	.	V	.
21.383	2.3032	0.63	.Q	.	.	.	V	.
21.400	2.3041	0.63	.Q	.	.	.	V	.
21.417	2.3050	0.62	.Q	.	.	.	V	.
21.433	2.3058	0.62	.Q	.	.	.	V	.
21.450	2.3067	0.62	.Q	.	.	.	V	.
21.467	2.3075	0.62	.Q	.	.	.	V	.
21.483	2.3084	0.62	.Q	.	.	.	V	.
21.500	2.3092	0.62	.Q	.	.	.	V	.
21.517	2.3101	0.62	.Q	.	.	.	V	.
21.533	2.3109	0.62	.Q	.	.	.	V	.
21.550	2.3118	0.62	.Q	.	.	.	V	.
21.567	2.3126	0.61	.Q	.	.	.	V	.
21.583	2.3135	0.61	.Q	.	.	.	V	.
21.600	2.3143	0.61	.Q	.	.	.	V	.
21.617	2.3152	0.61	.Q	.	.	.	V	.
21.633	2.3160	0.61	.Q	.	.	.	V	.
21.650	2.3168	0.61	.Q	.	.	.	V	.
21.667	2.3177	0.61	.Q	.	.	.	V	.

21.683	2.3185	0.61	.Q	.	.	.	V .
21.700	2.3193	0.61	.Q	.	.	.	V .
21.717	2.3202	0.60	.Q	.	.	.	V .
21.733	2.3210	0.60	.Q	.	.	.	V .
21.750	2.3218	0.60	.Q	.	.	.	V .
21.767	2.3227	0.60	.Q	.	.	.	V .
21.783	2.3235	0.60	.Q	.	.	.	V .
21.800	2.3243	0.60	.Q	.	.	.	V .
21.817	2.3252	0.60	.Q	.	.	.	V .
21.833	2.3260	0.60	.Q	.	.	.	V .
21.850	2.3268	0.60	.Q	.	.	.	V .
21.867	2.3276	0.60	.Q	.	.	.	V .
21.883	2.3284	0.59	.Q	.	.	.	V .
21.900	2.3293	0.59	.Q	.	.	.	V .
21.917	2.3301	0.59	.Q	.	.	.	V .
21.933	2.3309	0.59	.Q	.	.	.	V .
21.950	2.3317	0.59	.Q	.	.	.	V .
21.967	2.3325	0.59	.Q	.	.	.	V .
21.983	2.3333	0.59	.Q	.	.	.	V .
22.000	2.3341	0.59	.Q	.	.	.	V .
22.017	2.3349	0.59	.Q	.	.	.	V .
22.033	2.3358	0.59	.Q	.	.	.	V .
22.050	2.3366	0.59	.Q	.	.	.	V .
22.067	2.3374	0.58	.Q	.	.	.	V .
22.083	2.3382	0.58	.Q	.	.	.	V .
22.100	2.3390	0.58	.Q	.	.	.	V .
22.117	2.3398	0.58	.Q	.	.	.	V .
22.133	2.3406	0.58	.Q	.	.	.	V .
22.150	2.3414	0.58	.Q	.	.	.	V .
22.167	2.3422	0.58	.Q	.	.	.	V .
22.183	2.3430	0.58	.Q	.	.	.	V .
22.200	2.3438	0.58	.Q	.	.	.	V .
22.217	2.3445	0.58	.Q	.	.	.	V .
22.233	2.3453	0.58	.Q	.	.	.	V .
22.250	2.3461	0.57	.Q	.	.	.	V .
22.267	2.3469	0.57	.Q	.	.	.	V .
22.283	2.3477	0.57	.Q	.	.	.	V .
22.300	2.3485	0.57	.Q	.	.	.	V .
22.317	2.3493	0.57	.Q	.	.	.	V .
22.333	2.3501	0.57	.Q	.	.	.	V .
22.350	2.3509	0.57	.Q	.	.	.	V .
22.367	2.3516	0.57	.Q	.	.	.	V .
22.383	2.3524	0.57	.Q	.	.	.	V .
22.400	2.3532	0.57	.Q	.	.	.	V .
22.417	2.3540	0.57	.Q	.	.	.	V .
22.433	2.3548	0.56	.Q	.	.	.	V .
22.450	2.3555	0.56	.Q	.	.	.	V .
22.467	2.3563	0.56	.Q	.	.	.	V .
22.483	2.3571	0.56	.Q	.	.	.	V .
22.500	2.3579	0.56	.Q	.	.	.	V .
22.517	2.3586	0.56	.Q	.	.	.	V .
22.533	2.3594	0.56	.Q	.	.	.	V .
22.550	2.3602	0.56	.Q	.	.	.	V .
22.567	2.3609	0.56	.Q	.	.	.	V .
22.583	2.3617	0.56	.Q	.	.	.	V .

22.600	2.3625	0.56	.Q	.	.	.	V .
22.617	2.3632	0.56	.Q	.	.	.	V .
22.633	2.3640	0.55	.Q	.	.	.	V .
22.650	2.3648	0.55	.Q	.	.	.	V .
22.667	2.3655	0.55	.Q	.	.	.	V .
22.683	2.3663	0.55	.Q	.	.	.	V .
22.700	2.3670	0.55	.Q	.	.	.	V .
22.717	2.3678	0.55	.Q	.	.	.	V .
22.733	2.3686	0.55	.Q	.	.	.	V .
22.750	2.3693	0.55	.Q	.	.	.	V .
22.767	2.3701	0.55	.Q	.	.	.	V .
22.783	2.3708	0.55	.Q	.	.	.	V .
22.800	2.3716	0.55	.Q	.	.	.	V .
22.817	2.3723	0.55	.Q	.	.	.	V .
22.833	2.3731	0.55	.Q	.	.	.	V .
22.850	2.3738	0.54	.Q	.	.	.	V .
22.867	2.3746	0.54	Q	.	.	.	V .
22.883	2.3753	0.54	Q	.	.	.	V .
22.900	2.3761	0.54	Q	.	.	.	V .
22.917	2.3768	0.54	Q	.	.	.	V .
22.933	2.3776	0.54	Q	.	.	.	V .
22.950	2.3783	0.54	Q	.	.	.	V .
22.967	2.3790	0.54	Q	.	.	.	V .
22.983	2.3798	0.54	Q	.	.	.	V .
23.000	2.3805	0.54	Q	.	.	.	V .
23.017	2.3813	0.54	Q	.	.	.	V .
23.033	2.3820	0.54	Q	.	.	.	V .
23.050	2.3827	0.54	Q	.	.	.	V .
23.067	2.3835	0.53	Q	.	.	.	V .
23.083	2.3842	0.53	Q	.	.	.	V .
23.100	2.3849	0.53	Q	.	.	.	V .
23.117	2.3857	0.53	Q	.	.	.	V .
23.133	2.3864	0.53	Q	.	.	.	V .
23.150	2.3871	0.53	Q	.	.	.	V .
23.167	2.3879	0.53	Q	.	.	.	V .
23.183	2.3886	0.53	Q	.	.	.	V .
23.200	2.3893	0.53	Q	.	.	.	V .
23.217	2.3901	0.53	Q	.	.	.	V .
23.233	2.3908	0.53	Q	.	.	.	V .
23.250	2.3915	0.53	Q	.	.	.	V .
23.267	2.3922	0.53	Q	.	.	.	V .
23.283	2.3930	0.53	Q	.	.	.	V .
23.300	2.3937	0.52	Q	.	.	.	V .
23.317	2.3944	0.52	Q	.	.	.	V .
23.333	2.3951	0.52	Q	.	.	.	V .
23.350	2.3958	0.52	Q	.	.	.	V .
23.367	2.3966	0.52	Q	.	.	.	V .
23.383	2.3973	0.52	Q	.	.	.	V .
23.400	2.3980	0.52	Q	.	.	.	V .
23.417	2.3987	0.52	Q	.	.	.	V .
23.433	2.3994	0.52	Q	.	.	.	V .
23.450	2.4001	0.52	Q	.	.	.	V .
23.467	2.4009	0.52	Q	.	.	.	V .
23.483	2.4016	0.52	Q	.	.	.	V .
23.500	2.4023	0.52	Q	.	.	.	V .

23.517	2.4030	0.52	Q	.	.	.	V.
23.533	2.4037	0.52	Q	.	.	.	V.
23.550	2.4044	0.51	Q	.	.	.	V.
23.567	2.4051	0.51	Q	.	.	.	V.
23.583	2.4058	0.51	Q	.	.	.	V.
23.600	2.4065	0.51	Q	.	.	.	V.
23.617	2.4072	0.51	Q	.	.	.	V.
23.633	2.4079	0.51	Q	.	.	.	V.
23.650	2.4086	0.51	Q	.	.	.	V.
23.667	2.4093	0.51	Q	.	.	.	V.
23.683	2.4100	0.51	Q	.	.	.	V.
23.700	2.4107	0.51	Q	.	.	.	V.
23.717	2.4114	0.51	Q	.	.	.	V.
23.733	2.4121	0.51	Q	.	.	.	V.
23.750	2.4128	0.51	Q	.	.	.	V.
23.767	2.4135	0.51	Q	.	.	.	V.
23.783	2.4142	0.51	Q	.	.	.	V.
23.800	2.4149	0.50	Q	.	.	.	V.
23.817	2.4156	0.50	Q	.	.	.	V.
23.833	2.4163	0.50	Q	.	.	.	V.
23.850	2.4170	0.50	Q	.	.	.	V.
23.867	2.4177	0.50	Q	.	.	.	V.
23.883	2.4184	0.50	Q	.	.	.	V.
23.900	2.4191	0.50	Q	.	.	.	V.
23.917	2.4198	0.50	Q	.	.	.	V.
23.933	2.4205	0.50	Q	.	.	.	V.
23.950	2.4211	0.50	Q	.	.	.	V.
23.967	2.4218	0.50	Q	.	.	.	V.
23.983	2.4225	0.50	Q	.	.	.	V.
24.000	2.4232	0.50	Q	.	.	.	V.
24.017	2.4239	0.50	Q	.	.	.	V.
24.033	2.4246	0.50	Q	.	.	.	V.
24.050	2.4253	0.50	Q	.	.	.	V.
24.067	2.4259	0.50	Q	.	.	.	V.
24.083	2.4266	0.49	Q	.	.	.	V.
24.100	2.4273	0.49	Q	.	.	.	V.
24.117	2.4280	0.49	Q	.	.	.	V.
24.133	2.4287	0.49	Q	.	.	.	V.
24.150	2.4293	0.49	Q	.	.	.	V.
24.167	2.4300	0.49	Q	.	.	.	V.
24.183	2.4307	0.49	Q	.	.	.	V.
24.200	2.4314	0.49	Q	.	.	.	V.
24.217	2.4320	0.49	Q	.	.	.	V.
24.233	2.4327	0.49	Q	.	.	.	V.
24.250	2.4334	0.46	Q	.	.	.	V.
24.267	2.4339	0.43	Q	.	.	.	V.
24.283	2.4345	0.40	Q	.	.	.	V.
24.300	2.4350	0.36	Q	.	.	.	V.
24.317	2.4354	0.33	Q	.	.	.	V.
24.333	2.4359	0.30	Q	.	.	.	V.
24.350	2.4362	0.26	Q	.	.	.	V.
24.367	2.4365	0.23	Q	.	.	.	V.
24.383	2.4368	0.20	Q	.	.	.	V.
24.400	2.4370	0.17	Q	.	.	.	V.
24.417	2.4372	0.13	Q	.	.	.	V.

24.433	2.4374	0.10	Q	.	.	.	V.
24.450	2.4375	0.07	Q	.	.	.	V.
24.467	2.4375	0.04	Q	.	.	.	V

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1468.0
10%	545.0
20%	205.0
30%	130.0
40%	115.0
50%	95.0
60%	75.0
70%	55.0
80%	40.0
90%	20.0

FLOW PROCESS FROM NODE 101.00 TO NODE 102.00 IS CODE = 4

>>>>MODEL PIPEFLOW ROUTING OF STREAM #1<<<<<

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MODEL PIPEFLOW ROUTING OF STREAM 1 WHERE
 STORAGE EFFECTS ARE NEGLECTED WITHIN THE PIPE, FLOW
 VELOCITIES ARE ESTIMATED BY ASSUMING STEADY FLOW FOR
 EACH UNIT INTERVAL(NORMAL DEPTH, Dn), AND FLOWS IN EXCESS
 OF (.82)(DIAMETER) ARE PONDED AT THE UPSTREAM INLET:
 UNIT INTERVAL FLOW VELOCITY COMPUTED USING Dn UP TO
 (0.938)(DIAMETER):

PIPELENGTH(FT) = 1381.00 MANNINGS FACTOR = 0.013
 UPSTREAM ELEVATION(FT) = 1280.00
 DOWNSTREAM ELEVATION(FT) = 1245.00
 PIPE DIAMETER(FT) = 2.00

NORMAL DEPTH VELOCITY PIPE ROUTING RESULTS:

TIME (HRS)	INFLOW (CFS)	VELOCITY (FPS)	OUTFLOW (CFS)	UPSTREAM PONDING(AF)
10.000	0.83	2.75	0.83	0.000
10.017	0.83	2.76	0.83	0.000
10.033	0.83	2.76	0.83	0.000
10.050	0.84	2.77	0.83	0.000
10.067	0.84	2.77	0.84	0.000

10.083	0.84	2.78	0.84	0.000
10.100	0.84	2.79	0.84	0.000
10.117	0.84	2.79	0.84	0.000
10.133	0.84	2.80	0.84	0.000
10.150	0.85	2.80	0.84	0.000
10.167	0.85	2.81	0.84	0.000
10.183	0.85	2.81	0.85	0.000
10.200	0.85	2.82	0.85	0.000
10.217	0.85	2.83	0.85	0.000
10.233	0.86	2.83	0.86	0.000
10.250	0.86	2.84	0.86	0.000
10.267	0.86	2.84	0.86	0.000
10.283	0.86	2.85	0.86	0.000
10.300	0.86	2.85	0.86	0.000
10.317	0.86	2.85	0.86	0.000
10.333	0.86	2.86	0.87	0.000
10.350	0.86	2.86	0.87	0.000
10.367	0.86	2.86	0.87	0.000
10.383	0.87	2.87	0.87	0.000
10.400	0.87	2.87	0.87	0.000
10.417	0.87	2.87	0.87	0.000
10.433	0.87	2.88	0.87	0.000
10.450	0.87	2.88	0.87	0.000
10.467	0.87	2.88	0.87	0.000
10.483	0.87	2.88	0.87	0.000
10.500	0.87	2.89	0.87	0.000
10.517	0.87	2.89	0.87	0.000
10.533	0.87	2.90	0.87	0.000
10.550	0.88	2.90	0.88	0.000
10.567	0.88	2.91	0.88	0.000
10.583	0.88	2.92	0.88	0.000
10.600	0.88	2.92	0.88	0.000
10.617	0.88	2.93	0.88	0.000
10.633	0.89	2.94	0.88	0.000
10.650	0.89	2.94	0.89	0.000
10.667	0.89	2.95	0.89	0.000
10.683	0.89	2.96	0.89	0.000
10.700	0.89	2.96	0.89	0.000
10.717	0.90	2.97	0.90	0.000
10.733	0.90	2.98	0.90	0.000
10.750	0.90	2.98	0.90	0.000
10.767	0.90	2.99	0.90	0.000
10.783	0.90	2.99	0.90	0.000
10.800	0.91	3.00	0.91	0.000
10.817	0.91	3.00	0.91	0.000
10.833	0.91	3.00	0.91	0.000
10.850	0.91	3.01	0.91	0.000
10.867	0.91	3.01	0.91	0.000
10.883	0.91	3.01	0.92	0.000
10.900	0.91	3.02	0.91	0.000
10.917	0.91	3.02	0.91	0.000
10.933	0.91	3.03	0.91	0.000
10.950	0.91	3.03	0.91	0.000
10.967	0.92	3.03	0.92	0.000
10.983	0.92	3.04	0.92	0.000

11.000	0.92	3.04	0.92	0.000
11.017	0.92	3.04	0.92	0.000
11.033	0.92	3.05	0.92	0.000
11.050	0.92	3.06	0.92	0.000
11.067	0.93	3.06	0.92	0.000
11.083	0.93	3.07	0.92	0.000
11.100	0.93	3.08	0.92	0.000
11.117	0.93	3.09	0.93	0.000
11.133	0.93	3.10	0.93	0.000
11.150	0.94	3.10	0.93	0.000
11.167	0.94	3.11	0.94	0.000
11.183	0.94	3.12	0.94	0.000
11.200	0.94	3.13	0.94	0.000
11.217	0.95	3.13	0.95	0.000
11.233	0.95	3.14	0.95	0.000
11.250	0.95	3.15	0.95	0.000
11.267	0.95	3.16	0.95	0.000
11.283	0.96	3.16	0.96	0.000
11.300	0.96	3.17	0.96	0.000
11.317	0.96	3.17	0.96	0.000
11.333	0.96	3.17	0.96	0.000
11.350	0.96	3.18	0.97	0.000
11.367	0.96	3.18	0.97	0.000
11.383	0.96	3.19	0.97	0.000
11.400	0.96	3.19	0.97	0.000
11.417	0.97	3.19	0.97	0.000
11.433	0.97	3.20	0.97	0.000
11.450	0.97	3.20	0.97	0.000
11.467	0.97	3.21	0.97	0.000
11.483	0.97	3.21	0.97	0.000
11.500	0.97	3.22	0.97	0.000
11.517	0.97	3.22	0.97	0.000
11.533	0.97	3.23	0.97	0.000
11.550	0.98	3.24	0.98	0.000
11.567	0.98	3.25	0.98	0.000
11.583	0.98	3.25	0.98	0.000
11.600	0.99	3.26	0.98	0.000
11.617	0.99	3.27	0.98	0.000
11.633	0.99	3.28	0.98	0.000
11.650	0.99	3.29	0.99	0.000
11.667	1.00	3.30	1.00	0.000
11.683	1.00	3.31	1.00	0.000
11.700	1.00	3.32	1.00	0.000
11.717	1.00	3.33	1.00	0.000
11.733	1.01	3.34	1.01	0.000
11.750	1.01	3.34	1.02	0.000
11.767	1.01	3.35	1.03	0.000
11.783	1.01	3.36	1.02	0.000
11.800	1.02	3.36	1.02	0.000
11.817	1.02	3.37	1.02	0.000
11.833	1.02	3.37	1.02	0.000
11.850	1.02	3.38	1.03	0.000
11.867	1.02	3.38	1.03	0.000
11.883	1.02	3.39	1.03	0.000
11.900	1.03	3.39	1.03	0.000

11.917	1.03	3.40	1.03	0.000
11.933	1.03	3.40	1.03	0.000
11.950	1.03	3.41	1.03	0.000
11.967	1.03	3.41	1.03	0.000
11.983	1.03	3.42	1.03	0.000
12.000	1.03	3.42	1.03	0.000
12.017	1.04	3.43	1.04	0.000
12.033	1.04	3.46	1.04	0.000
12.050	1.05	3.49	1.04	0.000
12.067	1.07	3.53	1.04	0.000
12.083	1.08	3.56	1.04	0.000
12.100	1.09	3.59	1.04	0.000
12.117	1.10	3.63	1.05	0.000
12.133	1.11	3.66	1.09	0.000
12.150	1.12	3.70	1.12	0.000
12.167	1.13	3.73	1.13	0.000
12.183	1.14	3.76	1.14	0.000
12.200	1.15	3.80	1.15	0.000
12.217	1.16	3.83	1.16	0.000
12.233	1.17	3.87	1.17	0.000
12.250	1.18	3.90	1.18	0.000
12.267	1.19	3.93	1.19	0.000
12.283	1.19	3.94	1.20	0.000
12.300	1.19	3.95	1.21	0.000
12.317	1.20	3.96	1.28	0.000
12.333	1.20	3.96	1.24	0.000
12.350	1.20	3.97	1.24	0.000
12.367	1.20	3.97	1.21	0.000
12.383	1.20	3.98	1.20	0.000
12.400	1.20	3.99	1.20	0.000
12.417	1.21	3.99	1.21	0.000
12.433	1.21	4.00	1.21	0.000
12.450	1.21	4.00	1.21	0.000
12.467	1.21	4.01	1.21	0.000
12.483	1.21	4.02	1.21	0.000
12.500	1.22	4.02	1.22	0.000
12.517	1.22	4.03	1.22	0.000
12.533	1.22	4.04	1.22	0.000
12.550	1.23	4.06	1.22	0.000
12.567	1.23	4.07	1.22	0.000
12.583	1.23	4.08	1.22	0.000
12.600	1.24	4.10	1.23	0.000
12.617	1.24	4.11	1.24	0.000
12.633	1.25	4.12	1.25	0.000
12.650	1.25	4.14	1.25	0.000
12.667	1.25	4.15	1.25	0.000
12.683	1.26	4.16	1.26	0.000
12.700	1.26	4.18	1.26	0.000
12.717	1.27	4.19	1.27	0.000
12.733	1.27	4.20	1.27	0.000
12.750	1.27	4.22	1.27	0.000
12.767	1.28	4.23	1.28	0.000
12.783	1.28	4.24	1.28	0.000
12.800	1.28	4.24	1.29	0.000
12.817	1.28	4.25	1.29	0.000

12.833	1.29	4.26	1.29	0.000
12.850	1.29	4.27	1.30	0.000
12.867	1.29	4.27	1.29	0.000
12.883	1.29	4.28	1.29	0.000
12.900	1.30	4.29	1.30	0.000
12.917	1.30	4.30	1.30	0.000
12.933	1.30	4.30	1.30	0.000
12.950	1.30	4.31	1.30	0.000
12.967	1.30	4.32	1.30	0.000
12.983	1.31	4.33	1.31	0.000
13.000	1.31	4.33	1.31	0.000
13.017	1.31	4.34	1.31	0.000
13.033	1.32	4.36	1.31	0.000
13.050	1.32	4.38	1.32	0.000
13.067	1.33	4.39	1.32	0.000
13.083	1.33	4.41	1.32	0.000
13.100	1.34	4.43	1.32	0.000
13.117	1.34	4.44	1.34	0.000
13.133	1.35	4.46	1.35	0.000
13.150	1.35	4.48	1.35	0.000
13.167	1.36	4.49	1.36	0.000
13.183	1.36	4.51	1.36	0.000
13.200	1.37	4.53	1.37	0.000
13.217	1.37	4.54	1.37	0.000
13.233	1.38	4.56	1.38	0.000
13.250	1.38	4.58	1.38	0.000
13.267	1.39	4.59	1.39	0.000
13.283	1.39	4.60	1.39	0.000
13.300	1.39	4.61	1.40	0.000
13.317	1.40	4.62	1.40	0.000
13.333	1.40	4.63	1.41	0.000
13.350	1.40	4.64	1.41	0.000
13.367	1.41	4.65	1.42	0.000
13.383	1.41	4.66	1.41	0.000
13.400	1.41	4.67	1.41	0.000
13.417	1.41	4.68	1.41	0.000
13.433	1.42	4.69	1.42	0.000
13.450	1.42	4.70	1.42	0.000
13.467	1.42	4.71	1.42	0.000
13.483	1.43	4.72	1.43	0.000
13.500	1.43	4.73	1.43	0.000
13.517	1.43	4.74	1.43	0.000
13.533	1.44	4.76	1.43	0.000
13.550	1.44	4.78	1.44	0.000
13.567	1.45	4.80	1.44	0.000
13.583	1.46	4.83	1.45	0.000
13.600	1.46	4.85	1.46	0.000
13.617	1.47	4.87	1.47	0.000
13.633	1.48	4.89	1.48	0.000
13.650	1.48	4.92	1.48	0.000
13.667	1.49	4.94	1.49	0.000
13.683	1.50	4.96	1.50	0.000
13.700	1.50	4.98	1.50	0.000
13.717	1.51	5.00	1.51	0.000
13.733	1.52	5.03	1.52	0.000

13.750	1.52	5.05	1.52	0.000
13.767	1.53	5.07	1.53	0.000
13.783	1.53	5.08	1.54	0.000
13.800	1.54	5.09	1.54	0.000
13.817	1.54	5.11	1.55	0.000
13.833	1.55	5.12	1.56	0.000
13.850	1.55	5.13	1.55	0.000
13.867	1.55	5.15	1.55	0.000
13.883	1.56	5.16	1.56	0.000
13.900	1.56	5.17	1.56	0.000
13.917	1.57	5.18	1.57	0.000
13.933	1.57	5.20	1.57	0.000
13.950	1.57	5.21	1.57	0.000
13.967	1.58	5.22	1.58	0.000
13.983	1.58	5.24	1.58	0.000
14.000	1.59	5.25	1.59	0.000
14.017	1.59	5.27	1.59	0.000
14.033	1.60	5.30	1.59	0.000
14.050	1.61	5.33	1.60	0.000
14.067	1.62	5.36	1.60	0.000
14.083	1.63	5.39	1.61	0.000
14.100	1.64	5.42	1.64	0.000
14.117	1.65	5.46	1.65	0.000
14.133	1.66	5.49	1.66	0.000
14.150	1.67	5.52	1.67	0.000
14.167	1.68	5.55	1.68	0.000
14.183	1.69	5.58	1.69	0.000
14.200	1.70	5.62	1.70	0.000
14.217	1.71	5.65	1.71	0.000
14.233	1.72	5.68	1.72	0.000
14.250	1.73	5.71	1.73	0.000
14.267	1.73	5.74	1.74	0.000
14.283	1.74	5.76	1.74	0.000
14.300	1.75	5.78	1.75	0.000
14.317	1.75	5.80	1.76	0.000
14.333	1.76	5.82	1.78	0.000
14.350	1.76	5.83	1.78	0.000
14.367	1.77	5.85	1.77	0.000
14.383	1.77	5.87	1.77	0.000
14.400	1.78	5.89	1.78	0.000
14.417	1.78	5.91	1.78	0.000
14.433	1.79	5.93	1.79	0.000
14.450	1.80	5.95	1.80	0.000
14.467	1.80	5.96	1.80	0.000
14.483	1.81	5.97	1.81	0.000
14.500	1.81	5.97	1.81	0.000
14.517	1.82	5.98	1.82	0.000
14.533	1.83	5.99	1.81	0.000
14.550	1.85	6.00	1.81	0.000
14.567	1.86	6.00	1.82	0.000
14.583	1.88	6.01	1.83	0.000
14.600	1.89	6.02	1.85	0.000
14.617	1.91	6.03	1.86	0.000
14.633	1.92	6.04	1.88	0.000
14.650	1.93	6.05	1.89	0.000

14.667	1.95	6.06	1.91	0.000
14.683	1.96	6.07	1.92	0.000
14.700	1.98	6.08	1.93	0.000
14.717	1.99	6.09	1.95	0.000
14.733	2.00	6.10	1.96	0.000
14.750	2.02	6.11	1.98	0.000
14.767	2.03	6.12	1.99	0.000
14.783	2.04	6.13	2.01	0.000
14.800	2.05	6.14	2.02	0.000
14.817	2.06	6.14	2.03	0.000
14.833	2.07	6.15	2.04	0.000
14.850	2.08	6.15	2.05	0.000
14.867	2.09	6.16	2.06	0.000
14.883	2.09	6.17	2.07	0.000
14.900	2.10	6.17	2.08	0.000
14.917	2.11	6.18	2.09	0.000
14.933	2.12	6.19	2.10	0.000
14.950	2.13	6.19	2.11	0.000
14.967	2.14	6.20	2.11	0.000
14.983	2.15	6.21	2.12	0.000
15.000	2.16	6.21	2.13	0.000
15.017	2.17	6.22	2.14	0.000
15.033	2.20	6.24	2.15	0.000
15.050	2.22	6.26	2.16	0.000
15.067	2.25	6.28	2.18	0.000
15.083	2.27	6.29	2.20	0.000
15.100	2.30	6.31	2.23	0.000
15.117	2.33	6.33	2.26	0.000
15.133	2.35	6.35	2.28	0.000
15.150	2.38	6.36	2.31	0.000
15.167	2.40	6.38	2.33	0.000
15.183	2.43	6.40	2.36	0.000
15.200	2.45	6.42	2.38	0.000
15.217	2.48	6.44	2.41	0.000
15.233	2.50	6.45	2.44	0.000
15.250	2.53	6.47	2.46	0.000
15.267	2.55	6.49	2.49	0.000
15.283	2.57	6.50	2.51	0.000
15.300	2.59	6.51	2.54	0.000
15.317	2.61	6.53	2.56	0.000
15.333	2.63	6.54	2.58	0.000
15.350	2.65	6.55	2.60	0.000
15.367	2.67	6.57	2.62	0.000
15.383	2.68	6.58	2.64	0.000
15.400	2.70	6.59	2.66	0.000
15.417	2.72	6.61	2.68	0.000
15.433	2.74	6.62	2.69	0.000
15.450	2.76	6.63	2.71	0.000
15.467	2.78	6.65	2.73	0.000
15.483	2.80	6.66	2.75	0.000
15.500	2.82	6.67	2.77	0.000
15.517	2.87	6.71	2.79	0.000
15.533	2.96	6.77	2.81	0.000
15.550	3.05	6.83	2.83	0.000
15.567	3.14	6.90	2.90	0.000

15.583	3.23	6.96	3.01	0.000
15.600	3.31	7.02	3.11	0.000
15.617	3.40	7.08	3.20	0.000
15.633	3.49	7.15	3.29	0.000
15.650	3.58	7.21	3.39	0.000
15.667	3.67	7.26	3.48	0.000
15.683	3.76	7.31	3.57	0.000
15.700	3.85	7.36	3.66	0.000
15.717	3.94	7.41	3.74	0.000
15.733	4.03	7.46	3.83	0.000
15.750	4.12	7.50	3.92	0.000
15.767	4.20	7.55	4.01	0.000
15.783	4.28	7.59	4.10	0.000
15.800	4.35	7.63	4.20	0.000
15.817	4.43	7.67	4.27	0.000
15.833	4.50	7.71	4.34	0.000
15.850	4.57	7.75	4.42	0.000
15.867	4.65	7.79	4.56	0.000
15.883	4.72	7.83	4.58	0.000
15.900	4.79	7.87	4.65	0.000
15.917	4.87	7.91	4.72	0.000
15.933	4.94	7.95	4.80	0.000
15.950	5.02	7.99	4.87	0.000
15.967	5.09	8.03	4.95	0.000
15.983	5.16	8.07	5.02	0.000
16.000	5.24	8.11	5.10	0.000
16.017	5.82	8.37	5.17	0.000
16.033	6.93	8.83	5.25	0.000
16.050	8.03	9.22	5.85	0.000
16.067	9.13	9.58	7.08	0.000
16.083	10.23	9.91	8.24	0.000
16.100	11.34	10.20	9.44	0.000
16.117	12.44	10.42	10.62	0.000
16.133	13.54	10.65	11.71	0.000
16.150	14.64	10.87	12.76	0.000
16.167	15.74	11.05	13.96	0.000
16.183	16.85	11.24	15.10	0.000
16.200	17.95	11.45	16.14	0.000
16.217	19.05	11.63	17.37	0.000
16.233	20.15	11.79	18.97	0.000
16.250	21.76	11.99	19.80	0.000
16.267	21.10	11.92	20.94	0.000
16.283	19.88	11.76	21.44	0.000
16.300	18.67	11.57	20.51	0.000
16.317	17.45	11.36	19.23	0.000
16.333	16.23	11.13	18.47	0.000
16.350	15.02	10.93	16.99	0.000
16.367	13.80	10.71	15.58	0.000
16.383	12.58	10.45	14.55	0.000
16.400	11.37	10.20	13.32	0.000
16.417	10.15	9.89	12.10	0.000
16.433	8.93	9.51	11.00	0.000
16.450	7.72	9.11	9.73	0.000
16.467	6.50	8.65	8.51	0.000
16.483	5.28	8.13	7.40	0.000

16.500	4.07	7.48	6.26	0.000
16.517	3.51	7.16	5.19	0.000
16.533	3.43	7.10	4.39	0.000
16.550	3.35	7.04	3.75	0.000
16.567	3.26	6.99	3.08	0.000
16.583	3.18	6.93	3.36	0.000
16.600	3.10	6.87	3.28	0.000
16.617	3.02	6.81	3.20	0.000
16.633	2.94	6.76	3.12	0.000
16.650	2.85	6.70	3.04	0.000
16.667	2.77	6.64	2.96	0.000
16.683	2.69	6.58	2.88	0.000
16.700	2.61	6.53	2.80	0.000
16.717	2.53	6.47	2.73	0.000
16.733	2.44	6.41	2.65	0.000
16.750	2.36	6.36	2.57	0.000
16.767	2.31	6.32	2.49	0.000
16.783	2.29	6.30	2.41	0.000
16.800	2.26	6.28	2.34	0.000
16.817	2.23	6.26	2.30	0.000
16.833	2.20	6.24	2.28	0.000
16.850	2.18	6.22	2.25	0.000
16.867	2.15	6.20	2.22	0.000
16.883	2.12	6.18	2.20	0.000
16.900	2.09	6.16	2.17	0.000
16.917	2.06	6.15	2.14	0.000
16.933	2.04	6.13	2.11	0.000
16.950	2.01	6.11	2.09	0.000
16.967	1.98	6.09	2.06	0.000
16.983	1.95	6.07	2.03	0.000
17.000	1.92	6.05	2.00	0.000
17.017	1.90	6.03	1.98	0.000
17.033	1.89	6.02	1.95	0.000
17.050	1.87	6.01	1.92	0.000
17.067	1.85	6.00	1.90	0.000
17.083	1.83	5.98	1.88	0.000
17.100	1.82	5.97	1.87	0.000
17.117	1.80	5.95	1.85	0.000
17.133	1.78	5.90	1.83	0.000
17.150	1.76	5.84	1.82	0.000
17.167	1.75	5.78	1.79	0.000
17.183	1.73	5.72	1.73	0.000
17.200	1.71	5.66	1.71	0.000
17.217	1.69	5.61	1.69	0.000
17.233	1.68	5.55	1.71	0.000
17.250	1.66	5.49	1.69	0.000
17.267	1.65	5.45	1.64	0.000
17.283	1.63	5.41	1.62	0.000
17.300	1.62	5.37	1.61	0.000
17.317	1.61	5.33	1.59	0.000
17.333	1.60	5.29	1.59	0.000
17.350	1.59	5.25	1.59	0.000
17.367	1.58	5.21	1.58	0.000
17.383	1.56	5.18	1.56	0.000
17.400	1.55	5.14	1.55	0.000

17.417	1.54	5.10	1.54	0.000
17.433	1.53	5.06	1.53	0.000
17.450	1.52	5.02	1.52	0.000
17.467	1.50	4.98	1.50	0.000
17.483	1.49	4.94	1.49	0.000
17.500	1.48	4.90	1.48	0.000
17.517	1.47	4.87	1.47	0.000
17.533	1.46	4.84	1.46	0.000
17.550	1.45	4.81	1.45	0.000
17.567	1.45	4.79	1.43	0.000
17.583	1.44	4.76	1.43	0.000
17.600	1.43	4.73	1.43	0.000
17.617	1.42	4.70	1.42	0.000
17.633	1.41	4.67	1.41	0.000
17.650	1.40	4.64	1.40	0.000
17.667	1.39	4.61	1.39	0.000
17.683	1.38	4.58	1.38	0.000
17.700	1.38	4.55	1.38	0.000
17.717	1.37	4.53	1.37	0.000
17.733	1.36	4.50	1.36	0.000
17.750	1.35	4.47	1.38	0.000
17.767	1.34	4.44	1.36	0.000
17.783	1.34	4.42	1.33	0.000
17.800	1.33	4.40	1.32	0.000
17.817	1.32	4.38	1.31	0.000
17.833	1.32	4.35	1.31	0.000
17.850	1.31	4.33	1.31	0.000
17.867	1.30	4.31	1.30	0.000
17.883	1.30	4.29	1.30	0.000
17.900	1.29	4.26	1.29	0.000
17.917	1.28	4.24	1.28	0.000
17.933	1.27	4.22	1.27	0.000
17.950	1.27	4.20	1.27	0.000
17.967	1.26	4.17	1.26	0.000
17.983	1.25	4.15	1.25	0.000
18.000	1.25	4.13	1.25	0.000
18.017	1.24	4.09	1.24	0.000
18.033	1.22	4.05	1.23	0.000
18.050	1.21	4.01	1.23	0.000
18.067	1.20	3.97	1.22	0.000
18.083	1.19	3.93	1.21	0.000
18.100	1.18	3.89	1.18	0.000
18.117	1.16	3.85	1.16	0.000
18.133	1.15	3.81	1.15	0.000
18.150	1.14	3.77	1.14	0.000
18.167	1.13	3.73	1.13	0.000
18.183	1.12	3.70	1.12	0.000
18.200	1.10	3.66	1.10	0.000
18.217	1.09	3.62	1.13	0.000
18.233	1.08	3.58	1.11	0.000
18.250	1.07	3.54	1.07	0.000
18.267	1.06	3.52	1.06	0.000
18.283	1.06	3.50	1.04	0.000
18.300	1.05	3.48	1.03	0.000
18.317	1.05	3.47	1.02	0.000

18.333	1.04	3.45	1.01	0.000
18.350	1.04	3.43	1.00	0.000
18.367	1.03	3.42	1.02	0.000
18.383	1.03	3.40	1.03	0.000
18.400	1.02	3.39	1.02	0.000
18.417	1.02	3.37	1.02	0.000
18.433	1.01	3.35	1.01	0.000
18.450	1.01	3.34	1.01	0.000
18.467	1.00	3.32	1.00	0.000
18.483	1.00	3.30	1.00	0.000
18.500	0.99	3.29	0.99	0.000
18.517	0.99	3.27	0.99	0.000
18.533	0.99	3.26	0.98	0.000
18.550	0.98	3.25	0.98	0.000
18.567	0.98	3.24	0.97	0.000
18.583	0.97	3.23	0.97	0.000
18.600	0.97	3.21	0.96	0.000
18.617	0.97	3.20	0.99	0.000
18.633	0.96	3.19	0.96	0.000
18.650	0.96	3.18	0.96	0.000
18.667	0.96	3.16	0.96	0.000
18.683	0.95	3.15	0.95	0.000
18.700	0.95	3.14	0.95	0.000
18.717	0.94	3.13	0.94	0.000
18.733	0.94	3.11	0.94	0.000
18.750	0.94	3.10	0.94	0.000
18.767	0.93	3.09	0.93	0.000
18.783	0.93	3.08	0.93	0.000
18.800	0.93	3.07	0.93	0.000
18.817	0.92	3.06	0.92	0.000
18.833	0.92	3.05	0.92	0.000
18.850	0.92	3.04	0.91	0.000
18.867	0.91	3.03	0.91	0.000
18.883	0.91	3.01	0.91	0.000
18.900	0.91	3.00	0.91	0.000
18.917	0.90	2.99	0.90	0.000
18.933	0.90	2.98	0.90	0.000
18.950	0.90	2.97	0.90	0.000
18.967	0.89	2.96	0.89	0.000
18.983	0.89	2.95	0.89	0.000
19.000	0.89	2.94	0.89	0.000
19.017	0.89	2.93	0.88	0.000
19.033	0.88	2.92	0.88	0.000
19.050	0.88	2.91	0.88	0.000
19.067	0.88	2.90	0.88	0.000
19.083	0.87	2.89	0.87	0.000
19.100	0.87	2.88	0.87	0.000
19.117	0.87	2.88	0.87	0.000
19.133	0.87	2.87	0.87	0.000
19.150	0.86	2.86	0.86	0.000
19.167	0.86	2.85	0.86	0.000
19.183	0.86	2.84	0.86	0.000
19.200	0.85	2.83	0.85	0.000
19.217	0.85	2.82	0.85	0.000
19.233	0.85	2.81	0.85	0.000

19.250	0.85	2.80	0.86	0.000
19.267	0.84	2.79	0.84	0.000
19.283	0.84	2.78	0.84	0.000
19.300	0.84	2.78	0.84	0.000
19.317	0.84	2.77	0.83	0.000
19.333	0.83	2.76	0.83	0.000
19.350	0.83	2.75	0.83	0.000
19.367	0.83	2.74	0.83	0.000
19.383	0.83	2.74	0.82	0.000
19.400	0.82	2.73	0.82	0.000
19.417	0.82	2.72	0.82	0.000
19.433	0.82	2.71	0.82	0.000
19.450	0.82	2.70	0.82	0.000
19.467	0.81	2.69	0.81	0.000
19.483	0.81	2.69	0.81	0.000
19.500	0.81	2.68	0.81	0.000
19.517	0.81	2.67	0.81	0.000
19.533	0.80	2.66	0.80	0.000
19.550	0.80	2.66	0.80	0.000
19.567	0.80	2.65	0.80	0.000
19.583	0.80	2.64	0.80	0.000
19.600	0.80	2.64	0.79	0.000
19.617	0.79	2.63	0.79	0.000
19.633	0.79	2.62	0.79	0.000
19.650	0.79	2.61	0.79	0.000
19.667	0.79	2.61	0.79	0.000
19.683	0.79	2.60	0.79	0.000
19.700	0.78	2.59	0.78	0.000
19.717	0.78	2.58	0.78	0.000
19.733	0.78	2.58	0.78	0.000
19.750	0.78	2.57	0.78	0.000
19.767	0.77	2.56	0.77	0.000
19.783	0.77	2.56	0.77	0.000
19.800	0.77	2.55	0.77	0.000
19.817	0.77	2.54	0.77	0.000
19.833	0.77	2.54	0.77	0.000
19.850	0.76	2.53	0.76	0.000
19.867	0.76	2.52	0.76	0.000
19.883	0.76	2.52	0.76	0.000
19.900	0.76	2.51	0.76	0.000
19.917	0.76	2.51	0.76	0.000
19.933	0.75	2.50	0.77	0.000
19.950	0.75	2.49	0.75	0.000
19.967	0.75	2.49	0.75	0.000
19.983	0.75	2.48	0.75	0.000
20.000	0.75	2.47	0.75	0.000
20.017	0.75	2.47	0.75	0.000
20.033	0.74	2.46	0.74	0.000
20.050	0.74	2.46	0.74	0.000
20.067	0.74	2.45	0.74	0.000
20.083	0.74	2.44	0.74	0.000
20.100	0.74	2.44	0.74	0.000
20.117	0.73	2.43	0.73	0.000
20.133	0.73	2.43	0.73	0.000
20.150	0.73	2.42	0.73	0.000

20.167	0.73	2.41	0.73	0.000
20.183	0.73	2.41	0.73	0.000
20.200	0.73	2.40	0.73	0.000
20.217	0.72	2.40	0.72	0.000
20.233	0.72	2.39	0.72	0.000
20.250	0.72	2.39	0.72	0.000
20.267	0.72	2.38	0.72	0.000
20.283	0.72	2.37	0.72	0.000
20.300	0.72	2.37	0.72	0.000
20.317	0.71	2.36	0.71	0.000
20.333	0.71	2.36	0.71	0.000
20.350	0.71	2.35	0.71	0.000
20.367	0.71	2.35	0.71	0.000
20.383	0.71	2.34	0.71	0.000
20.400	0.71	2.34	0.71	0.000
20.417	0.70	2.33	0.70	0.000
20.433	0.70	2.33	0.70	0.000
20.450	0.70	2.32	0.70	0.000
20.467	0.70	2.32	0.70	0.000
20.483	0.70	2.31	0.70	0.000
20.500	0.70	2.31	0.70	0.000
20.517	0.70	2.30	0.69	0.000
20.533	0.69	2.30	0.69	0.000
20.550	0.69	2.29	0.69	0.000
20.567	0.69	2.29	0.69	0.000
20.583	0.69	2.28	0.69	0.000
20.600	0.69	2.28	0.69	0.000
20.617	0.69	2.27	0.69	0.000
20.633	0.68	2.27	0.68	0.000
20.650	0.68	2.26	0.68	0.000
20.667	0.68	2.26	0.68	0.000
20.683	0.68	2.25	0.69	0.000
20.700	0.68	2.25	0.68	0.000
20.717	0.68	2.24	0.68	0.000
20.733	0.68	2.24	0.68	0.000
20.750	0.67	2.23	0.67	0.000
20.767	0.67	2.23	0.67	0.000
20.783	0.67	2.22	0.67	0.000
20.800	0.67	2.22	0.67	0.000
20.817	0.67	2.22	0.67	0.000
20.833	0.67	2.21	0.67	0.000
20.850	0.67	2.21	0.67	0.000
20.867	0.67	2.20	0.66	0.000
20.883	0.66	2.20	0.66	0.000
20.900	0.66	2.19	0.66	0.000
20.917	0.66	2.19	0.66	0.000
20.933	0.66	2.18	0.66	0.000
20.950	0.66	2.18	0.66	0.000
20.967	0.66	2.18	0.66	0.000
20.983	0.66	2.17	0.66	0.000
21.000	0.65	2.17	0.65	0.000
21.017	0.65	2.16	0.65	0.000
21.033	0.65	2.16	0.65	0.000
21.050	0.65	2.15	0.65	0.000
21.067	0.65	2.15	0.65	0.000

21.083	0.65	2.15	0.65	0.000
21.100	0.65	2.14	0.65	0.000
21.117	0.65	2.14	0.65	0.000
21.133	0.64	2.13	0.64	0.000
21.150	0.64	2.13	0.64	0.000
21.167	0.64	2.13	0.64	0.000
21.183	0.64	2.12	0.64	0.000
21.200	0.64	2.12	0.64	0.000
21.217	0.64	2.11	0.64	0.000
21.233	0.64	2.11	0.64	0.000
21.250	0.64	2.11	0.64	0.000
21.267	0.63	2.10	0.63	0.000
21.283	0.63	2.10	0.63	0.000
21.300	0.63	2.09	0.63	0.000
21.317	0.63	2.09	0.63	0.000
21.333	0.63	2.09	0.63	0.000
21.350	0.63	2.08	0.63	0.000
21.367	0.63	2.08	0.63	0.000
21.383	0.63	2.08	0.63	0.000
21.400	0.63	2.07	0.62	0.000
21.417	0.62	2.07	0.62	0.000
21.433	0.62	2.06	0.62	0.000
21.450	0.62	2.06	0.62	0.000
21.467	0.62	2.06	0.62	0.000
21.483	0.62	2.05	0.63	0.000
21.500	0.62	2.05	0.62	0.000
21.517	0.62	2.05	0.62	0.000
21.533	0.62	2.04	0.62	0.000
21.550	0.62	2.04	0.62	0.000
21.567	0.61	2.03	0.61	0.000
21.583	0.61	2.03	0.61	0.000
21.600	0.61	2.03	0.61	0.000
21.617	0.61	2.02	0.61	0.000
21.633	0.61	2.02	0.61	0.000
21.650	0.61	2.02	0.61	0.000
21.667	0.61	2.01	0.61	0.000
21.683	0.61	2.01	0.61	0.000
21.700	0.61	2.01	0.61	0.000
21.717	0.60	2.00	0.60	0.000
21.733	0.60	2.00	0.60	0.000
21.750	0.60	2.00	0.60	0.000
21.767	0.60	1.99	0.60	0.000
21.783	0.60	1.99	0.60	0.000
21.800	0.60	1.99	0.60	0.000
21.817	0.60	1.98	0.60	0.000
21.833	0.60	1.98	0.60	0.000
21.850	0.60	1.98	0.60	0.000
21.867	0.60	1.97	0.60	0.000
21.883	0.59	1.97	0.59	0.000
21.900	0.59	1.97	0.59	0.000
21.917	0.59	1.96	0.59	0.000
21.933	0.59	1.96	0.59	0.000
21.950	0.59	1.96	0.59	0.000
21.967	0.59	1.95	0.59	0.000
21.983	0.59	1.95	0.59	0.000

22.000	0.59	1.95	0.59	0.000
22.017	0.59	1.94	0.59	0.000
22.033	0.59	1.94	0.59	0.000
22.050	0.59	1.94	0.59	0.000
22.067	0.58	1.93	0.58	0.000
22.083	0.58	1.93	0.58	0.000
22.100	0.58	1.93	0.58	0.000
22.117	0.58	1.93	0.58	0.000
22.133	0.58	1.92	0.58	0.000
22.150	0.58	1.92	0.58	0.000
22.167	0.58	1.92	0.58	0.000
22.183	0.58	1.91	0.58	0.000
22.200	0.58	1.91	0.58	0.000
22.217	0.58	1.91	0.58	0.000
22.233	0.58	1.90	0.58	0.000
22.250	0.57	1.90	0.57	0.000
22.267	0.57	1.90	0.57	0.000
22.283	0.57	1.90	0.57	0.000
22.300	0.57	1.89	0.57	0.000
22.317	0.57	1.89	0.57	0.000
22.333	0.57	1.89	0.57	0.000
22.350	0.57	1.88	0.58	0.000
22.367	0.57	1.88	0.57	0.000
22.383	0.57	1.88	0.57	0.000
22.400	0.57	1.87	0.57	0.000
22.417	0.57	1.87	0.56	0.000
22.433	0.56	1.87	0.56	0.000
22.450	0.56	1.87	0.56	0.000
22.467	0.56	1.86	0.56	0.000
22.483	0.56	1.86	0.56	0.000
22.500	0.56	1.86	0.56	0.000
22.517	0.56	1.86	0.56	0.000
22.533	0.56	1.85	0.56	0.000
22.550	0.56	1.85	0.56	0.000
22.567	0.56	1.85	0.56	0.000
22.583	0.56	1.84	0.56	0.000
22.600	0.56	1.84	0.56	0.000
22.617	0.56	1.84	0.56	0.000
22.633	0.55	1.84	0.55	0.000
22.650	0.55	1.83	0.55	0.000
22.667	0.55	1.83	0.55	0.000
22.683	0.55	1.83	0.55	0.000
22.700	0.55	1.83	0.55	0.000
22.717	0.55	1.82	0.55	0.000
22.733	0.55	1.82	0.55	0.000
22.750	0.55	1.82	0.55	0.000
22.767	0.55	1.81	0.55	0.000
22.783	0.55	1.81	0.55	0.000
22.800	0.55	1.81	0.55	0.000
22.817	0.55	1.81	0.55	0.000
22.833	0.55	1.80	0.54	0.000
22.850	0.54	1.80	0.54	0.000
22.867	0.54	1.80	0.54	0.000
22.883	0.54	1.80	0.54	0.000
22.900	0.54	1.79	0.54	0.000

22.917	0.54	1.79	0.54	0.000
22.933	0.54	1.79	0.54	0.000
22.950	0.54	1.79	0.54	0.000
22.967	0.54	1.78	0.54	0.000
22.983	0.54	1.78	0.54	0.000
23.000	0.54	1.78	0.54	0.000
23.017	0.54	1.78	0.54	0.000
23.033	0.54	1.77	0.54	0.000
23.050	0.54	1.77	0.54	0.000
23.067	0.53	1.77	0.53	0.000
23.083	0.53	1.77	0.53	0.000
23.100	0.53	1.76	0.53	0.000
23.117	0.53	1.76	0.53	0.000
23.133	0.53	1.76	0.53	0.000
23.150	0.53	1.76	0.53	0.000
23.167	0.53	1.76	0.53	0.000
23.183	0.53	1.75	0.53	0.000
23.200	0.53	1.75	0.53	0.000
23.217	0.53	1.75	0.53	0.000
23.233	0.53	1.75	0.53	0.000
23.250	0.53	1.74	0.53	0.000
23.267	0.53	1.74	0.53	0.000
23.283	0.53	1.74	0.53	0.000
23.300	0.52	1.74	0.52	0.000
23.317	0.52	1.73	0.52	0.000
23.333	0.52	1.73	0.52	0.000
23.350	0.52	1.73	0.52	0.000
23.367	0.52	1.73	0.52	0.000
23.383	0.52	1.73	0.52	0.000
23.400	0.52	1.72	0.52	0.000
23.417	0.52	1.72	0.52	0.000
23.433	0.52	1.72	0.52	0.000
23.450	0.52	1.72	0.52	0.000
23.467	0.52	1.71	0.52	0.000
23.483	0.52	1.71	0.52	0.000
23.500	0.52	1.71	0.52	0.000
23.517	0.52	1.71	0.52	0.000
23.533	0.52	1.71	0.51	0.000
23.550	0.51	1.70	0.51	0.000
23.567	0.51	1.70	0.51	0.000
23.583	0.51	1.70	0.51	0.000
23.600	0.51	1.70	0.51	0.000
23.617	0.51	1.69	0.51	0.000
23.633	0.51	1.69	0.51	0.000
23.650	0.51	1.69	0.51	0.000
23.667	0.51	1.69	0.51	0.000
23.683	0.51	1.69	0.51	0.000
23.700	0.51	1.68	0.51	0.000
23.717	0.51	1.68	0.51	0.000
23.733	0.51	1.68	0.51	0.000
23.750	0.51	1.68	0.51	0.000
23.767	0.51	1.68	0.51	0.000
23.783	0.51	1.67	0.51	0.000
23.800	0.50	1.67	0.50	0.000
23.817	0.50	1.67	0.50	0.000

23.833	0.50	1.67	0.50	0.000
23.850	0.50	1.66	0.50	0.000
23.867	0.50	1.66	0.50	0.000
23.883	0.50	1.66	0.50	0.000
23.900	0.50	1.66	0.50	0.000
23.917	0.50	1.66	0.50	0.000
23.933	0.50	1.65	0.50	0.000
23.950	0.50	1.65	0.50	0.000
23.967	0.50	1.65	0.50	0.000
23.983	0.50	1.65	0.50	0.000
24.000	0.50	1.65	0.50	0.000

FLOW PROCESS FROM NODE 200.00 TO NODE 201.00 IS CODE = 1.2

>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<

(SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #2)

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA(ACRES) = 18.29
SOIL-LOSS RATE, Fm,(INCH/HR) = 0.352
LOW LOSS FRACTION = 0.466
TIME OF CONCENTRATION(MIN.) = 14.82
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY(YEARS) = 10
5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.20
30-MINUTE POINT RAINFALL VALUE(INCHES) = 0.52
1-HOUR POINT RAINFALL VALUE(INCHES) = 0.75
3-HOUR POINT RAINFALL VALUE(INCHES) = 1.27
6-HOUR POINT RAINFALL VALUE(INCHES) = 1.77
24-HOUR POINT RAINFALL VALUE(INCHES) = 3.24

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 2.47
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 2.47

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)
(Notes: Time indicated is at END of Each Unit Intervals.
Peak 5-minute rainfall intensity is modeled as
a constant value for entire 5-minute period.)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	4.5	9.0	13.5	18.0
-----------	------------	--------	----	-----	-----	------	------

0.017	0.0000	0.02	Q	.	.	.	.
0.033	0.0001	0.07	Q	.	.	.	.
0.050	0.0003	0.11	Q	.	.	.	.
0.067	0.0005	0.16	Q	.	.	.	.
0.083	0.0008	0.20	Q	.	.	.	.
0.100	0.0011	0.25	Q	.	.	.	.
0.117	0.0015	0.29	Q	.	.	.	.
0.133	0.0020	0.34	Q	.	.	.	.
0.150	0.0025	0.38	Q	.	.	.	.
0.167	0.0031	0.43	Q	.	.	.	.
0.183	0.0037	0.47	VQ	.	.	.	.
0.200	0.0044	0.51	VQ	.	.	.	.
0.217	0.0052	0.52	VQ	.	.	.	.
0.233	0.0059	0.52	VQ	.	.	.	.
0.250	0.0066	0.52	VQ	.	.	.	.
0.267	0.0073	0.52	VQ	.	.	.	.
0.283	0.0080	0.52	VQ	.	.	.	.
0.300	0.0087	0.52	VQ	.	.	.	.
0.317	0.0095	0.52	VQ	.	.	.	.
0.333	0.0102	0.52	VQ	.	.	.	.
0.350	0.0109	0.52	VQ	.	.	.	.
0.367	0.0116	0.52	VQ	.	.	.	.
0.383	0.0123	0.52	VQ	.	.	.	.
0.400	0.0130	0.52	VQ	.	.	.	.
0.417	0.0138	0.52	VQ	.	.	.	.
0.433	0.0145	0.52	VQ	.	.	.	.
0.450	0.0152	0.52	VQ	.	.	.	.
0.467	0.0159	0.52	VQ	.	.	.	.
0.483	0.0166	0.52	VQ	.	.	.	.
0.500	0.0174	0.52	VQ	.	.	.	.
0.517	0.0181	0.52	VQ	.	.	.	.
0.533	0.0188	0.52	VQ	.	.	.	.
0.550	0.0195	0.52	VQ	.	.	.	.
0.567	0.0202	0.52	VQ	.	.	.	.
0.583	0.0210	0.52	VQ	.	.	.	.
0.600	0.0217	0.52	VQ	.	.	.	.
0.617	0.0224	0.52	VQ	.	.	.	.
0.633	0.0231	0.52	VQ	.	.	.	.
0.650	0.0239	0.53	VQ	.	.	.	.
0.667	0.0246	0.53	VQ	.	.	.	.
0.683	0.0253	0.53	VQ	.	.	.	.
0.700	0.0260	0.53	VQ	.	.	.	.
0.717	0.0268	0.53	VQ	.	.	.	.
0.733	0.0275	0.53	VQ	.	.	.	.
0.750	0.0282	0.53	VQ	.	.	.	.
0.767	0.0289	0.53	VQ	.	.	.	.
0.783	0.0297	0.53	VQ	.	.	.	.
0.800	0.0304	0.53	VQ	.	.	.	.
0.817	0.0311	0.53	VQ	.	.	.	.
0.833	0.0318	0.53	VQ	.	.	.	.
0.850	0.0326	0.53	VQ	.	.	.	.
0.867	0.0333	0.53	VQ	.	.	.	.
0.883	0.0340	0.53	VQ	.	.	.	.
0.900	0.0348	0.53	VQ	.	.	.	.
0.917	0.0355	0.53	VQ	.	.	.	.

0.933	0.0362	0.53	VQ	.	.	.	.
0.950	0.0370	0.53	VQ	.	.	.	.
0.967	0.0377	0.53	VQ	.	.	.	.
0.983	0.0384	0.53	VQ	.	.	.	.
1.000	0.0392	0.53	VQ	.	.	.	.
1.017	0.0399	0.53	VQ	.	.	.	.
1.033	0.0406	0.53	VQ	.	.	.	.
1.050	0.0414	0.53	VQ	.	.	.	.
1.067	0.0421	0.53	VQ	.	.	.	.
1.083	0.0428	0.53	VQ	.	.	.	.
1.100	0.0436	0.53	VQ	.	.	.	.
1.117	0.0443	0.53	VQ	.	.	.	.
1.133	0.0451	0.53	VQ	.	.	.	.
1.150	0.0458	0.53	VQ	.	.	.	.
1.167	0.0465	0.54	VQ	.	.	.	.
1.183	0.0473	0.54	VQ	.	.	.	.
1.200	0.0480	0.54	VQ	.	.	.	.
1.217	0.0487	0.54	VQ	.	.	.	.
1.233	0.0495	0.54	VQ	.	.	.	.
1.250	0.0502	0.54	VQ	.	.	.	.
1.267	0.0510	0.54	VQ	.	.	.	.
1.283	0.0517	0.54	VQ	.	.	.	.
1.300	0.0524	0.54	VQ	.	.	.	.
1.317	0.0532	0.54	VQ	.	.	.	.
1.333	0.0539	0.54	VQ	.	.	.	.
1.350	0.0547	0.54	VQ	.	.	.	.
1.367	0.0554	0.54	VQ	.	.	.	.
1.383	0.0562	0.54	VQ	.	.	.	.
1.400	0.0569	0.54	VQ	.	.	.	.
1.417	0.0577	0.54	VQ	.	.	.	.
1.433	0.0584	0.54	VQ	.	.	.	.
1.450	0.0591	0.54	VQ	.	.	.	.
1.467	0.0599	0.54	VQ	.	.	.	.
1.483	0.0606	0.54	VQ	.	.	.	.
1.500	0.0614	0.54	VQ	.	.	.	.
1.517	0.0621	0.54	.Q	.	.	.	.
1.533	0.0629	0.54	.Q	.	.	.	.
1.550	0.0636	0.54	.Q	.	.	.	.
1.567	0.0644	0.54	.Q	.	.	.	.
1.583	0.0651	0.54	.Q	.	.	.	.
1.600	0.0659	0.54	.Q	.	.	.	.
1.617	0.0666	0.54	.Q	.	.	.	.
1.633	0.0674	0.54	.Q	.	.	.	.
1.650	0.0681	0.55	.Q	.	.	.	.
1.667	0.0689	0.55	.Q	.	.	.	.
1.683	0.0696	0.55	.Q	.	.	.	.
1.700	0.0704	0.55	.Q	.	.	.	.
1.717	0.0711	0.55	.Q	.	.	.	.
1.733	0.0719	0.55	.Q	.	.	.	.
1.750	0.0726	0.55	.Q	.	.	.	.
1.767	0.0734	0.55	.Q	.	.	.	.
1.783	0.0742	0.55	.Q	.	.	.	.
1.800	0.0749	0.55	.Q	.	.	.	.
1.817	0.0757	0.55	.Q	.	.	.	.
1.833	0.0764	0.55	.Q	.	.	.	.

1.850	0.0772	0.55	.Q	.	.	.	.
1.867	0.0779	0.55	.Q	.	.	.	.
1.883	0.0787	0.55	.Q	.	.	.	.
1.900	0.0795	0.55	.Q	.	.	.	.
1.917	0.0802	0.55	.Q	.	.	.	.
1.933	0.0810	0.55	.Q	.	.	.	.
1.950	0.0817	0.55	.Q	.	.	.	.
1.967	0.0825	0.55	.Q	.	.	.	.
1.983	0.0833	0.55	.Q	.	.	.	.
2.000	0.0840	0.55	.Q	.	.	.	.
2.017	0.0848	0.55	.Q	.	.	.	.
2.033	0.0856	0.55	.Q	.	.	.	.
2.050	0.0863	0.55	.Q	.	.	.	.
2.067	0.0871	0.55	.Q	.	.	.	.
2.083	0.0879	0.55	.Q	.	.	.	.
2.100	0.0886	0.56	.Q	.	.	.	.
2.117	0.0894	0.56	.Q	.	.	.	.
2.133	0.0901	0.56	.Q	.	.	.	.
2.150	0.0909	0.56	.Q	.	.	.	.
2.167	0.0917	0.56	.Q	.	.	.	.
2.183	0.0924	0.56	.Q	.	.	.	.
2.200	0.0932	0.56	.Q	.	.	.	.
2.217	0.0940	0.56	.Q	.	.	.	.
2.233	0.0947	0.56	.Q	.	.	.	.
2.250	0.0955	0.56	.Q	.	.	.	.
2.267	0.0963	0.56	.Q	.	.	.	.
2.283	0.0971	0.56	.Q	.	.	.	.
2.300	0.0978	0.56	.Q	.	.	.	.
2.317	0.0986	0.56	.Q	.	.	.	.
2.333	0.0994	0.56	.Q	.	.	.	.
2.350	0.1001	0.56	.Q	.	.	.	.
2.367	0.1009	0.56	.Q	.	.	.	.
2.383	0.1017	0.56	.Q	.	.	.	.
2.400	0.1025	0.56	.Q	.	.	.	.
2.417	0.1032	0.56	.Q	.	.	.	.
2.433	0.1040	0.56	.Q	.	.	.	.
2.450	0.1048	0.56	.Q	.	.	.	.
2.467	0.1056	0.56	.Q	.	.	.	.
2.483	0.1064	0.56	.Q	.	.	.	.
2.500	0.1071	0.56	.Q	.	.	.	.
2.517	0.1079	0.57	.Q	.	.	.	.
2.533	0.1087	0.57	.Q	.	.	.	.
2.550	0.1095	0.57	.Q	.	.	.	.
2.567	0.1103	0.57	.Q	.	.	.	.
2.583	0.1110	0.57	.Q	.	.	.	.
2.600	0.1118	0.57	.Q	.	.	.	.
2.617	0.1126	0.57	.Q	.	.	.	.
2.633	0.1134	0.57	.Q	.	.	.	.
2.650	0.1142	0.57	.Q	.	.	.	.
2.667	0.1149	0.57	.Q	.	.	.	.
2.683	0.1157	0.57	.Q	.	.	.	.
2.700	0.1165	0.57	.Q	.	.	.	.
2.717	0.1173	0.57	.Q	.	.	.	.
2.733	0.1181	0.57	.Q	.	.	.	.
2.750	0.1189	0.57	.Q	.	.	.	.

2.767	0.1196	0.57	.Q	.	.	.	.
2.783	0.1204	0.57	.Q	.	.	.	.
2.800	0.1212	0.57	.Q	.	.	.	.
2.817	0.1220	0.57	.Q	.	.	.	.
2.833	0.1228	0.57	.Q	.	.	.	.
2.850	0.1236	0.57	.QV	.	.	.	.
2.867	0.1244	0.57	.QV	.	.	.	.
2.883	0.1252	0.57	.QV	.	.	.	.
2.900	0.1260	0.57	.QV	.	.	.	.
2.917	0.1267	0.58	.QV	.	.	.	.
2.933	0.1275	0.58	.QV	.	.	.	.
2.950	0.1283	0.58	.QV	.	.	.	.
2.967	0.1291	0.58	.QV	.	.	.	.
2.983	0.1299	0.58	.QV	.	.	.	.
3.000	0.1307	0.58	.QV	.	.	.	.
3.017	0.1315	0.58	.QV	.	.	.	.
3.033	0.1323	0.58	.QV	.	.	.	.
3.050	0.1331	0.58	.QV	.	.	.	.
3.067	0.1339	0.58	.QV	.	.	.	.
3.083	0.1347	0.58	.QV	.	.	.	.
3.100	0.1355	0.58	.QV	.	.	.	.
3.117	0.1363	0.58	.QV	.	.	.	.
3.133	0.1371	0.58	.QV	.	.	.	.
3.150	0.1379	0.58	.QV	.	.	.	.
3.167	0.1387	0.58	.QV	.	.	.	.
3.183	0.1395	0.58	.QV	.	.	.	.
3.200	0.1403	0.58	.QV	.	.	.	.
3.217	0.1411	0.58	.QV	.	.	.	.
3.233	0.1419	0.58	.QV	.	.	.	.
3.250	0.1427	0.58	.QV	.	.	.	.
3.267	0.1435	0.58	.QV	.	.	.	.
3.283	0.1443	0.58	.QV	.	.	.	.
3.300	0.1451	0.58	.QV	.	.	.	.
3.317	0.1459	0.58	.QV	.	.	.	.
3.333	0.1467	0.59	.QV	.	.	.	.
3.350	0.1475	0.59	.QV	.	.	.	.
3.367	0.1483	0.59	.QV	.	.	.	.
3.383	0.1491	0.59	.QV	.	.	.	.
3.400	0.1499	0.59	.QV	.	.	.	.
3.417	0.1508	0.59	.QV	.	.	.	.
3.433	0.1516	0.59	.QV	.	.	.	.
3.450	0.1524	0.59	.QV	.	.	.	.
3.467	0.1532	0.59	.QV	.	.	.	.
3.483	0.1540	0.59	.QV	.	.	.	.
3.500	0.1548	0.59	.QV	.	.	.	.
3.517	0.1556	0.59	.QV	.	.	.	.
3.533	0.1564	0.59	.QV	.	.	.	.
3.550	0.1572	0.59	.QV	.	.	.	.
3.567	0.1581	0.59	.QV	.	.	.	.
3.583	0.1589	0.59	.QV	.	.	.	.
3.600	0.1597	0.59	.QV	.	.	.	.
3.617	0.1605	0.59	.QV	.	.	.	.
3.633	0.1613	0.59	.QV	.	.	.	.
3.650	0.1621	0.59	.QV	.	.	.	.
3.667	0.1630	0.59	.QV	.	.	.	.

3.683	0.1638	0.59	.QV	.	.	.	.
3.700	0.1646	0.59	.QV	.	.	.	.
3.717	0.1654	0.59	.QV	.	.	.	.
3.733	0.1662	0.59	.QV	.	.	.	.
3.750	0.1670	0.60	.QV	.	.	.	.
3.767	0.1679	0.60	.QV	.	.	.	.
3.783	0.1687	0.60	.QV	.	.	.	.
3.800	0.1695	0.60	.QV	.	.	.	.
3.817	0.1703	0.60	.QV	.	.	.	.
3.833	0.1712	0.60	.QV	.	.	.	.
3.850	0.1720	0.60	.QV	.	.	.	.
3.867	0.1728	0.60	.QV	.	.	.	.
3.883	0.1736	0.60	.QV	.	.	.	.
3.900	0.1745	0.60	.QV	.	.	.	.
3.917	0.1753	0.60	.QV	.	.	.	.
3.933	0.1761	0.60	.QV	.	.	.	.
3.950	0.1769	0.60	.QV	.	.	.	.
3.967	0.1778	0.60	.QV	.	.	.	.
3.983	0.1786	0.60	.QV	.	.	.	.
4.000	0.1794	0.60	.QV	.	.	.	.
4.017	0.1803	0.60	.QV	.	.	.	.
4.033	0.1811	0.60	.QV	.	.	.	.
4.050	0.1819	0.60	.QV	.	.	.	.
4.067	0.1828	0.60	.QV	.	.	.	.
4.083	0.1836	0.60	.QV	.	.	.	.
4.100	0.1844	0.60	.QV	.	.	.	.
4.117	0.1853	0.61	.Q V	.	.	.	.
4.133	0.1861	0.61	.Q V	.	.	.	.
4.150	0.1869	0.61	.Q V	.	.	.	.
4.167	0.1878	0.61	.Q V	.	.	.	.
4.183	0.1886	0.61	.Q V	.	.	.	.
4.200	0.1894	0.61	.Q V	.	.	.	.
4.217	0.1903	0.61	.Q V	.	.	.	.
4.233	0.1911	0.61	.Q V	.	.	.	.
4.250	0.1920	0.61	.Q V	.	.	.	.
4.267	0.1928	0.61	.Q V	.	.	.	.
4.283	0.1936	0.61	.Q V	.	.	.	.
4.300	0.1945	0.61	.Q V	.	.	.	.
4.317	0.1953	0.61	.Q V	.	.	.	.
4.333	0.1962	0.61	.Q V	.	.	.	.
4.350	0.1970	0.61	.Q V	.	.	.	.
4.367	0.1979	0.61	.Q V	.	.	.	.
4.383	0.1987	0.61	.Q V	.	.	.	.
4.400	0.1996	0.62	.Q V	.	.	.	.
4.417	0.2004	0.62	.Q V	.	.	.	.
4.433	0.2012	0.62	.Q V	.	.	.	.
4.450	0.2021	0.62	.Q V	.	.	.	.
4.467	0.2029	0.62	.Q V	.	.	.	.
4.483	0.2038	0.62	.Q V	.	.	.	.
4.500	0.2046	0.62	.Q V	.	.	.	.
4.517	0.2055	0.62	.Q V	.	.	.	.
4.533	0.2063	0.62	.Q V	.	.	.	.
4.550	0.2072	0.62	.Q V	.	.	.	.
4.567	0.2081	0.62	.Q V	.	.	.	.
4.583	0.2089	0.62	.Q V	.	.	.	.

4.600	0.2098	0.62	.Q V	.	.	.	.
4.617	0.2106	0.62	.Q V	.	.	.	.
4.633	0.2115	0.62	.Q V	.	.	.	.
4.650	0.2123	0.62	.Q V	.	.	.	.
4.667	0.2132	0.62	.Q V	.	.	.	.
4.683	0.2140	0.62	.Q V	.	.	.	.
4.700	0.2149	0.62	.Q V	.	.	.	.
4.717	0.2157	0.62	.Q V	.	.	.	.
4.733	0.2166	0.62	.Q V	.	.	.	.
4.750	0.2175	0.62	.Q V	.	.	.	.
4.767	0.2183	0.63	.Q V	.	.	.	.
4.783	0.2192	0.63	.Q V	.	.	.	.
4.800	0.2201	0.63	.Q V	.	.	.	.
4.817	0.2209	0.63	.Q V	.	.	.	.
4.833	0.2218	0.63	.Q V	.	.	.	.
4.850	0.2226	0.63	.Q V	.	.	.	.
4.867	0.2235	0.63	.Q V	.	.	.	.
4.883	0.2244	0.63	.Q V	.	.	.	.
4.900	0.2252	0.63	.Q V	.	.	.	.
4.917	0.2261	0.63	.Q V	.	.	.	.
4.933	0.2270	0.63	.Q V	.	.	.	.
4.950	0.2279	0.63	.Q V	.	.	.	.
4.967	0.2287	0.63	.Q V	.	.	.	.
4.983	0.2296	0.63	.Q V	.	.	.	.
5.000	0.2305	0.63	.Q V	.	.	.	.
5.017	0.2313	0.63	.Q V	.	.	.	.
5.033	0.2322	0.63	.Q V	.	.	.	.
5.050	0.2331	0.63	.Q V	.	.	.	.
5.067	0.2340	0.63	.Q V	.	.	.	.
5.083	0.2348	0.63	.Q V	.	.	.	.
5.100	0.2357	0.63	.Q V	.	.	.	.
5.117	0.2366	0.64	.Q V	.	.	.	.
5.133	0.2375	0.64	.Q V	.	.	.	.
5.150	0.2383	0.64	.Q V	.	.	.	.
5.167	0.2392	0.64	.Q V	.	.	.	.
5.183	0.2401	0.64	.Q V	.	.	.	.
5.200	0.2410	0.64	.Q V	.	.	.	.
5.217	0.2418	0.64	.Q V	.	.	.	.
5.233	0.2427	0.64	.Q V	.	.	.	.
5.250	0.2436	0.64	.Q V	.	.	.	.
5.267	0.2445	0.64	.Q V	.	.	.	.
5.283	0.2454	0.64	.Q V	.	.	.	.
5.300	0.2463	0.64	.Q V	.	.	.	.
5.317	0.2471	0.64	.Q V	.	.	.	.
5.333	0.2480	0.64	.Q V	.	.	.	.
5.350	0.2489	0.64	.Q V	.	.	.	.
5.367	0.2498	0.65	.Q V	.	.	.	.
5.383	0.2507	0.65	.Q V	.	.	.	.
5.400	0.2516	0.65	.Q V	.	.	.	.
5.417	0.2525	0.65	.Q V	.	.	.	.
5.433	0.2534	0.65	.Q V	.	.	.	.
5.450	0.2543	0.65	.Q V	.	.	.	.
5.467	0.2552	0.65	.Q V	.	.	.	.
5.483	0.2561	0.65	.Q V	.	.	.	.
5.500	0.2570	0.65	.Q V	.	.	.	.

5.517	0.2578	0.65	.Q	V	.	.	.	.
5.533	0.2587	0.65	.Q	V	.	.	.	.
5.550	0.2596	0.65	.Q	V	.	.	.	.
5.567	0.2605	0.65	.Q	V	.	.	.	.
5.583	0.2614	0.65	.Q	V	.	.	.	.
5.600	0.2623	0.65	.Q	V	.	.	.	.
5.617	0.2632	0.65	.Q	V	.	.	.	.
5.633	0.2641	0.65	.Q	V	.	.	.	.
5.650	0.2650	0.65	.Q	V	.	.	.	.
5.667	0.2659	0.65	.Q	V	.	.	.	.
5.683	0.2668	0.65	.Q	V	.	.	.	.
5.700	0.2677	0.66	.Q	V	.	.	.	.
5.717	0.2686	0.66	.Q	V	.	.	.	.
5.733	0.2695	0.66	.Q	V	.	.	.	.
5.750	0.2704	0.66	.Q	V	.	.	.	.
5.767	0.2713	0.66	.Q	V	.	.	.	.
5.783	0.2723	0.66	.Q	V	.	.	.	.
5.800	0.2732	0.66	.Q	V	.	.	.	.
5.817	0.2741	0.66	.Q	V	.	.	.	.
5.833	0.2750	0.66	.Q	V	.	.	.	.
5.850	0.2759	0.66	.Q	V	.	.	.	.
5.867	0.2768	0.66	.Q	V	.	.	.	.
5.883	0.2777	0.66	.Q	V	.	.	.	.
5.900	0.2786	0.66	.Q	V	.	.	.	.
5.917	0.2796	0.66	.Q	V	.	.	.	.
5.933	0.2805	0.67	.Q	V	.	.	.	.
5.950	0.2814	0.67	.Q	V	.	.	.	.
5.967	0.2823	0.67	.Q	V	.	.	.	.
5.983	0.2832	0.67	.Q	V	.	.	.	.
6.000	0.2841	0.67	.Q	V	.	.	.	.
6.017	0.2851	0.67	.Q	V	.	.	.	.
6.033	0.2860	0.67	.Q	V	.	.	.	.
6.050	0.2869	0.67	.Q	V	.	.	.	.
6.067	0.2878	0.67	.Q	V	.	.	.	.
6.083	0.2887	0.67	.Q	V	.	.	.	.
6.100	0.2897	0.67	.Q	V	.	.	.	.
6.117	0.2906	0.67	.Q	V	.	.	.	.
6.133	0.2915	0.67	.Q	V	.	.	.	.
6.150	0.2924	0.67	.Q	V	.	.	.	.
6.167	0.2934	0.67	.Q	V	.	.	.	.
6.183	0.2943	0.67	.Q	V	.	.	.	.
6.200	0.2952	0.67	.Q	V	.	.	.	.
6.217	0.2961	0.67	.Q	V	.	.	.	.
6.233	0.2971	0.68	.Q	V	.	.	.	.
6.250	0.2980	0.68	.Q	V	.	.	.	.
6.267	0.2989	0.68	.Q	V	.	.	.	.
6.283	0.2999	0.68	.Q	V	.	.	.	.
6.300	0.3008	0.68	.Q	V	.	.	.	.
6.317	0.3017	0.68	.Q	V	.	.	.	.
6.333	0.3027	0.68	.Q	V	.	.	.	.
6.350	0.3036	0.68	.Q	V	.	.	.	.
6.367	0.3046	0.68	.Q	V	.	.	.	.
6.383	0.3055	0.68	.Q	V	.	.	.	.
6.400	0.3064	0.68	.Q	V	.	.	.	.
6.417	0.3074	0.68	.Q	V	.	.	.	.

6.433	0.3083	0.68	.Q	V	.	.	.	.
6.450	0.3093	0.68	.Q	V	.	.	.	.
6.467	0.3102	0.68	.Q	V	.	.	.	.
6.483	0.3111	0.69	.Q	V	.	.	.	.
6.500	0.3121	0.69	.Q	V	.	.	.	.
6.517	0.3130	0.69	.Q	V	.	.	.	.
6.533	0.3140	0.69	.Q	V	.	.	.	.
6.550	0.3149	0.69	.Q	V	.	.	.	.
6.567	0.3159	0.69	.Q	V	.	.	.	.
6.583	0.3168	0.69	.Q	V	.	.	.	.
6.600	0.3178	0.69	.Q	V	.	.	.	.
6.617	0.3187	0.69	.Q	V	.	.	.	.
6.633	0.3197	0.69	.Q	V	.	.	.	.
6.650	0.3206	0.69	.Q	V	.	.	.	.
6.667	0.3216	0.69	.Q	V	.	.	.	.
6.683	0.3225	0.69	.Q	V	.	.	.	.
6.700	0.3235	0.69	.Q	V	.	.	.	.
6.717	0.3244	0.69	.Q	V	.	.	.	.
6.733	0.3254	0.70	.Q	V	.	.	.	.
6.750	0.3264	0.70	.Q	V	.	.	.	.
6.767	0.3273	0.70	.Q	V	.	.	.	.
6.783	0.3283	0.70	.Q	V	.	.	.	.
6.800	0.3292	0.70	.Q	V	.	.	.	.
6.817	0.3302	0.70	.Q	V	.	.	.	.
6.833	0.3312	0.70	.Q	V	.	.	.	.
6.850	0.3321	0.70	.Q	V	.	.	.	.
6.867	0.3331	0.70	.Q	V	.	.	.	.
6.883	0.3341	0.70	.Q	V	.	.	.	.
6.900	0.3350	0.70	.Q	V	.	.	.	.
6.917	0.3360	0.70	.Q	V	.	.	.	.
6.933	0.3370	0.70	.Q	V	.	.	.	.
6.950	0.3379	0.70	.Q	V	.	.	.	.
6.967	0.3389	0.71	.Q	V	.	.	.	.
6.983	0.3399	0.71	.Q	V	.	.	.	.
7.000	0.3409	0.71	.Q	V	.	.	.	.
7.017	0.3418	0.71	.Q	V	.	.	.	.
7.033	0.3428	0.71	.Q	V	.	.	.	.
7.050	0.3438	0.71	.Q	V	.	.	.	.
7.067	0.3448	0.71	.Q	V	.	.	.	.
7.083	0.3457	0.71	.Q	V	.	.	.	.
7.100	0.3467	0.71	.Q	V	.	.	.	.
7.117	0.3477	0.71	.Q	V	.	.	.	.
7.133	0.3487	0.71	.Q	V	.	.	.	.
7.150	0.3497	0.71	.Q	V	.	.	.	.
7.167	0.3506	0.71	.Q	V	.	.	.	.
7.183	0.3516	0.71	.Q	V	.	.	.	.
7.200	0.3526	0.71	.Q	V	.	.	.	.
7.217	0.3536	0.72	.Q	V	.	.	.	.
7.233	0.3546	0.72	.Q	V	.	.	.	.
7.250	0.3556	0.72	.Q	V	.	.	.	.
7.267	0.3566	0.72	.Q	V	.	.	.	.
7.283	0.3575	0.72	.Q	V	.	.	.	.
7.300	0.3585	0.72	.Q	V	.	.	.	.
7.317	0.3595	0.72	.Q	V	.	.	.	.
7.333	0.3605	0.72	.Q	V	.	.	.	.

7.350	0.3615	0.72	.Q	V	.	.	.	.
7.367	0.3625	0.72	.Q	V	.	.	.	.
7.383	0.3635	0.73	.Q	V	.	.	.	.
7.400	0.3645	0.73	.Q	V	.	.	.	.
7.417	0.3655	0.73	.Q	V	.	.	.	.
7.433	0.3665	0.73	.Q	V	.	.	.	.
7.450	0.3675	0.73	.Q	V	.	.	.	.
7.467	0.3685	0.73	.Q	V	.	.	.	.
7.483	0.3695	0.73	.Q	V	.	.	.	.
7.500	0.3705	0.73	.Q	V	.	.	.	.
7.517	0.3715	0.73	.Q	V	.	.	.	.
7.533	0.3725	0.73	.Q	V	.	.	.	.
7.550	0.3736	0.73	.Q	V	.	.	.	.
7.567	0.3746	0.73	.Q	V	.	.	.	.
7.583	0.3756	0.73	.Q	V	.	.	.	.
7.600	0.3766	0.73	.Q	V	.	.	.	.
7.617	0.3776	0.73	.Q	V	.	.	.	.
7.633	0.3786	0.73	.Q	V	.	.	.	.
7.650	0.3796	0.73	.Q	V	.	.	.	.
7.667	0.3806	0.74	.Q	V	.	.	.	.
7.683	0.3816	0.74	.Q	V	.	.	.	.
7.700	0.3827	0.74	.Q	V	.	.	.	.
7.717	0.3837	0.74	.Q	V	.	.	.	.
7.733	0.3847	0.74	.Q	V	.	.	.	.
7.750	0.3857	0.74	.Q	V	.	.	.	.
7.767	0.3867	0.74	.Q	V	.	.	.	.
7.783	0.3878	0.74	.Q	V	.	.	.	.
7.800	0.3888	0.74	.Q	V	.	.	.	.
7.817	0.3898	0.75	.Q	V	.	.	.	.
7.833	0.3908	0.75	.Q	V	.	.	.	.
7.850	0.3919	0.75	.Q	V	.	.	.	.
7.867	0.3929	0.75	.Q	V	.	.	.	.
7.883	0.3939	0.75	.Q	V	.	.	.	.
7.900	0.3950	0.75	.Q	V	.	.	.	.
7.917	0.3960	0.75	.Q	V	.	.	.	.
7.933	0.3970	0.75	.Q	V	.	.	.	.
7.950	0.3981	0.75	.Q	V	.	.	.	.
7.967	0.3991	0.75	.Q	V	.	.	.	.
7.983	0.4001	0.75	.Q	V	.	.	.	.
8.000	0.4012	0.75	.Q	V	.	.	.	.
8.017	0.4022	0.75	.Q	V	.	.	.	.
8.033	0.4033	0.75	.Q	V	.	.	.	.
8.050	0.4043	0.76	.Q	V	.	.	.	.
8.067	0.4053	0.76	.Q	V	.	.	.	.
8.083	0.4064	0.76	.Q	V	.	.	.	.
8.100	0.4074	0.76	.Q	V	.	.	.	.
8.117	0.4085	0.76	.Q	V	.	.	.	.
8.133	0.4095	0.76	.Q	V	.	.	.	.
8.150	0.4106	0.76	.Q	V	.	.	.	.
8.167	0.4116	0.76	.Q	V	.	.	.	.
8.183	0.4127	0.76	.Q	V	.	.	.	.
8.200	0.4137	0.76	.Q	V	.	.	.	.
8.217	0.4148	0.77	.Q	V	.	.	.	.
8.233	0.4158	0.77	.Q	V	.	.	.	.
8.250	0.4169	0.77	.Q	V	.	.	.	.

8.267	0.4179	0.77	.Q	V	.	.	.	.
8.283	0.4190	0.77	.Q	V	.	.	.	.
8.300	0.4201	0.77	.Q	V	.	.	.	.
8.317	0.4211	0.77	.Q	V	.	.	.	.
8.333	0.4222	0.77	.Q	V	.	.	.	.
8.350	0.4233	0.77	.Q	V	.	.	.	.
8.367	0.4243	0.78	.Q	V	.	.	.	.
8.383	0.4254	0.78	.Q	V	.	.	.	.
8.400	0.4265	0.78	.Q	V	.	.	.	.
8.417	0.4275	0.78	.Q	V	.	.	.	.
8.433	0.4286	0.78	.Q	V	.	.	.	.
8.450	0.4297	0.78	.Q	V	.	.	.	.
8.467	0.4308	0.78	.Q	V	.	.	.	.
8.483	0.4318	0.78	.Q	V	.	.	.	.
8.500	0.4329	0.78	.Q	V	.	.	.	.
8.517	0.4340	0.78	.Q	V	.	.	.	.
8.533	0.4351	0.78	.Q	V	.	.	.	.
8.550	0.4361	0.78	.Q	V	.	.	.	.
8.567	0.4372	0.78	.Q	V	.	.	.	.
8.583	0.4383	0.78	.Q	V	.	.	.	.
8.600	0.4394	0.78	.Q	V	.	.	.	.
8.617	0.4405	0.79	.Q	V	.	.	.	.
8.633	0.4415	0.79	.Q	V	.	.	.	.
8.650	0.4426	0.79	.Q	V	.	.	.	.
8.667	0.4437	0.79	.Q	V	.	.	.	.
8.683	0.4448	0.79	.Q	V	.	.	.	.
8.700	0.4459	0.79	.Q	V	.	.	.	.
8.717	0.4470	0.79	.Q	V	.	.	.	.
8.733	0.4481	0.79	.Q	V	.	.	.	.
8.750	0.4492	0.80	.Q	V	.	.	.	.
8.767	0.4503	0.80	.Q	V	.	.	.	.
8.783	0.4514	0.80	.Q	V	.	.	.	.
8.800	0.4525	0.80	.Q	V	.	.	.	.
8.817	0.4536	0.80	.Q	V	.	.	.	.
8.833	0.4547	0.80	.Q	V	.	.	.	.
8.850	0.4558	0.80	.Q	V	.	.	.	.
8.867	0.4569	0.80	.Q	V	.	.	.	.
8.883	0.4580	0.81	.Q	V	.	.	.	.
8.900	0.4591	0.81	.Q	V	.	.	.	.
8.917	0.4602	0.81	.Q	V	.	.	.	.
8.933	0.4613	0.81	.Q	V	.	.	.	.
8.950	0.4625	0.81	.Q	V	.	.	.	.
8.967	0.4636	0.81	.Q	V	.	.	.	.
8.983	0.4647	0.81	.Q	V	.	.	.	.
9.000	0.4658	0.81	.Q	V	.	.	.	.
9.017	0.4669	0.81	.Q	V	.	.	.	.
9.033	0.4680	0.81	.Q	V	.	.	.	.
9.050	0.4692	0.81	.Q	V	.	.	.	.
9.067	0.4703	0.81	.Q	V	.	.	.	.
9.083	0.4714	0.81	.Q	V	.	.	.	.
9.100	0.4725	0.81	.Q	V	.	.	.	.
9.117	0.4737	0.82	.Q	V	.	.	.	.
9.133	0.4748	0.82	.Q	V	.	.	.	.
9.150	0.4759	0.82	.Q	V	.	.	.	.
9.167	0.4770	0.82	.Q	V	.	.	.	.

9.183	0.4782	0.82	.Q	V	.	.	.
9.200	0.4793	0.82	.Q	V	.	.	.
9.217	0.4804	0.83	.Q	V	.	.	.
9.233	0.4816	0.83	.Q	V	.	.	.
9.250	0.4827	0.83	.Q	V	.	.	.
9.267	0.4839	0.83	.Q	V	.	.	.
9.283	0.4850	0.83	.Q	V	.	.	.
9.300	0.4862	0.83	.Q	V	.	.	.
9.317	0.4873	0.83	.Q	V	.	.	.
9.333	0.4885	0.84	.Q	V	.	.	.
9.350	0.4896	0.84	.Q	V	.	.	.
9.367	0.4908	0.84	.Q	V	.	.	.
9.383	0.4919	0.84	.Q	V	.	.	.
9.400	0.4931	0.84	.Q	V	.	.	.
9.417	0.4942	0.84	.Q	V	.	.	.
9.433	0.4954	0.84	.Q	V	.	.	.
9.450	0.4965	0.84	.Q	V	.	.	.
9.467	0.4977	0.84	.Q	V	.	.	.
9.483	0.4989	0.84	.Q	V	.	.	.
9.500	0.5000	0.84	.Q	V	.	.	.
9.517	0.5012	0.84	.Q	V	.	.	.
9.533	0.5024	0.85	.Q	V	.	.	.
9.550	0.5035	0.85	.Q	V	.	.	.
9.567	0.5047	0.85	.Q	V	.	.	.
9.583	0.5059	0.85	.Q	V	.	.	.
9.600	0.5070	0.85	.Q	V	.	.	.
9.617	0.5082	0.85	.Q	V	.	.	.
9.633	0.5094	0.85	.Q	V	.	.	.
9.650	0.5105	0.85	.Q	V	.	.	.
9.667	0.5117	0.86	.Q	V	.	.	.
9.683	0.5129	0.86	.Q	V	.	.	.
9.700	0.5141	0.86	.Q	V	.	.	.
9.717	0.5153	0.86	.Q	V	.	.	.
9.733	0.5165	0.86	.Q	V	.	.	.
9.750	0.5177	0.86	.Q	V	.	.	.
9.767	0.5188	0.87	.Q	V	.	.	.
9.783	0.5200	0.87	.Q	V	.	.	.
9.800	0.5212	0.87	.Q	V	.	.	.
9.817	0.5224	0.87	.Q	V	.	.	.
9.833	0.5236	0.87	.Q	V	.	.	.
9.850	0.5248	0.87	.Q	V	.	.	.
9.867	0.5260	0.87	.Q	V	.	.	.
9.883	0.5272	0.87	.Q	V	.	.	.
9.900	0.5285	0.88	.Q	V	.	.	.
9.917	0.5297	0.88	.Q	V	.	.	.
9.933	0.5309	0.88	.Q	V	.	.	.
9.950	0.5321	0.88	.Q	V	.	.	.
9.967	0.5333	0.88	.Q	V	.	.	.
9.983	0.5345	0.88	.Q	V	.	.	.
10.000	0.5357	0.88	.Q	V	.	.	.
10.017	0.5369	0.88	.Q	V	.	.	.
10.033	0.5381	0.88	.Q	V	.	.	.
10.050	0.5394	0.88	.Q	V	.	.	.
10.067	0.5406	0.88	.Q	V	.	.	.
10.083	0.5418	0.89	.Q	V	.	.	.

10.100	0.5430	0.89	.Q	V .	.	.	.
10.117	0.5443	0.89	.Q	V .	.	.	.
10.133	0.5455	0.89	.Q	V .	.	.	.
10.150	0.5467	0.89	.Q	V .	.	.	.
10.167	0.5479	0.90	.Q	V .	.	.	.
10.183	0.5492	0.90	.Q	V .	.	.	.
10.200	0.5504	0.90	.Q	V .	.	.	.
10.217	0.5517	0.90	.Q	V .	.	.	.
10.233	0.5529	0.90	.Q	V .	.	.	.
10.250	0.5541	0.90	.Q	V .	.	.	.
10.267	0.5554	0.91	.Q	V .	.	.	.
10.283	0.5566	0.91	.Q	V .	.	.	.
10.300	0.5579	0.91	.Q	V .	.	.	.
10.317	0.5592	0.91	.Q	V .	.	.	.
10.333	0.5604	0.91	.Q	V .	.	.	.
10.350	0.5617	0.91	.Q	V .	.	.	.
10.367	0.5629	0.92	.Q	V .	.	.	.
10.383	0.5642	0.92	.Q	V .	.	.	.
10.400	0.5655	0.92	.Q	V .	.	.	.
10.417	0.5667	0.92	.Q	V .	.	.	.
10.433	0.5680	0.92	.Q	V .	.	.	.
10.450	0.5693	0.92	.Q	V .	.	.	.
10.467	0.5705	0.92	.Q	V .	.	.	.
10.483	0.5718	0.92	.Q	V .	.	.	.
10.500	0.5731	0.92	.Q	V .	.	.	.
10.517	0.5743	0.92	.Q	V .	.	.	.
10.533	0.5756	0.93	.Q	V .	.	.	.
10.550	0.5769	0.93	.Q	V .	.	.	.
10.567	0.5782	0.93	.Q	V .	.	.	.
10.583	0.5795	0.93	.Q	V .	.	.	.
10.600	0.5807	0.93	.Q	V .	.	.	.
10.617	0.5820	0.93	.Q	V .	.	.	.
10.633	0.5833	0.94	.Q	V .	.	.	.
10.650	0.5846	0.94	.Q	V .	.	.	.
10.667	0.5859	0.94	.Q	V .	.	.	.
10.683	0.5872	0.94	.Q	V .	.	.	.
10.700	0.5885	0.94	.Q	V .	.	.	.
10.717	0.5898	0.95	.Q	V .	.	.	.
10.733	0.5911	0.95	.Q	V .	.	.	.
10.750	0.5924	0.95	.Q	V .	.	.	.
10.767	0.5937	0.95	.Q	V .	.	.	.
10.783	0.5950	0.95	.Q	V .	.	.	.
10.800	0.5964	0.96	.Q	V .	.	.	.
10.817	0.5977	0.96	.Q	V .	.	.	.
10.833	0.5990	0.96	.Q	V .	.	.	.
10.850	0.6003	0.96	.Q	V .	.	.	.
10.867	0.6017	0.96	.Q	V .	.	.	.
10.883	0.6030	0.96	.Q	V .	.	.	.
10.900	0.6043	0.97	.Q	V .	.	.	.
10.917	0.6056	0.97	.Q	V .	.	.	.
10.933	0.6070	0.97	.Q	V .	.	.	.
10.950	0.6083	0.97	.Q	V .	.	.	.
10.967	0.6096	0.97	.Q	V .	.	.	.
10.983	0.6110	0.97	.Q	V .	.	.	.
11.000	0.6123	0.97	.Q	V .	.	.	.

11.017	0.6137	0.97	. Q	V.	.	.	.
11.033	0.6150	0.97	. Q	V.	.	.	.
11.050	0.6163	0.98	. Q	V.	.	.	.
11.067	0.6177	0.98	. Q	V	.	.	.
11.083	0.6190	0.98	. Q	V	.	.	.
11.100	0.6204	0.98	. Q	V	.	.	.
11.117	0.6217	0.98	. Q	V	.	.	.
11.133	0.6231	0.99	. Q	V	.	.	.
11.150	0.6245	0.99	. Q	V	.	.	.
11.167	0.6258	0.99	. Q	V	.	.	.
11.183	0.6272	0.99	. Q	V	.	.	.
11.200	0.6286	1.00	. Q	V	.	.	.
11.217	0.6300	1.00	. Q	V	.	.	.
11.233	0.6313	1.00	. Q	V	.	.	.
11.250	0.6327	1.00	. Q	V	.	.	.
11.267	0.6341	1.01	. Q	V	.	.	.
11.283	0.6355	1.01	. Q	V	.	.	.
11.300	0.6369	1.01	. Q	V	.	.	.
11.317	0.6383	1.01	. Q	V	.	.	.
11.333	0.6397	1.02	. Q	V	.	.	.
11.350	0.6411	1.02	. Q	V	.	.	.
11.367	0.6425	1.02	. Q	V	.	.	.
11.383	0.6439	1.02	. Q	V	.	.	.
11.400	0.6453	1.02	. Q	V	.	.	.
11.417	0.6467	1.02	. Q	V	.	.	.
11.433	0.6481	1.02	. Q	V	.	.	.
11.450	0.6495	1.02	. Q	V	.	.	.
11.467	0.6509	1.03	. Q	V	.	.	.
11.483	0.6523	1.03	. Q	V	.	.	.
11.500	0.6538	1.03	. Q	V	.	.	.
11.517	0.6552	1.03	. Q	V	.	.	.
11.533	0.6566	1.03	. Q	V	.	.	.
11.550	0.6580	1.03	. Q	V	.	.	.
11.567	0.6594	1.03	. Q	V	.	.	.
11.583	0.6609	1.04	. Q	V	.	.	.
11.600	0.6623	1.04	. Q	V	.	.	.
11.617	0.6637	1.04	. Q	V	.	.	.
11.633	0.6652	1.05	. Q	V	.	.	.
11.650	0.6666	1.05	. Q	V	.	.	.
11.667	0.6681	1.05	. Q	V	.	.	.
11.683	0.6695	1.05	. Q	V	.	.	.
11.700	0.6710	1.06	. Q	V	.	.	.
11.717	0.6724	1.06	. Q	V	.	.	.
11.733	0.6739	1.06	. Q	V	.	.	.
11.750	0.6754	1.07	. Q	V	.	.	.
11.767	0.6769	1.07	. Q	V	.	.	.
11.783	0.6783	1.07	. Q	V	.	.	.
11.800	0.6798	1.08	. Q	.V	.	.	.
11.817	0.6813	1.08	. Q	.V	.	.	.
11.833	0.6828	1.08	. Q	.V	.	.	.
11.850	0.6843	1.08	. Q	.V	.	.	.
11.867	0.6858	1.08	. Q	.V	.	.	.
11.883	0.6873	1.08	. Q	.V	.	.	.
11.900	0.6888	1.09	. Q	.V	.	.	.
11.917	0.6902	1.09	. Q	.V	.	.	.

11.933	0.6917	1.09	. Q	.V	.	.	.
11.950	0.6933	1.09	. Q	.V	.	.	.
11.967	0.6948	1.09	. Q	.V	.	.	.
11.983	0.6963	1.09	. Q	.V	.	.	.
12.000	0.6978	1.10	. Q	.V	.	.	.
12.017	0.6993	1.10	. Q	.V	.	.	.
12.033	0.7008	1.10	. Q	.V	.	.	.
12.050	0.7023	1.10	. Q	.V	.	.	.
12.067	0.7038	1.11	. Q	.V	.	.	.
12.083	0.7054	1.12	. Q	.V	.	.	.
12.100	0.7069	1.13	. Q	.V	.	.	.
12.117	0.7085	1.14	. Q	.V	.	.	.
12.133	0.7101	1.15	. Q	.V	.	.	.
12.150	0.7117	1.16	. Q	.V	.	.	.
12.167	0.7133	1.17	. Q	.V	.	.	.
12.183	0.7149	1.18	. Q	.V	.	.	.
12.200	0.7166	1.20	. Q	.V	.	.	.
12.217	0.7182	1.21	. Q	.V	.	.	.
12.233	0.7199	1.22	. Q	.V	.	.	.
12.250	0.7216	1.23	. Q	.V	.	.	.
12.267	0.7233	1.24	. Q	.V	.	.	.
12.283	0.7250	1.25	. Q	.V	.	.	.
12.300	0.7268	1.26	. Q	.V	.	.	.
12.317	0.7285	1.27	. Q	.V	.	.	.
12.333	0.7303	1.27	. Q	.V	.	.	.
12.350	0.7320	1.27	. Q	.V	.	.	.
12.367	0.7338	1.27	. Q	.V	.	.	.
12.383	0.7355	1.27	. Q	.V	.	.	.
12.400	0.7373	1.27	. Q	.V	.	.	.
12.417	0.7390	1.28	. Q	.V	.	.	.
12.433	0.7408	1.28	. Q	.V	.	.	.
12.450	0.7426	1.28	. Q	. V	.	.	.
12.467	0.7443	1.28	. Q	. V	.	.	.
12.483	0.7461	1.28	. Q	. V	.	.	.
12.500	0.7479	1.29	. Q	. V	.	.	.
12.517	0.7496	1.29	. Q	. V	.	.	.
12.533	0.7514	1.29	. Q	. V	.	.	.
12.550	0.7532	1.29	. Q	. V	.	.	.
12.567	0.7550	1.30	. Q	. V	.	.	.
12.583	0.7568	1.30	. Q	. V	.	.	.
12.600	0.7586	1.31	. Q	. V	.	.	.
12.617	0.7604	1.31	. Q	. V	.	.	.
12.633	0.7622	1.31	. Q	. V	.	.	.
12.650	0.7640	1.32	. Q	. V	.	.	.
12.667	0.7658	1.32	. Q	. V	.	.	.
12.683	0.7677	1.33	. Q	. V	.	.	.
12.700	0.7695	1.33	. Q	. V	.	.	.
12.717	0.7713	1.34	. Q	. V	.	.	.
12.733	0.7732	1.34	. Q	. V	.	.	.
12.750	0.7750	1.34	. Q	. V	.	.	.
12.767	0.7769	1.35	. Q	. V	.	.	.
12.783	0.7787	1.35	. Q	. V	.	.	.
12.800	0.7806	1.36	. Q	. V	.	.	.
12.817	0.7825	1.36	. Q	. V	.	.	.
12.833	0.7844	1.36	. Q	. V	.	.	.

12.850	0.7862	1.36	.	Q	.	V	.	.	.
12.867	0.7881	1.37	.	Q	.	V	.	.	.
12.883	0.7900	1.37	.	Q	.	V	.	.	.
12.900	0.7919	1.37	.	Q	.	V	.	.	.
12.917	0.7938	1.37	.	Q	.	V	.	.	.
12.933	0.7957	1.38	.	Q	.	V	.	.	.
12.950	0.7976	1.38	.	Q	.	V	.	.	.
12.967	0.7995	1.38	.	Q	.	V	.	.	.
12.983	0.8014	1.38	.	Q	.	V	.	.	.
13.000	0.8033	1.39	.	Q	.	V	.	.	.
13.017	0.8052	1.39	.	Q	.	V	.	.	.
13.033	0.8071	1.39	.	Q	.	V	.	.	.
13.050	0.8091	1.39	.	Q	.	V	.	.	.
13.067	0.8110	1.40	.	Q	.	V	.	.	.
13.083	0.8129	1.41	.	Q	.	V	.	.	.
13.100	0.8149	1.41	.	Q	.	V	.	.	.
13.117	0.8168	1.42	.	Q	.	V	.	.	.
13.133	0.8188	1.42	.	Q	.	V	.	.	.
13.150	0.8207	1.43	.	Q	.	V	.	.	.
13.167	0.8227	1.43	.	Q	.	V	.	.	.
13.183	0.8247	1.44	.	Q	.	V	.	.	.
13.200	0.8267	1.44	.	Q	.	V	.	.	.
13.217	0.8287	1.45	.	Q	.	V	.	.	.
13.233	0.8307	1.45	.	Q	.	V	.	.	.
13.250	0.8327	1.46	.	Q	.	V	.	.	.
13.267	0.8347	1.47	.	Q	.	V	.	.	.
13.283	0.8367	1.47	.	Q	.	V	.	.	.
13.300	0.8388	1.48	.	Q	.	V	.	.	.
13.317	0.8408	1.48	.	Q	.	V	.	.	.
13.333	0.8428	1.48	.	Q	.	V	.	.	.
13.350	0.8449	1.48	.	Q	.	V	.	.	.
13.367	0.8469	1.49	.	Q	.	V	.	.	.
13.383	0.8490	1.49	.	Q	.	V	.	.	.
13.400	0.8511	1.49	.	Q	.	V	.	.	.
13.417	0.8531	1.50	.	Q	.	V	.	.	.
13.433	0.8552	1.50	.	Q	.	V	.	.	.
13.450	0.8573	1.50	.	Q	.	V	.	.	.
13.467	0.8593	1.51	.	Q	.	V	.	.	.
13.483	0.8614	1.51	.	Q	.	V	.	.	.
13.500	0.8635	1.51	.	Q	.	V	.	.	.
13.517	0.8656	1.52	.	Q	.	V	.	.	.
13.533	0.8677	1.52	.	Q	.	V	.	.	.
13.550	0.8698	1.52	.	Q	.	V	.	.	.
13.567	0.8719	1.53	.	Q	.	V	.	.	.
13.583	0.8740	1.54	.	Q	.	V	.	.	.
13.600	0.8761	1.55	.	Q	.	V	.	.	.
13.617	0.8783	1.55	.	Q	.	V	.	.	.
13.633	0.8804	1.56	.	Q	.	V	.	.	.
13.650	0.8826	1.57	.	Q	.	V	.	.	.
13.667	0.8847	1.57	.	Q	.	V	.	.	.
13.683	0.8869	1.58	.	Q	.	V	.	.	.
13.700	0.8891	1.59	.	Q	.	V	.	.	.
13.717	0.8913	1.60	.	Q	.	V	.	.	.
13.733	0.8935	1.60	.	Q	.	V	.	.	.
13.750	0.8957	1.61	.	Q	.	V	.	.	.

13.767	0.8980	1.62	.	Q	.	V	.	.	.
13.783	0.9002	1.62	.	Q	.	V	.	.	.
13.800	0.9024	1.63	.	Q	.	V	.	.	.
13.817	0.9047	1.63	.	Q	.	V	.	.	.
13.833	0.9069	1.64	.	Q	.	V	.	.	.
13.850	0.9092	1.64	.	Q	.	V	.	.	.
13.867	0.9115	1.65	.	Q	.	V	.	.	.
13.883	0.9137	1.65	.	Q	.	V	.	.	.
13.900	0.9160	1.65	.	Q	.	V	.	.	.
13.917	0.9183	1.66	.	Q	.	V	.	.	.
13.933	0.9206	1.66	.	Q	.	V	.	.	.
13.950	0.9229	1.67	.	Q	.	V	.	.	.
13.967	0.9252	1.67	.	Q	.	V	.	.	.
13.983	0.9275	1.67	.	Q	.	V	.	.	.
14.000	0.9298	1.68	.	Q	.	V	.	.	.
14.017	0.9321	1.68	.	Q	.	V	.	.	.
14.033	0.9345	1.69	.	Q	.	V	.	.	.
14.050	0.9368	1.70	.	Q	.	V	.	.	.
14.067	0.9391	1.71	.	Q	.	V	.	.	.
14.083	0.9415	1.72	.	Q	.	V	.	.	.
14.100	0.9439	1.73	.	Q	.	V	.	.	.
14.117	0.9463	1.74	.	Q	.	V	.	.	.
14.133	0.9487	1.75	.	Q	.	V	.	.	.
14.150	0.9511	1.76	.	Q	.	V	.	.	.
14.167	0.9536	1.77	.	Q	.	V	.	.	.
14.183	0.9560	1.78	.	Q	.	V	.	.	.
14.200	0.9585	1.79	.	Q	.	V	.	.	.
14.217	0.9610	1.80	.	Q	.	V	.	.	.
14.233	0.9635	1.81	.	Q	.	V	.	.	.
14.250	0.9660	1.82	.	Q	.	V	.	.	.
14.267	0.9685	1.83	.	Q	.	V	.	.	.
14.283	0.9710	1.84	.	Q	.	V	.	.	.
14.300	0.9736	1.85	.	Q	.	V	.	.	.
14.317	0.9761	1.85	.	Q	.	V	.	.	.
14.333	0.9787	1.86	.	Q	.	V	.	.	.
14.350	0.9813	1.87	.	Q	.	V	.	.	.
14.367	0.9838	1.87	.	Q	.	V	.	.	.
14.383	0.9864	1.88	.	Q	.	V	.	.	.
14.400	0.9890	1.88	.	Q	.	V	.	.	.
14.417	0.9916	1.89	.	Q	.	V	.	.	.
14.433	0.9942	1.90	.	Q	.	V	.	.	.
14.450	0.9969	1.90	.	Q	.	V	.	.	.
14.467	0.9995	1.91	.	Q	.	V	.	.	.
14.483	1.0021	1.91	.	Q	.	V	.	.	.
14.500	1.0048	1.92	.	Q	.	V	.	.	.
14.517	1.0074	1.93	.	Q	.	V	.	.	.
14.533	1.0101	1.94	.	Q	.	V	.	.	.
14.550	1.0128	1.95	.	Q	.	V	.	.	.
14.567	1.0155	1.97	.	Q	.	V	.	.	.
14.583	1.0182	1.98	.	Q	.	V	.	.	.
14.600	1.0210	2.00	.	Q	.	V	.	.	.
14.617	1.0237	2.01	.	Q	.	V	.	.	.
14.633	1.0265	2.03	.	Q	.	V	.	.	.
14.650	1.0293	2.04	.	Q	.	V	.	.	.
14.667	1.0322	2.06	.	Q	.	V	.	.	.

14.683	1.0350	2.07	.	Q	.	V	.	.	.
14.700	1.0379	2.09	.	Q	.	V	.	.	.
14.717	1.0408	2.10	.	Q	.	V	.	.	.
14.733	1.0437	2.12	.	Q	.	V	.	.	.
14.750	1.0466	2.13	.	Q	.	V	.	.	.
14.767	1.0496	2.15	.	Q	.	V	.	.	.
14.783	1.0526	2.16	.	Q	.	V	.	.	.
14.800	1.0556	2.17	.	Q	.	V	.	.	.
14.817	1.0586	2.18	.	Q	.	V	.	.	.
14.833	1.0616	2.19	.	Q	.	V	.	.	.
14.850	1.0646	2.20	.	Q	.	V	.	.	.
14.867	1.0677	2.21	.	Q	.	V	.	.	.
14.883	1.0707	2.22	.	Q	.	V	.	.	.
14.900	1.0738	2.23	.	Q	.	V	.	.	.
14.917	1.0769	2.24	.	Q	.	V	.	.	.
14.933	1.0800	2.25	.	Q	.	V	.	.	.
14.950	1.0831	2.26	.	Q	.	V	.	.	.
14.967	1.0862	2.27	.	Q	.	V	.	.	.
14.983	1.0893	2.28	.	Q	.	V	.	.	.
15.000	1.0925	2.29	.	Q	.	V	.	.	.
15.017	1.0956	2.30	.	Q	.	V	.	.	.
15.033	1.0988	2.32	.	Q	.	V	.	.	.
15.050	1.1021	2.35	.	Q	.	V	.	.	.
15.067	1.1053	2.37	.	Q	.	V	.	.	.
15.083	1.1086	2.40	.	Q	.	V	.	.	.
15.100	1.1120	2.43	.	Q	.	V	.	.	.
15.117	1.1154	2.46	.	Q	.	V	.	.	.
15.133	1.1188	2.48	.	Q	.	V	.	.	.
15.150	1.1223	2.51	.	Q	.	V	.	.	.
15.167	1.1258	2.54	.	Q	.	V	.	.	.
15.183	1.1293	2.56	.	Q	.	V	.	.	.
15.200	1.1329	2.59	.	Q	.	V	.	.	.
15.217	1.1365	2.62	.	Q	.	V	.	.	.
15.233	1.1401	2.65	.	Q	.	V	.	.	.
15.250	1.1438	2.67	.	Q	.	V	.	.	.
15.267	1.1475	2.70	.	Q	.	V	.	.	.
15.283	1.1513	2.72	.	Q	.	V	.	.	.
15.300	1.1550	2.74	.	Q	.	V	.	.	.
15.317	1.1588	2.76	.	Q	.	V	.	.	.
15.333	1.1627	2.79	.	Q	.	V	.	.	.
15.350	1.1666	2.81	.	Q	.	V	.	.	.
15.367	1.1704	2.83	.	Q	.	V	.	.	.
15.383	1.1744	2.85	.	Q	.	V	.	.	.
15.400	1.1783	2.87	.	Q	.	V	.	.	.
15.417	1.1823	2.89	.	Q	.	V	.	.	.
15.433	1.1863	2.91	.	Q	.	V	.	.	.
15.450	1.1904	2.94	.	Q	.	V	.	.	.
15.467	1.1944	2.96	.	Q	.	V	.	.	.
15.483	1.1985	2.98	.	Q	.	V	.	.	.
15.500	1.2027	3.00	.	Q	.	V	.	.	.
15.517	1.2069	3.04	.	Q	.	V	.	.	.
15.533	1.2112	3.13	.	Q	.	V	.	.	.
15.550	1.2156	3.22	.	Q	.	V	.	.	.
15.567	1.2202	3.32	.	Q	.	V	.	.	.
15.583	1.2249	3.41	.	Q	.	V	.	.	.

15.600	1.2297	3.51	.	Q	.	V.	.	.
15.617	1.2347	3.60	.	Q	.	V.	.	.
15.633	1.2397	3.70	.	Q	.	V	.	.
15.650	1.2450	3.79	.	Q	.	V	.	.
15.667	1.2503	3.89	.	Q	.	V	.	.
15.683	1.2558	3.98	.	Q	.	V	.	.
15.700	1.2614	4.08	.	Q.	.	V	.	.
15.717	1.2672	4.17	.	Q.	.	V	.	.
15.733	1.2730	4.27	.	Q.	.	V	.	.
15.750	1.2790	4.36	.	Q.	.	V	.	.
15.767	1.2852	4.45	.	Q.	.	V	.	.
15.783	1.2914	4.53	.	Q	.	V	.	.
15.800	1.2978	4.61	.	Q	.	.V	.	.
15.817	1.3042	4.69	.	Q	.	.V	.	.
15.833	1.3108	4.77	.	Q	.	.V	.	.
15.850	1.3174	4.85	.	Q	.	.V	.	.
15.867	1.3242	4.92	.	Q	.	.V	.	.
15.883	1.3311	5.00	.	.Q	.	.V	.	.
15.900	1.3381	5.08	.	.Q	.	.V	.	.
15.917	1.3452	5.16	.	.Q	.	.V	.	.
15.933	1.3525	5.24	.	.Q	.	.V	.	.
15.950	1.3598	5.32	.	.Q	.	.V	.	.
15.967	1.3672	5.40	.	.Q	.	.V	.	.
15.983	1.3748	5.48	.	.Q	.	.V	.	.
16.000	1.3824	5.56	.	.Q	.	.V	.	.
16.017	1.3907	6.01	.	.Q	.	.V	.	.
16.033	1.4001	6.85	.	.Q	.	.V	.	.
16.050	1.4107	7.68	.	.Q	.	.V	.	.
16.067	1.4224	8.52	.	.Q	.	.V	.	.
16.083	1.4353	9.35	.	.Q	.	.V	.	.
16.100	1.4494	10.19	.	.Q	.	.V	.	.
16.117	1.4645	11.02	.	.Q	.	.V	.	.
16.133	1.4809	11.85	.	.Q	.	.V	.	.
16.150	1.4983	12.69	.	.Q	.	.V	.	.
16.167	1.5170	13.52	.	.Q	.	.V	.	.
16.183	1.5367	14.36	.	.Q	.	.V	.	.
16.200	1.5577	15.19	.	.Q	.	.V	.	.
16.217	1.5797	16.03	.	.Q	.	.V	.	.
16.233	1.6030	16.86	.	.Q	.	.V	.	.
16.250	1.6277	17.96	.	.Q	.	.V	.	.
16.267	1.6515	17.31	.	.Q	.	.V	.	.
16.283	1.6741	16.35	.	.Q	.	.V	.	.
16.300	1.6953	15.40	.	.Q	.	.V	.	.
16.317	1.7152	14.44	.	.Q	.	.V	.	.
16.333	1.7337	13.48	.	.Q	.	.V	.	.
16.350	1.7510	12.52	.	.Q	.	.V	.	.
16.367	1.7669	11.57	.	.Q	.	.V	.	.
16.383	1.7815	10.61	.	.Q	.	.V	.	.
16.400	1.7948	9.65	.	.Q	.	.V	.	.
16.417	1.8068	8.70	.	.Q	.	.V	.	.
16.433	1.8175	7.74	.	.Q	.	.V	.	.
16.450	1.8268	6.78	.	.Q	.	.V	.	.
16.467	1.8348	5.82	.	.Q	.	.V	.	.
16.483	1.8415	4.87	.	.Q	.	.V	.	.
16.500	1.8470	3.97	.	.Q	.	.V	.	.

16.517	1.8521	3.70	.	Q	.	.	V	.
16.533	1.8571	3.61	.	Q	.	.	V	.
16.550	1.8619	3.53	.	Q	.	.	V	.
16.567	1.8667	3.44	.	Q	.	.	V	.
16.583	1.8713	3.35	.	Q	.	.	V	.
16.600	1.8758	3.26	.	Q	.	.	V	.
16.617	1.8802	3.17	.	Q	.	.	V	.
16.633	1.8844	3.09	.	Q	.	.	V	.
16.650	1.8885	3.00	.	Q	.	.	V	.
16.667	1.8925	2.91	.	Q	.	.	V	.
16.683	1.8964	2.82	.	Q	.	.	V	.
16.700	1.9002	2.74	.	Q	.	.	V	.
16.717	1.9039	2.65	.	Q	.	.	V	.
16.733	1.9074	2.56	.	Q	.	.	V	.
16.750	1.9108	2.48	.	Q	.	.	V	.
16.767	1.9142	2.45	.	Q	.	.	.V	.
16.783	1.9175	2.42	.	Q	.	.	.V	.
16.800	1.9208	2.39	.	Q	.	.	.V	.
16.817	1.9240	2.36	.	Q	.	.	.V	.
16.833	1.9272	2.33	.	Q	.	.	.V	.
16.850	1.9304	2.30	.	Q	.	.	.V	.
16.867	1.9335	2.27	.	Q	.	.	.V	.
16.883	1.9366	2.24	.	Q	.	.	.V	.
16.900	1.9396	2.21	.	Q	.	.	.V	.
16.917	1.9426	2.18	.	Q	.	.	.V	.
16.933	1.9456	2.15	.	Q	.	.	.V	.
16.950	1.9485	2.12	.	Q	.	.	.V	.
16.967	1.9514	2.09	.	Q	.	.	.V	.
16.983	1.9542	2.06	.	Q	.	.	.V	.
17.000	1.9570	2.03	.	Q	.	.	.V	.
17.017	1.9598	2.01	.	Q	.	.	.V	.
17.033	1.9625	1.99	.	Q	.	.	.V	.
17.050	1.9652	1.97	.	Q	.	.	.V	.
17.067	1.9679	1.95	.	Q	.	.	.V	.
17.083	1.9706	1.94	.	Q	.	.	.V	.
17.100	1.9732	1.92	.	Q	.	.	.V	.
17.117	1.9758	1.90	.	Q	.	.	.V	.
17.133	1.9784	1.88	.	Q	.	.	.V	.
17.150	1.9810	1.86	.	Q	.	.	.V	.
17.167	1.9835	1.84	.	Q	.	.	.V	.
17.183	1.9860	1.82	.	Q	.	.	.V	.
17.200	1.9885	1.81	.	Q	.	.	.V	.
17.217	1.9910	1.79	.	Q	.	.	.V	.
17.233	1.9934	1.77	.	Q	.	.	.V	.
17.250	1.9958	1.75	.	Q	.	.	.V	.
17.267	1.9982	1.74	.	Q	.	.	.V	.
17.283	2.0006	1.73	.	Q	.	.	.V	.
17.300	2.0030	1.71	.	Q	.	.	.V	.
17.317	2.0053	1.70	.	Q	.	.	.V	.
17.333	2.0076	1.69	.	Q	.	.	.V	.
17.350	2.0100	1.68	.	Q	.	.	.V	.
17.367	2.0122	1.66	.	Q	.	.	.V	.
17.383	2.0145	1.65	.	Q	.	.	.V	.
17.400	2.0168	1.64	.	Q	.	.	.V	.
17.417	2.0190	1.63	.	Q	.	.	.V	.

17.433	2.0212	1.61	.	Q	.	.	.	V	.
17.450	2.0234	1.60	.	Q	.	.	.	V	.
17.467	2.0256	1.59	.	Q	.	.	.	V	.
17.483	2.0278	1.58	.	Q	.	.	.	V	.
17.500	2.0300	1.56	.	Q	.	.	.	V	.
17.517	2.0321	1.55	.	Q	.	.	.	V	.
17.533	2.0342	1.55	.	Q	.	.	.	V	.
17.550	2.0363	1.54	.	Q	.	.	.	V	.
17.567	2.0384	1.53	.	Q	.	.	.	V	.
17.583	2.0405	1.52	.	Q	.	.	.	V	.
17.600	2.0426	1.51	.	Q	.	.	.	V	.
17.617	2.0447	1.50	.	Q	.	.	.	V	.
17.633	2.0467	1.49	.	Q	.	.	.	V	.
17.650	2.0488	1.48	.	Q	.	.	.	V	.
17.667	2.0508	1.47	.	Q	.	.	.	V	.
17.683	2.0528	1.46	.	Q	.	.	.	V	.
17.700	2.0548	1.45	.	Q	.	.	.	V	.
17.717	2.0568	1.44	.	Q	.	.	.	V	.
17.733	2.0588	1.43	.	Q	.	.	.	V	.
17.750	2.0607	1.43	.	Q	.	.	.	V	.
17.767	2.0627	1.42	.	Q	.	.	.	V	.
17.783	2.0646	1.41	.	Q	.	.	.	V	.
17.800	2.0666	1.40	.	Q	.	.	.	V	.
17.817	2.0685	1.40	.	Q	.	.	.	V	.
17.833	2.0704	1.39	.	Q	.	.	.	V	.
17.850	2.0723	1.38	.	Q	.	.	.	V	.
17.867	2.0742	1.37	.	Q	.	.	.	V	.
17.883	2.0761	1.37	.	Q	.	.	.	V	.
17.900	2.0780	1.36	.	Q	.	.	.	V	.
17.917	2.0798	1.35	.	Q	.	.	.	V	.
17.933	2.0817	1.35	.	Q	.	.	.	V	.
17.950	2.0835	1.34	.	Q	.	.	.	V	.
17.967	2.0853	1.33	.	Q	.	.	.	V	.
17.983	2.0872	1.32	.	Q	.	.	.	V	.
18.000	2.0890	1.31	.	Q	.	.	.	V	.
18.017	2.0908	1.30	.	Q	.	.	.	V	.
18.033	2.0926	1.29	.	Q	.	.	.	V	.
18.050	2.0943	1.28	.	Q	.	.	.	V	.
18.067	2.0961	1.27	.	Q	.	.	.	V	.
18.083	2.0978	1.26	.	Q	.	.	.	V	.
18.100	2.0995	1.25	.	Q	.	.	.	V	.
18.117	2.1012	1.23	.	Q	.	.	.	V	.
18.133	2.1029	1.22	.	Q	.	.	.	V	.
18.150	2.1046	1.21	.	Q	.	.	.	V	.
18.167	2.1062	1.20	.	Q	.	.	.	V	.
18.183	2.1079	1.19	.	Q	.	.	.	V	.
18.200	2.1095	1.18	.	Q	.	.	.	V	.
18.217	2.1111	1.17	.	Q	.	.	.	V	.
18.233	2.1127	1.16	.	Q	.	.	.	V	.
18.250	2.1143	1.15	.	Q	.	.	.	V	.
18.267	2.1158	1.14	.	Q	.	.	.	V	.
18.283	2.1174	1.14	.	Q	.	.	.	V	.
18.300	2.1190	1.13	.	Q	.	.	.	V	.
18.317	2.1205	1.12	.	Q	.	.	.	V	.
18.333	2.1220	1.12	.	Q	.	.	.	V	.

18.350	2.1236	1.11	. Q	.	.	.	V	.
18.367	2.1251	1.10	. Q	.	.	.	V	.
18.383	2.1266	1.09	. Q	.	.	.	V	.
18.400	2.1281	1.09	. Q	.	.	.	V	.
18.417	2.1296	1.08	. Q	.	.	.	V	.
18.433	2.1311	1.07	. Q	.	.	.	V	.
18.450	2.1325	1.07	. Q	.	.	.	V	.
18.467	2.1340	1.06	. Q	.	.	.	V	.
18.483	2.1354	1.05	. Q	.	.	.	V	.
18.500	2.1369	1.05	. Q	.	.	.	V	.
18.517	2.1383	1.05	. Q	.	.	.	V	.
18.533	2.1398	1.04	. Q	.	.	.	V	.
18.550	2.1412	1.04	. Q	.	.	.	V	.
18.567	2.1426	1.03	. Q	.	.	.	V	.
18.583	2.1440	1.03	. Q	.	.	.	V	.
18.600	2.1454	1.03	. Q	.	.	.	V	.
18.617	2.1468	1.02	. Q	.	.	.	V	.
18.633	2.1482	1.02	. Q	.	.	.	V	.
18.650	2.1496	1.01	. Q	.	.	.	V	.
18.667	2.1510	1.01	. Q	.	.	.	V	.
18.683	2.1524	1.00	. Q	.	.	.	V	.
18.700	2.1538	1.00	. Q	.	.	.	V	.
18.717	2.1552	1.00	. Q	.	.	.	V	.
18.733	2.1565	0.99	. Q	.	.	.	V	.
18.750	2.1579	0.99	. Q	.	.	.	V	.
18.767	2.1593	0.99	. Q	.	.	.	V	.
18.783	2.1606	0.98	. Q	.	.	.	V	.
18.800	2.1620	0.98	. Q	.	.	.	V	.
18.817	2.1633	0.98	. Q	.	.	.	V	.
18.833	2.1646	0.97	. Q	.	.	.	V	.
18.850	2.1660	0.97	. Q	.	.	.	V	.
18.867	2.1673	0.97	. Q	.	.	.	V	.
18.883	2.1686	0.96	. Q	.	.	.	V	.
18.900	2.1700	0.96	. Q	.	.	.	V	.
18.917	2.1713	0.96	. Q	.	.	.	V	.
18.933	2.1726	0.95	. Q	.	.	.	V	.
18.950	2.1739	0.95	. Q	.	.	.	V	.
18.967	2.1752	0.94	. Q	.	.	.	V	.
18.983	2.1765	0.94	. Q	.	.	.	V	.
19.000	2.1778	0.94	. Q	.	.	.	V	.
19.017	2.1791	0.94	. Q	.	.	.	V	.
19.033	2.1804	0.93	. Q	.	.	.	V	.
19.050	2.1816	0.93	. Q	.	.	.	V	.
19.067	2.1829	0.93	. Q	.	.	.	V	.
19.083	2.1842	0.92	. Q	.	.	.	V	.
19.100	2.1854	0.92	. Q	.	.	.	V	.
19.117	2.1867	0.92	. Q	.	.	.	V	.
19.133	2.1880	0.91	. Q	.	.	.	V	.
19.150	2.1892	0.91	. Q	.	.	.	V	.
19.167	2.1905	0.91	. Q	.	.	.	V	.
19.183	2.1917	0.91	. Q	.	.	.	V	.
19.200	2.1930	0.90	. Q	.	.	.	V	.
19.217	2.1942	0.90	. Q	.	.	.	V	.
19.233	2.1954	0.90	.Q	.	.	.	V	.
19.250	2.1967	0.89	.Q	.	.	.	V	.

19.267	2.1979	0.89	.Q	.	.	.	V	.
19.283	2.1991	0.89	.Q	.	.	.	V	.
19.300	2.2003	0.89	.Q	.	.	.	V	.
19.317	2.2016	0.88	.Q	.	.	.	V	.
19.333	2.2028	0.88	.Q	.	.	.	V	.
19.350	2.2040	0.88	.Q	.	.	.	V	.
19.367	2.2052	0.88	.Q	.	.	.	V	.
19.383	2.2064	0.87	.Q	.	.	.	V	.
19.400	2.2076	0.87	.Q	.	.	.	V	.
19.417	2.2088	0.87	.Q	.	.	.	V	.
19.433	2.2100	0.87	.Q	.	.	.	V	.
19.450	2.2112	0.86	.Q	.	.	.	V	.
19.467	2.2123	0.86	.Q	.	.	.	V	.
19.483	2.2135	0.86	.Q	.	.	.	V	.
19.500	2.2147	0.86	.Q	.	.	.	V	.
19.517	2.2159	0.85	.Q	.	.	.	V	.
19.533	2.2171	0.85	.Q	.	.	.	V	.
19.550	2.2182	0.85	.Q	.	.	.	V	.
19.567	2.2194	0.85	.Q	.	.	.	V	.
19.583	2.2205	0.84	.Q	.	.	.	V	.
19.600	2.2217	0.84	.Q	.	.	.	V	.
19.617	2.2229	0.84	.Q	.	.	.	V	.
19.633	2.2240	0.84	.Q	.	.	.	V	.
19.650	2.2252	0.83	.Q	.	.	.	V	.
19.667	2.2263	0.83	.Q	.	.	.	V	.
19.683	2.2275	0.83	.Q	.	.	.	V	.
19.700	2.2286	0.83	.Q	.	.	.	V	.
19.717	2.2297	0.82	.Q	.	.	.	V	.
19.733	2.2309	0.82	.Q	.	.	.	V	.
19.750	2.2320	0.82	.Q	.	.	.	V	.
19.767	2.2331	0.82	.Q	.	.	.	V	.
19.783	2.2342	0.82	.Q	.	.	.	V	.
19.800	2.2354	0.81	.Q	.	.	.	V	.
19.817	2.2365	0.81	.Q	.	.	.	V	.
19.833	2.2376	0.81	.Q	.	.	.	V	.
19.850	2.2387	0.81	.Q	.	.	.	V	.
19.867	2.2398	0.81	.Q	.	.	.	V	.
19.883	2.2409	0.80	.Q	.	.	.	V	.
19.900	2.2420	0.80	.Q	.	.	.	V	.
19.917	2.2431	0.80	.Q	.	.	.	V	.
19.933	2.2442	0.80	.Q	.	.	.	V	.
19.950	2.2453	0.80	.Q	.	.	.	V	.
19.967	2.2464	0.79	.Q	.	.	.	V	.
19.983	2.2475	0.79	.Q	.	.	.	V	.
20.000	2.2486	0.79	.Q	.	.	.	V	.
20.017	2.2497	0.79	.Q	.	.	.	V	.
20.033	2.2508	0.79	.Q	.	.	.	V	.
20.050	2.2518	0.78	.Q	.	.	.	V	.
20.067	2.2529	0.78	.Q	.	.	.	V	.
20.083	2.2540	0.78	.Q	.	.	.	V	.
20.100	2.2551	0.78	.Q	.	.	.	V	.
20.117	2.2561	0.78	.Q	.	.	.	V	.
20.133	2.2572	0.77	.Q	.	.	.	V	.
20.150	2.2583	0.77	.Q	.	.	.	V	.
20.167	2.2593	0.77	.Q	.	.	.	V	.

20.183	2.2604	0.77	.Q	.	.	.	V	.
20.200	2.2614	0.77	.Q	.	.	.	V	.
20.217	2.2625	0.76	.Q	.	.	.	V	.
20.233	2.2635	0.76	.Q	.	.	.	V	.
20.250	2.2646	0.76	.Q	.	.	.	V	.
20.267	2.2656	0.76	.Q	.	.	.	V	.
20.283	2.2667	0.76	.Q	.	.	.	V	.
20.300	2.2677	0.76	.Q	.	.	.	V	.
20.317	2.2688	0.75	.Q	.	.	.	V	.
20.333	2.2698	0.75	.Q	.	.	.	V	.
20.350	2.2708	0.75	.Q	.	.	.	V	.
20.367	2.2719	0.75	.Q	.	.	.	V	.
20.383	2.2729	0.75	.Q	.	.	.	V	.
20.400	2.2739	0.75	.Q	.	.	.	V	.
20.417	2.2749	0.74	.Q	.	.	.	V	.
20.433	2.2760	0.74	.Q	.	.	.	V	.
20.450	2.2770	0.74	.Q	.	.	.	V	.
20.467	2.2780	0.74	.Q	.	.	.	V	.
20.483	2.2790	0.74	.Q	.	.	.	V	.
20.500	2.2800	0.74	.Q	.	.	.	V	.
20.517	2.2810	0.73	.Q	.	.	.	V	.
20.533	2.2821	0.73	.Q	.	.	.	V	.
20.550	2.2831	0.73	.Q	.	.	.	V	.
20.567	2.2841	0.73	.Q	.	.	.	V	.
20.583	2.2851	0.73	.Q	.	.	.	V	.
20.600	2.2861	0.73	.Q	.	.	.	V	.
20.617	2.2871	0.73	.Q	.	.	.	V	.
20.633	2.2881	0.72	.Q	.	.	.	V	.
20.650	2.2891	0.72	.Q	.	.	.	V	.
20.667	2.2901	0.72	.Q	.	.	.	V	.
20.683	2.2910	0.72	.Q	.	.	.	V	.
20.700	2.2920	0.72	.Q	.	.	.	V	.
20.717	2.2930	0.72	.Q	.	.	.	V	.
20.733	2.2940	0.71	.Q	.	.	.	V	.
20.750	2.2950	0.71	.Q	.	.	.	V	.
20.767	2.2960	0.71	.Q	.	.	.	V	.
20.783	2.2969	0.71	.Q	.	.	.	V	.
20.800	2.2979	0.71	.Q	.	.	.	V	.
20.817	2.2989	0.71	.Q	.	.	.	V	.
20.833	2.2999	0.71	.Q	.	.	.	V	.
20.850	2.3008	0.70	.Q	.	.	.	V	.
20.867	2.3018	0.70	.Q	.	.	.	V	.
20.883	2.3028	0.70	.Q	.	.	.	V	.
20.900	2.3037	0.70	.Q	.	.	.	V	.
20.917	2.3047	0.70	.Q	.	.	.	V	.
20.933	2.3057	0.70	.Q	.	.	.	V	.
20.950	2.3066	0.70	.Q	.	.	.	V	.
20.967	2.3076	0.69	.Q	.	.	.	V	.
20.983	2.3085	0.69	.Q	.	.	.	V	.
21.000	2.3095	0.69	.Q	.	.	.	V	.
21.017	2.3104	0.69	.Q	.	.	.	V	.
21.033	2.3114	0.69	.Q	.	.	.	V	.
21.050	2.3123	0.69	.Q	.	.	.	V	.
21.067	2.3133	0.69	.Q	.	.	.	V	.
21.083	2.3142	0.68	.Q	.	.	.	V	.

21.100	2.3152	0.68	.Q	.	.	.	V	.
21.117	2.3161	0.68	.Q	.	.	.	V	.
21.133	2.3170	0.68	.Q	.	.	.	V	.
21.150	2.3180	0.68	.Q	.	.	.	V	.
21.167	2.3189	0.68	.Q	.	.	.	V	.
21.183	2.3198	0.68	.Q	.	.	.	V	.
21.200	2.3208	0.68	.Q	.	.	.	V	.
21.217	2.3217	0.67	.Q	.	.	.	V	.
21.233	2.3226	0.67	.Q	.	.	.	V	.
21.250	2.3235	0.67	.Q	.	.	.	V	.
21.267	2.3245	0.67	.Q	.	.	.	V	.
21.283	2.3254	0.67	.Q	.	.	.	V	.
21.300	2.3263	0.67	.Q	.	.	.	V	.
21.317	2.3272	0.67	.Q	.	.	.	V	.
21.333	2.3281	0.67	.Q	.	.	.	V	.
21.350	2.3291	0.66	.Q	.	.	.	V	.
21.367	2.3300	0.66	.Q	.	.	.	V	.
21.383	2.3309	0.66	.Q	.	.	.	V	.
21.400	2.3318	0.66	.Q	.	.	.	V	.
21.417	2.3327	0.66	.Q	.	.	.	V	.
21.433	2.3336	0.66	.Q	.	.	.	V	.
21.450	2.3345	0.66	.Q	.	.	.	V	.
21.467	2.3354	0.66	.Q	.	.	.	V	.
21.483	2.3363	0.66	.Q	.	.	.	V	.
21.500	2.3372	0.65	.Q	.	.	.	V	.
21.517	2.3381	0.65	.Q	.	.	.	V	.
21.533	2.3390	0.65	.Q	.	.	.	V	.
21.550	2.3399	0.65	.Q	.	.	.	V	.
21.567	2.3408	0.65	.Q	.	.	.	V	.
21.583	2.3417	0.65	.Q	.	.	.	V	.
21.600	2.3426	0.65	.Q	.	.	.	V	.
21.617	2.3435	0.65	.Q	.	.	.	V	.
21.633	2.3444	0.64	.Q	.	.	.	V	.
21.650	2.3453	0.64	.Q	.	.	.	V	.
21.667	2.3461	0.64	.Q	.	.	.	V	.
21.683	2.3470	0.64	.Q	.	.	.	V	.
21.700	2.3479	0.64	.Q	.	.	.	V	.
21.717	2.3488	0.64	.Q	.	.	.	V	.
21.733	2.3497	0.64	.Q	.	.	.	V	.
21.750	2.3506	0.64	.Q	.	.	.	V	.
21.767	2.3514	0.64	.Q	.	.	.	V	.
21.783	2.3523	0.63	.Q	.	.	.	V	.
21.800	2.3532	0.63	.Q	.	.	.	V	.
21.817	2.3540	0.63	.Q	.	.	.	V	.
21.833	2.3549	0.63	.Q	.	.	.	V	.
21.850	2.3558	0.63	.Q	.	.	.	V	.
21.867	2.3567	0.63	.Q	.	.	.	V	.
21.883	2.3575	0.63	.Q	.	.	.	V	.
21.900	2.3584	0.63	.Q	.	.	.	V	.
21.917	2.3592	0.63	.Q	.	.	.	V	.
21.933	2.3601	0.63	.Q	.	.	.	V	.
21.950	2.3610	0.62	.Q	.	.	.	V	.
21.967	2.3618	0.62	.Q	.	.	.	V	.
21.983	2.3627	0.62	.Q	.	.	.	V	.
22.000	2.3635	0.62	.Q	.	.	.	V	.

22.017	2.3644	0.62	.Q	.	.	.	V .
22.033	2.3652	0.62	.Q	.	.	.	V .
22.050	2.3661	0.62	.Q	.	.	.	V .
22.067	2.3669	0.62	.Q	.	.	.	V .
22.083	2.3678	0.62	.Q	.	.	.	V .
22.100	2.3686	0.62	.Q	.	.	.	V .
22.117	2.3695	0.61	.Q	.	.	.	V .
22.133	2.3703	0.61	.Q	.	.	.	V .
22.150	2.3712	0.61	.Q	.	.	.	V .
22.167	2.3720	0.61	.Q	.	.	.	V .
22.183	2.3729	0.61	.Q	.	.	.	V .
22.200	2.3737	0.61	.Q	.	.	.	V .
22.217	2.3745	0.61	.Q	.	.	.	V .
22.233	2.3754	0.61	.Q	.	.	.	V .
22.250	2.3762	0.61	.Q	.	.	.	V .
22.267	2.3770	0.61	.Q	.	.	.	V .
22.283	2.3779	0.60	.Q	.	.	.	V .
22.300	2.3787	0.60	.Q	.	.	.	V .
22.317	2.3795	0.60	.Q	.	.	.	V .
22.333	2.3804	0.60	.Q	.	.	.	V .
22.350	2.3812	0.60	.Q	.	.	.	V .
22.367	2.3820	0.60	.Q	.	.	.	V .
22.383	2.3829	0.60	.Q	.	.	.	V .
22.400	2.3837	0.60	.Q	.	.	.	V .
22.417	2.3845	0.60	.Q	.	.	.	V .
22.433	2.3853	0.60	.Q	.	.	.	V .
22.450	2.3861	0.60	.Q	.	.	.	V .
22.467	2.3870	0.59	.Q	.	.	.	V .
22.483	2.3878	0.59	.Q	.	.	.	V .
22.500	2.3886	0.59	.Q	.	.	.	V .
22.517	2.3894	0.59	.Q	.	.	.	V .
22.533	2.3902	0.59	.Q	.	.	.	V .
22.550	2.3910	0.59	.Q	.	.	.	V .
22.567	2.3919	0.59	.Q	.	.	.	V .
22.583	2.3927	0.59	.Q	.	.	.	V .
22.600	2.3935	0.59	.Q	.	.	.	V .
22.617	2.3943	0.59	.Q	.	.	.	V .
22.633	2.3951	0.59	.Q	.	.	.	V .
22.650	2.3959	0.59	.Q	.	.	.	V .
22.667	2.3967	0.58	.Q	.	.	.	V .
22.683	2.3975	0.58	.Q	.	.	.	V .
22.700	2.3983	0.58	.Q	.	.	.	V .
22.717	2.3991	0.58	.Q	.	.	.	V .
22.733	2.3999	0.58	.Q	.	.	.	V .
22.750	2.4007	0.58	.Q	.	.	.	V .
22.767	2.4015	0.58	.Q	.	.	.	V .
22.783	2.4023	0.58	.Q	.	.	.	V .
22.800	2.4031	0.58	.Q	.	.	.	V .
22.817	2.4039	0.58	.Q	.	.	.	V .
22.833	2.4047	0.58	.Q	.	.	.	V .
22.850	2.4055	0.58	.Q	.	.	.	V .
22.867	2.4063	0.57	.Q	.	.	.	V .
22.883	2.4071	0.57	.Q	.	.	.	V .
22.900	2.4078	0.57	.Q	.	.	.	V .
22.917	2.4086	0.57	.Q	.	.	.	V .

22.933	2.4094	0.57	.Q	.	.	.	V.
22.950	2.4102	0.57	.Q	.	.	.	V.
22.967	2.4110	0.57	.Q	.	.	.	V.
22.983	2.4118	0.57	.Q	.	.	.	V.
23.000	2.4126	0.57	.Q	.	.	.	V.
23.017	2.4133	0.57	.Q	.	.	.	V.
23.033	2.4141	0.57	.Q	.	.	.	V.
23.050	2.4149	0.57	.Q	.	.	.	V.
23.067	2.4157	0.56	.Q	.	.	.	V.
23.083	2.4164	0.56	.Q	.	.	.	V.
23.100	2.4172	0.56	.Q	.	.	.	V.
23.117	2.4180	0.56	.Q	.	.	.	V.
23.133	2.4188	0.56	.Q	.	.	.	V.
23.150	2.4195	0.56	.Q	.	.	.	V.
23.167	2.4203	0.56	.Q	.	.	.	V.
23.183	2.4211	0.56	.Q	.	.	.	V.
23.200	2.4219	0.56	.Q	.	.	.	V.
23.217	2.4226	0.56	.Q	.	.	.	V.
23.233	2.4234	0.56	.Q	.	.	.	V.
23.250	2.4242	0.56	.Q	.	.	.	V.
23.267	2.4249	0.56	.Q	.	.	.	V.
23.283	2.4257	0.55	.Q	.	.	.	V.
23.300	2.4265	0.55	.Q	.	.	.	V.
23.317	2.4272	0.55	.Q	.	.	.	V.
23.333	2.4280	0.55	.Q	.	.	.	V.
23.350	2.4287	0.55	.Q	.	.	.	V.
23.367	2.4295	0.55	.Q	.	.	.	V.
23.383	2.4303	0.55	.Q	.	.	.	V.
23.400	2.4310	0.55	.Q	.	.	.	V.
23.417	2.4318	0.55	.Q	.	.	.	V.
23.433	2.4325	0.55	.Q	.	.	.	V.
23.450	2.4333	0.55	.Q	.	.	.	V.
23.467	2.4340	0.55	.Q	.	.	.	V.
23.483	2.4348	0.55	.Q	.	.	.	V.
23.500	2.4355	0.55	.Q	.	.	.	V.
23.517	2.4363	0.54	.Q	.	.	.	V.
23.533	2.4370	0.54	.Q	.	.	.	V.
23.550	2.4378	0.54	.Q	.	.	.	V.
23.567	2.4385	0.54	.Q	.	.	.	V.
23.583	2.4393	0.54	.Q	.	.	.	V.
23.600	2.4400	0.54	.Q	.	.	.	V.
23.617	2.4408	0.54	.Q	.	.	.	V.
23.633	2.4415	0.54	.Q	.	.	.	V.
23.650	2.4423	0.54	.Q	.	.	.	V.
23.667	2.4430	0.54	.Q	.	.	.	V.
23.683	2.4437	0.54	.Q	.	.	.	V.
23.700	2.4445	0.54	.Q	.	.	.	V.
23.717	2.4452	0.54	.Q	.	.	.	V.
23.733	2.4460	0.54	.Q	.	.	.	V.
23.750	2.4467	0.54	.Q	.	.	.	V.
23.767	2.4474	0.53	.Q	.	.	.	V.
23.783	2.4482	0.53	.Q	.	.	.	V.
23.800	2.4489	0.53	.Q	.	.	.	V.
23.817	2.4496	0.53	.Q	.	.	.	V.
23.833	2.4504	0.53	.Q	.	.	.	V.

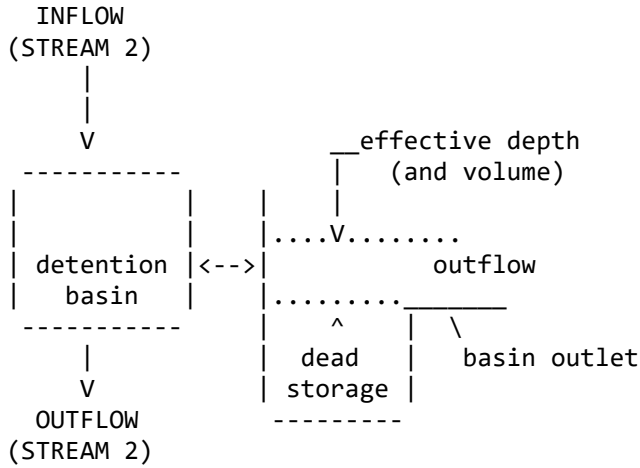
23.850	2.4511	0.53	.Q	.	.	.	V.
23.867	2.4518	0.53	.Q	.	.	.	V.
23.883	2.4526	0.53	.Q	.	.	.	V.
23.900	2.4533	0.53	.Q	.	.	.	V.
23.917	2.4540	0.53	.Q	.	.	.	V.
23.933	2.4547	0.53	.Q	.	.	.	V.
23.950	2.4555	0.53	.Q	.	.	.	V.
23.967	2.4562	0.53	.Q	.	.	.	V.
23.983	2.4569	0.53	.Q	.	.	.	V.
24.000	2.4576	0.53	.Q	.	.	.	V.
24.017	2.4584	0.52	.Q	.	.	.	V.
24.033	2.4591	0.52	.Q	.	.	.	V.
24.050	2.4598	0.52	.Q	.	.	.	V.
24.067	2.4605	0.52	.Q	.	.	.	V.
24.083	2.4613	0.52	.Q	.	.	.	V.
24.100	2.4620	0.52	.Q	.	.	.	V.
24.117	2.4627	0.52	.Q	.	.	.	V.
24.133	2.4634	0.52	.Q	.	.	.	V.
24.150	2.4641	0.52	.Q	.	.	.	V.
24.167	2.4648	0.50	.Q	.	.	.	V.
24.183	2.4655	0.47	.Q	.	.	.	V.
24.200	2.4661	0.43	Q	.	.	.	V.
24.217	2.4666	0.40	Q	.	.	.	V.
24.233	2.4671	0.36	Q	.	.	.	V.
24.250	2.4676	0.33	Q	.	.	.	V.
24.267	2.4680	0.29	Q	.	.	.	V.
24.283	2.4683	0.26	Q	.	.	.	V.
24.300	2.4686	0.22	Q	.	.	.	V.
24.317	2.4689	0.19	Q	.	.	.	V.
24.333	2.4691	0.15	Q	.	.	.	V.
24.350	2.4693	0.12	Q	.	.	.	V.
24.367	2.4694	0.08	Q	.	.	.	V.
24.383	2.4695	0.05	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1463.0
10%	900.0
20%	280.0
30%	155.0
40%	120.0
50%	100.0
60%	80.0
70%	60.0
80%	40.0
90%	20.0

FLOW PROCESS FROM NODE 201.00 TO NODE 201.00 IS CODE = 3.2

=====
 >>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<<
 =====



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
 THROUGH A FLOW-THROUGH DETENTION BASIN
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE(AF) = 0.000
 SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
 SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
 DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	3.00	0.19	0.623
3	4.00	0.21	0.904
4	5.00	3.80	1.221
5	6.00	24.25	1.570
6	7.00	41.26	1.958

=====
 MODIFIED-PULS BASIN ROUTING MODEL RESULTS(1-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
 MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH(FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME(AF)
10.000	0.000	0.88	0.00	2.31	0.1	0.479
10.017	0.000	0.88	0.00	2.31	0.1	0.480
10.033	0.000	0.88	0.00	2.32	0.1	0.481

10.050	0.000	0.88	0.00	2.32	0.1	0.482
10.067	0.000	0.88	0.00	2.33	0.1	0.483
10.083	0.000	0.89	0.00	2.33	0.1	0.484
10.100	0.000	0.89	0.00	2.34	0.1	0.485
10.117	0.000	0.89	0.00	2.34	0.1	0.486
10.133	0.000	0.89	0.00	2.35	0.1	0.487
10.150	0.000	0.89	0.00	2.35	0.1	0.488
10.167	0.000	0.90	0.00	2.36	0.1	0.490
10.183	0.000	0.90	0.00	2.36	0.1	0.491
10.200	0.000	0.90	0.00	2.37	0.1	0.492
10.217	0.000	0.90	0.00	2.37	0.2	0.493
10.233	0.000	0.90	0.00	2.38	0.2	0.494
10.250	0.000	0.90	0.00	2.38	0.2	0.495
10.267	0.000	0.91	0.00	2.39	0.2	0.496
10.283	0.000	0.91	0.00	2.39	0.2	0.497
10.300	0.000	0.91	0.00	2.40	0.2	0.498
10.317	0.000	0.91	0.00	2.40	0.2	0.499
10.333	0.000	0.91	0.00	2.41	0.2	0.500
10.350	0.000	0.91	0.00	2.41	0.2	0.501
10.367	0.000	0.92	0.00	2.42	0.2	0.502
10.383	0.000	0.92	0.00	2.42	0.2	0.503
10.400	0.000	0.92	0.00	2.43	0.2	0.504
10.417	0.000	0.92	0.00	2.43	0.2	0.505
10.433	0.000	0.92	0.00	2.44	0.2	0.506
10.450	0.000	0.92	0.00	2.44	0.2	0.507
10.467	0.000	0.92	0.00	2.45	0.2	0.508
10.483	0.000	0.92	0.00	2.45	0.2	0.509
10.500	0.000	0.92	0.00	2.46	0.2	0.510
10.517	0.000	0.92	0.00	2.46	0.2	0.512
10.533	0.000	0.93	0.00	2.47	0.2	0.513
10.550	0.000	0.93	0.00	2.47	0.2	0.514
10.567	0.000	0.93	0.00	2.48	0.2	0.515
10.583	0.000	0.93	0.00	2.48	0.2	0.516
10.600	0.000	0.93	0.00	2.49	0.2	0.517
10.617	0.000	0.93	0.00	2.49	0.2	0.518
10.633	0.000	0.94	0.00	2.50	0.2	0.519
10.650	0.000	0.94	0.00	2.50	0.2	0.520
10.667	0.000	0.94	0.00	2.51	0.2	0.521
10.683	0.000	0.94	0.00	2.51	0.2	0.522
10.700	0.000	0.94	0.00	2.52	0.2	0.523
10.717	0.000	0.95	0.00	2.52	0.2	0.524
10.733	0.000	0.95	0.00	2.53	0.2	0.525
10.750	0.000	0.95	0.00	2.54	0.2	0.527
10.767	0.000	0.95	0.00	2.54	0.2	0.528
10.783	0.000	0.95	0.00	2.55	0.2	0.529
10.800	0.000	0.96	0.00	2.55	0.2	0.530
10.817	0.000	0.96	0.00	2.56	0.2	0.531
10.833	0.000	0.96	0.00	2.56	0.2	0.532
10.850	0.000	0.96	0.00	2.57	0.2	0.533
10.867	0.000	0.96	0.00	2.57	0.2	0.534
10.883	0.000	0.96	0.00	2.58	0.2	0.535
10.900	0.000	0.97	0.00	2.58	0.2	0.536
10.917	0.000	0.97	0.00	2.59	0.2	0.538
10.933	0.000	0.97	0.00	2.59	0.2	0.539
10.950	0.000	0.97	0.00	2.60	0.2	0.540

10.967	0.000	0.97	0.00	2.60	0.2	0.541
10.983	0.000	0.97	0.00	2.61	0.2	0.542
11.000	0.000	0.97	0.00	2.62	0.2	0.543
11.017	0.000	0.97	0.00	2.62	0.2	0.544
11.033	0.000	0.97	0.00	2.63	0.2	0.545
11.050	0.000	0.98	0.00	2.63	0.2	0.546
11.067	0.000	0.98	0.00	2.64	0.2	0.548
11.083	0.000	0.98	0.00	2.64	0.2	0.549
11.100	0.000	0.98	0.00	2.65	0.2	0.550
11.117	0.000	0.98	0.00	2.65	0.2	0.551
11.133	0.000	0.99	0.00	2.66	0.2	0.552
11.150	0.000	0.99	0.00	2.66	0.2	0.553
11.167	0.000	0.99	0.00	2.67	0.2	0.554
11.183	0.000	0.99	0.00	2.67	0.2	0.555
11.200	0.000	1.00	0.00	2.68	0.2	0.557
11.217	0.000	1.00	0.00	2.69	0.2	0.558
11.233	0.000	1.00	0.00	2.69	0.2	0.559
11.250	0.000	1.00	0.00	2.70	0.2	0.560
11.267	0.000	1.01	0.00	2.70	0.2	0.561
11.283	0.000	1.01	0.00	2.71	0.2	0.562
11.300	0.000	1.01	0.00	2.71	0.2	0.563
11.317	0.000	1.01	0.00	2.72	0.2	0.565
11.333	0.000	1.02	0.00	2.72	0.2	0.566
11.350	0.000	1.02	0.00	2.73	0.2	0.567
11.367	0.000	1.02	0.00	2.74	0.2	0.568
11.383	0.000	1.02	0.00	2.74	0.2	0.569
11.400	0.000	1.02	0.00	2.75	0.2	0.570
11.417	0.000	1.02	0.00	2.75	0.2	0.572
11.433	0.000	1.02	0.00	2.76	0.2	0.573
11.450	0.000	1.02	0.00	2.76	0.2	0.574
11.467	0.000	1.03	0.00	2.77	0.2	0.575
11.483	0.000	1.03	0.00	2.77	0.2	0.576
11.500	0.000	1.03	0.00	2.78	0.2	0.577
11.517	0.000	1.03	0.00	2.79	0.2	0.579
11.533	0.000	1.03	0.00	2.79	0.2	0.580
11.550	0.000	1.03	0.00	2.80	0.2	0.581
11.567	0.000	1.03	0.00	2.80	0.2	0.582
11.583	0.000	1.04	0.00	2.81	0.2	0.583
11.600	0.000	1.04	0.00	2.81	0.2	0.585
11.617	0.000	1.04	0.00	2.82	0.2	0.586
11.633	0.000	1.05	0.00	2.83	0.2	0.587
11.650	0.000	1.05	0.00	2.83	0.2	0.588
11.667	0.000	1.05	0.00	2.84	0.2	0.589
11.683	0.000	1.05	0.00	2.84	0.2	0.591
11.700	0.000	1.06	0.00	2.85	0.2	0.592
11.717	0.000	1.06	0.00	2.86	0.2	0.593
11.733	0.000	1.06	0.00	2.86	0.2	0.594
11.750	0.000	1.07	0.00	2.87	0.2	0.595
11.767	0.000	1.07	0.00	2.87	0.2	0.597
11.783	0.000	1.07	0.00	2.88	0.2	0.598
11.800	0.000	1.08	0.00	2.88	0.2	0.599
11.817	0.000	1.08	0.00	2.89	0.2	0.600
11.833	0.000	1.08	0.00	2.90	0.2	0.602
11.850	0.000	1.08	0.00	2.90	0.2	0.603
11.867	0.000	1.08	0.00	2.91	0.2	0.604

11.883	0.000	1.08	0.00	2.91	0.2	0.605
11.900	0.000	1.09	0.00	2.92	0.2	0.606
11.917	0.000	1.09	0.00	2.93	0.2	0.608
11.933	0.000	1.09	0.00	2.93	0.2	0.609
11.950	0.000	1.09	0.00	2.94	0.2	0.610
11.967	0.000	1.09	0.00	2.94	0.2	0.611
11.983	0.000	1.09	0.00	2.95	0.2	0.613
12.000	0.000	1.10	0.00	2.96	0.2	0.614
12.017	0.000	1.10	0.00	2.96	0.2	0.615
12.033	0.000	1.10	0.00	2.97	0.2	0.616
12.050	0.000	1.10	0.00	2.97	0.2	0.618
12.067	0.000	1.11	0.00	2.98	0.2	0.619
12.083	0.000	1.12	0.00	2.99	0.2	0.620
12.100	0.000	1.13	0.00	2.99	0.2	0.622
12.117	0.000	1.14	0.00	3.00	0.2	0.623
12.133	0.000	1.15	0.00	3.00	0.2	0.624
12.150	0.000	1.16	0.00	3.01	0.2	0.626
12.167	0.000	1.17	0.00	3.01	0.2	0.627
12.183	0.000	1.18	0.00	3.02	0.2	0.628
12.200	0.000	1.20	0.00	3.02	0.2	0.630
12.217	0.000	1.21	0.00	3.03	0.2	0.631
12.233	0.000	1.22	0.00	3.03	0.2	0.632
12.250	0.000	1.23	0.00	3.04	0.2	0.634
12.267	0.000	1.24	0.00	3.04	0.2	0.635
12.283	0.000	1.25	0.00	3.05	0.2	0.637
12.300	0.000	1.26	0.00	3.05	0.2	0.638
12.317	0.000	1.27	0.00	3.06	0.2	0.640
12.333	0.000	1.27	0.00	3.06	0.2	0.641
12.350	0.000	1.27	0.00	3.07	0.2	0.643
12.367	0.000	1.27	0.00	3.08	0.2	0.644
12.383	0.000	1.27	0.00	3.08	0.2	0.646
12.400	0.000	1.27	0.00	3.09	0.2	0.647
12.417	0.000	1.28	0.00	3.09	0.2	0.649
12.433	0.000	1.28	0.00	3.10	0.2	0.650
12.450	0.000	1.28	0.00	3.10	0.2	0.652
12.467	0.000	1.28	0.00	3.11	0.2	0.653
12.483	0.000	1.28	0.00	3.11	0.2	0.655
12.500	0.000	1.29	0.00	3.12	0.2	0.656
12.517	0.000	1.29	0.00	3.12	0.2	0.658
12.533	0.000	1.29	0.00	3.13	0.2	0.659
12.550	0.000	1.29	0.00	3.13	0.2	0.661
12.567	0.000	1.30	0.00	3.14	0.2	0.662
12.583	0.000	1.30	0.00	3.15	0.2	0.664
12.600	0.000	1.31	0.00	3.15	0.2	0.665
12.617	0.000	1.31	0.00	3.16	0.2	0.667
12.633	0.000	1.31	0.00	3.16	0.2	0.668
12.650	0.000	1.32	0.00	3.17	0.2	0.670
12.667	0.000	1.32	0.00	3.17	0.2	0.671
12.683	0.000	1.33	0.00	3.18	0.2	0.673
12.700	0.000	1.33	0.00	3.18	0.2	0.675
12.717	0.000	1.34	0.00	3.19	0.2	0.676
12.733	0.000	1.34	0.00	3.19	0.2	0.678
12.750	0.000	1.34	0.00	3.20	0.2	0.679
12.767	0.000	1.35	0.00	3.21	0.2	0.681
12.783	0.000	1.35	0.00	3.21	0.2	0.683

12.800	0.000	1.36	0.00	3.22	0.2	0.684
12.817	0.000	1.36	0.00	3.22	0.2	0.686
12.833	0.000	1.36	0.00	3.23	0.2	0.687
12.850	0.000	1.36	0.00	3.23	0.2	0.689
12.867	0.000	1.37	0.00	3.24	0.2	0.691
12.883	0.000	1.37	0.00	3.25	0.2	0.692
12.900	0.000	1.37	0.00	3.25	0.2	0.694
12.917	0.000	1.37	0.00	3.26	0.2	0.695
12.933	0.000	1.38	0.00	3.26	0.2	0.697
12.950	0.000	1.38	0.00	3.27	0.2	0.699
12.967	0.000	1.38	0.00	3.28	0.2	0.700
12.983	0.000	1.38	0.00	3.28	0.2	0.702
13.000	0.000	1.39	0.00	3.29	0.2	0.704
13.017	0.000	1.39	0.00	3.29	0.2	0.705
13.033	0.000	1.39	0.00	3.30	0.2	0.707
13.050	0.000	1.39	0.00	3.30	0.2	0.709
13.067	0.000	1.40	0.00	3.31	0.2	0.710
13.083	0.000	1.41	0.00	3.32	0.2	0.712
13.100	0.000	1.41	0.00	3.32	0.2	0.714
13.117	0.000	1.42	0.00	3.33	0.2	0.715
13.133	0.000	1.42	0.00	3.33	0.2	0.717
13.150	0.000	1.43	0.00	3.34	0.2	0.719
13.167	0.000	1.43	0.00	3.35	0.2	0.720
13.183	0.000	1.44	0.00	3.35	0.2	0.722
13.200	0.000	1.44	0.00	3.36	0.2	0.724
13.217	0.000	1.45	0.00	3.36	0.2	0.725
13.233	0.000	1.45	0.00	3.37	0.2	0.727
13.250	0.000	1.46	0.00	3.38	0.2	0.729
13.267	0.000	1.47	0.00	3.38	0.2	0.731
13.283	0.000	1.47	0.00	3.39	0.2	0.732
13.300	0.000	1.48	0.00	3.40	0.2	0.734
13.317	0.000	1.48	0.00	3.40	0.2	0.736
13.333	0.000	1.48	0.00	3.41	0.2	0.738
13.350	0.000	1.48	0.00	3.41	0.2	0.739
13.367	0.000	1.49	0.00	3.42	0.2	0.741
13.383	0.000	1.49	0.00	3.43	0.2	0.743
13.400	0.000	1.49	0.00	3.43	0.2	0.745
13.417	0.000	1.50	0.00	3.44	0.2	0.747
13.433	0.000	1.50	0.00	3.45	0.2	0.748
13.450	0.000	1.50	0.00	3.45	0.2	0.750
13.467	0.000	1.51	0.00	3.46	0.2	0.752
13.483	0.000	1.51	0.00	3.47	0.2	0.754
13.500	0.000	1.51	0.00	3.47	0.2	0.756
13.517	0.000	1.52	0.00	3.48	0.2	0.757
13.533	0.000	1.52	0.00	3.48	0.2	0.759
13.550	0.000	1.52	0.00	3.49	0.2	0.761
13.567	0.000	1.53	0.00	3.50	0.2	0.763
13.583	0.000	1.54	0.00	3.50	0.2	0.765
13.600	0.000	1.55	0.00	3.51	0.2	0.767
13.617	0.000	1.55	0.00	3.52	0.2	0.768
13.633	0.000	1.56	0.00	3.52	0.2	0.770
13.650	0.000	1.57	0.00	3.53	0.2	0.772
13.667	0.000	1.57	0.00	3.54	0.2	0.774
13.683	0.000	1.58	0.00	3.54	0.2	0.776
13.700	0.000	1.59	0.00	3.55	0.2	0.778

13.717	0.000	1.60	0.00	3.56	0.2	0.780
13.733	0.000	1.60	0.00	3.57	0.2	0.782
13.750	0.000	1.61	0.00	3.57	0.2	0.784
13.767	0.000	1.62	0.00	3.58	0.2	0.786
13.783	0.000	1.62	0.00	3.59	0.2	0.788
13.800	0.000	1.63	0.00	3.59	0.2	0.790
13.817	0.000	1.63	0.00	3.60	0.2	0.792
13.833	0.000	1.64	0.00	3.61	0.2	0.794
13.850	0.000	1.64	0.00	3.61	0.2	0.796
13.867	0.000	1.65	0.00	3.62	0.2	0.798
13.883	0.000	1.65	0.00	3.63	0.2	0.800
13.900	0.000	1.65	0.00	3.64	0.2	0.802
13.917	0.000	1.66	0.00	3.64	0.2	0.804
13.933	0.000	1.66	0.00	3.65	0.2	0.806
13.950	0.000	1.67	0.00	3.66	0.2	0.808
13.967	0.000	1.67	0.00	3.66	0.2	0.810
13.983	0.000	1.67	0.00	3.67	0.2	0.812
14.000	0.000	1.68	0.00	3.68	0.2	0.814
14.017	0.000	1.68	0.00	3.69	0.2	0.816
14.033	0.000	1.69	0.00	3.69	0.2	0.818
14.050	0.000	1.70	0.00	3.70	0.2	0.820
14.067	0.000	1.71	0.00	3.71	0.2	0.822
14.083	0.000	1.72	0.00	3.71	0.2	0.824
14.100	0.000	1.73	0.00	3.72	0.2	0.826
14.117	0.000	1.74	0.00	3.73	0.2	0.828
14.133	0.000	1.75	0.00	3.74	0.2	0.830
14.150	0.000	1.76	0.00	3.75	0.2	0.832
14.167	0.000	1.77	0.00	3.75	0.2	0.835
14.183	0.000	1.78	0.00	3.76	0.2	0.837
14.200	0.000	1.79	0.00	3.77	0.2	0.839
14.217	0.000	1.80	0.00	3.78	0.2	0.841
14.233	0.000	1.81	0.00	3.78	0.2	0.843
14.250	0.000	1.82	0.00	3.79	0.2	0.846
14.267	0.000	1.83	0.00	3.80	0.2	0.848
14.283	0.000	1.84	0.00	3.81	0.2	0.850
14.300	0.000	1.85	0.00	3.82	0.2	0.852
14.317	0.000	1.85	0.00	3.82	0.2	0.855
14.333	0.000	1.86	0.00	3.83	0.2	0.857
14.350	0.000	1.87	0.00	3.84	0.2	0.859
14.367	0.000	1.87	0.00	3.85	0.2	0.861
14.383	0.000	1.88	0.00	3.86	0.2	0.864
14.400	0.000	1.88	0.00	3.86	0.2	0.866
14.417	0.000	1.89	0.00	3.87	0.2	0.868
14.433	0.000	1.90	0.00	3.88	0.2	0.871
14.450	0.000	1.90	0.00	3.89	0.2	0.873
14.467	0.000	1.91	0.00	3.90	0.2	0.875
14.483	0.000	1.91	0.00	3.91	0.2	0.878
14.500	0.000	1.92	0.00	3.91	0.2	0.880
14.517	0.000	1.93	0.00	3.92	0.2	0.882
14.533	0.000	1.94	0.00	3.93	0.2	0.885
14.550	0.000	1.95	0.00	3.94	0.2	0.887
14.567	0.000	1.97	0.00	3.95	0.2	0.890
14.583	0.000	1.98	0.00	3.96	0.2	0.892
14.600	0.000	2.00	0.00	3.97	0.2	0.895
14.617	0.000	2.01	0.00	3.98	0.2	0.897

14.633	0.000	2.03	0.00	3.98	0.2	0.900
14.650	0.000	2.04	0.00	3.99	0.2	0.902
14.667	0.000	2.06	0.00	4.00	0.2	0.905
14.683	0.000	2.07	0.00	4.01	0.2	0.907
14.700	0.000	2.09	0.00	4.02	0.3	0.910
14.717	0.000	2.10	0.00	4.03	0.3	0.912
14.733	0.000	2.12	0.00	4.03	0.3	0.915
14.750	0.000	2.13	0.00	4.04	0.3	0.917
14.767	0.000	2.15	0.00	4.05	0.4	0.920
14.783	0.000	2.16	0.00	4.06	0.4	0.922
14.800	0.000	2.17	0.00	4.06	0.4	0.924
14.817	0.000	2.18	0.00	4.07	0.5	0.927
14.833	0.000	2.19	0.00	4.08	0.5	0.929
14.850	0.000	2.20	0.00	4.09	0.5	0.931
14.867	0.000	2.21	0.00	4.09	0.5	0.934
14.883	0.000	2.22	0.00	4.10	0.6	0.936
14.900	0.000	2.23	0.00	4.11	0.6	0.938
14.917	0.000	2.24	0.00	4.12	0.6	0.941
14.933	0.000	2.25	0.00	4.12	0.6	0.943
14.950	0.000	2.26	0.00	4.13	0.7	0.945
14.967	0.000	2.27	0.00	4.14	0.7	0.947
14.983	0.000	2.28	0.00	4.14	0.7	0.949
15.000	0.000	2.29	0.00	4.15	0.7	0.951
15.017	0.000	2.30	0.00	4.16	0.8	0.954
15.033	0.000	2.32	0.00	4.16	0.8	0.956
15.050	0.000	2.35	0.00	4.17	0.8	0.958
15.067	0.000	2.37	0.00	4.18	0.8	0.960
15.083	0.000	2.40	0.00	4.18	0.9	0.962
15.100	0.000	2.43	0.00	4.19	0.9	0.964
15.117	0.000	2.46	0.00	4.20	0.9	0.966
15.133	0.000	2.48	0.00	4.20	0.9	0.968
15.150	0.000	2.51	0.00	4.21	1.0	0.971
15.167	0.000	2.54	0.00	4.22	1.0	0.973
15.183	0.000	2.56	0.00	4.22	1.0	0.975
15.200	0.000	2.59	0.00	4.23	1.0	0.977
15.217	0.000	2.62	0.00	4.24	1.0	0.979
15.233	0.000	2.65	0.00	4.24	1.1	0.981
15.250	0.000	2.67	0.00	4.25	1.1	0.984
15.267	0.000	2.70	0.00	4.26	1.1	0.986
15.283	0.000	2.72	0.00	4.26	1.1	0.988
15.300	0.000	2.74	0.00	4.27	1.2	0.990
15.317	0.000	2.76	0.00	4.28	1.2	0.992
15.333	0.000	2.79	0.00	4.29	1.2	0.994
15.350	0.000	2.81	0.00	4.29	1.2	0.997
15.367	0.000	2.83	0.00	4.30	1.3	0.999
15.383	0.000	2.85	0.00	4.31	1.3	1.001
15.400	0.000	2.87	0.00	4.31	1.3	1.003
15.417	0.000	2.89	0.00	4.32	1.3	1.005
15.433	0.000	2.91	0.00	4.33	1.4	1.007
15.450	0.000	2.94	0.00	4.33	1.4	1.009
15.467	0.000	2.96	0.00	4.34	1.4	1.011
15.483	0.000	2.98	0.00	4.35	1.4	1.014
15.500	0.000	3.00	0.00	4.35	1.5	1.016
15.517	0.000	3.04	0.00	4.36	1.5	1.018
15.533	0.000	3.13	0.00	4.37	1.5	1.020

15.550	0.000	3.22	0.00	4.37	1.5	1.022
15.567	0.000	3.32	0.00	4.38	1.6	1.025
15.583	0.000	3.41	0.00	4.39	1.6	1.027
15.600	0.000	3.51	0.00	4.40	1.6	1.030
15.617	0.000	3.60	0.00	4.41	1.7	1.033
15.633	0.000	3.70	0.00	4.41	1.7	1.035
15.650	0.000	3.79	0.00	4.42	1.7	1.038
15.667	0.000	3.89	0.00	4.43	1.7	1.041
15.683	0.000	3.98	0.00	4.44	1.8	1.044
15.700	0.000	4.08	0.00	4.45	1.8	1.047
15.717	0.000	4.17	0.00	4.46	1.9	1.050
15.733	0.000	4.27	0.00	4.47	1.9	1.054
15.750	0.000	4.36	0.00	4.48	1.9	1.057
15.767	0.000	4.45	0.00	4.49	2.0	1.061
15.783	0.000	4.53	0.00	4.50	2.0	1.064
15.800	0.000	4.61	0.00	4.52	2.0	1.068
15.817	0.000	4.69	0.00	4.53	2.1	1.071
15.833	0.000	4.77	0.00	4.54	2.1	1.075
15.850	0.000	4.85	0.00	4.55	2.2	1.078
15.867	0.000	4.92	0.00	4.56	2.2	1.082
15.883	0.000	5.00	0.00	4.57	2.2	1.086
15.900	0.000	5.08	0.00	4.59	2.3	1.090
15.917	0.000	5.16	0.00	4.60	2.3	1.094
15.933	0.000	5.24	0.00	4.61	2.4	1.098
15.950	0.000	5.32	0.00	4.62	2.4	1.102
15.967	0.000	5.40	0.00	4.64	2.5	1.106
15.983	0.000	5.48	0.00	4.65	2.5	1.110
16.000	0.000	5.56	0.00	4.66	2.6	1.114
16.017	0.000	6.01	0.00	4.68	2.6	1.119
16.033	0.000	6.85	0.00	4.70	2.7	1.124
16.050	0.000	7.68	0.00	4.72	2.7	1.131
16.067	0.000	8.52	0.00	4.74	2.8	1.139
16.083	0.000	9.35	0.00	4.77	2.9	1.148
16.100	0.000	10.19	0.00	4.80	3.0	1.158
16.117	0.000	11.02	0.00	4.83	3.1	1.169
16.133	0.000	11.85	0.00	4.87	3.3	1.180
16.150	0.000	12.69	0.00	4.91	3.4	1.193
16.167	0.000	13.52	0.00	4.96	3.6	1.207
16.183	0.000	14.36	0.00	5.00	3.7	1.221
16.200	0.000	15.19	0.00	5.04	4.3	1.237
16.217	0.000	16.03	0.00	5.09	5.1	1.252
16.233	0.000	16.86	0.00	5.13	6.0	1.266
16.250	0.000	17.96	0.00	5.17	6.9	1.282
16.267	0.000	17.31	0.00	5.21	7.7	1.295
16.283	0.000	16.35	0.00	5.24	8.4	1.306
16.300	0.000	15.40	0.00	5.27	9.0	1.315
16.317	0.000	14.44	0.00	5.29	9.5	1.321
16.333	0.000	13.48	0.00	5.30	9.8	1.326
16.350	0.000	12.52	0.00	5.31	10.1	1.330
16.367	0.000	11.57	0.00	5.32	10.2	1.332
16.383	0.000	10.61	0.00	5.32	10.3	1.332
16.400	0.000	9.65	0.00	5.32	10.3	1.331
16.417	0.000	8.70	0.00	5.31	10.2	1.329
16.433	0.000	7.74	0.00	5.30	10.0	1.326
16.450	0.000	6.78	0.00	5.29	9.8	1.322

16.467	0.000	5.82	0.00	5.27	9.6	1.317
16.483	0.000	4.87	0.00	5.26	9.2	1.311
16.500	0.000	3.97	0.00	5.24	8.9	1.304
16.517	0.000	3.70	0.00	5.22	8.5	1.297
16.533	0.000	3.61	0.00	5.20	8.1	1.291
16.550	0.000	3.53	0.00	5.18	7.7	1.285
16.567	0.000	3.44	0.00	5.17	7.4	1.280
16.583	0.000	3.35	0.00	5.15	7.1	1.275
16.600	0.000	3.26	0.00	5.14	6.8	1.270
16.617	0.000	3.17	0.00	5.13	6.5	1.265
16.633	0.000	3.09	0.00	5.11	6.3	1.261
16.650	0.000	3.00	0.00	5.10	6.0	1.257
16.667	0.000	2.91	0.00	5.09	5.8	1.253
16.683	0.000	2.82	0.00	5.08	5.6	1.249
16.700	0.000	2.74	0.00	5.07	5.3	1.245
16.717	0.000	2.65	0.00	5.06	5.1	1.242
16.733	0.000	2.56	0.00	5.05	4.9	1.239
16.750	0.000	2.48	0.00	5.04	4.7	1.236
16.767	0.000	2.45	0.00	5.03	4.6	1.233
16.783	0.000	2.42	0.00	5.03	4.4	1.230
16.800	0.000	2.39	0.00	5.02	4.2	1.227
16.817	0.000	2.36	0.00	5.01	4.1	1.225
16.833	0.000	2.33	0.00	5.00	4.0	1.223
16.850	0.000	2.30	0.00	5.00	3.8	1.221
16.867	0.000	2.27	0.00	4.99	3.8	1.218
16.883	0.000	2.24	0.00	4.99	3.8	1.216
16.900	0.000	2.21	0.00	4.98	3.7	1.214
16.917	0.000	2.18	0.00	4.97	3.7	1.212
16.933	0.000	2.15	0.00	4.97	3.7	1.210
16.950	0.000	2.12	0.00	4.96	3.7	1.208
16.967	0.000	2.09	0.00	4.95	3.6	1.206
16.983	0.000	2.06	0.00	4.95	3.6	1.204
17.000	0.000	2.03	0.00	4.94	3.6	1.201
17.017	0.000	2.01	0.00	4.93	3.6	1.199
17.033	0.000	1.99	0.00	4.92	3.5	1.197
17.050	0.000	1.97	0.00	4.92	3.5	1.195
17.067	0.000	1.95	0.00	4.91	3.5	1.193
17.083	0.000	1.94	0.00	4.90	3.5	1.191
17.100	0.000	1.92	0.00	4.90	3.4	1.189
17.117	0.000	1.90	0.00	4.89	3.4	1.187
17.133	0.000	1.88	0.00	4.88	3.4	1.185
17.150	0.000	1.86	0.00	4.88	3.4	1.182
17.167	0.000	1.84	0.00	4.87	3.4	1.180
17.183	0.000	1.82	0.00	4.87	3.3	1.178
17.200	0.000	1.81	0.00	4.86	3.3	1.176
17.217	0.000	1.79	0.00	4.85	3.3	1.174
17.233	0.000	1.77	0.00	4.85	3.3	1.172
17.250	0.000	1.75	0.00	4.84	3.2	1.170
17.267	0.000	1.74	0.00	4.83	3.2	1.168
17.283	0.000	1.73	0.00	4.83	3.2	1.166
17.300	0.000	1.71	0.00	4.82	3.2	1.164
17.317	0.000	1.70	0.00	4.81	3.1	1.162
17.333	0.000	1.69	0.00	4.81	3.1	1.160
17.350	0.000	1.68	0.00	4.80	3.1	1.158
17.367	0.000	1.66	0.00	4.80	3.1	1.156

17.383	0.000	1.65	0.00	4.79	3.1	1.154
17.400	0.000	1.64	0.00	4.78	3.0	1.152
17.417	0.000	1.63	0.00	4.78	3.0	1.150
17.433	0.000	1.61	0.00	4.77	3.0	1.148
17.450	0.000	1.60	0.00	4.77	3.0	1.147
17.467	0.000	1.59	0.00	4.76	2.9	1.145
17.483	0.000	1.58	0.00	4.75	2.9	1.143
17.500	0.000	1.56	0.00	4.75	2.9	1.141
17.517	0.000	1.55	0.00	4.74	2.9	1.139
17.533	0.000	1.55	0.00	4.74	2.9	1.137
17.550	0.000	1.54	0.00	4.73	2.8	1.136
17.567	0.000	1.53	0.00	4.72	2.8	1.134
17.583	0.000	1.52	0.00	4.72	2.8	1.132
17.600	0.000	1.51	0.00	4.71	2.8	1.130
17.617	0.000	1.50	0.00	4.71	2.8	1.129
17.633	0.000	1.49	0.00	4.70	2.7	1.127
17.650	0.000	1.48	0.00	4.70	2.7	1.125
17.667	0.000	1.47	0.00	4.69	2.7	1.123
17.683	0.000	1.46	0.00	4.69	2.7	1.122
17.700	0.000	1.45	0.00	4.68	2.7	1.120
17.717	0.000	1.44	0.00	4.68	2.6	1.118
17.733	0.000	1.43	0.00	4.67	2.6	1.117
17.750	0.000	1.43	0.00	4.67	2.6	1.115
17.767	0.000	1.42	0.00	4.66	2.6	1.113
17.783	0.000	1.41	0.00	4.66	2.6	1.112
17.800	0.000	1.40	0.00	4.65	2.6	1.110
17.817	0.000	1.40	0.00	4.65	2.5	1.109
17.833	0.000	1.39	0.00	4.64	2.5	1.107
17.850	0.000	1.38	0.00	4.64	2.5	1.106
17.867	0.000	1.37	0.00	4.63	2.5	1.104
17.883	0.000	1.37	0.00	4.63	2.5	1.103
17.900	0.000	1.36	0.00	4.62	2.5	1.101
17.917	0.000	1.35	0.00	4.62	2.4	1.100
17.933	0.000	1.35	0.00	4.61	2.4	1.098
17.950	0.000	1.34	0.00	4.61	2.4	1.097
17.967	0.000	1.33	0.00	4.60	2.4	1.095
17.983	0.000	1.32	0.00	4.60	2.4	1.094
18.000	0.000	1.31	0.00	4.59	2.4	1.092
18.017	0.000	1.30	0.00	4.59	2.3	1.091
18.033	0.000	1.29	0.00	4.59	2.3	1.090
18.050	0.000	1.28	0.00	4.58	2.3	1.088
18.067	0.000	1.27	0.00	4.58	2.3	1.087
18.083	0.000	1.26	0.00	4.57	2.3	1.085
18.100	0.000	1.25	0.00	4.57	2.3	1.084
18.117	0.000	1.23	0.00	4.56	2.2	1.083
18.133	0.000	1.22	0.00	4.56	2.2	1.081
18.150	0.000	1.21	0.00	4.55	2.2	1.080
18.167	0.000	1.20	0.00	4.55	2.2	1.078
18.183	0.000	1.19	0.00	4.55	2.2	1.077
18.200	0.000	1.18	0.00	4.54	2.2	1.076
18.217	0.000	1.17	0.00	4.54	2.1	1.074
18.233	0.000	1.16	0.00	4.53	2.1	1.073
18.250	0.000	1.15	0.00	4.53	2.1	1.072
18.267	0.000	1.14	0.00	4.52	2.1	1.070
18.283	0.000	1.14	0.00	4.52	2.1	1.069

18.300	0.000	1.13	0.00	4.52	2.1	1.068
18.317	0.000	1.12	0.00	4.51	2.1	1.066
18.333	0.000	1.12	0.00	4.51	2.0	1.065
18.350	0.000	1.11	0.00	4.50	2.0	1.064
18.367	0.000	1.10	0.00	4.50	2.0	1.063
18.383	0.000	1.09	0.00	4.50	2.0	1.061
18.400	0.000	1.09	0.00	4.49	2.0	1.060
18.417	0.000	1.08	0.00	4.49	2.0	1.059
18.433	0.000	1.07	0.00	4.48	2.0	1.058
18.450	0.000	1.07	0.00	4.48	1.9	1.057
18.467	0.000	1.06	0.00	4.48	1.9	1.055
18.483	0.000	1.05	0.00	4.47	1.9	1.054
18.500	0.000	1.05	0.00	4.47	1.9	1.053
18.517	0.000	1.05	0.00	4.47	1.9	1.052
18.533	0.000	1.04	0.00	4.46	1.9	1.051
18.550	0.000	1.04	0.00	4.46	1.9	1.049
18.567	0.000	1.03	0.00	4.46	1.9	1.048
18.583	0.000	1.03	0.00	4.45	1.8	1.047
18.600	0.000	1.03	0.00	4.45	1.8	1.046
18.617	0.000	1.02	0.00	4.44	1.8	1.045
18.633	0.000	1.02	0.00	4.44	1.8	1.044
18.650	0.000	1.01	0.00	4.44	1.8	1.043
18.667	0.000	1.01	0.00	4.43	1.8	1.042
18.683	0.000	1.00	0.00	4.43	1.8	1.041
18.700	0.000	1.00	0.00	4.43	1.8	1.040
18.717	0.000	1.00	0.00	4.43	1.7	1.039
18.733	0.000	0.99	0.00	4.42	1.7	1.038
18.750	0.000	0.99	0.00	4.42	1.7	1.037
18.767	0.000	0.99	0.00	4.42	1.7	1.036
18.783	0.000	0.98	0.00	4.41	1.7	1.035
18.800	0.000	0.98	0.00	4.41	1.7	1.034
18.817	0.000	0.98	0.00	4.41	1.7	1.033
18.833	0.000	0.97	0.00	4.40	1.7	1.032
18.850	0.000	0.97	0.00	4.40	1.7	1.031
18.867	0.000	0.97	0.00	4.40	1.6	1.030
18.883	0.000	0.96	0.00	4.39	1.6	1.029
18.900	0.000	0.96	0.00	4.39	1.6	1.028
18.917	0.000	0.96	0.00	4.39	1.6	1.027
18.933	0.000	0.95	0.00	4.39	1.6	1.026
18.950	0.000	0.95	0.00	4.38	1.6	1.025
18.967	0.000	0.94	0.00	4.38	1.6	1.025
18.983	0.000	0.94	0.00	4.38	1.6	1.024
19.000	0.000	0.94	0.00	4.37	1.6	1.023
19.017	0.000	0.94	0.00	4.37	1.6	1.022
19.033	0.000	0.93	0.00	4.37	1.5	1.021
19.050	0.000	0.93	0.00	4.37	1.5	1.020
19.067	0.000	0.93	0.00	4.36	1.5	1.020
19.083	0.000	0.92	0.00	4.36	1.5	1.019
19.100	0.000	0.92	0.00	4.36	1.5	1.018
19.117	0.000	0.92	0.00	4.36	1.5	1.017
19.133	0.000	0.91	0.00	4.35	1.5	1.016
19.150	0.000	0.91	0.00	4.35	1.5	1.016
19.167	0.000	0.91	0.00	4.35	1.5	1.015
19.183	0.000	0.91	0.00	4.35	1.5	1.014
19.200	0.000	0.90	0.00	4.34	1.5	1.013

19.217	0.000	0.90	0.00	4.34	1.4	1.013
19.233	0.000	0.90	0.00	4.34	1.4	1.012
19.250	0.000	0.89	0.00	4.34	1.4	1.011
19.267	0.000	0.89	0.00	4.34	1.4	1.010
19.283	0.000	0.89	0.00	4.33	1.4	1.010
19.300	0.000	0.89	0.00	4.33	1.4	1.009
19.317	0.000	0.88	0.00	4.33	1.4	1.008
19.333	0.000	0.88	0.00	4.33	1.4	1.007
19.350	0.000	0.88	0.00	4.32	1.4	1.007
19.367	0.000	0.88	0.00	4.32	1.4	1.006
19.383	0.000	0.87	0.00	4.32	1.4	1.005
19.400	0.000	0.87	0.00	4.32	1.4	1.005
19.417	0.000	0.87	0.00	4.32	1.3	1.004
19.433	0.000	0.87	0.00	4.31	1.3	1.003
19.450	0.000	0.86	0.00	4.31	1.3	1.003
19.467	0.000	0.86	0.00	4.31	1.3	1.002
19.483	0.000	0.86	0.00	4.31	1.3	1.002
19.500	0.000	0.86	0.00	4.31	1.3	1.001
19.517	0.000	0.85	0.00	4.30	1.3	1.000
19.533	0.000	0.85	0.00	4.30	1.3	1.000
19.550	0.000	0.85	0.00	4.30	1.3	0.999
19.567	0.000	0.85	0.00	4.30	1.3	0.998
19.583	0.000	0.84	0.00	4.30	1.3	0.998
19.600	0.000	0.84	0.00	4.29	1.3	0.997
19.617	0.000	0.84	0.00	4.29	1.3	0.997
19.633	0.000	0.84	0.00	4.29	1.3	0.996
19.650	0.000	0.83	0.00	4.29	1.2	0.996
19.667	0.000	0.83	0.00	4.29	1.2	0.995
19.683	0.000	0.83	0.00	4.29	1.2	0.994
19.700	0.000	0.83	0.00	4.28	1.2	0.994
19.717	0.000	0.82	0.00	4.28	1.2	0.993
19.733	0.000	0.82	0.00	4.28	1.2	0.993
19.750	0.000	0.82	0.00	4.28	1.2	0.992
19.767	0.000	0.82	0.00	4.28	1.2	0.992
19.783	0.000	0.82	0.00	4.27	1.2	0.991
19.800	0.000	0.81	0.00	4.27	1.2	0.991
19.817	0.000	0.81	0.00	4.27	1.2	0.990
19.833	0.000	0.81	0.00	4.27	1.2	0.990
19.850	0.000	0.81	0.00	4.27	1.2	0.989
19.867	0.000	0.81	0.00	4.27	1.2	0.989
19.883	0.000	0.80	0.00	4.27	1.2	0.988
19.900	0.000	0.80	0.00	4.26	1.2	0.988
19.917	0.000	0.80	0.00	4.26	1.2	0.987
19.933	0.000	0.80	0.00	4.26	1.1	0.987
19.950	0.000	0.80	0.00	4.26	1.1	0.986
19.967	0.000	0.79	0.00	4.26	1.1	0.986
19.983	0.000	0.79	0.00	4.26	1.1	0.985
20.000	0.000	0.79	0.00	4.25	1.1	0.985
20.017	0.000	0.79	0.00	4.25	1.1	0.984
20.033	0.000	0.79	0.00	4.25	1.1	0.984
20.050	0.000	0.78	0.00	4.25	1.1	0.983
20.067	0.000	0.78	0.00	4.25	1.1	0.983
20.083	0.000	0.78	0.00	4.25	1.1	0.982
20.100	0.000	0.78	0.00	4.25	1.1	0.982
20.117	0.000	0.78	0.00	4.24	1.1	0.982

20.133	0.000	0.77	0.00	4.24	1.1	0.981
20.150	0.000	0.77	0.00	4.24	1.1	0.981
20.167	0.000	0.77	0.00	4.24	1.1	0.980
20.183	0.000	0.77	0.00	4.24	1.1	0.980
20.200	0.000	0.77	0.00	4.24	1.1	0.979
20.217	0.000	0.76	0.00	4.24	1.1	0.979
20.233	0.000	0.76	0.00	4.24	1.1	0.979
20.250	0.000	0.76	0.00	4.23	1.1	0.978
20.267	0.000	0.76	0.00	4.23	1.0	0.978
20.283	0.000	0.76	0.00	4.23	1.0	0.977
20.300	0.000	0.76	0.00	4.23	1.0	0.977
20.317	0.000	0.75	0.00	4.23	1.0	0.977
20.333	0.000	0.75	0.00	4.23	1.0	0.976
20.350	0.000	0.75	0.00	4.23	1.0	0.976
20.367	0.000	0.75	0.00	4.23	1.0	0.976
20.383	0.000	0.75	0.00	4.22	1.0	0.975
20.400	0.000	0.75	0.00	4.22	1.0	0.975
20.417	0.000	0.74	0.00	4.22	1.0	0.974
20.433	0.000	0.74	0.00	4.22	1.0	0.974
20.450	0.000	0.74	0.00	4.22	1.0	0.974
20.467	0.000	0.74	0.00	4.22	1.0	0.973
20.483	0.000	0.74	0.00	4.22	1.0	0.973
20.500	0.000	0.74	0.00	4.22	1.0	0.973
20.517	0.000	0.73	0.00	4.22	1.0	0.972
20.533	0.000	0.73	0.00	4.21	1.0	0.972
20.550	0.000	0.73	0.00	4.21	1.0	0.972
20.567	0.000	0.73	0.00	4.21	1.0	0.971
20.583	0.000	0.73	0.00	4.21	1.0	0.971
20.600	0.000	0.73	0.00	4.21	1.0	0.971
20.617	0.000	0.73	0.00	4.21	1.0	0.970
20.633	0.000	0.72	0.00	4.21	1.0	0.970
20.650	0.000	0.72	0.00	4.21	1.0	0.970
20.667	0.000	0.72	0.00	4.21	1.0	0.969
20.683	0.000	0.72	0.00	4.21	0.9	0.969
20.700	0.000	0.72	0.00	4.20	0.9	0.969
20.717	0.000	0.72	0.00	4.20	0.9	0.968
20.733	0.000	0.71	0.00	4.20	0.9	0.968
20.750	0.000	0.71	0.00	4.20	0.9	0.968
20.767	0.000	0.71	0.00	4.20	0.9	0.967
20.783	0.000	0.71	0.00	4.20	0.9	0.967
20.800	0.000	0.71	0.00	4.20	0.9	0.967
20.817	0.000	0.71	0.00	4.20	0.9	0.967
20.833	0.000	0.71	0.00	4.20	0.9	0.966
20.850	0.000	0.70	0.00	4.20	0.9	0.966
20.867	0.000	0.70	0.00	4.19	0.9	0.966
20.883	0.000	0.70	0.00	4.19	0.9	0.965
20.900	0.000	0.70	0.00	4.19	0.9	0.965
20.917	0.000	0.70	0.00	4.19	0.9	0.965
20.933	0.000	0.70	0.00	4.19	0.9	0.965
20.950	0.000	0.70	0.00	4.19	0.9	0.964
20.967	0.000	0.69	0.00	4.19	0.9	0.964
20.983	0.000	0.69	0.00	4.19	0.9	0.964
21.000	0.000	0.69	0.00	4.19	0.9	0.964
21.017	0.000	0.69	0.00	4.19	0.9	0.963
21.033	0.000	0.69	0.00	4.19	0.9	0.963

21.050	0.000	0.69	0.00	4.19	0.9	0.963
21.067	0.000	0.69	0.00	4.18	0.9	0.962
21.083	0.000	0.68	0.00	4.18	0.9	0.962
21.100	0.000	0.68	0.00	4.18	0.9	0.962
21.117	0.000	0.68	0.00	4.18	0.9	0.962
21.133	0.000	0.68	0.00	4.18	0.9	0.961
21.150	0.000	0.68	0.00	4.18	0.9	0.961
21.167	0.000	0.68	0.00	4.18	0.9	0.961
21.183	0.000	0.68	0.00	4.18	0.9	0.961
21.200	0.000	0.68	0.00	4.18	0.9	0.960
21.217	0.000	0.67	0.00	4.18	0.8	0.960
21.233	0.000	0.67	0.00	4.18	0.8	0.960
21.250	0.000	0.67	0.00	4.18	0.8	0.960
21.267	0.000	0.67	0.00	4.18	0.8	0.960
21.283	0.000	0.67	0.00	4.17	0.8	0.959
21.300	0.000	0.67	0.00	4.17	0.8	0.959
21.317	0.000	0.67	0.00	4.17	0.8	0.959
21.333	0.000	0.67	0.00	4.17	0.8	0.959
21.350	0.000	0.66	0.00	4.17	0.8	0.958
21.367	0.000	0.66	0.00	4.17	0.8	0.958
21.383	0.000	0.66	0.00	4.17	0.8	0.958
21.400	0.000	0.66	0.00	4.17	0.8	0.958
21.417	0.000	0.66	0.00	4.17	0.8	0.958
21.433	0.000	0.66	0.00	4.17	0.8	0.957
21.450	0.000	0.66	0.00	4.17	0.8	0.957
21.467	0.000	0.66	0.00	4.17	0.8	0.957
21.483	0.000	0.66	0.00	4.17	0.8	0.957
21.500	0.000	0.65	0.00	4.17	0.8	0.956
21.517	0.000	0.65	0.00	4.16	0.8	0.956
21.533	0.000	0.65	0.00	4.16	0.8	0.956
21.550	0.000	0.65	0.00	4.16	0.8	0.956
21.567	0.000	0.65	0.00	4.16	0.8	0.956
21.583	0.000	0.65	0.00	4.16	0.8	0.955
21.600	0.000	0.65	0.00	4.16	0.8	0.955
21.617	0.000	0.65	0.00	4.16	0.8	0.955
21.633	0.000	0.64	0.00	4.16	0.8	0.955
21.650	0.000	0.64	0.00	4.16	0.8	0.955
21.667	0.000	0.64	0.00	4.16	0.8	0.954
21.683	0.000	0.64	0.00	4.16	0.8	0.954
21.700	0.000	0.64	0.00	4.16	0.8	0.954
21.717	0.000	0.64	0.00	4.16	0.8	0.954
21.733	0.000	0.64	0.00	4.16	0.8	0.954
21.750	0.000	0.64	0.00	4.16	0.8	0.954
21.767	0.000	0.64	0.00	4.16	0.8	0.953
21.783	0.000	0.63	0.00	4.16	0.8	0.953
21.800	0.000	0.63	0.00	4.15	0.8	0.953
21.817	0.000	0.63	0.00	4.15	0.8	0.953
21.833	0.000	0.63	0.00	4.15	0.8	0.953
21.850	0.000	0.63	0.00	4.15	0.8	0.952
21.867	0.000	0.63	0.00	4.15	0.8	0.952
21.883	0.000	0.63	0.00	4.15	0.8	0.952
21.900	0.000	0.63	0.00	4.15	0.8	0.952
21.917	0.000	0.63	0.00	4.15	0.8	0.952
21.933	0.000	0.63	0.00	4.15	0.7	0.952
21.950	0.000	0.62	0.00	4.15	0.7	0.951

21.967	0.000	0.62	0.00	4.15	0.7	0.951
21.983	0.000	0.62	0.00	4.15	0.7	0.951
22.000	0.000	0.62	0.00	4.15	0.7	0.951
22.017	0.000	0.62	0.00	4.15	0.7	0.951
22.033	0.000	0.62	0.00	4.15	0.7	0.951
22.050	0.000	0.62	0.00	4.15	0.7	0.950
22.067	0.000	0.62	0.00	4.15	0.7	0.950
22.083	0.000	0.62	0.00	4.15	0.7	0.950
22.100	0.000	0.62	0.00	4.14	0.7	0.950
22.117	0.000	0.61	0.00	4.14	0.7	0.950
22.133	0.000	0.61	0.00	4.14	0.7	0.950
22.150	0.000	0.61	0.00	4.14	0.7	0.949
22.167	0.000	0.61	0.00	4.14	0.7	0.949
22.183	0.000	0.61	0.00	4.14	0.7	0.949
22.200	0.000	0.61	0.00	4.14	0.7	0.949
22.216	0.000	0.61	0.00	4.14	0.7	0.949
22.233	0.000	0.61	0.00	4.14	0.7	0.949
22.250	0.000	0.61	0.00	4.14	0.7	0.949
22.266	0.000	0.61	0.00	4.14	0.7	0.948
22.283	0.000	0.60	0.00	4.14	0.7	0.948
22.300	0.000	0.60	0.00	4.14	0.7	0.948
22.316	0.000	0.60	0.00	4.14	0.7	0.948
22.333	0.000	0.60	0.00	4.14	0.7	0.948
22.350	0.000	0.60	0.00	4.14	0.7	0.948
22.366	0.000	0.60	0.00	4.14	0.7	0.948
22.383	0.000	0.60	0.00	4.14	0.7	0.947
22.400	0.000	0.60	0.00	4.14	0.7	0.947
22.416	0.000	0.60	0.00	4.14	0.7	0.947
22.433	0.000	0.60	0.00	4.14	0.7	0.947
22.450	0.000	0.60	0.00	4.14	0.7	0.947
22.466	0.000	0.59	0.00	4.13	0.7	0.947
22.483	0.000	0.59	0.00	4.13	0.7	0.947
22.500	0.000	0.59	0.00	4.13	0.7	0.946
22.516	0.000	0.59	0.00	4.13	0.7	0.946
22.533	0.000	0.59	0.00	4.13	0.7	0.946
22.550	0.000	0.59	0.00	4.13	0.7	0.946
22.566	0.000	0.59	0.00	4.13	0.7	0.946
22.583	0.000	0.59	0.00	4.13	0.7	0.946
22.600	0.000	0.59	0.00	4.13	0.7	0.946
22.616	0.000	0.59	0.00	4.13	0.7	0.945
22.633	0.000	0.59	0.00	4.13	0.7	0.945
22.650	0.000	0.59	0.00	4.13	0.7	0.945
22.666	0.000	0.58	0.00	4.13	0.7	0.945
22.683	0.000	0.58	0.00	4.13	0.7	0.945
22.700	0.000	0.58	0.00	4.13	0.7	0.945
22.716	0.000	0.58	0.00	4.13	0.7	0.945
22.733	0.000	0.58	0.00	4.13	0.7	0.945
22.750	0.000	0.58	0.00	4.13	0.7	0.944
22.766	0.000	0.58	0.00	4.13	0.7	0.944
22.783	0.000	0.58	0.00	4.13	0.7	0.944
22.800	0.000	0.58	0.00	4.13	0.7	0.944
22.816	0.000	0.58	0.00	4.13	0.7	0.944
22.833	0.000	0.58	0.00	4.13	0.7	0.944
22.850	0.000	0.58	0.00	4.13	0.7	0.944
22.866	0.000	0.57	0.00	4.13	0.7	0.944

22.883	0.000	0.57	0.00	4.12	0.7	0.944
22.900	0.000	0.57	0.00	4.12	0.7	0.943
22.916	0.000	0.57	0.00	4.12	0.7	0.943
22.933	0.000	0.57	0.00	4.12	0.7	0.943
22.950	0.000	0.57	0.00	4.12	0.7	0.943
22.966	0.000	0.57	0.00	4.12	0.7	0.943
22.983	0.000	0.57	0.00	4.12	0.7	0.943
23.000	0.000	0.57	0.00	4.12	0.6	0.943
23.016	0.000	0.57	0.00	4.12	0.6	0.943
23.033	0.000	0.57	0.00	4.12	0.6	0.943
23.050	0.000	0.57	0.00	4.12	0.6	0.942
23.066	0.000	0.56	0.00	4.12	0.6	0.942
23.083	0.000	0.56	0.00	4.12	0.6	0.942
23.100	0.000	0.56	0.00	4.12	0.6	0.942
23.116	0.000	0.56	0.00	4.12	0.6	0.942
23.133	0.000	0.56	0.00	4.12	0.6	0.942
23.150	0.000	0.56	0.00	4.12	0.6	0.942
23.166	0.000	0.56	0.00	4.12	0.6	0.942
23.183	0.000	0.56	0.00	4.12	0.6	0.942
23.200	0.000	0.56	0.00	4.12	0.6	0.941
23.216	0.000	0.56	0.00	4.12	0.6	0.941
23.233	0.000	0.56	0.00	4.12	0.6	0.941
23.250	0.000	0.56	0.00	4.12	0.6	0.941
23.266	0.000	0.56	0.00	4.12	0.6	0.941
23.283	0.000	0.55	0.00	4.12	0.6	0.941
23.300	0.000	0.55	0.00	4.12	0.6	0.941
23.316	0.000	0.55	0.00	4.12	0.6	0.941
23.333	0.000	0.55	0.00	4.12	0.6	0.941
23.350	0.000	0.55	0.00	4.12	0.6	0.941
23.366	0.000	0.55	0.00	4.11	0.6	0.940
23.383	0.000	0.55	0.00	4.11	0.6	0.940
23.400	0.000	0.55	0.00	4.11	0.6	0.940
23.416	0.000	0.55	0.00	4.11	0.6	0.940
23.433	0.000	0.55	0.00	4.11	0.6	0.940
23.450	0.000	0.55	0.00	4.11	0.6	0.940
23.466	0.000	0.55	0.00	4.11	0.6	0.940
23.483	0.000	0.55	0.00	4.11	0.6	0.940
23.500	0.000	0.55	0.00	4.11	0.6	0.940
23.516	0.000	0.54	0.00	4.11	0.6	0.940
23.533	0.000	0.54	0.00	4.11	0.6	0.939
23.550	0.000	0.54	0.00	4.11	0.6	0.939
23.566	0.000	0.54	0.00	4.11	0.6	0.939
23.583	0.000	0.54	0.00	4.11	0.6	0.939
23.600	0.000	0.54	0.00	4.11	0.6	0.939
23.616	0.000	0.54	0.00	4.11	0.6	0.939
23.633	0.000	0.54	0.00	4.11	0.6	0.939
23.650	0.000	0.54	0.00	4.11	0.6	0.939
23.666	0.000	0.54	0.00	4.11	0.6	0.939
23.683	0.000	0.54	0.00	4.11	0.6	0.939
23.700	0.000	0.54	0.00	4.11	0.6	0.939
23.716	0.000	0.54	0.00	4.11	0.6	0.938
23.733	0.000	0.54	0.00	4.11	0.6	0.938
23.750	0.000	0.54	0.00	4.11	0.6	0.938
23.766	0.000	0.53	0.00	4.11	0.6	0.938
23.783	0.000	0.53	0.00	4.11	0.6	0.938

23.800	0.000	0.53	0.00	4.11	0.6	0.938
23.816	0.000	0.53	0.00	4.11	0.6	0.938
23.833	0.000	0.53	0.00	4.11	0.6	0.938
23.850	0.000	0.53	0.00	4.11	0.6	0.938
23.866	0.000	0.53	0.00	4.11	0.6	0.938
23.883	0.000	0.53	0.00	4.11	0.6	0.938
23.900	0.000	0.53	0.00	4.11	0.6	0.938
23.916	0.000	0.53	0.00	4.11	0.6	0.937
23.933	0.000	0.53	0.00	4.11	0.6	0.937
23.950	0.000	0.53	0.00	4.10	0.6	0.937
23.966	0.000	0.53	0.00	4.10	0.6	0.937
23.983	0.000	0.53	0.00	4.10	0.6	0.937
24.000	0.000	0.53	0.00	4.10	0.6	0.937

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 2.469 AF
BASIN STORAGE = 0.026 AF (WITH 0.000 AF INITIALLY FILLED)
OUTFLOW VOLUME = 2.443 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 201.00 TO NODE 202.00 IS CODE = 4

>>>>MODEL PIPEFLOW ROUTING OF STREAM #2<<<<<
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MODEL PIPEFLOW ROUTING OF STREAM 2 WHERE
STORAGE EFFECTS ARE NEGLECTED WITHIN THE PIPE, FLOW
VELOCITIES ARE ESTIMATED BY ASSUMING STEADY FLOW FOR
EACH UNIT INTERVAL(NORMAL DEPTH, Dn), AND FLOWS IN EXCESS
OF (.82)(DIAMETER) ARE PONDED AT THE UPSTREAM INLET:
UNIT INTERVAL FLOW VELOCITY COMPUTED USING Dn UP TO
(0.938)(DIAMETER):

PIPELENGTH(FT) = 243.00 MANNINGS FACTOR = 0.013
UPSTREAM ELEVATION(FT) = 1247.00
DOWNSTREAM ELEVATION(FT) = 1245.00
PIPE DIAMETER(FT) = 2.00

NORMAL DEPTH VELOCITY PIPE ROUTING RESULTS:

TIME (HRS)	INFLOW (CFS)	VELOCITY (FPS)	OUTFLOW (CFS)	UPSTREAM PONDING(AF)
10.000	0.15	0.50	0.14	0.000
10.017	0.15	0.50	0.14	0.000
10.033	0.15	0.50	0.14	0.000
10.050	0.15	0.50	0.14	0.000
10.067	0.15	0.50	0.14	0.000
10.083	0.15	0.50	0.15	0.000
10.100	0.15	0.50	0.15	0.000

10.117	0.15	0.50	0.15	0.000
10.133	0.15	0.50	0.15	0.000
10.150	0.15	0.50	0.15	0.000
10.167	0.15	0.50	0.15	0.000
10.183	0.15	0.50	0.15	0.000
10.200	0.15	0.50	0.15	0.000
10.217	0.15	0.50	0.15	0.000
10.233	0.15	0.50	0.15	0.000
10.250	0.15	0.50	0.15	0.000
10.267	0.15	0.50	0.15	0.000
10.283	0.15	0.50	0.15	0.000
10.300	0.15	0.50	0.15	0.000
10.317	0.15	0.50	0.15	0.000
10.333	0.15	0.50	0.15	0.000
10.350	0.15	0.51	0.15	0.000
10.367	0.15	0.51	0.15	0.000
10.383	0.15	0.51	0.15	0.000
10.400	0.15	0.51	0.15	0.000
10.417	0.15	0.51	0.15	0.000
10.433	0.15	0.51	0.15	0.000
10.450	0.15	0.51	0.15	0.000
10.467	0.15	0.51	0.15	0.000
10.483	0.16	0.51	0.16	0.000
10.500	0.16	0.51	0.16	0.000
10.517	0.16	0.52	0.16	0.000
10.533	0.16	0.52	0.16	0.000
10.550	0.16	0.52	0.16	0.000
10.567	0.16	0.52	0.16	0.000
10.583	0.16	0.52	0.16	0.000
10.600	0.16	0.52	0.16	0.000
10.617	0.16	0.52	0.16	0.000
10.633	0.16	0.52	0.16	0.000
10.650	0.16	0.52	0.16	0.000
10.667	0.16	0.53	0.16	0.000
10.683	0.16	0.53	0.16	0.000
10.700	0.16	0.53	0.16	0.000
10.717	0.16	0.53	0.16	0.000
10.733	0.16	0.53	0.16	0.000
10.750	0.16	0.53	0.16	0.000
10.767	0.16	0.53	0.16	0.000
10.783	0.16	0.53	0.16	0.000
10.800	0.16	0.53	0.16	0.000
10.817	0.16	0.54	0.16	0.000
10.833	0.16	0.54	0.16	0.000
10.850	0.16	0.54	0.16	0.000
10.867	0.16	0.54	0.16	0.000
10.883	0.16	0.54	0.16	0.000
10.900	0.16	0.54	0.16	0.000
10.917	0.16	0.54	0.16	0.000
10.933	0.16	0.54	0.16	0.000
10.950	0.16	0.54	0.16	0.000
10.967	0.16	0.55	0.16	0.000
10.983	0.17	0.55	0.17	0.000
11.000	0.17	0.55	0.17	0.000
11.017	0.17	0.55	0.17	0.000

11.033	0.17	0.55	0.17	0.000
11.050	0.17	0.55	0.17	0.000
11.067	0.17	0.55	0.17	0.000
11.083	0.17	0.55	0.17	0.000
11.100	0.17	0.55	0.17	0.000
11.117	0.17	0.56	0.17	0.000
11.133	0.17	0.56	0.17	0.000
11.150	0.17	0.56	0.17	0.000
11.167	0.17	0.56	0.17	0.000
11.183	0.17	0.56	0.17	0.000
11.200	0.17	0.56	0.17	0.000
11.217	0.17	0.56	0.17	0.000
11.233	0.17	0.56	0.17	0.000
11.250	0.17	0.56	0.17	0.000
11.267	0.17	0.57	0.17	0.000
11.283	0.17	0.57	0.17	0.000
11.300	0.17	0.57	0.17	0.000
11.317	0.17	0.57	0.17	0.000
11.333	0.17	0.57	0.17	0.000
11.350	0.17	0.57	0.17	0.000
11.367	0.17	0.57	0.17	0.000
11.383	0.17	0.57	0.17	0.000
11.400	0.17	0.58	0.17	0.000
11.417	0.17	0.58	0.17	0.000
11.433	0.17	0.58	0.17	0.000
11.450	0.17	0.58	0.17	0.000
11.467	0.18	0.58	0.18	0.000
11.483	0.18	0.58	0.18	0.000
11.500	0.18	0.58	0.18	0.000
11.517	0.18	0.58	0.18	0.000
11.533	0.18	0.58	0.18	0.000
11.550	0.18	0.59	0.18	0.000
11.567	0.18	0.59	0.18	0.000
11.583	0.18	0.59	0.18	0.000
11.600	0.18	0.59	0.18	0.000
11.617	0.18	0.59	0.18	0.000
11.633	0.18	0.59	0.18	0.000
11.650	0.18	0.59	0.18	0.000
11.667	0.18	0.59	0.18	0.000
11.683	0.18	0.60	0.18	0.000
11.700	0.18	0.60	0.18	0.000
11.717	0.18	0.60	0.18	0.000
11.733	0.18	0.60	0.18	0.000
11.750	0.18	0.60	0.18	0.000
11.767	0.18	0.60	0.18	0.000
11.783	0.18	0.60	0.18	0.000
11.800	0.18	0.60	0.18	0.000
11.817	0.18	0.61	0.18	0.000
11.833	0.18	0.61	0.18	0.000
11.850	0.18	0.61	0.18	0.000
11.867	0.18	0.61	0.18	0.000
11.883	0.18	0.61	0.18	0.000
11.900	0.18	0.61	0.18	0.000
11.917	0.19	0.61	0.19	0.000
11.933	0.19	0.61	0.19	0.000

11.950	0.19	0.62	0.19	0.000
11.967	0.19	0.62	0.19	0.000
11.983	0.19	0.62	0.19	0.000
12.000	0.19	0.62	0.19	0.000
12.017	0.19	0.62	0.19	0.000
12.033	0.19	0.62	0.19	0.000
12.050	0.19	0.62	0.19	0.000
12.067	0.19	0.62	0.19	0.000
12.083	0.19	0.63	0.19	0.000
12.100	0.19	0.63	0.19	0.000
12.117	0.19	0.63	0.19	0.000
12.133	0.19	0.63	0.19	0.000
12.150	0.19	0.63	0.19	0.000
12.167	0.19	0.63	0.19	0.000
12.183	0.19	0.63	0.19	0.000
12.200	0.19	0.63	0.19	0.000
12.217	0.19	0.63	0.19	0.000
12.233	0.19	0.63	0.19	0.000
12.250	0.19	0.63	0.19	0.000
12.267	0.19	0.63	0.19	0.000
12.283	0.19	0.63	0.19	0.000
12.300	0.19	0.63	0.19	0.000
12.317	0.19	0.63	0.19	0.000
12.333	0.19	0.63	0.19	0.000
12.350	0.19	0.63	0.19	0.000
12.367	0.19	0.63	0.19	0.000
12.383	0.19	0.63	0.19	0.000
12.400	0.19	0.63	0.19	0.000
12.417	0.19	0.63	0.19	0.000
12.433	0.19	0.64	0.19	0.000
12.450	0.19	0.64	0.19	0.000
12.467	0.19	0.64	0.19	0.000
12.483	0.19	0.64	0.19	0.000
12.500	0.19	0.64	0.19	0.000
12.517	0.19	0.64	0.19	0.000
12.533	0.19	0.64	0.19	0.000
12.550	0.19	0.64	0.19	0.000
12.567	0.19	0.64	0.19	0.000
12.583	0.19	0.64	0.19	0.000
12.600	0.19	0.64	0.19	0.000
12.617	0.19	0.64	0.19	0.000
12.633	0.19	0.64	0.19	0.000
12.650	0.19	0.64	0.19	0.000
12.667	0.19	0.64	0.19	0.000
12.683	0.19	0.64	0.19	0.000
12.700	0.19	0.64	0.19	0.000
12.717	0.19	0.64	0.19	0.000
12.733	0.19	0.64	0.19	0.000
12.750	0.19	0.64	0.19	0.000
12.767	0.19	0.64	0.19	0.000
12.783	0.19	0.64	0.19	0.000
12.800	0.19	0.64	0.19	0.000
12.817	0.19	0.64	0.19	0.000
12.833	0.19	0.64	0.19	0.000
12.850	0.19	0.64	0.19	0.000

12.867	0.19	0.64	0.19	0.000
12.883	0.19	0.65	0.19	0.000
12.900	0.19	0.65	0.19	0.000
12.917	0.20	0.65	0.20	0.000
12.933	0.20	0.65	0.20	0.000
12.950	0.20	0.65	0.20	0.000
12.967	0.20	0.65	0.20	0.000
12.983	0.20	0.65	0.20	0.000
13.000	0.20	0.65	0.20	0.000
13.017	0.20	0.65	0.20	0.000
13.033	0.20	0.65	0.20	0.000
13.050	0.20	0.65	0.20	0.000
13.067	0.20	0.65	0.20	0.000
13.083	0.20	0.65	0.20	0.000
13.100	0.20	0.65	0.20	0.000
13.117	0.20	0.65	0.20	0.000
13.133	0.20	0.65	0.20	0.000
13.150	0.20	0.65	0.20	0.000
13.167	0.20	0.65	0.20	0.000
13.183	0.20	0.65	0.20	0.000
13.200	0.20	0.65	0.20	0.000
13.217	0.20	0.65	0.20	0.000
13.233	0.20	0.65	0.20	0.000
13.250	0.20	0.65	0.20	0.000
13.267	0.20	0.65	0.20	0.000
13.283	0.20	0.65	0.20	0.000
13.300	0.20	0.65	0.20	0.000
13.317	0.20	0.66	0.20	0.000
13.333	0.20	0.66	0.20	0.000
13.350	0.20	0.66	0.20	0.000
13.367	0.20	0.66	0.20	0.000
13.383	0.20	0.66	0.20	0.000
13.400	0.20	0.66	0.20	0.000
13.417	0.20	0.66	0.20	0.000
13.433	0.20	0.66	0.20	0.000
13.450	0.20	0.66	0.20	0.000
13.467	0.20	0.66	0.20	0.000
13.483	0.20	0.66	0.20	0.000
13.500	0.20	0.66	0.20	0.000
13.517	0.20	0.66	0.20	0.000
13.533	0.20	0.66	0.20	0.000
13.550	0.20	0.66	0.20	0.000
13.567	0.20	0.66	0.20	0.000
13.583	0.20	0.66	0.20	0.000
13.600	0.20	0.66	0.20	0.000
13.617	0.20	0.66	0.20	0.000
13.633	0.20	0.66	0.20	0.000
13.650	0.20	0.66	0.20	0.000
13.667	0.20	0.66	0.20	0.000
13.683	0.20	0.66	0.20	0.000
13.700	0.20	0.67	0.20	0.000
13.717	0.20	0.67	0.20	0.000
13.733	0.20	0.67	0.20	0.000
13.750	0.20	0.67	0.20	0.000
13.767	0.20	0.67	0.20	0.000

13.783	0.20	0.67	0.20	0.000
13.800	0.20	0.67	0.20	0.000
13.817	0.20	0.67	0.20	0.000
13.833	0.20	0.67	0.20	0.000
13.850	0.20	0.67	0.20	0.000
13.867	0.20	0.67	0.20	0.000
13.883	0.20	0.67	0.20	0.000
13.900	0.20	0.67	0.20	0.000
13.917	0.20	0.67	0.20	0.000
13.933	0.20	0.67	0.20	0.000
13.950	0.20	0.67	0.20	0.000
13.967	0.20	0.67	0.20	0.000
13.983	0.20	0.67	0.20	0.000
14.000	0.20	0.67	0.20	0.000
14.017	0.20	0.67	0.20	0.000
14.033	0.20	0.67	0.20	0.000
14.050	0.20	0.68	0.20	0.000
14.067	0.20	0.68	0.20	0.000
14.083	0.20	0.68	0.20	0.000
14.100	0.20	0.68	0.20	0.000
14.117	0.20	0.68	0.20	0.000
14.133	0.20	0.68	0.20	0.000
14.150	0.20	0.68	0.21	0.000
14.167	0.20	0.68	0.20	0.000
14.183	0.21	0.68	0.21	0.000
14.200	0.21	0.68	0.21	0.000
14.217	0.21	0.68	0.21	0.000
14.233	0.21	0.68	0.21	0.000
14.250	0.21	0.68	0.21	0.000
14.267	0.21	0.68	0.21	0.000
14.283	0.21	0.68	0.21	0.000
14.300	0.21	0.68	0.21	0.000
14.317	0.21	0.68	0.21	0.000
14.333	0.21	0.68	0.21	0.000
14.350	0.21	0.68	0.21	0.000
14.367	0.21	0.68	0.21	0.000
14.383	0.21	0.69	0.21	0.000
14.400	0.21	0.69	0.21	0.000
14.417	0.21	0.69	0.21	0.000
14.433	0.21	0.69	0.21	0.000
14.450	0.21	0.69	0.21	0.000
14.467	0.21	0.69	0.21	0.000
14.483	0.21	0.69	0.21	0.000
14.500	0.21	0.69	0.21	0.000
14.517	0.21	0.69	0.21	0.000
14.533	0.21	0.69	0.21	0.000
14.550	0.21	0.69	0.21	0.000
14.567	0.21	0.69	0.21	0.000
14.583	0.21	0.69	0.21	0.000
14.600	0.21	0.69	0.21	0.000
14.617	0.21	0.69	0.21	0.000
14.633	0.21	0.69	0.21	0.000
14.650	0.21	0.69	0.21	0.000
14.667	0.21	0.71	0.21	0.000
14.683	0.23	0.76	0.21	0.000

14.700	0.26	0.86	0.21	0.000
14.717	0.29	0.95	0.21	0.000
14.733	0.32	1.05	0.21	0.000
14.750	0.34	1.14	0.23	0.000
14.767	0.37	1.23	0.39	0.000
14.783	0.40	1.32	0.51	0.000
14.800	0.43	1.41	0.50	0.000
14.817	0.45	1.50	0.46	0.000
14.833	0.48	1.59	0.54	0.000
14.850	0.51	1.68	0.53	0.000
14.867	0.53	1.77	0.53	0.000
14.883	0.56	1.85	0.56	0.000
14.900	0.59	1.94	0.59	0.000
14.917	0.61	2.02	0.61	0.000
14.933	0.64	2.11	0.64	0.000
14.950	0.66	2.19	0.71	0.000
14.967	0.69	2.27	0.69	0.000
14.983	0.71	2.35	0.71	0.000
15.000	0.73	2.43	0.73	0.000
15.017	0.76	2.51	0.76	0.000
15.033	0.78	2.59	0.78	0.000
15.050	0.81	2.67	0.81	0.000
15.067	0.83	2.75	0.83	0.000
15.083	0.85	2.83	0.85	0.000
15.100	0.88	2.91	0.88	0.000
15.117	0.90	2.99	0.90	0.000
15.133	0.93	3.07	0.93	0.000
15.150	0.95	3.15	0.95	0.000
15.167	0.98	3.23	0.98	0.000
15.183	1.00	3.31	1.00	0.000
15.200	1.02	3.39	1.02	0.000
15.217	1.05	3.41	1.05	0.000
15.233	1.07	3.43	1.05	0.000
15.250	1.10	3.45	1.08	0.000
15.267	1.12	3.46	1.10	0.000
15.283	1.15	3.48	1.13	0.000
15.300	1.17	3.50	1.15	0.000
15.317	1.20	3.52	1.17	0.000
15.333	1.22	3.53	1.20	0.000
15.350	1.25	3.55	1.22	0.000
15.367	1.27	3.57	1.25	0.000
15.383	1.29	3.58	1.27	0.000
15.400	1.32	3.60	1.30	0.000
15.417	1.34	3.62	1.32	0.000
15.433	1.37	3.64	1.35	0.000
15.450	1.39	3.65	1.37	0.000
15.467	1.41	3.67	1.40	0.000
15.483	1.44	3.69	1.42	0.000
15.500	1.46	3.70	1.44	0.000
15.517	1.49	3.72	1.47	0.000
15.533	1.51	3.74	1.49	0.000
15.550	1.54	3.76	1.52	0.000
15.567	1.56	3.77	1.54	0.000
15.583	1.59	3.79	1.57	0.000
15.600	1.62	3.81	1.60	0.000

15.617	1.65	3.83	1.63	0.000
15.633	1.68	3.86	1.66	0.000
15.650	1.71	3.88	1.69	0.000
15.667	1.75	3.90	1.72	0.000
15.683	1.78	3.93	1.76	0.000
15.700	1.82	3.95	1.79	0.000
15.717	1.85	3.97	1.83	0.000
15.733	1.89	4.00	1.86	0.000
15.750	1.93	4.03	1.90	0.000
15.767	1.96	4.05	1.94	0.000
15.783	2.00	4.08	1.99	0.000
15.800	2.04	4.11	2.02	0.000
15.817	2.08	4.13	2.05	0.000
15.833	2.12	4.15	2.09	0.000
15.850	2.17	4.18	2.14	0.000
15.867	2.21	4.20	2.18	0.000
15.883	2.25	4.22	2.22	0.000
15.900	2.29	4.25	2.26	0.000
15.917	2.34	4.27	2.31	0.000
15.933	2.38	4.29	2.35	0.000
15.950	2.43	4.32	2.40	0.000
15.967	2.47	4.34	2.44	0.000
15.983	2.52	4.37	2.49	0.000
16.000	2.56	4.39	2.53	0.000
16.017	2.61	4.42	2.58	0.000
16.033	2.67	4.45	2.64	0.000
16.050	2.74	4.49	2.70	0.000
16.067	2.83	4.53	2.78	0.000
16.083	2.92	4.59	2.87	0.000
16.100	3.03	4.64	2.97	0.000
16.117	3.14	4.70	3.07	0.000
16.133	3.27	4.75	3.19	0.000
16.150	3.41	4.81	3.33	0.000
16.167	3.56	4.87	3.47	0.000
16.183	3.73	4.94	3.64	0.000
16.200	4.27	5.15	3.97	0.000
16.217	5.15	5.44	4.67	0.000
16.233	6.03	5.71	5.58	0.000
16.250	6.91	5.90	6.44	0.000
16.267	7.74	6.08	7.32	0.000
16.283	8.45	6.21	8.10	0.000
16.300	9.02	6.30	8.73	0.000
16.317	9.48	6.38	9.26	0.000
16.333	9.83	6.45	9.67	0.000
16.350	10.07	6.50	9.96	0.000
16.367	10.23	6.53	10.16	0.000
16.383	10.29	6.54	10.26	0.000
16.400	10.28	6.54	10.29	0.000
16.417	10.20	6.52	10.23	0.000
16.433	10.04	6.49	10.11	0.000
16.450	9.83	6.45	9.92	0.000
16.467	9.55	6.40	9.68	0.000
16.483	9.23	6.34	9.38	0.000
16.500	8.85	6.28	9.04	0.000
16.517	8.46	6.21	8.66	0.000

16.533	8.09	6.15	8.28	0.000
16.550	7.74	6.08	7.91	0.000
16.567	7.41	6.01	7.57	0.000
16.583	7.10	5.94	7.26	0.000
16.600	6.80	5.88	6.96	0.000
16.617	6.53	5.82	6.67	0.000
16.633	6.26	5.77	6.41	0.000
16.650	6.01	5.70	6.14	0.000
16.667	5.78	5.63	5.89	0.000
16.683	5.55	5.56	5.66	0.000
16.700	5.34	5.50	5.45	0.000
16.717	5.13	5.44	5.24	0.000
16.733	4.93	5.37	5.04	0.000
16.750	4.75	5.31	4.85	0.000
16.767	4.57	5.25	4.67	0.000
16.783	4.40	5.19	4.50	0.000
16.800	4.25	5.14	4.34	0.000
16.817	4.10	5.09	4.19	0.000
16.833	3.97	5.04	4.04	0.000
16.850	3.85	4.99	3.91	0.000
16.867	3.78	4.96	3.82	0.000
16.883	3.76	4.95	3.77	0.000
16.900	3.74	4.94	3.75	0.000
16.917	3.71	4.93	3.73	0.000
16.933	3.69	4.92	3.70	0.000
16.950	3.66	4.91	3.68	0.000
16.967	3.64	4.90	3.65	0.000
16.983	3.62	4.89	3.63	0.000
17.000	3.59	4.88	3.60	0.000
17.017	3.57	4.87	3.58	0.000
17.033	3.54	4.86	3.56	0.000
17.050	3.52	4.85	3.53	0.000
17.067	3.49	4.84	3.51	0.000
17.083	3.47	4.83	3.48	0.000
17.100	3.45	4.82	3.46	0.000
17.117	3.42	4.81	3.44	0.000
17.133	3.40	4.80	3.41	0.000
17.150	3.38	4.79	3.39	0.000
17.167	3.35	4.78	3.37	0.000
17.183	3.33	4.77	3.34	0.000
17.200	3.30	4.76	3.32	0.000
17.217	3.28	4.75	3.30	0.000
17.233	3.26	4.75	3.27	0.000
17.250	3.23	4.74	3.25	0.000
17.267	3.21	4.73	3.23	0.000
17.283	3.19	4.72	3.20	0.000
17.300	3.17	4.71	3.18	0.000
17.317	3.14	4.70	3.16	0.000
17.333	3.12	4.69	3.14	0.000
17.350	3.10	4.68	3.11	0.000
17.367	3.08	4.67	3.09	0.000
17.383	3.05	4.66	3.07	0.000
17.400	3.03	4.65	3.05	0.000
17.417	3.01	4.63	3.02	0.000
17.433	2.99	4.62	3.00	0.000

17.450	2.97	4.61	2.98	0.000
17.467	2.95	4.60	2.96	0.000
17.483	2.93	4.59	2.94	0.000
17.500	2.90	4.58	2.92	0.000
17.517	2.88	4.57	2.90	0.000
17.533	2.86	4.55	2.88	0.000
17.550	2.84	4.54	2.85	0.000
17.567	2.82	4.53	2.83	0.000
17.583	2.80	4.52	2.81	0.000
17.600	2.78	4.51	2.79	0.000
17.617	2.76	4.50	2.77	0.000
17.633	2.74	4.49	2.75	0.000
17.650	2.72	4.48	2.74	0.000
17.667	2.70	4.47	2.72	0.000
17.683	2.69	4.46	2.70	0.000
17.700	2.67	4.45	2.68	0.000
17.717	2.65	4.44	2.66	0.000
17.733	2.63	4.43	2.64	0.000
17.750	2.61	4.42	2.62	0.000
17.767	2.59	4.41	2.60	0.000
17.783	2.57	4.40	2.58	0.000
17.800	2.56	4.39	2.57	0.000
17.817	2.54	4.38	2.55	0.000
17.833	2.52	4.37	2.53	0.000
17.850	2.50	4.36	2.51	0.000
17.867	2.48	4.35	2.50	0.000
17.883	2.47	4.34	2.48	0.000
17.900	2.45	4.33	2.46	0.000
17.917	2.43	4.32	2.44	0.000
17.933	2.42	4.31	2.43	0.000
17.950	2.40	4.30	2.41	0.000
17.967	2.38	4.30	2.39	0.000
17.983	2.37	4.29	2.38	0.000
18.000	2.35	4.28	2.36	0.000
18.017	2.33	4.27	2.35	0.000
18.033	2.32	4.26	2.33	0.000
18.050	2.30	4.25	2.31	0.000
18.067	2.29	4.24	2.30	0.000
18.083	2.27	4.23	2.28	0.000
18.100	2.26	4.23	2.27	0.000
18.117	2.24	4.22	2.25	0.000
18.133	2.22	4.21	2.23	0.000
18.150	2.21	4.20	2.22	0.000
18.167	2.19	4.19	2.20	0.000
18.183	2.18	4.18	2.19	0.000
18.200	2.16	4.18	2.17	0.000
18.217	2.15	4.17	2.16	0.000
18.233	2.13	4.16	2.14	0.000
18.250	2.12	4.15	2.13	0.000
18.267	2.10	4.14	2.11	0.000
18.283	2.09	4.13	2.10	0.000
18.300	2.07	4.13	2.08	0.000
18.317	2.06	4.12	2.07	0.000
18.333	2.04	4.11	2.05	0.000
18.350	2.03	4.10	2.04	0.000

18.367	2.01	4.09	2.02	0.000
18.383	2.00	4.08	2.01	0.000
18.400	1.99	4.07	1.99	0.000
18.417	1.97	4.06	1.98	0.000
18.433	1.96	4.05	1.97	0.000
18.450	1.94	4.04	1.96	0.000
18.467	1.93	4.03	1.94	0.000
18.483	1.92	4.02	1.93	0.000
18.500	1.90	4.01	1.91	0.000
18.517	1.89	4.00	1.90	0.000
18.533	1.88	3.99	1.89	0.000
18.550	1.86	3.98	1.87	0.000
18.567	1.85	3.97	1.86	0.000
18.583	1.84	3.97	1.85	0.000
18.600	1.83	3.96	1.83	0.000
18.617	1.81	3.95	1.82	0.000
18.633	1.80	3.94	1.81	0.000
18.650	1.79	3.93	1.80	0.000
18.667	1.78	3.92	1.79	0.000
18.683	1.77	3.91	1.77	0.000
18.700	1.75	3.91	1.76	0.000
18.717	1.74	3.90	1.75	0.000
18.733	1.73	3.89	1.74	0.000
18.750	1.72	3.88	1.73	0.000
18.767	1.71	3.87	1.72	0.000
18.783	1.70	3.87	1.70	0.000
18.800	1.69	3.86	1.69	0.000
18.817	1.67	3.85	1.68	0.000
18.833	1.66	3.84	1.67	0.000
18.850	1.65	3.84	1.66	0.000
18.867	1.64	3.83	1.65	0.000
18.883	1.63	3.82	1.64	0.000
18.900	1.62	3.81	1.63	0.000
18.917	1.61	3.81	1.62	0.000
18.933	1.60	3.80	1.61	0.000
18.950	1.59	3.79	1.60	0.000
18.967	1.58	3.79	1.59	0.000
18.983	1.57	3.78	1.58	0.000
19.000	1.56	3.77	1.57	0.000
19.017	1.55	3.76	1.56	0.000
19.033	1.54	3.76	1.55	0.000
19.050	1.53	3.75	1.54	0.000
19.067	1.52	3.75	1.53	0.000
19.083	1.51	3.74	1.52	0.000
19.100	1.50	3.73	1.51	0.000
19.117	1.50	3.73	1.50	0.000
19.133	1.49	3.72	1.49	0.000
19.150	1.48	3.71	1.48	0.000
19.167	1.47	3.71	1.48	0.000
19.183	1.46	3.70	1.47	0.000
19.200	1.45	3.70	1.46	0.000
19.217	1.44	3.69	1.45	0.000
19.233	1.43	3.68	1.44	0.000
19.250	1.43	3.68	1.43	0.000
19.267	1.42	3.67	1.42	0.000

19.283	1.41	3.67	1.42	0.000
19.300	1.40	3.66	1.41	0.000
19.317	1.39	3.65	1.40	0.000
19.333	1.39	3.65	1.39	0.000
19.350	1.38	3.64	1.38	0.000
19.367	1.37	3.64	1.38	0.000
19.383	1.36	3.63	1.37	0.000
19.400	1.35	3.63	1.36	0.000
19.417	1.35	3.62	1.35	0.000
19.433	1.34	3.62	1.35	0.000
19.450	1.33	3.61	1.34	0.000
19.467	1.33	3.61	1.33	0.000
19.483	1.32	3.60	1.32	0.000
19.500	1.31	3.60	1.32	0.000
19.517	1.30	3.59	1.31	0.000
19.533	1.30	3.59	1.30	0.000
19.550	1.29	3.58	1.30	0.000
19.567	1.28	3.58	1.29	0.000
19.583	1.28	3.57	1.28	0.000
19.600	1.27	3.57	1.28	0.000
19.617	1.26	3.56	1.27	0.000
19.633	1.26	3.56	1.26	0.000
19.650	1.25	3.55	1.26	0.000
19.667	1.24	3.55	1.25	0.000
19.683	1.24	3.54	1.24	0.000
19.700	1.23	3.54	1.24	0.000
19.717	1.22	3.54	1.23	0.000
19.733	1.22	3.53	1.22	0.000
19.750	1.21	3.53	1.22	0.000
19.767	1.21	3.52	1.21	0.000
19.783	1.20	3.52	1.21	0.000
19.800	1.19	3.51	1.20	0.000
19.817	1.19	3.51	1.19	0.000
19.833	1.18	3.51	1.19	0.000
19.850	1.18	3.50	1.18	0.000
19.867	1.17	3.50	1.18	0.000
19.883	1.17	3.49	1.17	0.000
19.900	1.16	3.49	1.16	0.000
19.917	1.15	3.49	1.16	0.000
19.933	1.15	3.48	1.15	0.000
19.950	1.14	3.48	1.15	0.000
19.967	1.14	3.48	1.14	0.000
19.983	1.13	3.47	1.14	0.000
20.000	1.13	3.47	1.13	0.000
20.017	1.12	3.46	1.13	0.000
20.033	1.12	3.46	1.12	0.000
20.050	1.11	3.46	1.12	0.000
20.067	1.11	3.45	1.11	0.000
20.083	1.10	3.45	1.11	0.000
20.100	1.10	3.45	1.10	0.000
20.117	1.09	3.44	1.10	0.000
20.133	1.09	3.44	1.09	0.000
20.150	1.08	3.44	1.09	0.000
20.167	1.08	3.43	1.08	0.000
20.183	1.07	3.43	1.08	0.000

20.200	1.07	3.43	1.07	0.000
20.217	1.06	3.42	1.07	0.000
20.233	1.06	3.42	1.06	0.000
20.250	1.05	3.42	1.06	0.000
20.267	1.05	3.41	1.05	0.000
20.283	1.04	3.41	1.05	0.000
20.300	1.04	3.41	1.04	0.000
20.317	1.04	3.40	1.04	0.000
20.333	1.03	3.40	1.04	0.000
20.350	1.03	3.40	1.03	0.000
20.367	1.02	3.39	1.03	0.000
20.383	1.02	3.37	1.02	0.000
20.400	1.01	3.36	1.01	0.000
20.417	1.01	3.34	1.01	0.000
20.433	1.01	3.33	1.01	0.000
20.450	1.00	3.32	1.00	0.000
20.467	1.00	3.30	1.00	0.000
20.483	0.99	3.29	0.99	0.000
20.500	0.99	3.28	0.99	0.000
20.517	0.99	3.26	0.99	0.000
20.533	0.98	3.25	0.98	0.000
20.550	0.98	3.24	0.98	0.000
20.567	0.97	3.22	0.97	0.000
20.583	0.97	3.21	0.97	0.000
20.600	0.97	3.20	0.97	0.000
20.617	0.96	3.19	0.96	0.000
20.633	0.96	3.18	0.96	0.000
20.650	0.96	3.16	0.96	0.000
20.667	0.95	3.15	0.95	0.000
20.683	0.95	3.14	0.95	0.000
20.700	0.94	3.13	0.94	0.000
20.717	0.94	3.12	0.94	0.000
20.733	0.94	3.10	0.94	0.000
20.750	0.93	3.09	0.93	0.000
20.767	0.93	3.08	0.93	0.000
20.783	0.93	3.07	0.93	0.000
20.800	0.92	3.06	0.92	0.000
20.817	0.92	3.05	0.92	0.000
20.833	0.92	3.04	0.92	0.000
20.850	0.91	3.03	0.91	0.000
20.867	0.91	3.02	0.91	0.000
20.883	0.91	3.00	0.91	0.000
20.900	0.90	2.99	0.90	0.000
20.917	0.90	2.98	0.90	0.000
20.933	0.90	2.97	0.90	0.000
20.950	0.89	2.96	0.89	0.000
20.967	0.89	2.95	0.89	0.000
20.983	0.89	2.94	0.89	0.000
21.000	0.89	2.93	0.89	0.000
21.017	0.88	2.92	0.88	0.000
21.033	0.88	2.91	0.88	0.000
21.050	0.88	2.90	0.88	0.000
21.067	0.87	2.89	0.87	0.000
21.083	0.87	2.88	0.87	0.000
21.100	0.87	2.87	0.87	0.000

21.117	0.87	2.86	0.87	0.000
21.133	0.86	2.85	0.86	0.000
21.150	0.86	2.85	0.86	0.000
21.167	0.86	2.84	0.86	0.000
21.183	0.85	2.83	0.85	0.000
21.200	0.85	2.82	0.85	0.000
21.217	0.85	2.81	0.85	0.000
21.233	0.85	2.80	0.85	0.000
21.250	0.84	2.79	0.84	0.000
21.267	0.84	2.78	0.84	0.000
21.283	0.84	2.77	0.84	0.000
21.300	0.84	2.76	0.84	0.000
21.317	0.83	2.76	0.83	0.000
21.333	0.83	2.75	0.83	0.000
21.350	0.83	2.74	0.83	0.000
21.367	0.82	2.73	0.82	0.000
21.383	0.82	2.72	0.82	0.000
21.400	0.82	2.71	0.82	0.000
21.417	0.82	2.71	0.82	0.000
21.433	0.81	2.70	0.81	0.000
21.450	0.81	2.69	0.81	0.000
21.467	0.81	2.68	0.81	0.000
21.483	0.81	2.67	0.81	0.000
21.500	0.81	2.67	0.81	0.000
21.517	0.80	2.66	0.80	0.000
21.533	0.80	2.65	0.80	0.000
21.550	0.80	2.64	0.80	0.000
21.567	0.80	2.64	0.80	0.000
21.583	0.79	2.63	0.79	0.000
21.600	0.79	2.62	0.79	0.000
21.617	0.79	2.61	0.79	0.000
21.633	0.79	2.61	0.79	0.000
21.650	0.78	2.60	0.78	0.000
21.667	0.78	2.59	0.78	0.000
21.683	0.78	2.58	0.78	0.000
21.700	0.78	2.58	0.78	0.000
21.717	0.78	2.57	0.78	0.000
21.733	0.77	2.56	0.77	0.000
21.750	0.77	2.56	0.77	0.000
21.767	0.77	2.55	0.77	0.000
21.783	0.77	2.54	0.77	0.000
21.800	0.77	2.53	0.77	0.000
21.817	0.76	2.53	0.76	0.000
21.833	0.76	2.52	0.76	0.000
21.850	0.76	2.51	0.76	0.000
21.867	0.76	2.51	0.76	0.000
21.883	0.76	2.50	0.76	0.000
21.900	0.75	2.49	0.75	0.000
21.917	0.75	2.49	0.75	0.000
21.933	0.75	2.48	0.75	0.000
21.950	0.75	2.48	0.75	0.000
21.967	0.75	2.47	0.75	0.000
21.983	0.74	2.46	0.74	0.000
22.000	0.74	2.46	0.74	0.000
22.017	0.74	2.45	0.74	0.000

22.033	0.74	2.44	0.74	0.000
22.050	0.74	2.44	0.74	0.000
22.067	0.73	2.43	0.73	0.000
22.083	0.73	2.43	0.73	0.000
22.100	0.73	2.42	0.73	0.000
22.117	0.73	2.41	0.73	0.000
22.133	0.73	2.41	0.73	0.000
22.150	0.73	2.40	0.73	0.000
22.167	0.72	2.40	0.72	0.000
22.183	0.72	2.39	0.72	0.000
22.200	0.72	2.38	0.72	0.000
22.217	0.72	2.38	0.72	0.000
22.233	0.72	2.37	0.72	0.000
22.250	0.72	2.37	0.72	0.000
22.267	0.71	2.36	0.71	0.000
22.283	0.71	2.36	0.71	0.000
22.300	0.71	2.35	0.71	0.000
22.317	0.71	2.35	0.71	0.000
22.333	0.71	2.34	0.71	0.000
22.350	0.71	2.33	0.71	0.000
22.367	0.70	2.33	0.70	0.000
22.383	0.70	2.32	0.70	0.000
22.400	0.70	2.32	0.70	0.000
22.417	0.70	2.31	0.70	0.000
22.433	0.70	2.31	0.70	0.000
22.450	0.70	2.30	0.70	0.000
22.467	0.69	2.30	0.69	0.000
22.483	0.69	2.29	0.69	0.000
22.500	0.69	2.29	0.69	0.000
22.517	0.69	2.28	0.69	0.000
22.533	0.69	2.28	0.69	0.000
22.550	0.69	2.27	0.69	0.000
22.567	0.69	2.27	0.69	0.000
22.583	0.68	2.26	0.68	0.000
22.600	0.68	2.26	0.68	0.000
22.617	0.68	2.25	0.68	0.000
22.633	0.68	2.25	0.68	0.000
22.650	0.68	2.24	0.68	0.000
22.667	0.68	2.24	0.68	0.000
22.683	0.67	2.23	0.67	0.000
22.700	0.67	2.23	0.67	0.000
22.717	0.67	2.22	0.67	0.000
22.733	0.67	2.22	0.67	0.000
22.750	0.67	2.22	0.67	0.000
22.767	0.67	2.21	0.67	0.000
22.783	0.67	2.21	0.67	0.000
22.800	0.67	2.20	0.67	0.000
22.817	0.66	2.20	0.66	0.000
22.833	0.66	2.19	0.66	0.000
22.850	0.66	2.19	0.66	0.000
22.867	0.66	2.18	0.66	0.000
22.883	0.66	2.18	0.66	0.000
22.900	0.66	2.18	0.66	0.000
22.917	0.66	2.17	0.66	0.000
22.933	0.65	2.17	0.65	0.000

22.950	0.65	2.16	0.65	0.000
22.967	0.65	2.16	0.65	0.000
22.983	0.65	2.15	0.65	0.000
23.000	0.65	2.15	0.65	0.000
23.017	0.65	2.15	0.65	0.000
23.033	0.65	2.14	0.65	0.000
23.050	0.65	2.14	0.65	0.000
23.067	0.64	2.13	0.64	0.000
23.083	0.64	2.13	0.64	0.000
23.100	0.64	2.12	0.64	0.000
23.117	0.64	2.12	0.64	0.000
23.133	0.64	2.12	0.64	0.000
23.150	0.64	2.11	0.64	0.000
23.167	0.64	2.11	0.64	0.000
23.183	0.64	2.10	0.64	0.000
23.200	0.63	2.10	0.63	0.000
23.217	0.63	2.10	0.63	0.000
23.233	0.63	2.09	0.63	0.000
23.250	0.63	2.09	0.63	0.000
23.267	0.63	2.09	0.63	0.000
23.283	0.63	2.08	0.63	0.000
23.300	0.63	2.08	0.63	0.000
23.317	0.63	2.07	0.63	0.000
23.333	0.63	2.07	0.63	0.000
23.350	0.62	2.07	0.62	0.000
23.367	0.62	2.06	0.62	0.000
23.383	0.62	2.06	0.62	0.000
23.400	0.62	2.06	0.62	0.000
23.417	0.62	2.05	0.62	0.000
23.433	0.62	2.05	0.62	0.000
23.450	0.62	2.04	0.62	0.000
23.467	0.62	2.04	0.62	0.000
23.483	0.62	2.04	0.62	0.000
23.500	0.61	2.03	0.61	0.000
23.517	0.61	2.03	0.61	0.000
23.533	0.61	2.03	0.61	0.000
23.550	0.61	2.02	0.61	0.000
23.567	0.61	2.02	0.61	0.000
23.583	0.61	2.02	0.61	0.000
23.600	0.61	2.01	0.61	0.000
23.617	0.61	2.01	0.61	0.000
23.633	0.61	2.01	0.61	0.000
23.650	0.60	2.00	0.60	0.000
23.667	0.60	2.00	0.60	0.000
23.683	0.60	2.00	0.60	0.000
23.700	0.60	1.99	0.60	0.000
23.717	0.60	1.99	0.60	0.000
23.733	0.60	1.99	0.60	0.000
23.750	0.60	1.98	0.60	0.000
23.767	0.60	1.98	0.60	0.000
23.783	0.60	1.98	0.60	0.000
23.800	0.60	1.97	0.60	0.000
23.817	0.59	1.97	0.59	0.000
23.833	0.59	1.97	0.59	0.000
23.850	0.59	1.96	0.59	0.000

23.867	0.59	1.96	0.59	0.000
23.883	0.59	1.96	0.59	0.000
23.900	0.59	1.95	0.59	0.000
23.917	0.59	1.95	0.59	0.000
23.933	0.59	1.95	0.59	0.000
23.950	0.59	1.94	0.59	0.000
23.967	0.59	1.94	0.59	0.000
23.983	0.59	1.94	0.59	0.000
24.000	0.58	1.94	0.58	0.000

FLOW PROCESS FROM NODE 202.00 TO NODE 102.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

FLOW PROCESS FROM NODE 300.00 TO NODE 301.00 IS CODE = 1.2

>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<

(SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #3)

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA(ACRES) = 42.62
SOIL-LOSS RATE, Fm,(INCH/HR) = 0.404
LOW LOSS FRACTION = 0.524
TIME OF CONCENTRATION(MIN.) = 15.76
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY(YEARS) = 10
5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.20
30-MINUTE POINT RAINFALL VALUE(INCHES) = 0.52
1-HOUR POINT RAINFALL VALUE(INCHES) = 0.75
3-HOUR POINT RAINFALL VALUE(INCHES) = 1.27
6-HOUR POINT RAINFALL VALUE(INCHES) = 1.77
24-HOUR POINT RAINFALL VALUE(INCHES) = 3.24

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 5.18
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 6.33

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)
(Notes: Time indicated is at END of Each Unit Intervals.)

Peak 5-minute rainfall intensity is modeled as
a constant value for entire 5-minute period.)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	9.6	19.1	28.7	38.3
0.017	0.0001	0.04	Q	.	.	.	.
0.033	0.0002	0.11	Q	.	.	.	.
0.050	0.0005	0.19	Q	.	.	.	.
0.067	0.0008	0.26	Q	.	.	.	.
0.083	0.0013	0.34	Q	.	.	.	.
0.100	0.0019	0.41	Q	.	.	.	.
0.117	0.0025	0.49	Q	.	.	.	.
0.133	0.0033	0.56	Q	.	.	.	.
0.150	0.0042	0.64	Q	.	.	.	.
0.167	0.0051	0.71	Q	.	.	.	.
0.183	0.0062	0.78	Q	.	.	.	.
0.200	0.0074	0.86	Q	.	.	.	.
0.217	0.0087	0.93	Q	.	.	.	.
0.233	0.0101	1.01	VQ	.	.	.	.
0.250	0.0116	1.07	VQ	.	.	.	.
0.267	0.0130	1.08	VQ	.	.	.	.
0.283	0.0145	1.08	VQ	.	.	.	.
0.300	0.0160	1.08	VQ	.	.	.	.
0.317	0.0175	1.08	VQ	.	.	.	.
0.333	0.0190	1.08	VQ	.	.	.	.
0.350	0.0205	1.08	VQ	.	.	.	.
0.367	0.0220	1.08	VQ	.	.	.	.
0.383	0.0235	1.08	VQ	.	.	.	.
0.400	0.0250	1.08	VQ	.	.	.	.
0.417	0.0264	1.08	VQ	.	.	.	.
0.433	0.0279	1.08	VQ	.	.	.	.
0.450	0.0294	1.08	VQ	.	.	.	.
0.467	0.0309	1.09	VQ	.	.	.	.
0.483	0.0324	1.09	VQ	.	.	.	.
0.500	0.0339	1.09	VQ	.	.	.	.
0.517	0.0354	1.09	VQ	.	.	.	.
0.533	0.0369	1.09	VQ	.	.	.	.
0.550	0.0384	1.09	VQ	.	.	.	.
0.567	0.0399	1.09	VQ	.	.	.	.
0.583	0.0414	1.09	VQ	.	.	.	.
0.600	0.0429	1.09	VQ	.	.	.	.
0.617	0.0444	1.09	VQ	.	.	.	.
0.633	0.0459	1.09	VQ	.	.	.	.
0.650	0.0474	1.09	VQ	.	.	.	.
0.667	0.0489	1.09	VQ	.	.	.	.
0.683	0.0504	1.09	VQ	.	.	.	.
0.700	0.0519	1.09	VQ	.	.	.	.
0.717	0.0534	1.09	VQ	.	.	.	.
0.733	0.0550	1.09	VQ	.	.	.	.
0.750	0.0565	1.09	VQ	.	.	.	.
0.767	0.0580	1.09	VQ	.	.	.	.
0.783	0.0595	1.10	VQ	.	.	.	.
0.800	0.0610	1.10	VQ	.	.	.	.
0.817	0.0625	1.10	VQ	.	.	.	.
0.833	0.0640	1.10	VQ	.	.	.	.

0.850	0.0655	1.10	VQ	.	.	.	.
0.867	0.0670	1.10	VQ	.	.	.	.
0.883	0.0686	1.10	VQ	.	.	.	.
0.900	0.0701	1.10	VQ	.	.	.	.
0.917	0.0716	1.10	VQ	.	.	.	.
0.933	0.0731	1.10	VQ	.	.	.	.
0.950	0.0746	1.10	VQ	.	.	.	.
0.967	0.0761	1.10	VQ	.	.	.	.
0.983	0.0777	1.11	VQ	.	.	.	.
1.000	0.0792	1.11	VQ	.	.	.	.
1.017	0.0807	1.11	VQ	.	.	.	.
1.033	0.0822	1.11	VQ	.	.	.	.
1.050	0.0838	1.11	VQ	.	.	.	.
1.067	0.0853	1.11	VQ	.	.	.	.
1.083	0.0868	1.11	VQ	.	.	.	.
1.100	0.0884	1.11	VQ	.	.	.	.
1.117	0.0899	1.11	VQ	.	.	.	.
1.133	0.0914	1.11	VQ	.	.	.	.
1.150	0.0930	1.11	VQ	.	.	.	.
1.167	0.0945	1.11	VQ	.	.	.	.
1.183	0.0960	1.11	VQ	.	.	.	.
1.200	0.0976	1.11	VQ	.	.	.	.
1.217	0.0991	1.11	VQ	.	.	.	.
1.233	0.1006	1.11	VQ	.	.	.	.
1.250	0.1022	1.11	VQ	.	.	.	.
1.267	0.1037	1.12	VQ	.	.	.	.
1.283	0.1052	1.12	VQ	.	.	.	.
1.300	0.1068	1.12	VQ	.	.	.	.
1.317	0.1083	1.12	VQ	.	.	.	.
1.333	0.1098	1.12	VQ	.	.	.	.
1.350	0.1114	1.12	VQ	.	.	.	.
1.367	0.1129	1.12	VQ	.	.	.	.
1.383	0.1145	1.12	VQ	.	.	.	.
1.400	0.1160	1.12	VQ	.	.	.	.
1.417	0.1176	1.12	VQ	.	.	.	.
1.433	0.1191	1.12	VQ	.	.	.	.
1.450	0.1207	1.12	VQ	.	.	.	.
1.467	0.1222	1.13	VQ	.	.	.	.
1.483	0.1238	1.13	VQ	.	.	.	.
1.500	0.1253	1.13	VQ	.	.	.	.
1.517	0.1269	1.13	VQ	.	.	.	.
1.533	0.1284	1.13	VQ	.	.	.	.
1.550	0.1300	1.13	.Q	.	.	.	.
1.567	0.1315	1.13	.Q	.	.	.	.
1.583	0.1331	1.13	.Q	.	.	.	.
1.600	0.1347	1.13	.Q	.	.	.	.
1.617	0.1362	1.13	.Q	.	.	.	.
1.633	0.1378	1.13	.Q	.	.	.	.
1.650	0.1393	1.13	.Q	.	.	.	.
1.667	0.1409	1.13	.Q	.	.	.	.
1.683	0.1425	1.13	.Q	.	.	.	.
1.700	0.1440	1.14	.Q	.	.	.	.
1.717	0.1456	1.14	.Q	.	.	.	.
1.733	0.1472	1.14	.Q	.	.	.	.
1.750	0.1487	1.14	.Q	.	.	.	.

1.767	0.1503	1.14	.Q	.	.	.	.
1.783	0.1519	1.14	.Q	.	.	.	.
1.800	0.1534	1.14	.Q	.	.	.	.
1.817	0.1550	1.14	.Q	.	.	.	.
1.833	0.1566	1.14	.Q	.	.	.	.
1.850	0.1581	1.14	.Q	.	.	.	.
1.867	0.1597	1.14	.Q	.	.	.	.
1.883	0.1613	1.14	.Q	.	.	.	.
1.900	0.1629	1.14	.Q	.	.	.	.
1.917	0.1644	1.14	.Q	.	.	.	.
1.933	0.1660	1.15	.Q	.	.	.	.
1.950	0.1676	1.15	.Q	.	.	.	.
1.967	0.1692	1.15	.Q	.	.	.	.
1.983	0.1707	1.15	.Q	.	.	.	.
2.000	0.1723	1.15	.Q	.	.	.	.
2.017	0.1739	1.15	.Q	.	.	.	.
2.033	0.1755	1.15	.Q	.	.	.	.
2.050	0.1771	1.15	.Q	.	.	.	.
2.067	0.1787	1.15	.Q	.	.	.	.
2.083	0.1803	1.15	.Q	.	.	.	.
2.100	0.1819	1.15	.Q	.	.	.	.
2.117	0.1835	1.16	.Q	.	.	.	.
2.133	0.1850	1.16	.Q	.	.	.	.
2.150	0.1866	1.16	.Q	.	.	.	.
2.167	0.1882	1.16	.Q	.	.	.	.
2.183	0.1898	1.16	.Q	.	.	.	.
2.200	0.1914	1.16	.Q	.	.	.	.
2.217	0.1930	1.16	.Q	.	.	.	.
2.233	0.1946	1.16	.Q	.	.	.	.
2.250	0.1962	1.16	.Q	.	.	.	.
2.267	0.1978	1.16	.Q	.	.	.	.
2.283	0.1994	1.16	.Q	.	.	.	.
2.300	0.2010	1.16	.Q	.	.	.	.
2.317	0.2026	1.16	.Q	.	.	.	.
2.333	0.2042	1.16	.Q	.	.	.	.
2.350	0.2058	1.16	.Q	.	.	.	.
2.367	0.2074	1.16	.Q	.	.	.	.
2.383	0.2090	1.16	.Q	.	.	.	.
2.400	0.2106	1.17	.Q	.	.	.	.
2.417	0.2122	1.17	.Q	.	.	.	.
2.433	0.2138	1.17	.Q	.	.	.	.
2.450	0.2154	1.17	.Q	.	.	.	.
2.467	0.2171	1.17	.Q	.	.	.	.
2.483	0.2187	1.17	.Q	.	.	.	.
2.500	0.2203	1.17	.Q	.	.	.	.
2.517	0.2219	1.17	.Q	.	.	.	.
2.533	0.2235	1.17	.Q	.	.	.	.
2.550	0.2251	1.18	.Q	.	.	.	.
2.567	0.2268	1.18	.Q	.	.	.	.
2.583	0.2284	1.18	.Q	.	.	.	.
2.600	0.2300	1.18	.Q	.	.	.	.
2.617	0.2316	1.18	.Q	.	.	.	.
2.633	0.2333	1.18	.Q	.	.	.	.
2.650	0.2349	1.18	.Q	.	.	.	.
2.667	0.2365	1.18	.Q	.	.	.	.

2.683	0.2381	1.18	.Q	.	.	.	.
2.700	0.2398	1.18	.Q	.	.	.	.
2.717	0.2414	1.18	.Q	.	.	.	.
2.733	0.2430	1.18	.Q	.	.	.	.
2.750	0.2447	1.18	.Q	.	.	.	.
2.767	0.2463	1.18	.Q	.	.	.	.
2.783	0.2479	1.19	.Q	.	.	.	.
2.800	0.2496	1.19	.Q	.	.	.	.
2.817	0.2512	1.19	.Q	.	.	.	.
2.833	0.2528	1.19	.Q	.	.	.	.
2.850	0.2545	1.19	.Q	.	.	.	.
2.867	0.2561	1.19	.Q	.	.	.	.
2.883	0.2577	1.19	.Q	.	.	.	.
2.900	0.2594	1.19	.QV	.	.	.	.
2.917	0.2610	1.19	.QV	.	.	.	.
2.933	0.2627	1.19	.QV	.	.	.	.
2.950	0.2643	1.19	.QV	.	.	.	.
2.967	0.2659	1.19	.QV	.	.	.	.
2.983	0.2676	1.20	.QV	.	.	.	.
3.000	0.2692	1.20	.QV	.	.	.	.
3.017	0.2709	1.20	.QV	.	.	.	.
3.033	0.2725	1.20	.QV	.	.	.	.
3.050	0.2742	1.20	.QV	.	.	.	.
3.067	0.2759	1.20	.QV	.	.	.	.
3.083	0.2775	1.20	.QV	.	.	.	.
3.100	0.2792	1.20	.QV	.	.	.	.
3.117	0.2808	1.20	.QV	.	.	.	.
3.133	0.2825	1.21	.QV	.	.	.	.
3.150	0.2841	1.21	.QV	.	.	.	.
3.167	0.2858	1.21	.QV	.	.	.	.
3.183	0.2875	1.21	.QV	.	.	.	.
3.200	0.2891	1.21	.QV	.	.	.	.
3.217	0.2908	1.21	.QV	.	.	.	.
3.233	0.2925	1.21	.QV	.	.	.	.
3.250	0.2941	1.21	.QV	.	.	.	.
3.267	0.2958	1.21	.QV	.	.	.	.
3.283	0.2975	1.21	.QV	.	.	.	.
3.300	0.2991	1.21	.QV	.	.	.	.
3.317	0.3008	1.21	.QV	.	.	.	.
3.333	0.3025	1.21	.QV	.	.	.	.
3.350	0.3042	1.21	.QV	.	.	.	.
3.367	0.3058	1.21	.QV	.	.	.	.
3.383	0.3075	1.21	.QV	.	.	.	.
3.400	0.3092	1.22	.QV	.	.	.	.
3.417	0.3109	1.22	.QV	.	.	.	.
3.433	0.3125	1.22	.QV	.	.	.	.
3.450	0.3142	1.22	.QV	.	.	.	.
3.467	0.3159	1.22	.QV	.	.	.	.
3.483	0.3176	1.22	.QV	.	.	.	.
3.500	0.3193	1.22	.QV	.	.	.	.
3.517	0.3209	1.22	.QV	.	.	.	.
3.533	0.3226	1.22	.QV	.	.	.	.
3.550	0.3243	1.23	.QV	.	.	.	.
3.567	0.3260	1.23	.QV	.	.	.	.
3.583	0.3277	1.23	.QV	.	.	.	.

3.600	0.3294	1.23	.QV	.	.	.	.
3.617	0.3311	1.23	.QV	.	.	.	.
3.633	0.3328	1.23	.QV	.	.	.	.
3.650	0.3345	1.23	.QV	.	.	.	.
3.667	0.3362	1.23	.QV	.	.	.	.
3.683	0.3379	1.24	.QV	.	.	.	.
3.700	0.3396	1.24	.QV	.	.	.	.
3.717	0.3413	1.24	.QV	.	.	.	.
3.733	0.3430	1.24	.QV	.	.	.	.
3.750	0.3447	1.24	.QV	.	.	.	.
3.767	0.3464	1.24	.QV	.	.	.	.
3.783	0.3481	1.24	.QV	.	.	.	.
3.800	0.3498	1.24	.QV	.	.	.	.
3.817	0.3515	1.24	.QV	.	.	.	.
3.833	0.3532	1.24	.QV	.	.	.	.
3.850	0.3549	1.24	.QV	.	.	.	.
3.867	0.3567	1.24	.QV	.	.	.	.
3.883	0.3584	1.24	.QV	.	.	.	.
3.900	0.3601	1.24	.QV	.	.	.	.
3.917	0.3618	1.24	.QV	.	.	.	.
3.933	0.3635	1.24	.QV	.	.	.	.
3.950	0.3652	1.25	.QV	.	.	.	.
3.967	0.3669	1.25	.QV	.	.	.	.
3.983	0.3687	1.25	.QV	.	.	.	.
4.000	0.3704	1.25	.QV	.	.	.	.
4.017	0.3721	1.25	.QV	.	.	.	.
4.033	0.3738	1.25	.QV	.	.	.	.
4.050	0.3756	1.25	.QV	.	.	.	.
4.067	0.3773	1.26	.QV	.	.	.	.
4.083	0.3790	1.26	.QV	.	.	.	.
4.100	0.3808	1.26	.QV	.	.	.	.
4.117	0.3825	1.26	.QV	.	.	.	.
4.133	0.3842	1.26	.QV	.	.	.	.
4.150	0.3860	1.26	.QV	.	.	.	.
4.167	0.3877	1.26	.QV	.	.	.	.
4.183	0.3894	1.26	.Q V	.	.	.	.
4.200	0.3912	1.27	.Q V	.	.	.	.
4.217	0.3929	1.27	.Q V	.	.	.	.
4.233	0.3947	1.27	.Q V	.	.	.	.
4.250	0.3964	1.27	.Q V	.	.	.	.
4.267	0.3982	1.27	.Q V	.	.	.	.
4.283	0.3999	1.27	.Q V	.	.	.	.
4.300	0.4017	1.27	.Q V	.	.	.	.
4.317	0.4034	1.27	.Q V	.	.	.	.
4.333	0.4052	1.27	.Q V	.	.	.	.
4.350	0.4069	1.27	.Q V	.	.	.	.
4.367	0.4087	1.27	.Q V	.	.	.	.
4.383	0.4104	1.27	.Q V	.	.	.	.
4.400	0.4122	1.27	.Q V	.	.	.	.
4.417	0.4139	1.27	.Q V	.	.	.	.
4.433	0.4157	1.27	.Q V	.	.	.	.
4.450	0.4174	1.28	.Q V	.	.	.	.
4.467	0.4192	1.28	.Q V	.	.	.	.
4.483	0.4210	1.28	.Q V	.	.	.	.
4.500	0.4227	1.28	.Q V	.	.	.	.

4.517	0.4245	1.28	.Q V	.	.	.	.
4.533	0.4262	1.28	.Q V	.	.	.	.
4.550	0.4280	1.28	.Q V	.	.	.	.
4.567	0.4298	1.28	.Q V	.	.	.	.
4.583	0.4316	1.29	.Q V	.	.	.	.
4.600	0.4333	1.29	.Q V	.	.	.	.
4.617	0.4351	1.29	.Q V	.	.	.	.
4.633	0.4369	1.29	.Q V	.	.	.	.
4.650	0.4387	1.29	.Q V	.	.	.	.
4.667	0.4404	1.29	.Q V	.	.	.	.
4.683	0.4422	1.29	.Q V	.	.	.	.
4.700	0.4440	1.30	.Q V	.	.	.	.
4.717	0.4458	1.30	.Q V	.	.	.	.
4.733	0.4476	1.30	.Q V	.	.	.	.
4.750	0.4494	1.30	.Q V	.	.	.	.
4.767	0.4512	1.30	.Q V	.	.	.	.
4.783	0.4530	1.30	.Q V	.	.	.	.
4.800	0.4547	1.30	.Q V	.	.	.	.
4.817	0.4565	1.30	.Q V	.	.	.	.
4.833	0.4583	1.30	.Q V	.	.	.	.
4.850	0.4601	1.30	.Q V	.	.	.	.
4.867	0.4619	1.30	.Q V	.	.	.	.
4.883	0.4637	1.30	.Q V	.	.	.	.
4.900	0.4655	1.30	.Q V	.	.	.	.
4.917	0.4673	1.31	.Q V	.	.	.	.
4.933	0.4691	1.31	.Q V	.	.	.	.
4.950	0.4709	1.31	.Q V	.	.	.	.
4.967	0.4727	1.31	.Q V	.	.	.	.
4.983	0.4745	1.31	.Q V	.	.	.	.
5.000	0.4763	1.31	.Q V	.	.	.	.
5.017	0.4781	1.31	.Q V	.	.	.	.
5.033	0.4799	1.31	.Q V	.	.	.	.
5.050	0.4817	1.31	.Q V	.	.	.	.
5.067	0.4836	1.32	.Q V	.	.	.	.
5.083	0.4854	1.32	.Q V	.	.	.	.
5.100	0.4872	1.32	.Q V	.	.	.	.
5.117	0.4890	1.32	.Q V	.	.	.	.
5.133	0.4908	1.32	.Q V	.	.	.	.
5.150	0.4927	1.32	.Q V	.	.	.	.
5.167	0.4945	1.33	.Q V	.	.	.	.
5.183	0.4963	1.33	.Q V	.	.	.	.
5.200	0.4981	1.33	.Q V	.	.	.	.
5.217	0.5000	1.33	.Q V	.	.	.	.
5.233	0.5018	1.33	.Q V	.	.	.	.
5.250	0.5036	1.33	.Q V	.	.	.	.
5.267	0.5055	1.33	.Q V	.	.	.	.
5.283	0.5073	1.33	.Q V	.	.	.	.
5.300	0.5092	1.33	.Q V	.	.	.	.
5.317	0.5110	1.34	.Q V	.	.	.	.
5.333	0.5128	1.34	.Q V	.	.	.	.
5.350	0.5147	1.34	.Q V	.	.	.	.
5.367	0.5165	1.34	.Q V	.	.	.	.
5.383	0.5184	1.34	.Q V	.	.	.	.
5.400	0.5202	1.34	.Q V	.	.	.	.
5.417	0.5220	1.34	.Q V	.	.	.	.

5.433	0.5239	1.34	.Q	V	.	.	.	.
5.450	0.5257	1.34	.Q	V	.	.	.	.
5.467	0.5276	1.34	.Q	V	.	.	.	.
5.483	0.5294	1.34	.Q	V	.	.	.	.
5.500	0.5313	1.34	.Q	V	.	.	.	.
5.517	0.5331	1.35	.Q	V	.	.	.	.
5.533	0.5350	1.35	.Q	V	.	.	.	.
5.550	0.5369	1.35	.Q	V	.	.	.	.
5.567	0.5387	1.35	.Q	V	.	.	.	.
5.583	0.5406	1.35	.Q	V	.	.	.	.
5.600	0.5424	1.35	.Q	V	.	.	.	.
5.617	0.5443	1.35	.Q	V	.	.	.	.
5.633	0.5462	1.36	.Q	V	.	.	.	.
5.650	0.5480	1.36	.Q	V	.	.	.	.
5.667	0.5499	1.36	.Q	V	.	.	.	.
5.683	0.5518	1.36	.Q	V	.	.	.	.
5.700	0.5537	1.36	.Q	V	.	.	.	.
5.717	0.5556	1.36	.Q	V	.	.	.	.
5.733	0.5574	1.37	.Q	V	.	.	.	.
5.750	0.5593	1.37	.Q	V	.	.	.	.
5.767	0.5612	1.37	.Q	V	.	.	.	.
5.783	0.5631	1.37	.Q	V	.	.	.	.
5.800	0.5650	1.37	.Q	V	.	.	.	.
5.817	0.5669	1.37	.Q	V	.	.	.	.
5.833	0.5688	1.37	.Q	V	.	.	.	.
5.850	0.5707	1.37	.Q	V	.	.	.	.
5.867	0.5725	1.37	.Q	V	.	.	.	.
5.883	0.5744	1.38	.Q	V	.	.	.	.
5.900	0.5763	1.38	.Q	V	.	.	.	.
5.917	0.5782	1.38	.Q	V	.	.	.	.
5.933	0.5801	1.38	.Q	V	.	.	.	.
5.950	0.5820	1.38	.Q	V	.	.	.	.
5.967	0.5839	1.38	.Q	V	.	.	.	.
5.983	0.5858	1.38	.Q	V	.	.	.	.
6.000	0.5877	1.38	.Q	V	.	.	.	.
6.017	0.5896	1.38	.Q	V	.	.	.	.
6.033	0.5915	1.38	.Q	V	.	.	.	.
6.050	0.5934	1.38	.Q	V	.	.	.	.
6.067	0.5954	1.39	.Q	V	.	.	.	.
6.083	0.5973	1.39	.Q	V	.	.	.	.
6.100	0.5992	1.39	.Q	V	.	.	.	.
6.117	0.6011	1.39	.Q	V	.	.	.	.
6.133	0.6030	1.39	.Q	V	.	.	.	.
6.150	0.6049	1.40	.Q	V	.	.	.	.
6.167	0.6069	1.40	.Q	V	.	.	.	.
6.183	0.6088	1.40	.Q	V	.	.	.	.
6.200	0.6107	1.40	.Q	V	.	.	.	.
6.217	0.6127	1.40	.Q	V	.	.	.	.
6.233	0.6146	1.40	.Q	V	.	.	.	.
6.250	0.6165	1.41	.Q	V	.	.	.	.
6.267	0.6185	1.41	.Q	V	.	.	.	.
6.283	0.6204	1.41	.Q	V	.	.	.	.
6.300	0.6223	1.41	.Q	V	.	.	.	.
6.317	0.6243	1.41	.Q	V	.	.	.	.
6.333	0.6262	1.41	.Q	V	.	.	.	.

6.350	0.6282	1.41	.Q	V	.	.	.	.
6.367	0.6301	1.41	.Q	V	.	.	.	.
6.383	0.6321	1.41	.Q	V	.	.	.	.
6.400	0.6340	1.42	.Q	V	.	.	.	.
6.417	0.6360	1.42	.Q	V	.	.	.	.
6.433	0.6379	1.42	.Q	V	.	.	.	.
6.450	0.6399	1.42	.Q	V	.	.	.	.
6.467	0.6418	1.42	.Q	V	.	.	.	.
6.483	0.6438	1.42	.Q	V	.	.	.	.
6.500	0.6458	1.42	.Q	V	.	.	.	.
6.517	0.6477	1.42	.Q	V	.	.	.	.
6.533	0.6497	1.42	.Q	V	.	.	.	.
6.550	0.6516	1.42	.Q	V	.	.	.	.
6.567	0.6536	1.43	.Q	V	.	.	.	.
6.583	0.6556	1.43	.Q	V	.	.	.	.
6.600	0.6575	1.43	.Q	V	.	.	.	.
6.617	0.6595	1.43	.Q	V	.	.	.	.
6.633	0.6615	1.43	.Q	V	.	.	.	.
6.650	0.6635	1.44	.Q	V	.	.	.	.
6.667	0.6654	1.44	.Q	V	.	.	.	.
6.683	0.6674	1.44	.Q	V	.	.	.	.
6.700	0.6694	1.44	.Q	V	.	.	.	.
6.717	0.6714	1.44	.Q	V	.	.	.	.
6.733	0.6734	1.44	.Q	V	.	.	.	.
6.750	0.6754	1.45	.Q	V	.	.	.	.
6.767	0.6774	1.45	.Q	V	.	.	.	.
6.783	0.6794	1.45	.Q	V	.	.	.	.
6.800	0.6814	1.45	.Q	V	.	.	.	.
6.817	0.6834	1.45	.Q	V	.	.	.	.
6.833	0.6854	1.45	.Q	V	.	.	.	.
6.850	0.6874	1.46	.Q	V	.	.	.	.
6.867	0.6894	1.46	.Q	V	.	.	.	.
6.883	0.6914	1.46	.Q	V	.	.	.	.
6.900	0.6934	1.46	.Q	V	.	.	.	.
6.917	0.6954	1.46	.Q	V	.	.	.	.
6.933	0.6974	1.46	.Q	V	.	.	.	.
6.950	0.6994	1.46	.Q	V	.	.	.	.
6.967	0.7014	1.46	.Q	V	.	.	.	.
6.983	0.7035	1.46	.Q	V	.	.	.	.
7.000	0.7055	1.46	.Q	V	.	.	.	.
7.017	0.7075	1.47	.Q	V	.	.	.	.
7.033	0.7095	1.47	.Q	V	.	.	.	.
7.050	0.7115	1.47	.Q	V	.	.	.	.
7.067	0.7136	1.47	.Q	V	.	.	.	.
7.083	0.7156	1.47	.Q	V	.	.	.	.
7.100	0.7176	1.47	.Q	V	.	.	.	.
7.117	0.7196	1.47	.Q	V	.	.	.	.
7.133	0.7217	1.48	.Q	V	.	.	.	.
7.150	0.7237	1.48	.Q	V	.	.	.	.
7.167	0.7258	1.48	.Q	V	.	.	.	.
7.183	0.7278	1.48	.Q	V	.	.	.	.
7.200	0.7298	1.48	.Q	V	.	.	.	.
7.217	0.7319	1.49	.Q	V	.	.	.	.
7.233	0.7339	1.49	.Q	V	.	.	.	.
7.250	0.7360	1.49	.Q	V	.	.	.	.

7.267	0.7380	1.49	.Q	V	.	.	.	.
7.283	0.7401	1.49	.Q	V	.	.	.	.
7.300	0.7422	1.50	.Q	V	.	.	.	.
7.317	0.7442	1.50	.Q	V	.	.	.	.
7.333	0.7463	1.50	.Q	V	.	.	.	.
7.350	0.7484	1.50	.Q	V	.	.	.	.
7.367	0.7504	1.50	.Q	V	.	.	.	.
7.383	0.7525	1.50	.Q	V	.	.	.	.
7.400	0.7546	1.51	.Q	V	.	.	.	.
7.417	0.7567	1.51	.Q	V	.	.	.	.
7.433	0.7587	1.51	.Q	V	.	.	.	.
7.450	0.7608	1.51	.Q	V	.	.	.	.
7.467	0.7629	1.51	.Q	V	.	.	.	.
7.483	0.7650	1.51	.Q	V	.	.	.	.
7.500	0.7671	1.51	.Q	V	.	.	.	.
7.517	0.7691	1.51	.Q	V	.	.	.	.
7.533	0.7712	1.51	.Q	V	.	.	.	.
7.550	0.7733	1.52	.Q	V	.	.	.	.
7.567	0.7754	1.52	.Q	V	.	.	.	.
7.583	0.7775	1.52	.Q	V	.	.	.	.
7.600	0.7796	1.52	.Q	V	.	.	.	.
7.617	0.7817	1.52	.Q	V	.	.	.	.
7.633	0.7838	1.52	.Q	V	.	.	.	.
7.650	0.7859	1.53	.Q	V	.	.	.	.
7.667	0.7880	1.53	.Q	V	.	.	.	.
7.683	0.7901	1.53	.Q	V	.	.	.	.
7.700	0.7922	1.53	.Q	V	.	.	.	.
7.717	0.7943	1.53	.Q	V	.	.	.	.
7.733	0.7964	1.54	.Q	V	.	.	.	.
7.750	0.7986	1.54	.Q	V	.	.	.	.
7.767	0.8007	1.54	.Q	V	.	.	.	.
7.783	0.8028	1.54	.Q	V	.	.	.	.
7.800	0.8049	1.55	.Q	V	.	.	.	.
7.817	0.8071	1.55	.Q	V	.	.	.	.
7.833	0.8092	1.55	.Q	V	.	.	.	.
7.850	0.8113	1.55	.Q	V	.	.	.	.
7.867	0.8135	1.55	.Q	V	.	.	.	.
7.883	0.8156	1.56	.Q	V	.	.	.	.
7.900	0.8178	1.56	.Q	V	.	.	.	.
7.917	0.8199	1.56	.Q	V	.	.	.	.
7.933	0.8221	1.56	.Q	V	.	.	.	.
7.950	0.8242	1.56	.Q	V	.	.	.	.
7.967	0.8264	1.56	.Q	V	.	.	.	.
7.983	0.8285	1.56	.Q	V	.	.	.	.
8.000	0.8307	1.56	.Q	V	.	.	.	.
8.017	0.8328	1.57	.Q	V	.	.	.	.
8.033	0.8350	1.57	.Q	V	.	.	.	.
8.050	0.8371	1.57	.Q	V	.	.	.	.
8.067	0.8393	1.57	.Q	V	.	.	.	.
8.083	0.8415	1.57	.Q	V	.	.	.	.
8.100	0.8436	1.57	.Q	V	.	.	.	.
8.117	0.8458	1.57	.Q	V	.	.	.	.
8.133	0.8480	1.57	.Q	V	.	.	.	.
8.150	0.8501	1.58	.Q	V	.	.	.	.
8.167	0.8523	1.58	.Q	V	.	.	.	.

8.183	0.8545	1.58	.Q	V	.	.	.	.
8.200	0.8567	1.58	.Q	V	.	.	.	.
8.217	0.8589	1.59	.Q	V	.	.	.	.
8.233	0.8610	1.59	.Q	V	.	.	.	.
8.250	0.8632	1.59	.Q	V	.	.	.	.
8.267	0.8654	1.59	.Q	V	.	.	.	.
8.283	0.8676	1.60	.Q	V	.	.	.	.
8.300	0.8698	1.60	.Q	V	.	.	.	.
8.317	0.8720	1.60	.Q	V	.	.	.	.
8.333	0.8743	1.60	.Q	V	.	.	.	.
8.350	0.8765	1.61	.Q	V	.	.	.	.
8.367	0.8787	1.61	.Q	V	.	.	.	.
8.383	0.8809	1.61	.Q	V	.	.	.	.
8.400	0.8831	1.61	.Q	V	.	.	.	.
8.417	0.8853	1.61	.Q	V	.	.	.	.
8.433	0.8876	1.62	.Q	V	.	.	.	.
8.450	0.8898	1.62	.Q	V	.	.	.	.
8.467	0.8920	1.62	.Q	V	.	.	.	.
8.483	0.8943	1.62	.Q	V	.	.	.	.
8.500	0.8965	1.62	.Q	V	.	.	.	.
8.517	0.8987	1.62	.Q	V	.	.	.	.
8.533	0.9010	1.62	.Q	V	.	.	.	.
8.550	0.9032	1.63	.Q	V	.	.	.	.
8.567	0.9054	1.63	.Q	V	.	.	.	.
8.583	0.9077	1.63	.Q	V	.	.	.	.
8.600	0.9099	1.63	.Q	V	.	.	.	.
8.617	0.9122	1.63	.Q	V	.	.	.	.
8.633	0.9144	1.63	.Q	V	.	.	.	.
8.650	0.9167	1.63	.Q	V	.	.	.	.
8.667	0.9189	1.64	.Q	V	.	.	.	.
8.683	0.9212	1.64	.Q	V	.	.	.	.
8.700	0.9235	1.64	.Q	V	.	.	.	.
8.717	0.9257	1.64	.Q	V	.	.	.	.
8.733	0.9280	1.65	.Q	V	.	.	.	.
8.750	0.9303	1.65	.Q	V	.	.	.	.
8.767	0.9325	1.65	.Q	V	.	.	.	.
8.783	0.9348	1.66	.Q	V	.	.	.	.
8.800	0.9371	1.66	.Q	V	.	.	.	.
8.817	0.9394	1.66	.Q	V	.	.	.	.
8.833	0.9417	1.66	.Q	V	.	.	.	.
8.850	0.9440	1.67	.Q	V	.	.	.	.
8.867	0.9463	1.67	.Q	V	.	.	.	.
8.883	0.9486	1.67	.Q	V	.	.	.	.
8.900	0.9509	1.67	.Q	V	.	.	.	.
8.917	0.9532	1.68	.Q	V	.	.	.	.
8.933	0.9555	1.68	.Q	V	.	.	.	.
8.950	0.9578	1.68	.Q	V	.	.	.	.
8.967	0.9601	1.68	.Q	V	.	.	.	.
8.983	0.9625	1.68	.Q	V	.	.	.	.
9.000	0.9648	1.68	.Q	V	.	.	.	.
9.017	0.9671	1.69	.Q	V	.	.	.	.
9.033	0.9694	1.69	.Q	V	.	.	.	.
9.050	0.9718	1.69	.Q	V	.	.	.	.
9.067	0.9741	1.69	.Q	V	.	.	.	.
9.083	0.9764	1.69	.Q	V	.	.	.	.

9.100	0.9787	1.69	.Q	V	.	.	.
9.117	0.9811	1.70	.Q	V	.	.	.
9.133	0.9834	1.70	.Q	V	.	.	.
9.150	0.9858	1.70	.Q	V	.	.	.
9.167	0.9881	1.70	.Q	V	.	.	.
9.183	0.9904	1.70	.Q	V	.	.	.
9.200	0.9928	1.70	.Q	V	.	.	.
9.217	0.9951	1.71	.Q	V	.	.	.
9.233	0.9975	1.71	.Q	V	.	.	.
9.250	0.9999	1.71	.Q	V	.	.	.
9.267	1.0022	1.72	.Q	V	.	.	.
9.283	1.0046	1.72	.Q	V	.	.	.
9.300	1.0070	1.72	.Q	V	.	.	.
9.317	1.0093	1.73	.Q	V	.	.	.
9.333	1.0117	1.73	.Q	V	.	.	.
9.350	1.0141	1.73	.Q	V	.	.	.
9.367	1.0165	1.74	.Q	V	.	.	.
9.383	1.0189	1.74	.Q	V	.	.	.
9.400	1.0213	1.74	.Q	V	.	.	.
9.417	1.0237	1.75	.Q	V	.	.	.
9.433	1.0261	1.75	.Q	V	.	.	.
9.450	1.0285	1.75	.Q	V	.	.	.
9.467	1.0309	1.75	.Q	V	.	.	.
9.483	1.0334	1.75	.Q	V	.	.	.
9.500	1.0358	1.76	.Q	V	.	.	.
9.517	1.0382	1.76	.Q	V	.	.	.
9.533	1.0406	1.76	.Q	V	.	.	.
9.550	1.0430	1.76	.Q	V	.	.	.
9.567	1.0455	1.76	.Q	V	.	.	.
9.583	1.0479	1.76	.Q	V	.	.	.
9.600	1.0503	1.77	.Q	V	.	.	.
9.617	1.0528	1.77	.Q	V	.	.	.
9.633	1.0552	1.77	.Q	V	.	.	.
9.650	1.0576	1.77	.Q	V	.	.	.
9.667	1.0601	1.77	.Q	V	.	.	.
9.683	1.0625	1.77	.Q	V	.	.	.
9.700	1.0650	1.78	.Q	V	.	.	.
9.717	1.0674	1.78	.Q	V	.	.	.
9.733	1.0699	1.78	.Q	V	.	.	.
9.750	1.0723	1.79	.Q	V	.	.	.
9.767	1.0748	1.79	.Q	V	.	.	.
9.783	1.0773	1.79	.Q	V	.	.	.
9.800	1.0798	1.80	.Q	V	.	.	.
9.817	1.0822	1.80	.Q	V	.	.	.
9.833	1.0847	1.80	.Q	V	.	.	.
9.850	1.0872	1.81	.Q	V	.	.	.
9.867	1.0897	1.81	.Q	V	.	.	.
9.883	1.0922	1.81	.Q	V	.	.	.
9.900	1.0947	1.82	.Q	V	.	.	.
9.917	1.0972	1.82	.Q	V	.	.	.
9.933	1.0997	1.82	.Q	V	.	.	.
9.950	1.1022	1.83	.Q	V	.	.	.
9.967	1.1048	1.83	.Q	V	.	.	.
9.983	1.1073	1.83	.Q	V	.	.	.
10.000	1.1098	1.84	.Q	V	.	.	.

10.017	1.1124	1.84	.Q	V	.	.	.
10.033	1.1149	1.84	.Q	V	.	.	.
10.050	1.1174	1.84	.Q	V	.	.	.
10.067	1.1200	1.84	.Q	V	.	.	.
10.083	1.1225	1.85	.Q	V	.	.	.
10.100	1.1250	1.85	.Q	V	.	.	.
10.117	1.1276	1.85	.Q	V	.	.	.
10.133	1.1301	1.85	.Q	V	.	.	.
10.150	1.1327	1.85	.Q	V	.	.	.
10.167	1.1353	1.85	.Q	V	.	.	.
10.183	1.1378	1.86	.Q	V	.	.	.
10.200	1.1404	1.86	.Q	V	.	.	.
10.217	1.1429	1.86	.Q	V	.	.	.
10.233	1.1455	1.86	.Q	V	.	.	.
10.250	1.1481	1.87	.Q	V	.	.	.
10.267	1.1506	1.87	.Q	V	.	.	.
10.283	1.1532	1.87	.Q	V	.	.	.
10.300	1.1558	1.88	.Q	V	.	.	.
10.317	1.1584	1.88	.Q	V	.	.	.
10.333	1.1610	1.89	.Q	V	.	.	.
10.350	1.1636	1.89	.Q	V	.	.	.
10.367	1.1662	1.90	.Q	V	.	.	.
10.383	1.1688	1.90	.Q	V	.	.	.
10.400	1.1715	1.90	.Q	V	.	.	.
10.417	1.1741	1.91	.Q	V	.	.	.
10.433	1.1767	1.91	.Q	V	.	.	.
10.450	1.1794	1.92	.Q	V	.	.	.
10.467	1.1820	1.92	.Q	V	.	.	.
10.483	1.1847	1.92	.Q	V	.	.	.
10.500	1.1873	1.93	.Q	V	.	.	.
10.517	1.1900	1.93	.Q	V	.	.	.
10.533	1.1926	1.93	.Q	V	.	.	.
10.550	1.1953	1.93	.Q	V	.	.	.
10.567	1.1979	1.94	.Q	V	.	.	.
10.583	1.2006	1.94	.Q	V	.	.	.
10.600	1.2033	1.94	.Q	V	.	.	.
10.617	1.2060	1.94	.Q	V	.	.	.
10.633	1.2086	1.94	.Q	V	.	.	.
10.650	1.2113	1.95	.Q	V	.	.	.
10.667	1.2140	1.95	.Q	V	.	.	.
10.683	1.2167	1.95	.Q	V	.	.	.
10.700	1.2194	1.95	.Q	V	.	.	.
10.717	1.2221	1.95	.Q	V	.	.	.
10.733	1.2248	1.96	.Q	V	.	.	.
10.750	1.2275	1.96	.Q	V	.	.	.
10.767	1.2302	1.96	.Q	V	.	.	.
10.783	1.2329	1.97	.Q	V	.	.	.
10.800	1.2356	1.97	.Q	V	.	.	.
10.817	1.2383	1.98	.Q	V	.	.	.
10.833	1.2411	1.98	.Q	V	.	.	.
10.850	1.2438	1.99	.Q	V	.	.	.
10.867	1.2465	1.99	.Q	V	.	.	.
10.883	1.2493	2.00	.Q	V	.	.	.
10.900	1.2520	2.00	.Q	V	.	.	.
10.917	1.2548	2.01	.Q	V	.	.	.

10.933	1.2576	2.01	. Q	V.	.	.	.
10.950	1.2603	2.01	. Q	V.	.	.	.
10.967	1.2631	2.02	. Q	V.	.	.	.
10.983	1.2659	2.02	. Q	V.	.	.	.
11.000	1.2687	2.03	. Q	V.	.	.	.
11.017	1.2715	2.03	. Q	V.	.	.	.
11.033	1.2743	2.04	. Q	V.	.	.	.
11.050	1.2771	2.04	. Q	V.	.	.	.
11.067	1.2799	2.04	. Q	V.	.	.	.
11.083	1.2827	2.04	. Q	V.	.	.	.
11.100	1.2856	2.05	. Q	V.	.	.	.
11.117	1.2884	2.05	. Q	V.	.	.	.
11.133	1.2912	2.05	. Q	V.	.	.	.
11.150	1.2940	2.05	. Q	V.	.	.	.
11.167	1.2969	2.06	. Q	V	.	.	.
11.183	1.2997	2.06	. Q	V	.	.	.
11.200	1.3025	2.06	. Q	V	.	.	.
11.217	1.3054	2.06	. Q	V	.	.	.
11.233	1.3082	2.07	. Q	V	.	.	.
11.250	1.3111	2.07	. Q	V	.	.	.
11.267	1.3139	2.07	. Q	V	.	.	.
11.283	1.3168	2.07	. Q	V	.	.	.
11.300	1.3197	2.08	. Q	V	.	.	.
11.317	1.3225	2.09	. Q	V	.	.	.
11.333	1.3254	2.09	. Q	V	.	.	.
11.350	1.3283	2.10	. Q	V	.	.	.
11.367	1.3312	2.10	. Q	V	.	.	.
11.383	1.3341	2.11	. Q	V	.	.	.
11.400	1.3370	2.11	. Q	V	.	.	.
11.417	1.3399	2.12	. Q	V	.	.	.
11.433	1.3429	2.12	. Q	V	.	.	.
11.450	1.3458	2.13	. Q	V	.	.	.
11.467	1.3487	2.14	. Q	V	.	.	.
11.483	1.3517	2.14	. Q	V	.	.	.
11.500	1.3546	2.15	. Q	V	.	.	.
11.517	1.3576	2.15	. Q	V	.	.	.
11.533	1.3606	2.16	. Q	V	.	.	.
11.550	1.3636	2.16	. Q	V	.	.	.
11.567	1.3665	2.16	. Q	V	.	.	.
11.583	1.3695	2.17	. Q	V	.	.	.
11.600	1.3725	2.17	. Q	V	.	.	.
11.617	1.3755	2.17	. Q	V	.	.	.
11.633	1.3785	2.18	. Q	V	.	.	.
11.650	1.3815	2.18	. Q	V	.	.	.
11.667	1.3845	2.18	. Q	V	.	.	.
11.683	1.3875	2.19	. Q	V	.	.	.
11.700	1.3905	2.19	. Q	V	.	.	.
11.717	1.3936	2.19	. Q	V	.	.	.
11.733	1.3966	2.19	. Q	V	.	.	.
11.750	1.3996	2.20	. Q	V	.	.	.
11.767	1.4026	2.20	. Q	V	.	.	.
11.783	1.4057	2.20	. Q	V	.	.	.
11.800	1.4087	2.21	. Q	V	.	.	.
11.817	1.4118	2.21	. Q	V	.	.	.
11.833	1.4148	2.22	. Q	V	.	.	.

11.850	1.4179	2.23	. Q	V	.	.	.
11.867	1.4210	2.23	. Q	V	.	.	.
11.883	1.4240	2.24	. Q	V	.	.	.
11.900	1.4271	2.25	. Q	.V	.	.	.
11.917	1.4302	2.25	. Q	.V	.	.	.
11.933	1.4333	2.26	. Q	.V	.	.	.
11.950	1.4365	2.27	. Q	.V	.	.	.
11.967	1.4396	2.27	. Q	.V	.	.	.
11.983	1.4427	2.28	. Q	.V	.	.	.
12.000	1.4459	2.28	. Q	.V	.	.	.
12.017	1.4490	2.29	. Q	.V	.	.	.
12.033	1.4522	2.30	. Q	.V	.	.	.
12.050	1.4554	2.30	. Q	.V	.	.	.
12.067	1.4586	2.31	. Q	.V	.	.	.
12.083	1.4618	2.33	. Q	.V	.	.	.
12.100	1.4650	2.34	. Q	.V	.	.	.
12.117	1.4682	2.36	. Q	.V	.	.	.
12.133	1.4715	2.37	. Q	.V	.	.	.
12.150	1.4748	2.39	. Q	.V	.	.	.
12.167	1.4781	2.41	. Q	.V	.	.	.
12.183	1.4815	2.42	. Q	.V	.	.	.
12.200	1.4848	2.44	. Q	.V	.	.	.
12.217	1.4882	2.45	. Q	.V	.	.	.
12.233	1.4916	2.47	. Q	.V	.	.	.
12.250	1.4950	2.49	. Q	.V	.	.	.
12.267	1.4985	2.50	. Q	.V	.	.	.
12.283	1.5019	2.52	. Q	.V	.	.	.
12.300	1.5054	2.53	. Q	.V	.	.	.
12.317	1.5089	2.55	. Q	.V	.	.	.
12.333	1.5125	2.57	. Q	.V	.	.	.
12.350	1.5160	2.58	. Q	.V	.	.	.
12.367	1.5196	2.59	. Q	.V	.	.	.
12.383	1.5232	2.60	. Q	.V	.	.	.
12.400	1.5267	2.61	. Q	.V	.	.	.
12.417	1.5304	2.62	. Q	.V	.	.	.
12.433	1.5340	2.63	. Q	.V	.	.	.
12.450	1.5376	2.64	. Q	.V	.	.	.
12.467	1.5413	2.65	. Q	.V	.	.	.
12.483	1.5449	2.66	. Q	.V	.	.	.
12.500	1.5486	2.67	. Q	.V	.	.	.
12.517	1.5523	2.68	. Q	.V	.	.	.
12.533	1.5560	2.69	. Q	. V	.	.	.
12.550	1.5597	2.70	. Q	. V	.	.	.
12.567	1.5635	2.71	. Q	. V	.	.	.
12.583	1.5672	2.72	. Q	. V	.	.	.
12.600	1.5710	2.73	. Q	. V	.	.	.
12.617	1.5747	2.74	. Q	. V	.	.	.
12.633	1.5785	2.74	. Q	. V	.	.	.
12.650	1.5823	2.74	. Q	. V	.	.	.
12.667	1.5861	2.75	. Q	. V	.	.	.
12.683	1.5899	2.75	. Q	. V	.	.	.
12.700	1.5937	2.76	. Q	. V	.	.	.
12.717	1.5975	2.76	. Q	. V	.	.	.
12.733	1.6013	2.77	. Q	. V	.	.	.
12.750	1.6051	2.77	. Q	. V	.	.	.

12.767	1.6089	2.78	. Q	. V	.	.	.
12.783	1.6128	2.78	. Q	. V	.	.	.
12.800	1.6166	2.79	. Q	. V	.	.	.
12.817	1.6204	2.79	. Q	. V	.	.	.
12.833	1.6243	2.80	. Q	. V	.	.	.
12.850	1.6282	2.80	. Q	. V	.	.	.
12.867	1.6320	2.81	. Q	. V	.	.	.
12.883	1.6359	2.82	. Q	. V	.	.	.
12.900	1.6398	2.83	. Q	. V	.	.	.
12.917	1.6437	2.84	. Q	. V	.	.	.
12.933	1.6476	2.85	. Q	. V	.	.	.
12.950	1.6516	2.86	. Q	. V	.	.	.
12.967	1.6555	2.87	. Q	. V	.	.	.
12.983	1.6595	2.88	. Q	. V	.	.	.
13.000	1.6635	2.89	. Q	. V	.	.	.
13.017	1.6675	2.90	. Q	. V	.	.	.
13.033	1.6715	2.91	. Q	. V	.	.	.
13.050	1.6755	2.92	. Q	. V	.	.	.
13.067	1.6795	2.93	. Q	. V	.	.	.
13.083	1.6836	2.94	. Q	. V	.	.	.
13.100	1.6877	2.95	. Q	. V	.	.	.
13.117	1.6917	2.96	. Q	. V	.	.	.
13.133	1.6958	2.97	. Q	. V	.	.	.
13.150	1.6999	2.97	. Q	. V	.	.	.
13.167	1.7040	2.98	. Q	. V	.	.	.
13.183	1.7081	2.99	. Q	. V	.	.	.
13.200	1.7123	2.99	. Q	. V	.	.	.
13.217	1.7164	3.00	. Q	. V	.	.	.
13.233	1.7205	3.00	. Q	. V	.	.	.
13.250	1.7247	3.01	. Q	. V	.	.	.
13.267	1.7288	3.02	. Q	. V	.	.	.
13.283	1.7330	3.02	. Q	. V	.	.	.
13.300	1.7372	3.03	. Q	. V	.	.	.
13.317	1.7413	3.03	. Q	. V	.	.	.
13.333	1.7455	3.04	. Q	. V	.	.	.
13.350	1.7497	3.05	. Q	. V	.	.	.
13.367	1.7539	3.05	. Q	. V	.	.	.
13.383	1.7581	3.06	. Q	. V	.	.	.
13.400	1.7624	3.07	. Q	. V	.	.	.
13.417	1.7666	3.08	. Q	. V	.	.	.
13.433	1.7709	3.10	. Q	. V	.	.	.
13.450	1.7752	3.11	. Q	. V	.	.	.
13.467	1.7795	3.13	. Q	. V	.	.	.
13.483	1.7838	3.14	. Q	. V	.	.	.
13.500	1.7881	3.15	. Q	. V	.	.	.
13.517	1.7925	3.17	. Q	. V	.	.	.
13.533	1.7969	3.18	. Q	. V	.	.	.
13.550	1.8013	3.19	. Q	. V	.	.	.
13.567	1.8057	3.21	. Q	. V	.	.	.
13.583	1.8101	3.22	. Q	. V	.	.	.
13.600	1.8146	3.23	. Q	. V	.	.	.
13.617	1.8191	3.25	. Q	. V	.	.	.
13.633	1.8236	3.26	. Q	. V	.	.	.
13.650	1.8281	3.27	. Q	. V	.	.	.
13.667	1.8326	3.28	. Q	. V	.	.	.

13.683	1.8371	3.29	.	Q	.	V	.	.	.
13.700	1.8416	3.30	.	Q	.	V	.	.	.
13.717	1.8462	3.30	.	Q	.	V	.	.	.
13.733	1.8508	3.31	.	Q	.	V	.	.	.
13.750	1.8553	3.32	.	Q	.	V	.	.	.
13.767	1.8599	3.33	.	Q	.	V	.	.	.
13.783	1.8645	3.34	.	Q	.	V	.	.	.
13.800	1.8691	3.34	.	Q	.	V	.	.	.
13.817	1.8737	3.35	.	Q	.	V	.	.	.
13.833	1.8784	3.36	.	Q	.	V	.	.	.
13.850	1.8830	3.37	.	Q	.	V	.	.	.
13.867	1.8876	3.37	.	Q	.	V	.	.	.
13.883	1.8923	3.38	.	Q	.	V	.	.	.
13.900	1.8970	3.39	.	Q	.	V	.	.	.
13.917	1.9017	3.40	.	Q	.	V	.	.	.
13.933	1.9064	3.42	.	Q	.	V	.	.	.
13.950	1.9111	3.44	.	Q	.	V	.	.	.
13.967	1.9159	3.46	.	Q	.	V	.	.	.
13.983	1.9207	3.48	.	Q	.	V	.	.	.
14.000	1.9255	3.50	.	Q	.	V	.	.	.
14.017	1.9303	3.52	.	Q	.	V	.	.	.
14.033	1.9352	3.54	.	Q	.	V	.	.	.
14.050	1.9401	3.56	.	Q	.	V	.	.	.
14.067	1.9451	3.58	.	Q	.	V	.	.	.
14.083	1.9500	3.60	.	Q	.	V	.	.	.
14.100	1.9550	3.62	.	Q	.	V	.	.	.
14.117	1.9600	3.63	.	Q	.	V	.	.	.
14.133	1.9650	3.65	.	Q	.	V	.	.	.
14.150	1.9701	3.67	.	Q	.	V	.	.	.
14.167	1.9752	3.69	.	Q	.	V	.	.	.
14.183	1.9803	3.70	.	Q	.	V	.	.	.
14.200	1.9854	3.72	.	Q	.	V	.	.	.
14.217	1.9905	3.73	.	Q	.	V	.	.	.
14.233	1.9957	3.74	.	Q	.	V	.	.	.
14.250	2.0008	3.75	.	Q	.	V	.	.	.
14.267	2.0060	3.76	.	Q	.	V	.	.	.
14.283	2.0112	3.78	.	Q	.	V	.	.	.
14.300	2.0164	3.79	.	Q	.	V	.	.	.
14.317	2.0217	3.80	.	Q	.	V	.	.	.
14.333	2.0269	3.81	.	Q	.	V	.	.	.
14.350	2.0322	3.82	.	Q	.	V	.	.	.
14.367	2.0375	3.84	.	Q	.	V	.	.	.
14.383	2.0428	3.85	.	Q	.	V	.	.	.
14.400	2.0481	3.86	.	Q	.	V	.	.	.
14.417	2.0534	3.87	.	Q	.	V	.	.	.
14.433	2.0588	3.89	.	Q	.	V	.	.	.
14.450	2.0642	3.91	.	Q	.	V	.	.	.
14.467	2.0696	3.94	.	Q	.	V	.	.	.
14.483	2.0751	3.97	.	Q	.	V	.	.	.
14.500	2.0806	4.00	.	Q	.	V	.	.	.
14.517	2.0861	4.03	.	Q	.	V	.	.	.
14.533	2.0917	4.06	.	Q	.	V	.	.	.
14.550	2.0973	4.08	.	Q	.	V	.	.	.
14.567	2.1030	4.11	.	Q	.	V	.	.	.
14.583	2.1087	4.14	.	Q	.	V	.	.	.

14.600	2.1144	4.17	.	Q	.	V	.	.	.
14.617	2.1202	4.20	.	Q	.	V	.	.	.
14.633	2.1260	4.23	.	Q	.	V	.	.	.
14.650	2.1319	4.26	.	Q	.	V	.	.	.
14.667	2.1378	4.28	.	Q	.	V	.	.	.
14.683	2.1438	4.31	.	Q	.	V	.	.	.
14.700	2.1497	4.34	.	Q	.	V	.	.	.
14.717	2.1557	4.36	.	Q	.	V	.	.	.
14.733	2.1618	4.38	.	Q	.	V	.	.	.
14.750	2.1678	4.39	.	Q	.	V	.	.	.
14.767	2.1739	4.41	.	Q	.	V	.	.	.
14.783	2.1800	4.43	.	Q	.	V	.	.	.
14.800	2.1861	4.45	.	Q	.	V	.	.	.
14.817	2.1923	4.47	.	Q	.	V	.	.	.
14.833	2.1985	4.49	.	Q	.	V	.	.	.
14.850	2.2047	4.51	.	Q	.	V	.	.	.
14.867	2.2109	4.52	.	Q	.	V	.	.	.
14.883	2.2171	4.54	.	Q	.	V	.	.	.
14.900	2.2234	4.56	.	Q	.	V	.	.	.
14.917	2.2297	4.58	.	Q	.	V	.	.	.
14.933	2.2361	4.60	.	Q	.	V	.	.	.
14.950	2.2424	4.62	.	Q	.	V	.	.	.
14.967	2.2488	4.65	.	Q	.	V	.	.	.
14.983	2.2553	4.70	.	Q	.	V	.	.	.
15.000	2.2619	4.76	.	Q	.	V	.	.	.
15.017	2.2685	4.81	.	Q	.	V	.	.	.
15.033	2.2752	4.86	.	Q	.	V	.	.	.
15.050	2.2819	4.91	.	Q	.	V	.	.	.
15.067	2.2888	4.96	.	Q	.	V	.	.	.
15.083	2.2957	5.01	.	Q	.	V	.	.	.
15.100	2.3027	5.06	.	Q	.	V	.	.	.
15.117	2.3097	5.12	.	Q	.	V	.	.	.
15.133	2.3168	5.17	.	Q	.	V	.	.	.
15.150	2.3240	5.22	.	Q	.	V	.	.	.
15.167	2.3313	5.27	.	Q	.	V	.	.	.
15.183	2.3386	5.32	.	Q	.	V	.	.	.
15.200	2.3460	5.37	.	Q	.	V	.	.	.
15.217	2.3535	5.42	.	Q	.	V	.	.	.
15.233	2.3610	5.47	.	Q	.	V	.	.	.
15.250	2.3686	5.50	.	Q	.	V	.	.	.
15.267	2.3762	5.54	.	Q	.	V	.	.	.
15.283	2.3839	5.58	.	Q	.	V	.	.	.
15.300	2.3916	5.62	.	Q	.	V	.	.	.
15.317	2.3994	5.66	.	Q	.	V	.	.	.
15.333	2.4073	5.69	.	Q	.	V	.	.	.
15.350	2.4152	5.73	.	Q	.	V	.	.	.
15.367	2.4231	5.77	.	Q	.	V	.	.	.
15.383	2.4311	5.81	.	Q	.	V	.	.	.
15.400	2.4392	5.85	.	Q	.	V	.	.	.
15.417	2.4473	5.88	.	Q	.	V	.	.	.
15.433	2.4554	5.92	.	Q	.	V	.	.	.
15.450	2.4636	5.96	.	Q	.	V	.	.	.
15.467	2.4719	6.00	.	Q	.	V	.	.	.
15.483	2.4802	6.06	.	Q	.	V	.	.	.
15.500	2.4888	6.22	.	Q	.	V	.	.	.

15.517	2.4976	6.41	.	Q	.	V.	.	.
15.533	2.5067	6.59	.	Q	.	V.	.	.
15.550	2.5160	6.78	.	Q	.	V.	.	.
15.567	2.5256	6.96	.	Q	.	V.	.	.
15.583	2.5355	7.14	.	Q	.	V.	.	.
15.600	2.5456	7.33	.	Q	.	V.	.	.
15.617	2.5559	7.51	.	Q	.	V.	.	.
15.633	2.5665	7.70	.	Q	.	V.	.	.
15.650	2.5774	7.88	.	Q	.	V.	.	.
15.667	2.5885	8.06	.	Q	.	V.	.	.
15.683	2.5998	8.25	.	Q	.	V	.	.
15.700	2.6114	8.43	.	Q	.	V	.	.
15.717	2.6233	8.62	.	Q.	.	V	.	.
15.733	2.6354	8.80	.	Q.	.	V	.	.
15.750	2.6478	8.97	.	Q.	.	V	.	.
15.767	2.6604	9.12	.	Q.	.	V	.	.
15.783	2.6731	9.28	.	Q.	.	V	.	.
15.800	2.6861	9.43	.	Q.	.	V	.	.
15.817	2.6993	9.58	.	Q	.	V	.	.
15.833	2.7127	9.73	.	Q	.	V	.	.
15.850	2.7263	9.88	.	Q	.	.V	.	.
15.867	2.7401	10.03	.	Q	.	.V	.	.
15.883	2.7541	10.18	.	Q	.	.V	.	.
15.900	2.7684	10.33	.	Q	.	.V	.	.
15.917	2.7828	10.48	.	Q	.	.V	.	.
15.933	2.7974	10.63	.	.Q	.	.V	.	.
15.950	2.8123	10.78	.	.Q	.	.V	.	.
15.967	2.8273	10.93	.	.Q	.	.V	.	.
15.983	2.8426	11.08	.	.Q	.	.V	.	.
16.000	2.8581	11.23	.	.Q	.	.V	.	.
16.017	2.8748	12.16	.	.Q	.	.V	.	.
16.033	2.8939	13.87	.	.Q	.	.V	.	.
16.050	2.9154	15.58	.	.Q	.	.V	.	.
16.067	2.9392	17.29	.	.Q	.	.V	.	.
16.083	2.9654	19.01	.	.Q	.	.V	.	.
16.100	2.9939	20.72	.	.Q	.	.V	.	.
16.117	3.0248	22.43	.	.Q	.	.V	.	.
16.133	3.0581	24.14	.	.Q	.	.V	.	.
16.150	3.0937	25.85	.	.Q	.	.V	.	.
16.167	3.1317	27.56	.	.Q	.	.V	.	.
16.183	3.1720	29.27	.	.Q	.	.V	.	.
16.200	3.2146	30.98	.	.Q	.	.V	.	.
16.217	3.2597	32.69	.	.Q	.	.V	.	.
16.233	3.3071	34.41	.	.Q	.	.V	.	.
16.250	3.3568	36.12	.	.Q	.	.V	.	.
16.267	3.4095	38.27	.	.Q	.	.V	.	.
16.283	3.4603	36.83	.	.Q	.	.V	.	.
16.300	3.5083	34.87	.	.Q	.	.V	.	.
16.317	3.5536	32.92	.	.Q	.	.V	.	.
16.333	3.5963	30.97	.	.Q	.	.V	.	.
16.350	3.6363	29.01	.	.Q	.	.V	.	.
16.367	3.6735	27.06	.	.Q	.	.V	.	.
16.383	3.7081	25.10	.	.Q	.	.V	.	.
16.400	3.7400	23.15	.	.Q	.	.V	.	.
16.417	3.7692	21.20	.	.Q	.	.V	.	.

16.433	3.7957	19.24	.	.	Q	V.	.
16.450	3.8195	17.29	.	.	Q	V.	.
16.467	3.8406	15.33	.	.	Q	V.	.
16.483	3.8591	13.38	.	.	Q	V.	.
16.500	3.8748	11.43	.	.Q	.	V.	.
16.517	3.8878	9.47	.	Q.	.	V	.
16.533	3.8985	7.73	.	Q	.	V	.
16.550	3.9086	7.33	.	Q	.	V	.
16.567	3.9185	7.17	.	Q	.	V	.
16.583	3.9281	7.01	.	Q	.	V	.
16.600	3.9375	6.85	.	Q	.	V	.
16.617	3.9468	6.69	.	Q	.	V	.
16.633	3.9558	6.53	.	Q	.	V	.
16.650	3.9645	6.37	.	Q	.	V	.
16.667	3.9731	6.22	.	Q	.	V	.
16.683	3.9814	6.06	.	Q	.	V	.
16.700	3.9896	5.90	.	Q	.	V	.
16.717	3.9975	5.74	.	Q	.	V	.
16.733	4.0052	5.58	.	Q	.	V	.
16.750	4.0126	5.42	.	Q	.	V	.
16.767	4.0199	5.26	.	Q	.	.V	.
16.783	4.0269	5.11	.	Q	.	.V	.
16.800	4.0338	4.97	.	Q	.	.V	.
16.817	4.0405	4.91	.	Q	.	.V	.
16.833	4.0472	4.86	.	Q	.	.V	.
16.850	4.0538	4.80	.	Q	.	.V	.
16.867	4.0604	4.74	.	Q	.	.V	.
16.883	4.0668	4.69	.	Q	.	.V	.
16.900	4.0732	4.63	.	Q	.	.V	.
16.917	4.0795	4.57	.	Q	.	.V	.
16.933	4.0857	4.52	.	Q	.	.V	.
16.950	4.0919	4.46	.	Q	.	.V	.
16.967	4.0979	4.40	.	Q	.	.V	.
16.983	4.1039	4.35	.	Q	.	.V	.
17.000	4.1098	4.29	.	Q	.	.V	.
17.017	4.1157	4.23	.	Q	.	.V	.
17.033	4.1214	4.18	.	Q	.	.V	.
17.050	4.1271	4.12	.	Q	.	.V	.
17.067	4.1327	4.07	.	Q	.	.V	.
17.083	4.1383	4.04	.	Q	.	.V	.
17.100	4.1438	4.00	.	Q	.	.V	.
17.117	4.1492	3.97	.	Q	.	.V	.
17.133	4.1546	3.93	.	Q	.	.V	.
17.150	4.1600	3.90	.	Q	.	.V	.
17.167	4.1653	3.86	.	Q	.	.V	.
17.183	4.1706	3.83	.	Q	.	.V	.
17.200	4.1758	3.79	.	Q	.	.V	.
17.217	4.1810	3.76	.	Q	.	.V	.
17.233	4.1861	3.72	.	Q	.	.V	.
17.250	4.1912	3.68	.	Q	.	.V	.
17.267	4.1962	3.65	.	Q	.	.V	.
17.283	4.2012	3.61	.	Q	.	.V	.
17.300	4.2061	3.58	.	Q	.	.V	.
17.317	4.2110	3.54	.	Q	.	.V	.
17.333	4.2158	3.52	.	Q	.	.V	.

17.350	4.2207	3.49	.	Q	.	.	.	V	.
17.367	4.2254	3.47	.	Q	.	.	.	V	.
17.383	4.2302	3.44	.	Q	.	.	.	V	.
17.400	4.2349	3.42	.	Q	.	.	.	V	.
17.417	4.2396	3.40	.	Q	.	.	.	V	.
17.433	4.2442	3.37	.	Q	.	.	.	V	.
17.450	4.2488	3.35	.	Q	.	.	.	V	.
17.467	4.2534	3.33	.	Q	.	.	.	V	.
17.483	4.2580	3.30	.	Q	.	.	.	V	.
17.500	4.2625	3.28	.	Q	.	.	.	V	.
17.517	4.2670	3.25	.	Q	.	.	.	V	.
17.533	4.2714	3.23	.	Q	.	.	.	V	.
17.550	4.2758	3.21	.	Q	.	.	.	V	.
17.567	4.2802	3.18	.	Q	.	.	.	V	.
17.583	4.2846	3.16	.	Q	.	.	.	V	.
17.600	4.2889	3.14	.	Q	.	.	.	V	.
17.617	4.2932	3.12	.	Q	.	.	.	V	.
17.633	4.2975	3.11	.	Q	.	.	.	V	.
17.650	4.3017	3.09	.	Q	.	.	.	V	.
17.667	4.3059	3.07	.	Q	.	.	.	V	.
17.683	4.3102	3.05	.	Q	.	.	.	V	.
17.700	4.3143	3.04	.	Q	.	.	.	V	.
17.717	4.3185	3.02	.	Q	.	.	.	V	.
17.733	4.3226	3.00	.	Q	.	.	.	V	.
17.750	4.3267	2.98	.	Q	.	.	.	V	.
17.767	4.3308	2.96	.	Q	.	.	.	V	.
17.783	4.3349	2.95	.	Q	.	.	.	V	.
17.800	4.3389	2.93	.	Q	.	.	.	V	.
17.817	4.3429	2.91	.	Q	.	.	.	V	.
17.833	4.3469	2.89	.	Q	.	.	.	V	.
17.850	4.3509	2.88	.	Q	.	.	.	V	.
17.867	4.3548	2.86	.	Q	.	.	.	V	.
17.883	4.3587	2.85	.	Q	.	.	.	V	.
17.900	4.3626	2.84	.	Q	.	.	.	V	.
17.917	4.3665	2.82	.	Q	.	.	.	V	.
17.933	4.3704	2.81	.	Q	.	.	.	V	.
17.950	4.3742	2.79	.	Q	.	.	.	V	.
17.967	4.3781	2.78	.	Q	.	.	.	V	.
17.983	4.3819	2.77	.	Q	.	.	.	V	.
18.000	4.3857	2.75	.	Q	.	.	.	V	.
18.017	4.3894	2.74	.	Q	.	.	.	V	.
18.033	4.3932	2.73	.	Q	.	.	.	V	.
18.050	4.3969	2.71	.	Q	.	.	.	V	.
18.067	4.4007	2.70	.	Q	.	.	.	V	.
18.083	4.4044	2.68	.	Q	.	.	.	V	.
18.100	4.4080	2.67	.	Q	.	.	.	V	.
18.117	4.4117	2.65	.	Q	.	.	.	V	.
18.133	4.4153	2.63	.	Q	.	.	.	V	.
18.150	4.4189	2.60	.	Q	.	.	.	V	.
18.167	4.4224	2.57	.	Q	.	.	.	V	.
18.183	4.4259	2.55	.	Q	.	.	.	V	.
18.200	4.4294	2.52	.	Q	.	.	.	V	.
18.217	4.4329	2.50	.	Q	.	.	.	V	.
18.233	4.4363	2.47	.	Q	.	.	.	V	.
18.250	4.4396	2.45	.	Q	.	.	.	V	.

18.267	4.4430	2.42	. Q	.	.	.	V	.
18.283	4.4463	2.40	. Q	.	.	.	V	.
18.300	4.4495	2.37	. Q	.	.	.	V	.
18.317	4.4528	2.34	. Q	.	.	.	V	.
18.333	4.4560	2.32	. Q	.	.	.	V	.
18.350	4.4591	2.29	. Q	.	.	.	V	.
18.367	4.4622	2.27	. Q	.	.	.	V	.
18.383	4.4653	2.25	. Q	.	.	.	V	.
18.400	4.4684	2.24	. Q	.	.	.	V	.
18.417	4.4715	2.23	. Q	.	.	.	V	.
18.433	4.4746	2.23	. Q	.	.	.	V	.
18.450	4.4776	2.22	. Q	.	.	.	V	.
18.467	4.4807	2.21	. Q	.	.	.	V	.
18.483	4.4837	2.20	. Q	.	.	.	V	.
18.500	4.4867	2.19	. Q	.	.	.	V	.
18.517	4.4897	2.18	. Q	.	.	.	V	.
18.533	4.4927	2.17	. Q	.	.	.	V	.
18.550	4.4957	2.16	. Q	.	.	.	V	.
18.567	4.4986	2.15	. Q	.	.	.	V	.
18.583	4.5016	2.14	. Q	.	.	.	V	.
18.600	4.5045	2.13	. Q	.	.	.	V	.
18.617	4.5075	2.13	. Q	.	.	.	V	.
18.633	4.5104	2.12	. Q	.	.	.	V	.
18.650	4.5133	2.11	. Q	.	.	.	V	.
18.667	4.5162	2.10	. Q	.	.	.	V	.
18.683	4.5191	2.09	. Q	.	.	.	V	.
18.700	4.5219	2.09	. Q	.	.	.	V	.
18.717	4.5248	2.08	. Q	.	.	.	V	.
18.733	4.5276	2.07	. Q	.	.	.	V	.
18.750	4.5305	2.06	. Q	.	.	.	V	.
18.767	4.5333	2.06	. Q	.	.	.	V	.
18.783	4.5361	2.05	. Q	.	.	.	V	.
18.800	4.5390	2.04	. Q	.	.	.	V	.
18.817	4.5418	2.03	. Q	.	.	.	V	.
18.833	4.5445	2.03	. Q	.	.	.	V	.
18.850	4.5473	2.02	. Q	.	.	.	V	.
18.867	4.5501	2.01	. Q	.	.	.	V	.
18.883	4.5528	2.00	. Q	.	.	.	V	.
18.900	4.5556	1.99	. Q	.	.	.	V	.
18.917	4.5583	1.99	. Q	.	.	.	V	.
18.933	4.5611	1.98	. Q	.	.	.	V	.
18.950	4.5638	1.98	. Q	.	.	.	V	.
18.967	4.5665	1.97	. Q	.	.	.	V	.
18.983	4.5692	1.96	. Q	.	.	.	V	.
19.000	4.5719	1.96	. Q	.	.	.	V	.
19.017	4.5746	1.95	. Q	.	.	.	V	.
19.033	4.5773	1.94	. Q	.	.	.	V	.
19.050	4.5799	1.94	. Q	.	.	.	V	.
19.067	4.5826	1.93	. Q	.	.	.	V	.
19.083	4.5852	1.92	. Q	.	.	.	V	.
19.100	4.5879	1.92	. Q	.	.	.	V	.
19.117	4.5905	1.91	.Q	.	.	.	V	.
19.133	4.5931	1.90	.Q	.	.	.	V	.
19.150	4.5957	1.90	.Q	.	.	.	V	.
19.167	4.5983	1.89	.Q	.	.	.	V	.

19.183	4.6009	1.89	.Q	.	.	.	V	.
19.200	4.6035	1.88	.Q	.	.	.	V	.
19.217	4.6061	1.87	.Q	.	.	.	V	.
19.233	4.6087	1.87	.Q	.	.	.	V	.
19.250	4.6112	1.86	.Q	.	.	.	V	.
19.267	4.6138	1.86	.Q	.	.	.	V	.
19.283	4.6163	1.85	.Q	.	.	.	V	.
19.300	4.6189	1.85	.Q	.	.	.	V	.
19.317	4.6214	1.84	.Q	.	.	.	V	.
19.333	4.6240	1.83	.Q	.	.	.	V	.
19.350	4.6265	1.83	.Q	.	.	.	V	.
19.367	4.6290	1.82	.Q	.	.	.	V	.
19.383	4.6315	1.82	.Q	.	.	.	V	.
19.400	4.6340	1.81	.Q	.	.	.	V	.
19.417	4.6365	1.81	.Q	.	.	.	V	.
19.433	4.6389	1.80	.Q	.	.	.	V	.
19.450	4.6414	1.80	.Q	.	.	.	V	.
19.467	4.6439	1.79	.Q	.	.	.	V	.
19.483	4.6463	1.79	.Q	.	.	.	V	.
19.500	4.6488	1.78	.Q	.	.	.	V	.
19.517	4.6512	1.78	.Q	.	.	.	V	.
19.533	4.6537	1.77	.Q	.	.	.	V	.
19.550	4.6561	1.77	.Q	.	.	.	V	.
19.567	4.6585	1.76	.Q	.	.	.	V	.
19.583	4.6610	1.76	.Q	.	.	.	V	.
19.600	4.6634	1.75	.Q	.	.	.	V	.
19.617	4.6658	1.75	.Q	.	.	.	V	.
19.633	4.6682	1.74	.Q	.	.	.	V	.
19.650	4.6706	1.74	.Q	.	.	.	V	.
19.667	4.6729	1.73	.Q	.	.	.	V	.
19.683	4.6753	1.73	.Q	.	.	.	V	.
19.700	4.6777	1.72	.Q	.	.	.	V	.
19.717	4.6801	1.72	.Q	.	.	.	V	.
19.733	4.6824	1.71	.Q	.	.	.	V	.
19.750	4.6848	1.71	.Q	.	.	.	V	.
19.767	4.6871	1.70	.Q	.	.	.	V	.
19.783	4.6895	1.70	.Q	.	.	.	V	.
19.800	4.6918	1.69	.Q	.	.	.	V	.
19.817	4.6941	1.69	.Q	.	.	.	V	.
19.833	4.6964	1.69	.Q	.	.	.	V	.
19.850	4.6988	1.68	.Q	.	.	.	V	.
19.867	4.7011	1.68	.Q	.	.	.	V	.
19.883	4.7034	1.67	.Q	.	.	.	V	.
19.900	4.7057	1.67	.Q	.	.	.	V	.
19.917	4.7080	1.66	.Q	.	.	.	V	.
19.933	4.7102	1.66	.Q	.	.	.	V	.
19.950	4.7125	1.65	.Q	.	.	.	V	.
19.967	4.7148	1.65	.Q	.	.	.	V	.
19.983	4.7171	1.65	.Q	.	.	.	V	.
20.000	4.7193	1.64	.Q	.	.	.	V	.
20.017	4.7216	1.64	.Q	.	.	.	V	.
20.033	4.7238	1.64	.Q	.	.	.	V	.
20.050	4.7261	1.63	.Q	.	.	.	V	.
20.067	4.7283	1.63	.Q	.	.	.	V	.
20.083	4.7306	1.62	.Q	.	.	.	V	.

20.100	4.7328	1.62	.Q	.	.	.	V	.
20.117	4.7350	1.62	.Q	.	.	.	V	.
20.133	4.7372	1.61	.Q	.	.	.	V	.
20.150	4.7394	1.61	.Q	.	.	.	V	.
20.167	4.7417	1.60	.Q	.	.	.	V	.
20.183	4.7439	1.60	.Q	.	.	.	V	.
20.200	4.7461	1.60	.Q	.	.	.	V	.
20.217	4.7482	1.59	.Q	.	.	.	V	.
20.233	4.7504	1.59	.Q	.	.	.	V	.
20.250	4.7526	1.58	.Q	.	.	.	V	.
20.267	4.7548	1.58	.Q	.	.	.	V	.
20.283	4.7570	1.58	.Q	.	.	.	V	.
20.300	4.7591	1.57	.Q	.	.	.	V	.
20.317	4.7613	1.57	.Q	.	.	.	V	.
20.333	4.7635	1.57	.Q	.	.	.	V	.
20.350	4.7656	1.56	.Q	.	.	.	V	.
20.367	4.7678	1.56	.Q	.	.	.	V	.
20.383	4.7699	1.56	.Q	.	.	.	V	.
20.400	4.7720	1.55	.Q	.	.	.	V	.
20.417	4.7742	1.55	.Q	.	.	.	V	.
20.433	4.7763	1.55	.Q	.	.	.	V	.
20.450	4.7784	1.54	.Q	.	.	.	V	.
20.467	4.7805	1.54	.Q	.	.	.	V	.
20.483	4.7827	1.53	.Q	.	.	.	V	.
20.500	4.7848	1.53	.Q	.	.	.	V	.
20.517	4.7869	1.53	.Q	.	.	.	V	.
20.533	4.7890	1.52	.Q	.	.	.	V	.
20.550	4.7911	1.52	.Q	.	.	.	V	.
20.567	4.7932	1.52	.Q	.	.	.	V	.
20.583	4.7952	1.52	.Q	.	.	.	V	.
20.600	4.7973	1.51	.Q	.	.	.	V	.
20.617	4.7994	1.51	.Q	.	.	.	V	.
20.633	4.8015	1.51	.Q	.	.	.	V	.
20.650	4.8035	1.50	.Q	.	.	.	V	.
20.667	4.8056	1.50	.Q	.	.	.	V	.
20.683	4.8077	1.50	.Q	.	.	.	V	.
20.700	4.8097	1.49	.Q	.	.	.	V	.
20.717	4.8118	1.49	.Q	.	.	.	V	.
20.733	4.8138	1.49	.Q	.	.	.	V	.
20.750	4.8159	1.48	.Q	.	.	.	V	.
20.767	4.8179	1.48	.Q	.	.	.	V	.
20.783	4.8199	1.48	.Q	.	.	.	V	.
20.800	4.8220	1.47	.Q	.	.	.	V	.
20.817	4.8240	1.47	.Q	.	.	.	V	.
20.833	4.8260	1.47	.Q	.	.	.	V	.
20.850	4.8280	1.47	.Q	.	.	.	V	.
20.867	4.8301	1.46	.Q	.	.	.	V	.
20.883	4.8321	1.46	.Q	.	.	.	V	.
20.900	4.8341	1.46	.Q	.	.	.	V	.
20.917	4.8361	1.45	.Q	.	.	.	V	.
20.933	4.8381	1.45	.Q	.	.	.	V	.
20.950	4.8401	1.45	.Q	.	.	.	V	.
20.967	4.8420	1.44	.Q	.	.	.	V	.
20.983	4.8440	1.44	.Q	.	.	.	V	.
21.000	4.8460	1.44	.Q	.	.	.	V	.

21.017	4.8480	1.44	.Q	.	.	.	V	.
21.033	4.8500	1.43	.Q	.	.	.	V	.
21.050	4.8519	1.43	.Q	.	.	.	V	.
21.067	4.8539	1.43	.Q	.	.	.	V	.
21.083	4.8559	1.42	.Q	.	.	.	V	.
21.100	4.8578	1.42	.Q	.	.	.	V	.
21.117	4.8598	1.42	.Q	.	.	.	V	.
21.133	4.8617	1.42	.Q	.	.	.	V	.
21.150	4.8637	1.41	.Q	.	.	.	V	.
21.167	4.8656	1.41	.Q	.	.	.	V	.
21.183	4.8676	1.41	.Q	.	.	.	V	.
21.200	4.8695	1.41	.Q	.	.	.	V	.
21.217	4.8714	1.40	.Q	.	.	.	V	.
21.233	4.8734	1.40	.Q	.	.	.	V	.
21.250	4.8753	1.40	.Q	.	.	.	V	.
21.267	4.8772	1.40	.Q	.	.	.	V	.
21.283	4.8791	1.39	.Q	.	.	.	V	.
21.300	4.8810	1.39	.Q	.	.	.	V	.
21.317	4.8830	1.39	.Q	.	.	.	V	.
21.333	4.8849	1.39	.Q	.	.	.	V	.
21.350	4.8868	1.38	.Q	.	.	.	V	.
21.367	4.8887	1.38	.Q	.	.	.	V	.
21.383	4.8906	1.38	.Q	.	.	.	V	.
21.400	4.8925	1.38	.Q	.	.	.	V	.
21.417	4.8943	1.37	.Q	.	.	.	V	.
21.433	4.8962	1.37	.Q	.	.	.	V	.
21.450	4.8981	1.37	.Q	.	.	.	V	.
21.467	4.9000	1.37	.Q	.	.	.	V	.
21.483	4.9019	1.36	.Q	.	.	.	V	.
21.500	4.9037	1.36	.Q	.	.	.	V	.
21.517	4.9056	1.36	.Q	.	.	.	V	.
21.533	4.9075	1.36	.Q	.	.	.	V	.
21.550	4.9093	1.35	.Q	.	.	.	V	.
21.567	4.9112	1.35	.Q	.	.	.	V	.
21.583	4.9131	1.35	.Q	.	.	.	V	.
21.600	4.9149	1.35	.Q	.	.	.	V	.
21.617	4.9168	1.34	.Q	.	.	.	V	.
21.633	4.9186	1.34	.Q	.	.	.	V	.
21.650	4.9205	1.34	.Q	.	.	.	V	.
21.667	4.9223	1.34	.Q	.	.	.	V	.
21.683	4.9241	1.33	.Q	.	.	.	V	.
21.700	4.9260	1.33	.Q	.	.	.	V	.
21.717	4.9278	1.33	.Q	.	.	.	V	.
21.733	4.9296	1.33	.Q	.	.	.	V	.
21.750	4.9315	1.32	.Q	.	.	.	V	.
21.767	4.9333	1.32	.Q	.	.	.	V	.
21.783	4.9351	1.32	.Q	.	.	.	V	.
21.800	4.9369	1.32	.Q	.	.	.	V	.
21.817	4.9387	1.32	.Q	.	.	.	V	.
21.833	4.9405	1.31	.Q	.	.	.	V	.
21.850	4.9423	1.31	.Q	.	.	.	V	.
21.867	4.9441	1.31	.Q	.	.	.	V	.
21.883	4.9460	1.31	.Q	.	.	.	V	.
21.900	4.9477	1.31	.Q	.	.	.	V	.
21.917	4.9495	1.30	.Q	.	.	.	V	.

21.933	4.9513	1.30	.Q	.	.	.	V .
21.950	4.9531	1.30	.Q	.	.	.	V .
21.967	4.9549	1.30	.Q	.	.	.	V .
21.983	4.9567	1.29	.Q	.	.	.	V .
22.000	4.9585	1.29	.Q	.	.	.	V .
22.017	4.9602	1.29	.Q	.	.	.	V .
22.033	4.9620	1.29	.Q	.	.	.	V .
22.050	4.9638	1.29	.Q	.	.	.	V .
22.067	4.9656	1.28	.Q	.	.	.	V .
22.083	4.9673	1.28	.Q	.	.	.	V .
22.100	4.9691	1.28	.Q	.	.	.	V .
22.117	4.9709	1.28	.Q	.	.	.	V .
22.133	4.9726	1.28	.Q	.	.	.	V .
22.150	4.9744	1.27	.Q	.	.	.	V .
22.167	4.9761	1.27	.Q	.	.	.	V .
22.183	4.9779	1.27	.Q	.	.	.	V .
22.200	4.9796	1.27	.Q	.	.	.	V .
22.217	4.9814	1.27	.Q	.	.	.	V .
22.233	4.9831	1.26	.Q	.	.	.	V .
22.250	4.9848	1.26	.Q	.	.	.	V .
22.267	4.9866	1.26	.Q	.	.	.	V .
22.283	4.9883	1.26	.Q	.	.	.	V .
22.300	4.9900	1.26	.Q	.	.	.	V .
22.317	4.9918	1.25	.Q	.	.	.	V .
22.333	4.9935	1.25	.Q	.	.	.	V .
22.350	4.9952	1.25	.Q	.	.	.	V .
22.367	4.9969	1.25	.Q	.	.	.	V .
22.383	4.9986	1.25	.Q	.	.	.	V .
22.400	5.0004	1.24	.Q	.	.	.	V .
22.417	5.0021	1.24	.Q	.	.	.	V .
22.433	5.0038	1.24	.Q	.	.	.	V .
22.450	5.0055	1.24	.Q	.	.	.	V .
22.467	5.0072	1.24	.Q	.	.	.	V .
22.483	5.0089	1.24	.Q	.	.	.	V .
22.500	5.0106	1.23	.Q	.	.	.	V .
22.517	5.0123	1.23	.Q	.	.	.	V .
22.533	5.0140	1.23	.Q	.	.	.	V .
22.550	5.0157	1.23	.Q	.	.	.	V .
22.567	5.0174	1.23	.Q	.	.	.	V .
22.583	5.0190	1.22	.Q	.	.	.	V .
22.600	5.0207	1.22	.Q	.	.	.	V .
22.617	5.0224	1.22	.Q	.	.	.	V .
22.633	5.0241	1.22	.Q	.	.	.	V .
22.650	5.0258	1.22	.Q	.	.	.	V .
22.667	5.0274	1.22	.Q	.	.	.	V .
22.683	5.0291	1.21	.Q	.	.	.	V .
22.700	5.0308	1.21	.Q	.	.	.	V .
22.717	5.0324	1.21	.Q	.	.	.	V .
22.733	5.0341	1.21	.Q	.	.	.	V .
22.750	5.0358	1.21	.Q	.	.	.	V .
22.767	5.0374	1.20	.Q	.	.	.	V .
22.783	5.0391	1.20	.Q	.	.	.	V .
22.800	5.0407	1.20	.Q	.	.	.	V .
22.817	5.0424	1.20	.Q	.	.	.	V .
22.833	5.0440	1.20	.Q	.	.	.	V .

22.850	5.0457	1.20	.Q	.	.	.	V .
22.867	5.0473	1.19	.Q	.	.	.	V .
22.883	5.0490	1.19	.Q	.	.	.	V .
22.900	5.0506	1.19	.Q	.	.	.	V.
22.917	5.0523	1.19	.Q	.	.	.	V.
22.933	5.0539	1.19	.Q	.	.	.	V.
22.950	5.0555	1.19	.Q	.	.	.	V.
22.967	5.0572	1.18	.Q	.	.	.	V.
22.983	5.0588	1.18	.Q	.	.	.	V.
23.000	5.0604	1.18	.Q	.	.	.	V.
23.017	5.0620	1.18	.Q	.	.	.	V.
23.033	5.0637	1.18	.Q	.	.	.	V.
23.050	5.0653	1.18	.Q	.	.	.	V.
23.067	5.0669	1.17	.Q	.	.	.	V.
23.083	5.0685	1.17	.Q	.	.	.	V.
23.100	5.0701	1.17	.Q	.	.	.	V.
23.117	5.0717	1.17	.Q	.	.	.	V.
23.133	5.0733	1.17	.Q	.	.	.	V.
23.150	5.0749	1.17	.Q	.	.	.	V.
23.167	5.0766	1.16	.Q	.	.	.	V.
23.183	5.0782	1.16	.Q	.	.	.	V.
23.200	5.0798	1.16	.Q	.	.	.	V.
23.217	5.0814	1.16	.Q	.	.	.	V.
23.233	5.0830	1.16	.Q	.	.	.	V.
23.250	5.0845	1.16	.Q	.	.	.	V.
23.267	5.0861	1.16	.Q	.	.	.	V.
23.283	5.0877	1.15	.Q	.	.	.	V.
23.300	5.0893	1.15	.Q	.	.	.	V.
23.317	5.0909	1.15	.Q	.	.	.	V.
23.333	5.0925	1.15	.Q	.	.	.	V.
23.350	5.0941	1.15	.Q	.	.	.	V.
23.367	5.0956	1.15	.Q	.	.	.	V.
23.383	5.0972	1.14	.Q	.	.	.	V.
23.400	5.0988	1.14	.Q	.	.	.	V.
23.417	5.1004	1.14	.Q	.	.	.	V.
23.433	5.1019	1.14	.Q	.	.	.	V.
23.450	5.1035	1.14	.Q	.	.	.	V.
23.467	5.1051	1.14	.Q	.	.	.	V.
23.483	5.1066	1.14	.Q	.	.	.	V.
23.500	5.1082	1.13	.Q	.	.	.	V.
23.517	5.1098	1.13	.Q	.	.	.	V.
23.533	5.1113	1.13	.Q	.	.	.	V.
23.550	5.1129	1.13	.Q	.	.	.	V.
23.567	5.1144	1.13	.Q	.	.	.	V.
23.583	5.1160	1.13	.Q	.	.	.	V.
23.600	5.1175	1.13	.Q	.	.	.	V.
23.617	5.1191	1.12	.Q	.	.	.	V.
23.633	5.1206	1.12	.Q	.	.	.	V.
23.650	5.1222	1.12	.Q	.	.	.	V.
23.667	5.1237	1.12	.Q	.	.	.	V.
23.683	5.1253	1.12	.Q	.	.	.	V.
23.700	5.1268	1.12	.Q	.	.	.	V.
23.717	5.1283	1.12	.Q	.	.	.	V.
23.733	5.1299	1.11	.Q	.	.	.	V.
23.750	5.1314	1.11	.Q	.	.	.	V.

23.767	5.1329	1.11	.Q	.	.	.	V.
23.783	5.1345	1.11	.Q	.	.	.	V.
23.800	5.1360	1.11	.Q	.	.	.	V.
23.817	5.1375	1.11	.Q	.	.	.	V.
23.833	5.1390	1.11	.Q	.	.	.	V.
23.850	5.1406	1.10	.Q	.	.	.	V.
23.867	5.1421	1.10	.Q	.	.	.	V.
23.883	5.1436	1.10	.Q	.	.	.	V.
23.900	5.1451	1.10	.Q	.	.	.	V.
23.917	5.1466	1.10	.Q	.	.	.	V.
23.933	5.1481	1.10	.Q	.	.	.	V.
23.950	5.1496	1.10	.Q	.	.	.	V.
23.967	5.1512	1.10	.Q	.	.	.	V.
23.983	5.1527	1.09	.Q	.	.	.	V.
24.000	5.1542	1.09	.Q	.	.	.	V.
24.017	5.1557	1.09	.Q	.	.	.	V.
24.033	5.1572	1.09	.Q	.	.	.	V.
24.050	5.1587	1.09	.Q	.	.	.	V.
24.067	5.1602	1.09	.Q	.	.	.	V.
24.083	5.1617	1.09	.Q	.	.	.	V.
24.100	5.1632	1.08	.Q	.	.	.	V.
24.117	5.1647	1.08	.Q	.	.	.	V.
24.133	5.1661	1.08	.Q	.	.	.	V.
24.150	5.1676	1.07	.Q	.	.	.	V.
24.167	5.1690	1.02	.Q	.	.	.	V.
24.183	5.1703	0.95	Q	.	.	.	V.
24.200	5.1715	0.88	Q	.	.	.	V.
24.217	5.1727	0.81	Q	.	.	.	V.
24.233	5.1737	0.74	Q	.	.	.	V.
24.250	5.1746	0.67	Q	.	.	.	V.
24.267	5.1754	0.60	Q	.	.	.	V.
24.283	5.1762	0.54	Q	.	.	.	V.
24.300	5.1768	0.47	Q	.	.	.	V.
24.317	5.1774	0.40	Q	.	.	.	V.
24.333	5.1778	0.33	Q	.	.	.	V.
24.350	5.1782	0.26	Q	.	.	.	V.
24.367	5.1785	0.19	Q	.	.	.	V.
24.383	5.1786	0.12	Q	.	.	.	V.
24.400	5.1787	0.06	Q	.	.	.	V

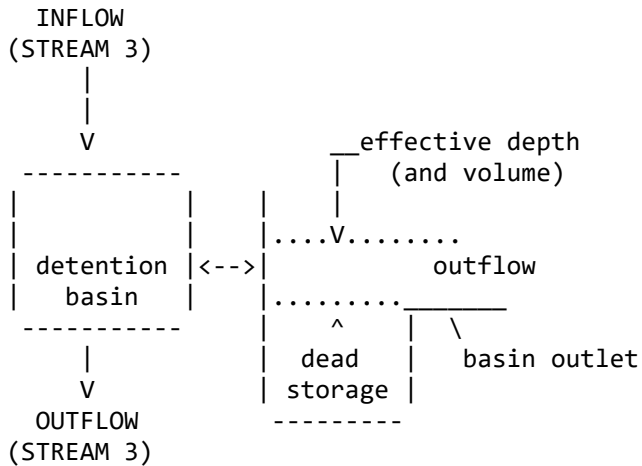
TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1464.0
10%	845.0
20%	275.0
30%	145.0
40%	130.0
50%	105.0
60%	85.0
70%	65.0

80% 45.0
 90% 20.0

 FLOW PROCESS FROM NODE 301.00 TO NODE 301.00 IS CODE = 3.2

 >>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<
 =====



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
 THROUGH A FLOW-THROUGH DETENTION BASIN
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
 DEAD STORAGE(AF) = 0.000
 SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
 SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
 DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	4.00	0.42	1.783
3	5.00	4.03	2.366
4	6.00	32.05	3.000
5	7.00	55.41	3.708
6	8.00	82.68	4.466

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MODIFIED-PULS BASIN ROUTING MODEL RESULTS(1-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
 MEAN OUTFLOW is the average value during the unit interval.)

CLOCK MEAN

TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH(FT)	OUTFLOW (CFS)	EFFECTIVE VOLUME(AF)
10.000	0.000	1.84	0.00	2.28	0.2	1.018
10.017	0.000	1.84	0.00	2.29	0.2	1.020
10.033	0.000	1.84	0.00	2.29	0.2	1.023
10.050	0.000	1.84	0.00	2.30	0.2	1.025
10.067	0.000	1.84	0.00	2.30	0.2	1.027
10.083	0.000	1.85	0.00	2.31	0.2	1.029
10.100	0.000	1.85	0.00	2.31	0.2	1.031
10.117	0.000	1.85	0.00	2.32	0.2	1.034
10.133	0.000	1.85	0.00	2.32	0.2	1.036
10.150	0.000	1.85	0.00	2.33	0.2	1.038
10.167	0.000	1.85	0.00	2.33	0.2	1.040
10.183	0.000	1.86	0.00	2.34	0.2	1.042
10.200	0.000	1.86	0.00	2.34	0.2	1.045
10.217	0.000	1.86	0.00	2.35	0.2	1.047
10.233	0.000	1.86	0.00	2.35	0.2	1.049
10.250	0.000	1.87	0.00	2.36	0.2	1.051
10.267	0.000	1.87	0.00	2.36	0.2	1.054
10.283	0.000	1.87	0.00	2.37	0.2	1.056
10.300	0.000	1.88	0.00	2.37	0.2	1.058
10.317	0.000	1.88	0.00	2.38	0.2	1.060
10.333	0.000	1.89	0.00	2.38	0.3	1.063
10.350	0.000	1.89	0.00	2.39	0.3	1.065
10.367	0.000	1.90	0.00	2.39	0.3	1.067
10.383	0.000	1.90	0.00	2.40	0.3	1.069
10.400	0.000	1.90	0.00	2.40	0.3	1.072
10.417	0.000	1.91	0.00	2.41	0.3	1.074
10.433	0.000	1.91	0.00	2.41	0.3	1.076
10.450	0.000	1.92	0.00	2.42	0.3	1.079
10.467	0.000	1.92	0.00	2.42	0.3	1.081
10.483	0.000	1.92	0.00	2.43	0.3	1.083
10.500	0.000	1.93	0.00	2.44	0.3	1.085
10.517	0.000	1.93	0.00	2.44	0.3	1.088
10.533	0.000	1.93	0.00	2.45	0.3	1.090
10.550	0.000	1.93	0.00	2.45	0.3	1.092
10.567	0.000	1.94	0.00	2.46	0.3	1.095
10.583	0.000	1.94	0.00	2.46	0.3	1.097
10.600	0.000	1.94	0.00	2.47	0.3	1.099
10.617	0.000	1.94	0.00	2.47	0.3	1.102
10.633	0.000	1.94	0.00	2.48	0.3	1.104
10.650	0.000	1.95	0.00	2.48	0.3	1.106
10.667	0.000	1.95	0.00	2.49	0.3	1.109
10.683	0.000	1.95	0.00	2.49	0.3	1.111
10.700	0.000	1.95	0.00	2.50	0.3	1.113
10.717	0.000	1.95	0.00	2.50	0.3	1.116
10.733	0.000	1.96	0.00	2.51	0.3	1.118
10.750	0.000	1.96	0.00	2.51	0.3	1.120
10.767	0.000	1.96	0.00	2.52	0.3	1.123
10.783	0.000	1.97	0.00	2.52	0.3	1.125
10.800	0.000	1.97	0.00	2.53	0.3	1.127
10.817	0.000	1.98	0.00	2.53	0.3	1.130
10.833	0.000	1.98	0.00	2.54	0.3	1.132
10.850	0.000	1.99	0.00	2.54	0.3	1.134

10.867	0.000	1.99	0.00	2.55	0.3	1.137
10.883	0.000	2.00	0.00	2.56	0.3	1.139
10.900	0.000	2.00	0.00	2.56	0.3	1.141
10.917	0.000	2.01	0.00	2.57	0.3	1.144
10.933	0.000	2.01	0.00	2.57	0.3	1.146
10.950	0.000	2.01	0.00	2.58	0.3	1.149
10.967	0.000	2.02	0.00	2.58	0.3	1.151
10.983	0.000	2.02	0.00	2.59	0.3	1.154
11.000	0.000	2.03	0.00	2.59	0.3	1.156
11.017	0.000	2.03	0.00	2.60	0.3	1.158
11.033	0.000	2.04	0.00	2.60	0.3	1.161
11.050	0.000	2.04	0.00	2.61	0.3	1.163
11.067	0.000	2.04	0.00	2.62	0.3	1.166
11.083	0.000	2.04	0.00	2.62	0.3	1.168
11.100	0.000	2.05	0.00	2.63	0.3	1.171
11.117	0.000	2.05	0.00	2.63	0.3	1.173
11.133	0.000	2.05	0.00	2.64	0.3	1.175
11.150	0.000	2.05	0.00	2.64	0.3	1.178
11.167	0.000	2.06	0.00	2.65	0.3	1.180
11.183	0.000	2.06	0.00	2.65	0.3	1.183
11.200	0.000	2.06	0.00	2.66	0.3	1.185
11.217	0.000	2.06	0.00	2.66	0.3	1.188
11.233	0.000	2.07	0.00	2.67	0.3	1.190
11.250	0.000	2.07	0.00	2.68	0.3	1.193
11.267	0.000	2.07	0.00	2.68	0.3	1.195
11.283	0.000	2.07	0.00	2.69	0.3	1.198
11.300	0.000	2.08	0.00	2.69	0.3	1.200
11.317	0.000	2.09	0.00	2.70	0.3	1.202
11.333	0.000	2.09	0.00	2.70	0.3	1.205
11.350	0.000	2.10	0.00	2.71	0.3	1.207
11.367	0.000	2.10	0.00	2.71	0.3	1.210
11.383	0.000	2.11	0.00	2.72	0.3	1.212
11.400	0.000	2.11	0.00	2.73	0.3	1.215
11.417	0.000	2.12	0.00	2.73	0.3	1.218
11.433	0.000	2.12	0.00	2.74	0.3	1.220
11.450	0.000	2.13	0.00	2.74	0.3	1.223
11.467	0.000	2.14	0.00	2.75	0.3	1.225
11.483	0.000	2.14	0.00	2.75	0.3	1.228
11.500	0.000	2.15	0.00	2.76	0.3	1.230
11.517	0.000	2.15	0.00	2.77	0.3	1.233
11.533	0.000	2.16	0.00	2.77	0.3	1.235
11.550	0.000	2.16	0.00	2.78	0.3	1.238
11.567	0.000	2.16	0.00	2.78	0.3	1.241
11.583	0.000	2.17	0.00	2.79	0.3	1.243
11.600	0.000	2.17	0.00	2.79	0.3	1.246
11.617	0.000	2.17	0.00	2.80	0.3	1.248
11.633	0.000	2.18	0.00	2.81	0.3	1.251
11.650	0.000	2.18	0.00	2.81	0.3	1.253
11.667	0.000	2.18	0.00	2.82	0.3	1.256
11.683	0.000	2.19	0.00	2.82	0.3	1.259
11.700	0.000	2.19	0.00	2.83	0.3	1.261
11.717	0.000	2.19	0.00	2.84	0.3	1.264
11.733	0.000	2.19	0.00	2.84	0.3	1.267
11.750	0.000	2.20	0.00	2.85	0.3	1.269
11.767	0.000	2.20	0.00	2.85	0.3	1.272

11.783	0.000	2.20	0.00	2.86	0.3	1.274
11.800	0.000	2.21	0.00	2.86	0.3	1.277
11.817	0.000	2.21	0.00	2.87	0.3	1.280
11.833	0.000	2.22	0.00	2.88	0.3	1.282
11.850	0.000	2.23	0.00	2.88	0.3	1.285
11.867	0.000	2.23	0.00	2.89	0.3	1.288
11.883	0.000	2.24	0.00	2.89	0.3	1.290
11.900	0.000	2.25	0.00	2.90	0.3	1.293
11.917	0.000	2.25	0.00	2.91	0.3	1.296
11.933	0.000	2.26	0.00	2.91	0.3	1.298
11.950	0.000	2.27	0.00	2.92	0.3	1.301
11.967	0.000	2.27	0.00	2.92	0.3	1.304
11.983	0.000	2.28	0.00	2.93	0.3	1.306
12.000	0.000	2.28	0.00	2.94	0.3	1.309
12.017	0.000	2.29	0.00	2.94	0.3	1.312
12.033	0.000	2.30	0.00	2.95	0.3	1.315
12.050	0.000	2.30	0.00	2.96	0.3	1.317
12.067	0.000	2.31	0.00	2.96	0.3	1.320
12.083	0.000	2.33	0.00	2.97	0.3	1.323
12.100	0.000	2.34	0.00	2.97	0.3	1.326
12.117	0.000	2.36	0.00	2.98	0.3	1.328
12.133	0.000	2.37	0.00	2.99	0.3	1.331
12.150	0.000	2.39	0.00	2.99	0.3	1.334
12.167	0.000	2.41	0.00	3.00	0.3	1.337
12.183	0.000	2.42	0.00	3.01	0.3	1.340
12.200	0.000	2.44	0.00	3.01	0.3	1.343
12.217	0.000	2.45	0.00	3.02	0.3	1.346
12.233	0.000	2.47	0.00	3.03	0.3	1.349
12.250	0.000	2.49	0.00	3.03	0.3	1.352
12.267	0.000	2.50	0.00	3.04	0.3	1.355
12.283	0.000	2.52	0.00	3.05	0.3	1.358
12.300	0.000	2.53	0.00	3.05	0.3	1.361
12.317	0.000	2.55	0.00	3.06	0.3	1.364
12.333	0.000	2.57	0.00	3.07	0.3	1.367
12.350	0.000	2.58	0.00	3.07	0.3	1.370
12.367	0.000	2.59	0.00	3.08	0.3	1.373
12.383	0.000	2.60	0.00	3.09	0.3	1.376
12.400	0.000	2.61	0.00	3.09	0.3	1.380
12.417	0.000	2.62	0.00	3.10	0.3	1.383
12.433	0.000	2.63	0.00	3.11	0.3	1.386
12.450	0.000	2.64	0.00	3.12	0.3	1.389
12.467	0.000	2.65	0.00	3.12	0.3	1.392
12.483	0.000	2.66	0.00	3.13	0.3	1.395
12.500	0.000	2.67	0.00	3.14	0.3	1.399
12.517	0.000	2.68	0.00	3.15	0.3	1.402
12.533	0.000	2.69	0.00	3.15	0.3	1.405
12.550	0.000	2.70	0.00	3.16	0.3	1.408
12.567	0.000	2.71	0.00	3.17	0.3	1.412
12.583	0.000	2.72	0.00	3.17	0.3	1.415
12.600	0.000	2.73	0.00	3.18	0.3	1.418
12.617	0.000	2.74	0.00	3.19	0.3	1.422
12.633	0.000	2.74	0.00	3.20	0.3	1.425
12.650	0.000	2.74	0.00	3.20	0.3	1.428
12.667	0.000	2.75	0.00	3.21	0.3	1.432
12.683	0.000	2.75	0.00	3.22	0.3	1.435

12.700	0.000	2.76	0.00	3.23	0.3	1.438
12.717	0.000	2.76	0.00	3.23	0.3	1.442
12.733	0.000	2.77	0.00	3.24	0.3	1.445
12.750	0.000	2.77	0.00	3.25	0.3	1.448
12.767	0.000	2.78	0.00	3.26	0.3	1.452
12.783	0.000	2.78	0.00	3.26	0.3	1.455
12.800	0.000	2.79	0.00	3.27	0.3	1.458
12.817	0.000	2.79	0.00	3.28	0.3	1.462
12.833	0.000	2.80	0.00	3.29	0.3	1.465
12.850	0.000	2.80	0.00	3.29	0.3	1.468
12.867	0.000	2.81	0.00	3.30	0.3	1.472
12.883	0.000	2.82	0.00	3.31	0.3	1.475
12.900	0.000	2.83	0.00	3.32	0.3	1.479
12.917	0.000	2.84	0.00	3.33	0.3	1.482
12.933	0.000	2.85	0.00	3.33	0.3	1.486
12.950	0.000	2.86	0.00	3.34	0.4	1.489
12.967	0.000	2.87	0.00	3.35	0.4	1.492
12.983	0.000	2.88	0.00	3.36	0.4	1.496
13.000	0.000	2.89	0.00	3.36	0.4	1.499
13.017	0.000	2.90	0.00	3.37	0.4	1.503
13.033	0.000	2.91	0.00	3.38	0.4	1.506
13.050	0.000	2.92	0.00	3.39	0.4	1.510
13.067	0.000	2.93	0.00	3.40	0.4	1.514
13.083	0.000	2.94	0.00	3.40	0.4	1.517
13.100	0.000	2.95	0.00	3.41	0.4	1.521
13.117	0.000	2.96	0.00	3.42	0.4	1.524
13.133	0.000	2.97	0.00	3.43	0.4	1.528
13.150	0.000	2.97	0.00	3.44	0.4	1.531
13.167	0.000	2.98	0.00	3.44	0.4	1.535
13.183	0.000	2.99	0.00	3.45	0.4	1.539
13.200	0.000	2.99	0.00	3.46	0.4	1.542
13.217	0.000	3.00	0.00	3.47	0.4	1.546
13.233	0.000	3.00	0.00	3.48	0.4	1.550
13.250	0.000	3.01	0.00	3.48	0.4	1.553
13.267	0.000	3.02	0.00	3.49	0.4	1.557
13.283	0.000	3.02	0.00	3.50	0.4	1.561
13.300	0.000	3.03	0.00	3.51	0.4	1.564
13.317	0.000	3.03	0.00	3.52	0.4	1.568
13.333	0.000	3.04	0.00	3.53	0.4	1.572
13.350	0.000	3.05	0.00	3.53	0.4	1.575
13.367	0.000	3.05	0.00	3.54	0.4	1.579
13.383	0.000	3.06	0.00	3.55	0.4	1.583
13.400	0.000	3.07	0.00	3.56	0.4	1.586
13.417	0.000	3.08	0.00	3.57	0.4	1.590
13.433	0.000	3.10	0.00	3.58	0.4	1.594
13.450	0.000	3.11	0.00	3.58	0.4	1.598
13.467	0.000	3.13	0.00	3.59	0.4	1.601
13.483	0.000	3.14	0.00	3.60	0.4	1.605
13.500	0.000	3.15	0.00	3.61	0.4	1.609
13.517	0.000	3.17	0.00	3.62	0.4	1.613
13.533	0.000	3.18	0.00	3.63	0.4	1.617
13.550	0.000	3.19	0.00	3.64	0.4	1.621
13.567	0.000	3.21	0.00	3.64	0.4	1.624
13.583	0.000	3.22	0.00	3.65	0.4	1.628
13.600	0.000	3.23	0.00	3.66	0.4	1.632

13.617	0.000	3.25	0.00	3.67	0.4	1.636
13.633	0.000	3.26	0.00	3.68	0.4	1.640
13.650	0.000	3.27	0.00	3.69	0.4	1.644
13.667	0.000	3.28	0.00	3.70	0.4	1.648
13.683	0.000	3.29	0.00	3.71	0.4	1.652
13.700	0.000	3.30	0.00	3.72	0.4	1.656
13.717	0.000	3.30	0.00	3.72	0.4	1.660
13.733	0.000	3.31	0.00	3.73	0.4	1.664
13.750	0.000	3.32	0.00	3.74	0.4	1.668
13.767	0.000	3.33	0.00	3.75	0.4	1.672
13.783	0.000	3.34	0.00	3.76	0.4	1.676
13.800	0.000	3.34	0.00	3.77	0.4	1.680
13.817	0.000	3.35	0.00	3.78	0.4	1.684
13.833	0.000	3.36	0.00	3.79	0.4	1.689
13.850	0.000	3.37	0.00	3.80	0.4	1.693
13.867	0.000	3.37	0.00	3.81	0.4	1.697
13.883	0.000	3.38	0.00	3.82	0.4	1.701
13.900	0.000	3.39	0.00	3.82	0.4	1.705
13.917	0.000	3.40	0.00	3.83	0.4	1.709
13.933	0.000	3.42	0.00	3.84	0.4	1.713
13.950	0.000	3.44	0.00	3.85	0.4	1.717
13.967	0.000	3.46	0.00	3.86	0.4	1.722
13.983	0.000	3.48	0.00	3.87	0.4	1.726
14.000	0.000	3.50	0.00	3.88	0.4	1.730
14.017	0.000	3.52	0.00	3.89	0.4	1.734
14.033	0.000	3.54	0.00	3.90	0.4	1.739
14.050	0.000	3.56	0.00	3.91	0.4	1.743
14.067	0.000	3.58	0.00	3.92	0.4	1.747
14.083	0.000	3.60	0.00	3.93	0.4	1.752
14.100	0.000	3.62	0.00	3.94	0.4	1.756
14.117	0.000	3.63	0.00	3.95	0.4	1.761
14.133	0.000	3.65	0.00	3.96	0.4	1.765
14.150	0.000	3.67	0.00	3.97	0.4	1.770
14.167	0.000	3.69	0.00	3.98	0.4	1.774
14.183	0.000	3.70	0.00	3.99	0.4	1.779
14.200	0.000	3.72	0.00	4.00	0.4	1.783
14.217	0.000	3.73	0.00	4.01	0.4	1.788
14.233	0.000	3.74	0.00	4.02	0.5	1.792
14.250	0.000	3.75	0.00	4.02	0.5	1.797
14.267	0.000	3.76	0.00	4.03	0.5	1.801
14.283	0.000	3.78	0.00	4.04	0.5	1.806
14.300	0.000	3.79	0.00	4.05	0.6	1.810
14.317	0.000	3.80	0.00	4.05	0.6	1.814
14.333	0.000	3.81	0.00	4.06	0.6	1.819
14.350	0.000	3.82	0.00	4.07	0.7	1.823
14.367	0.000	3.84	0.00	4.08	0.7	1.828
14.383	0.000	3.85	0.00	4.08	0.7	1.832
14.400	0.000	3.86	0.00	4.09	0.7	1.836
14.417	0.000	3.87	0.00	4.10	0.8	1.840
14.433	0.000	3.89	0.00	4.11	0.8	1.845
14.450	0.000	3.91	0.00	4.11	0.8	1.849
14.467	0.000	3.94	0.00	4.12	0.8	1.853
14.483	0.000	3.97	0.00	4.13	0.9	1.858
14.500	0.000	4.00	0.00	4.14	0.9	1.862
14.517	0.000	4.03	0.00	4.14	0.9	1.866

14.533	0.000	4.06	0.00	4.15	0.9	1.870
14.550	0.000	4.08	0.00	4.16	1.0	1.875
14.567	0.000	4.11	0.00	4.16	1.0	1.879
14.583	0.000	4.14	0.00	4.17	1.0	1.883
14.600	0.000	4.17	0.00	4.18	1.1	1.888
14.617	0.000	4.20	0.00	4.19	1.1	1.892
14.633	0.000	4.23	0.00	4.19	1.1	1.896
14.650	0.000	4.26	0.00	4.20	1.1	1.900
14.667	0.000	4.28	0.00	4.21	1.2	1.905
14.683	0.000	4.31	0.00	4.22	1.2	1.909
14.700	0.000	4.34	0.00	4.22	1.2	1.913
14.717	0.000	4.36	0.00	4.23	1.2	1.918
14.733	0.000	4.38	0.00	4.24	1.3	1.922
14.750	0.000	4.39	0.00	4.25	1.3	1.926
14.767	0.000	4.41	0.00	4.25	1.3	1.930
14.783	0.000	4.43	0.00	4.26	1.3	1.935
14.800	0.000	4.45	0.00	4.27	1.4	1.939
14.817	0.000	4.47	0.00	4.27	1.4	1.943
14.833	0.000	4.49	0.00	4.28	1.4	1.947
14.850	0.000	4.51	0.00	4.29	1.5	1.952
14.867	0.000	4.52	0.00	4.30	1.5	1.956
14.883	0.000	4.54	0.00	4.30	1.5	1.960
14.900	0.000	4.56	0.00	4.31	1.5	1.964
14.917	0.000	4.58	0.00	4.32	1.6	1.968
14.933	0.000	4.60	0.00	4.32	1.6	1.972
14.950	0.000	4.62	0.00	4.33	1.6	1.977
14.967	0.000	4.65	0.00	4.34	1.6	1.981
14.983	0.000	4.70	0.00	4.35	1.7	1.985
15.000	0.000	4.76	0.00	4.35	1.7	1.989
15.017	0.000	4.81	0.00	4.36	1.7	1.993
15.033	0.000	4.86	0.00	4.37	1.7	1.998
15.050	0.000	4.91	0.00	4.38	1.8	2.002
15.067	0.000	4.96	0.00	4.38	1.8	2.006
15.083	0.000	5.01	0.00	4.39	1.8	2.011
15.100	0.000	5.06	0.00	4.40	1.8	2.015
15.117	0.000	5.12	0.00	4.41	1.9	2.020
15.133	0.000	5.17	0.00	4.41	1.9	2.024
15.150	0.000	5.22	0.00	4.42	1.9	2.029
15.167	0.000	5.27	0.00	4.43	2.0	2.033
15.183	0.000	5.32	0.00	4.44	2.0	2.038
15.200	0.000	5.37	0.00	4.45	2.0	2.043
15.217	0.000	5.42	0.00	4.45	2.0	2.047
15.233	0.000	5.47	0.00	4.46	2.1	2.052
15.250	0.000	5.50	0.00	4.47	2.1	2.057
15.267	0.000	5.54	0.00	4.48	2.1	2.061
15.283	0.000	5.58	0.00	4.49	2.2	2.066
15.300	0.000	5.62	0.00	4.49	2.2	2.071
15.317	0.000	5.66	0.00	4.50	2.2	2.075
15.333	0.000	5.69	0.00	4.51	2.2	2.080
15.350	0.000	5.73	0.00	4.52	2.3	2.085
15.367	0.000	5.77	0.00	4.53	2.3	2.090
15.383	0.000	5.81	0.00	4.53	2.3	2.095
15.400	0.000	5.85	0.00	4.54	2.4	2.099
15.417	0.000	5.88	0.00	4.55	2.4	2.104
15.433	0.000	5.92	0.00	4.56	2.4	2.109

15.450	0.000	5.96	0.00	4.57	2.5	2.114
15.467	0.000	6.00	0.00	4.58	2.5	2.119
15.483	0.000	6.06	0.00	4.58	2.5	2.124
15.500	0.000	6.22	0.00	4.59	2.5	2.129
15.517	0.000	6.41	0.00	4.60	2.6	2.134
15.533	0.000	6.59	0.00	4.61	2.6	2.139
15.550	0.000	6.78	0.00	4.62	2.6	2.145
15.567	0.000	6.96	0.00	4.63	2.7	2.151
15.583	0.000	7.14	0.00	4.64	2.7	2.157
15.600	0.000	7.33	0.00	4.65	2.8	2.163
15.617	0.000	7.51	0.00	4.66	2.8	2.170
15.633	0.000	7.70	0.00	4.68	2.8	2.177
15.650	0.000	7.88	0.00	4.69	2.9	2.183
15.667	0.000	8.06	0.00	4.70	2.9	2.191
15.683	0.000	8.25	0.00	4.71	3.0	2.198
15.700	0.000	8.43	0.00	4.72	3.0	2.205
15.717	0.000	8.62	0.00	4.74	3.1	2.213
15.733	0.000	8.80	0.00	4.75	3.1	2.221
15.750	0.000	8.97	0.00	4.76	3.2	2.229
15.767	0.000	9.12	0.00	4.78	3.2	2.237
15.783	0.000	9.28	0.00	4.79	3.3	2.245
15.800	0.000	9.43	0.00	4.81	3.3	2.254
15.817	0.000	9.58	0.00	4.82	3.4	2.262
15.833	0.000	9.73	0.00	4.84	3.4	2.271
15.850	0.000	9.88	0.00	4.85	3.5	2.280
15.867	0.000	10.03	0.00	4.87	3.5	2.289
15.883	0.000	10.18	0.00	4.88	3.6	2.298
15.900	0.000	10.33	0.00	4.90	3.6	2.307
15.917	0.000	10.48	0.00	4.91	3.7	2.316
15.933	0.000	10.63	0.00	4.93	3.8	2.326
15.950	0.000	10.78	0.00	4.95	3.8	2.335
15.967	0.000	10.93	0.00	4.96	3.9	2.345
15.983	0.000	11.08	0.00	4.98	3.9	2.355
16.000	0.000	11.23	0.00	5.00	4.0	2.365
16.017	0.000	12.16	0.00	5.02	4.2	2.376
16.033	0.000	13.87	0.00	5.04	4.7	2.388
16.050	0.000	15.58	0.00	5.06	5.3	2.403
16.067	0.000	17.29	0.00	5.08	6.0	2.418
16.083	0.000	19.01	0.00	5.11	6.7	2.435
16.100	0.000	20.72	0.00	5.14	7.5	2.453
16.117	0.000	22.43	0.00	5.17	8.3	2.473
16.133	0.000	24.14	0.00	5.20	9.2	2.493
16.150	0.000	25.85	0.00	5.23	10.1	2.515
16.167	0.000	27.56	0.00	5.27	11.1	2.538
16.183	0.000	29.27	0.00	5.31	12.1	2.561
16.200	0.000	30.98	0.00	5.35	13.2	2.586
16.217	0.000	32.69	0.00	5.39	14.3	2.611
16.233	0.000	34.41	0.00	5.43	15.4	2.637
16.250	0.000	36.12	0.00	5.47	16.6	2.664
16.267	0.000	38.27	0.00	5.51	17.8	2.692
16.283	0.000	36.83	0.00	5.55	19.0	2.717
16.300	0.000	34.87	0.00	5.59	20.0	2.737
16.317	0.000	32.92	0.00	5.61	20.8	2.754
16.333	0.000	30.97	0.00	5.63	21.5	2.767
16.350	0.000	29.01	0.00	5.65	22.0	2.777

16.367	0.000	27.06	0.00	5.66	22.3	2.783
16.383	0.000	25.10	0.00	5.66	22.5	2.787
16.400	0.000	23.15	0.00	5.66	22.6	2.787
16.417	0.000	21.20	0.00	5.66	22.6	2.786
16.433	0.000	19.24	0.00	5.65	22.5	2.781
16.450	0.000	17.29	0.00	5.64	22.2	2.774
16.467	0.000	15.33	0.00	5.63	21.9	2.765
16.483	0.000	13.38	0.00	5.61	21.4	2.754
16.500	0.000	11.43	0.00	5.59	20.9	2.741
16.517	0.000	9.47	0.00	5.57	20.3	2.726
16.533	0.000	7.73	0.00	5.54	19.6	2.710
16.550	0.000	7.33	0.00	5.52	18.9	2.694
16.567	0.000	7.17	0.00	5.49	18.2	2.679
16.583	0.000	7.01	0.00	5.47	17.5	2.664
16.600	0.000	6.85	0.00	5.45	16.9	2.650
16.617	0.000	6.69	0.00	5.43	16.3	2.637
16.633	0.000	6.53	0.00	5.41	15.7	2.625
16.650	0.000	6.37	0.00	5.39	15.2	2.612
16.667	0.000	6.22	0.00	5.37	14.7	2.601
16.683	0.000	6.06	0.00	5.35	14.2	2.590
16.700	0.000	5.90	0.00	5.34	13.7	2.579
16.717	0.000	5.74	0.00	5.32	13.2	2.569
16.733	0.000	5.58	0.00	5.30	12.8	2.559
16.750	0.000	5.42	0.00	5.29	12.3	2.549
16.767	0.000	5.26	0.00	5.27	11.9	2.540
16.783	0.000	5.11	0.00	5.26	11.5	2.531
16.800	0.000	4.97	0.00	5.25	11.1	2.523
16.817	0.000	4.91	0.00	5.23	10.8	2.515
16.833	0.000	4.86	0.00	5.22	10.4	2.507
16.850	0.000	4.80	0.00	5.21	10.1	2.500
16.867	0.000	4.74	0.00	5.20	9.8	2.493
16.883	0.000	4.69	0.00	5.19	9.5	2.486
16.900	0.000	4.63	0.00	5.18	9.2	2.480
16.917	0.000	4.57	0.00	5.17	8.9	2.474
16.933	0.000	4.52	0.00	5.16	8.7	2.468
16.950	0.000	4.46	0.00	5.15	8.4	2.463
16.967	0.000	4.40	0.00	5.14	8.2	2.457
16.983	0.000	4.35	0.00	5.14	8.0	2.452
17.000	0.000	4.29	0.00	5.13	7.7	2.448
17.017	0.000	4.23	0.00	5.12	7.5	2.443
17.033	0.000	4.18	0.00	5.11	7.3	2.439
17.050	0.000	4.12	0.00	5.11	7.2	2.435
17.067	0.000	4.07	0.00	5.10	7.0	2.431
17.083	0.000	4.04	0.00	5.10	6.8	2.427
17.100	0.000	4.00	0.00	5.09	6.6	2.423
17.117	0.000	3.97	0.00	5.08	6.5	2.420
17.133	0.000	3.93	0.00	5.08	6.3	2.416
17.150	0.000	3.90	0.00	5.07	6.2	2.413
17.167	0.000	3.86	0.00	5.07	6.1	2.410
17.183	0.000	3.83	0.00	5.07	5.9	2.407
17.200	0.000	3.79	0.00	5.06	5.8	2.405
17.217	0.000	3.76	0.00	5.06	5.7	2.402
17.233	0.000	3.72	0.00	5.05	5.6	2.399
17.250	0.000	3.68	0.00	5.05	5.5	2.397
17.267	0.000	3.65	0.00	5.05	5.3	2.395

17.283	0.000	3.61	0.00	5.04	5.2	2.392
17.300	0.000	3.58	0.00	5.04	5.1	2.390
17.317	0.000	3.54	0.00	5.03	5.1	2.388
17.333	0.000	3.52	0.00	5.03	5.0	2.386
17.350	0.000	3.49	0.00	5.03	4.9	2.384
17.367	0.000	3.47	0.00	5.03	4.8	2.382
17.383	0.000	3.44	0.00	5.02	4.7	2.381
17.400	0.000	3.42	0.00	5.02	4.6	2.379
17.417	0.000	3.40	0.00	5.02	4.6	2.377
17.433	0.000	3.37	0.00	5.02	4.5	2.376
17.450	0.000	3.35	0.00	5.01	4.4	2.374
17.467	0.000	3.33	0.00	5.01	4.4	2.373
17.483	0.000	3.30	0.00	5.01	4.3	2.372
17.500	0.000	3.28	0.00	5.01	4.2	2.370
17.517	0.000	3.25	0.00	5.00	4.2	2.369
17.533	0.000	3.23	0.00	5.00	4.1	2.368
17.550	0.000	3.21	0.00	5.00	4.1	2.366
17.567	0.000	3.18	0.00	5.00	4.0	2.365
17.583	0.000	3.16	0.00	5.00	4.0	2.364
17.600	0.000	3.14	0.00	4.99	4.0	2.363
17.617	0.000	3.12	0.00	4.99	4.0	2.362
17.633	0.000	3.11	0.00	4.99	4.0	2.360
17.650	0.000	3.09	0.00	4.99	4.0	2.359
17.667	0.000	3.07	0.00	4.99	4.0	2.358
17.683	0.000	3.05	0.00	4.98	4.0	2.357
17.700	0.000	3.04	0.00	4.98	4.0	2.355
17.717	0.000	3.02	0.00	4.98	4.0	2.354
17.733	0.000	3.00	0.00	4.98	4.0	2.353
17.750	0.000	2.98	0.00	4.98	3.9	2.351
17.767	0.000	2.96	0.00	4.97	3.9	2.350
17.783	0.000	2.95	0.00	4.97	3.9	2.349
17.800	0.000	2.93	0.00	4.97	3.9	2.347
17.817	0.000	2.91	0.00	4.97	3.9	2.346
17.833	0.000	2.89	0.00	4.96	3.9	2.345
17.850	0.000	2.88	0.00	4.96	3.9	2.343
17.867	0.000	2.86	0.00	4.96	3.9	2.342
17.883	0.000	2.85	0.00	4.96	3.9	2.340
17.900	0.000	2.84	0.00	4.95	3.9	2.339
17.917	0.000	2.82	0.00	4.95	3.9	2.338
17.933	0.000	2.81	0.00	4.95	3.8	2.336
17.950	0.000	2.79	0.00	4.95	3.8	2.335
17.967	0.000	2.78	0.00	4.94	3.8	2.333
17.983	0.000	2.77	0.00	4.94	3.8	2.332
18.000	0.000	2.75	0.00	4.94	3.8	2.330
18.017	0.000	2.74	0.00	4.94	3.8	2.329
18.033	0.000	2.73	0.00	4.93	3.8	2.327
18.050	0.000	2.71	0.00	4.93	3.8	2.326
18.067	0.000	2.70	0.00	4.93	3.8	2.324
18.083	0.000	2.68	0.00	4.93	3.8	2.323
18.100	0.000	2.67	0.00	4.92	3.8	2.321
18.117	0.000	2.65	0.00	4.92	3.7	2.320
18.133	0.000	2.63	0.00	4.92	3.7	2.318
18.150	0.000	2.60	0.00	4.92	3.7	2.317
18.167	0.000	2.57	0.00	4.91	3.7	2.315
18.183	0.000	2.55	0.00	4.91	3.7	2.314

18.200	0.000	2.52	0.00	4.91	3.7	2.312
18.217	0.000	2.50	0.00	4.90	3.7	2.310
18.233	0.000	2.47	0.00	4.90	3.7	2.309
18.250	0.000	2.45	0.00	4.90	3.7	2.307
18.267	0.000	2.42	0.00	4.90	3.7	2.305
18.283	0.000	2.40	0.00	4.89	3.6	2.304
18.300	0.000	2.37	0.00	4.89	3.6	2.302
18.317	0.000	2.34	0.00	4.89	3.6	2.300
18.333	0.000	2.32	0.00	4.88	3.6	2.298
18.350	0.000	2.29	0.00	4.88	3.6	2.296
18.367	0.000	2.27	0.00	4.88	3.6	2.295
18.383	0.000	2.25	0.00	4.87	3.6	2.293
18.400	0.000	2.24	0.00	4.87	3.6	2.291
18.417	0.000	2.23	0.00	4.87	3.6	2.289
18.433	0.000	2.23	0.00	4.87	3.5	2.287
18.450	0.000	2.22	0.00	4.86	3.5	2.286
18.467	0.000	2.21	0.00	4.86	3.5	2.284
18.483	0.000	2.20	0.00	4.86	3.5	2.282
18.500	0.000	2.19	0.00	4.85	3.5	2.280
18.517	0.000	2.18	0.00	4.85	3.5	2.278
18.533	0.000	2.17	0.00	4.85	3.5	2.276
18.550	0.000	2.16	0.00	4.84	3.5	2.275
18.567	0.000	2.15	0.00	4.84	3.5	2.273
18.583	0.000	2.14	0.00	4.84	3.4	2.271
18.600	0.000	2.13	0.00	4.83	3.4	2.269
18.617	0.000	2.13	0.00	4.83	3.4	2.267
18.633	0.000	2.12	0.00	4.83	3.4	2.266
18.650	0.000	2.11	0.00	4.82	3.4	2.264
18.667	0.000	2.10	0.00	4.82	3.4	2.262
18.683	0.000	2.09	0.00	4.82	3.4	2.260
18.700	0.000	2.09	0.00	4.82	3.4	2.259
18.717	0.000	2.08	0.00	4.81	3.4	2.257
18.733	0.000	2.07	0.00	4.81	3.3	2.255
18.750	0.000	2.06	0.00	4.81	3.3	2.253
18.767	0.000	2.06	0.00	4.80	3.3	2.252
18.783	0.000	2.05	0.00	4.80	3.3	2.250
18.800	0.000	2.04	0.00	4.80	3.3	2.248
18.817	0.000	2.03	0.00	4.79	3.3	2.246
18.833	0.000	2.03	0.00	4.79	3.3	2.245
18.850	0.000	2.02	0.00	4.79	3.3	2.243
18.867	0.000	2.01	0.00	4.79	3.3	2.241
18.883	0.000	2.00	0.00	4.78	3.3	2.239
18.900	0.000	1.99	0.00	4.78	3.2	2.238
18.917	0.000	1.99	0.00	4.78	3.2	2.236
18.933	0.000	1.98	0.00	4.77	3.2	2.234
18.950	0.000	1.98	0.00	4.77	3.2	2.233
18.967	0.000	1.97	0.00	4.77	3.2	2.231
18.983	0.000	1.96	0.00	4.77	3.2	2.229
19.000	0.000	1.96	0.00	4.76	3.2	2.228
19.017	0.000	1.95	0.00	4.76	3.2	2.226
19.033	0.000	1.94	0.00	4.76	3.2	2.224
19.050	0.000	1.94	0.00	4.75	3.1	2.223
19.067	0.000	1.93	0.00	4.75	3.1	2.221
19.083	0.000	1.92	0.00	4.75	3.1	2.219
19.100	0.000	1.92	0.00	4.75	3.1	2.218

19.117	0.000	1.91	0.00	4.74	3.1	2.216
19.133	0.000	1.90	0.00	4.74	3.1	2.214
19.150	0.000	1.90	0.00	4.74	3.1	2.213
19.167	0.000	1.89	0.00	4.73	3.1	2.211
19.183	0.000	1.89	0.00	4.73	3.1	2.209
19.200	0.000	1.88	0.00	4.73	3.1	2.208
19.217	0.000	1.87	0.00	4.73	3.0	2.206
19.233	0.000	1.87	0.00	4.72	3.0	2.205
19.250	0.000	1.86	0.00	4.72	3.0	2.203
19.267	0.000	1.86	0.00	4.72	3.0	2.201
19.283	0.000	1.85	0.00	4.71	3.0	2.200
19.300	0.000	1.85	0.00	4.71	3.0	2.198
19.317	0.000	1.84	0.00	4.71	3.0	2.197
19.333	0.000	1.83	0.00	4.71	3.0	2.195
19.350	0.000	1.83	0.00	4.70	3.0	2.193
19.367	0.000	1.82	0.00	4.70	3.0	2.192
19.383	0.000	1.82	0.00	4.70	2.9	2.190
19.400	0.000	1.81	0.00	4.70	2.9	2.189
19.417	0.000	1.81	0.00	4.69	2.9	2.187
19.433	0.000	1.80	0.00	4.69	2.9	2.186
19.450	0.000	1.80	0.00	4.69	2.9	2.184
19.467	0.000	1.79	0.00	4.69	2.9	2.183
19.483	0.000	1.79	0.00	4.68	2.9	2.181
19.500	0.000	1.78	0.00	4.68	2.9	2.180
19.517	0.000	1.78	0.00	4.68	2.9	2.178
19.533	0.000	1.77	0.00	4.68	2.9	2.177
19.550	0.000	1.77	0.00	4.67	2.9	2.175
19.567	0.000	1.76	0.00	4.67	2.8	2.174
19.583	0.000	1.76	0.00	4.67	2.8	2.172
19.600	0.000	1.75	0.00	4.66	2.8	2.171
19.617	0.000	1.75	0.00	4.66	2.8	2.169
19.633	0.000	1.74	0.00	4.66	2.8	2.168
19.650	0.000	1.74	0.00	4.66	2.8	2.166
19.667	0.000	1.73	0.00	4.65	2.8	2.165
19.683	0.000	1.73	0.00	4.65	2.8	2.163
19.700	0.000	1.72	0.00	4.65	2.8	2.162
19.717	0.000	1.72	0.00	4.65	2.8	2.160
19.733	0.000	1.71	0.00	4.64	2.8	2.159
19.750	0.000	1.71	0.00	4.64	2.7	2.158
19.767	0.000	1.70	0.00	4.64	2.7	2.156
19.783	0.000	1.70	0.00	4.64	2.7	2.155
19.800	0.000	1.69	0.00	4.64	2.7	2.153
19.817	0.000	1.69	0.00	4.63	2.7	2.152
19.833	0.000	1.69	0.00	4.63	2.7	2.151
19.850	0.000	1.68	0.00	4.63	2.7	2.149
19.867	0.000	1.68	0.00	4.63	2.7	2.148
19.883	0.000	1.67	0.00	4.62	2.7	2.146
19.900	0.000	1.67	0.00	4.62	2.7	2.145
19.917	0.000	1.66	0.00	4.62	2.7	2.144
19.933	0.000	1.66	0.00	4.62	2.6	2.142
19.950	0.000	1.65	0.00	4.61	2.6	2.141
19.967	0.000	1.65	0.00	4.61	2.6	2.140
19.983	0.000	1.65	0.00	4.61	2.6	2.138
20.000	0.000	1.64	0.00	4.61	2.6	2.137
20.017	0.000	1.64	0.00	4.60	2.6	2.136

20.033	0.000	1.64	0.00	4.60	2.6	2.134
20.050	0.000	1.63	0.00	4.60	2.6	2.133
20.067	0.000	1.63	0.00	4.60	2.6	2.132
20.083	0.000	1.62	0.00	4.60	2.6	2.130
20.100	0.000	1.62	0.00	4.59	2.6	2.129
20.117	0.000	1.62	0.00	4.59	2.6	2.128
20.133	0.000	1.61	0.00	4.59	2.6	2.126
20.150	0.000	1.61	0.00	4.59	2.5	2.125
20.167	0.000	1.60	0.00	4.58	2.5	2.124
20.183	0.000	1.60	0.00	4.58	2.5	2.123
20.200	0.000	1.60	0.00	4.58	2.5	2.121
20.217	0.000	1.59	0.00	4.58	2.5	2.120
20.233	0.000	1.59	0.00	4.58	2.5	2.119
20.250	0.000	1.58	0.00	4.57	2.5	2.117
20.267	0.000	1.58	0.00	4.57	2.5	2.116
20.283	0.000	1.58	0.00	4.57	2.5	2.115
20.300	0.000	1.57	0.00	4.57	2.5	2.114
20.317	0.000	1.57	0.00	4.57	2.5	2.113
20.333	0.000	1.57	0.00	4.56	2.5	2.111
20.350	0.000	1.56	0.00	4.56	2.4	2.110
20.367	0.000	1.56	0.00	4.56	2.4	2.109
20.383	0.000	1.56	0.00	4.56	2.4	2.108
20.400	0.000	1.55	0.00	4.55	2.4	2.106
20.417	0.000	1.55	0.00	4.55	2.4	2.105
20.433	0.000	1.55	0.00	4.55	2.4	2.104
20.450	0.000	1.54	0.00	4.55	2.4	2.103
20.467	0.000	1.54	0.00	4.55	2.4	2.102
20.483	0.000	1.53	0.00	4.54	2.4	2.100
20.500	0.000	1.53	0.00	4.54	2.4	2.099
20.517	0.000	1.53	0.00	4.54	2.4	2.098
20.533	0.000	1.52	0.00	4.54	2.4	2.097
20.550	0.000	1.52	0.00	4.54	2.4	2.096
20.567	0.000	1.52	0.00	4.53	2.4	2.095
20.583	0.000	1.52	0.00	4.53	2.3	2.094
20.600	0.000	1.51	0.00	4.53	2.3	2.092
20.617	0.000	1.51	0.00	4.53	2.3	2.091
20.633	0.000	1.51	0.00	4.53	2.3	2.090
20.650	0.000	1.50	0.00	4.52	2.3	2.089
20.667	0.000	1.50	0.00	4.52	2.3	2.088
20.683	0.000	1.50	0.00	4.52	2.3	2.087
20.700	0.000	1.49	0.00	4.52	2.3	2.086
20.717	0.000	1.49	0.00	4.52	2.3	2.085
20.733	0.000	1.49	0.00	4.52	2.3	2.083
20.750	0.000	1.48	0.00	4.51	2.3	2.082
20.767	0.000	1.48	0.00	4.51	2.3	2.081
20.783	0.000	1.48	0.00	4.51	2.3	2.080
20.800	0.000	1.47	0.00	4.51	2.3	2.079
20.817	0.000	1.47	0.00	4.51	2.3	2.078
20.833	0.000	1.47	0.00	4.50	2.2	2.077
20.850	0.000	1.47	0.00	4.50	2.2	2.076
20.867	0.000	1.46	0.00	4.50	2.2	2.075
20.883	0.000	1.46	0.00	4.50	2.2	2.074
20.900	0.000	1.46	0.00	4.50	2.2	2.073
20.917	0.000	1.45	0.00	4.50	2.2	2.072
20.933	0.000	1.45	0.00	4.49	2.2	2.071

20.950	0.000	1.45	0.00	4.49	2.2	2.070
20.967	0.000	1.44	0.00	4.49	2.2	2.069
20.983	0.000	1.44	0.00	4.49	2.2	2.068
21.000	0.000	1.44	0.00	4.49	2.2	2.067
21.017	0.000	1.44	0.00	4.48	2.2	2.066
21.033	0.000	1.43	0.00	4.48	2.2	2.065
21.050	0.000	1.43	0.00	4.48	2.2	2.064
21.067	0.000	1.43	0.00	4.48	2.2	2.063
21.083	0.000	1.42	0.00	4.48	2.1	2.062
21.100	0.000	1.42	0.00	4.48	2.1	2.061
21.117	0.000	1.42	0.00	4.47	2.1	2.060
21.133	0.000	1.42	0.00	4.47	2.1	2.059
21.150	0.000	1.41	0.00	4.47	2.1	2.058
21.167	0.000	1.41	0.00	4.47	2.1	2.057
21.183	0.000	1.41	0.00	4.47	2.1	2.056
21.200	0.000	1.41	0.00	4.47	2.1	2.055
21.217	0.000	1.40	0.00	4.46	2.1	2.054
21.233	0.000	1.40	0.00	4.46	2.1	2.053
21.250	0.000	1.40	0.00	4.46	2.1	2.052
21.267	0.000	1.40	0.00	4.46	2.1	2.051
21.283	0.000	1.39	0.00	4.46	2.1	2.050
21.300	0.000	1.39	0.00	4.46	2.1	2.049
21.317	0.000	1.39	0.00	4.45	2.1	2.048
21.333	0.000	1.39	0.00	4.45	2.1	2.047
21.350	0.000	1.38	0.00	4.45	2.1	2.046
21.367	0.000	1.38	0.00	4.45	2.0	2.045
21.383	0.000	1.38	0.00	4.45	2.0	2.044
21.400	0.000	1.38	0.00	4.45	2.0	2.043
21.417	0.000	1.37	0.00	4.45	2.0	2.043
21.433	0.000	1.37	0.00	4.44	2.0	2.042
21.450	0.000	1.37	0.00	4.44	2.0	2.041
21.467	0.000	1.37	0.00	4.44	2.0	2.040
21.483	0.000	1.36	0.00	4.44	2.0	2.039
21.500	0.000	1.36	0.00	4.44	2.0	2.038
21.517	0.000	1.36	0.00	4.44	2.0	2.037
21.533	0.000	1.36	0.00	4.43	2.0	2.036
21.550	0.000	1.35	0.00	4.43	2.0	2.035
21.567	0.000	1.35	0.00	4.43	2.0	2.035
21.583	0.000	1.35	0.00	4.43	2.0	2.034
21.600	0.000	1.35	0.00	4.43	2.0	2.033
21.617	0.000	1.34	0.00	4.43	2.0	2.032
21.633	0.000	1.34	0.00	4.43	2.0	2.031
21.650	0.000	1.34	0.00	4.42	2.0	2.030
21.667	0.000	1.34	0.00	4.42	1.9	2.029
21.683	0.000	1.33	0.00	4.42	1.9	2.029
21.700	0.000	1.33	0.00	4.42	1.9	2.028
21.717	0.000	1.33	0.00	4.42	1.9	2.027
21.733	0.000	1.33	0.00	4.42	1.9	2.026
21.750	0.000	1.32	0.00	4.42	1.9	2.025
21.767	0.000	1.32	0.00	4.41	1.9	2.025
21.783	0.000	1.32	0.00	4.41	1.9	2.024
21.800	0.000	1.32	0.00	4.41	1.9	2.023
21.817	0.000	1.32	0.00	4.41	1.9	2.022
21.833	0.000	1.31	0.00	4.41	1.9	2.021
21.850	0.000	1.31	0.00	4.41	1.9	2.020

21.867	0.000	1.31	0.00	4.41	1.9	2.020
21.883	0.000	1.31	0.00	4.40	1.9	2.019
21.900	0.000	1.31	0.00	4.40	1.9	2.018
21.917	0.000	1.30	0.00	4.40	1.9	2.017
21.933	0.000	1.30	0.00	4.40	1.9	2.017
21.950	0.000	1.30	0.00	4.40	1.9	2.016
21.967	0.000	1.30	0.00	4.40	1.9	2.015
21.983	0.000	1.29	0.00	4.40	1.9	2.014
22.000	0.000	1.29	0.00	4.40	1.8	2.013
22.017	0.000	1.29	0.00	4.39	1.8	2.013
22.033	0.000	1.29	0.00	4.39	1.8	2.012
22.050	0.000	1.29	0.00	4.39	1.8	2.011
22.067	0.000	1.28	0.00	4.39	1.8	2.010
22.083	0.000	1.28	0.00	4.39	1.8	2.010
22.100	0.000	1.28	0.00	4.39	1.8	2.009
22.117	0.000	1.28	0.00	4.39	1.8	2.008
22.133	0.000	1.28	0.00	4.38	1.8	2.007
22.150	0.000	1.27	0.00	4.38	1.8	2.007
22.167	0.000	1.27	0.00	4.38	1.8	2.006
22.183	0.000	1.27	0.00	4.38	1.8	2.005
22.200	0.000	1.27	0.00	4.38	1.8	2.005
22.216	0.000	1.27	0.00	4.38	1.8	2.004
22.233	0.000	1.26	0.00	4.38	1.8	2.003
22.250	0.000	1.26	0.00	4.38	1.8	2.002
22.266	0.000	1.26	0.00	4.38	1.8	2.002
22.283	0.000	1.26	0.00	4.37	1.8	2.001
22.300	0.000	1.26	0.00	4.37	1.8	2.000
22.316	0.000	1.25	0.00	4.37	1.8	2.000
22.333	0.000	1.25	0.00	4.37	1.8	1.999
22.350	0.000	1.25	0.00	4.37	1.8	1.998
22.366	0.000	1.25	0.00	4.37	1.8	1.997
22.383	0.000	1.25	0.00	4.37	1.7	1.997
22.400	0.000	1.24	0.00	4.37	1.7	1.996
22.416	0.000	1.24	0.00	4.36	1.7	1.995
22.433	0.000	1.24	0.00	4.36	1.7	1.995
22.450	0.000	1.24	0.00	4.36	1.7	1.994
22.466	0.000	1.24	0.00	4.36	1.7	1.993
22.483	0.000	1.24	0.00	4.36	1.7	1.993
22.500	0.000	1.23	0.00	4.36	1.7	1.992
22.516	0.000	1.23	0.00	4.36	1.7	1.991
22.533	0.000	1.23	0.00	4.36	1.7	1.991
22.550	0.000	1.23	0.00	4.36	1.7	1.990
22.566	0.000	1.23	0.00	4.35	1.7	1.989
22.583	0.000	1.22	0.00	4.35	1.7	1.989
22.600	0.000	1.22	0.00	4.35	1.7	1.988
22.616	0.000	1.22	0.00	4.35	1.7	1.987
22.633	0.000	1.22	0.00	4.35	1.7	1.987
22.650	0.000	1.22	0.00	4.35	1.7	1.986
22.666	0.000	1.22	0.00	4.35	1.7	1.986
22.683	0.000	1.21	0.00	4.35	1.7	1.985
22.700	0.000	1.21	0.00	4.35	1.7	1.984
22.716	0.000	1.21	0.00	4.34	1.7	1.984
22.733	0.000	1.21	0.00	4.34	1.7	1.983
22.750	0.000	1.21	0.00	4.34	1.7	1.982
22.766	0.000	1.20	0.00	4.34	1.7	1.982

22.783	0.000	1.20	0.00	4.34	1.6	1.981
22.800	0.000	1.20	0.00	4.34	1.6	1.981
22.816	0.000	1.20	0.00	4.34	1.6	1.980
22.833	0.000	1.20	0.00	4.34	1.6	1.979
22.850	0.000	1.20	0.00	4.34	1.6	1.979
22.866	0.000	1.19	0.00	4.33	1.6	1.978
22.883	0.000	1.19	0.00	4.33	1.6	1.978
22.900	0.000	1.19	0.00	4.33	1.6	1.977
22.916	0.000	1.19	0.00	4.33	1.6	1.976
22.933	0.000	1.19	0.00	4.33	1.6	1.976
22.950	0.000	1.19	0.00	4.33	1.6	1.975
22.966	0.000	1.18	0.00	4.33	1.6	1.975
22.983	0.000	1.18	0.00	4.33	1.6	1.974
23.000	0.000	1.18	0.00	4.33	1.6	1.973
23.016	0.000	1.18	0.00	4.33	1.6	1.973
23.033	0.000	1.18	0.00	4.32	1.6	1.972
23.050	0.000	1.18	0.00	4.32	1.6	1.972
23.066	0.000	1.17	0.00	4.32	1.6	1.971
23.083	0.000	1.17	0.00	4.32	1.6	1.971
23.100	0.000	1.17	0.00	4.32	1.6	1.970
23.116	0.000	1.17	0.00	4.32	1.6	1.969
23.133	0.000	1.17	0.00	4.32	1.6	1.969
23.150	0.000	1.17	0.00	4.32	1.6	1.968
23.166	0.000	1.16	0.00	4.32	1.6	1.968
23.183	0.000	1.16	0.00	4.32	1.6	1.967
23.200	0.000	1.16	0.00	4.32	1.6	1.967
23.216	0.000	1.16	0.00	4.31	1.6	1.966
23.233	0.000	1.16	0.00	4.31	1.6	1.966
23.250	0.000	1.16	0.00	4.31	1.5	1.965
23.266	0.000	1.16	0.00	4.31	1.5	1.965
23.283	0.000	1.15	0.00	4.31	1.5	1.964
23.300	0.000	1.15	0.00	4.31	1.5	1.963
23.316	0.000	1.15	0.00	4.31	1.5	1.963
23.333	0.000	1.15	0.00	4.31	1.5	1.962
23.350	0.000	1.15	0.00	4.31	1.5	1.962
23.366	0.000	1.15	0.00	4.31	1.5	1.961
23.383	0.000	1.14	0.00	4.31	1.5	1.961
23.400	0.000	1.14	0.00	4.30	1.5	1.960
23.416	0.000	1.14	0.00	4.30	1.5	1.960
23.433	0.000	1.14	0.00	4.30	1.5	1.959
23.450	0.000	1.14	0.00	4.30	1.5	1.959
23.466	0.000	1.14	0.00	4.30	1.5	1.958
23.483	0.000	1.14	0.00	4.30	1.5	1.958
23.500	0.000	1.13	0.00	4.30	1.5	1.957
23.516	0.000	1.13	0.00	4.30	1.5	1.957
23.533	0.000	1.13	0.00	4.30	1.5	1.956
23.550	0.000	1.13	0.00	4.30	1.5	1.956
23.566	0.000	1.13	0.00	4.30	1.5	1.955
23.583	0.000	1.13	0.00	4.29	1.5	1.955
23.600	0.000	1.13	0.00	4.29	1.5	1.954
23.616	0.000	1.12	0.00	4.29	1.5	1.954
23.633	0.000	1.12	0.00	4.29	1.5	1.953
23.650	0.000	1.12	0.00	4.29	1.5	1.953
23.666	0.000	1.12	0.00	4.29	1.5	1.952
23.683	0.000	1.12	0.00	4.29	1.5	1.952

23.700	0.000	1.12	0.00	4.29	1.5	1.951
23.716	0.000	1.12	0.00	4.29	1.5	1.951
23.733	0.000	1.11	0.00	4.29	1.5	1.950
23.750	0.000	1.11	0.00	4.29	1.5	1.950
23.766	0.000	1.11	0.00	4.29	1.5	1.950
23.783	0.000	1.11	0.00	4.28	1.4	1.949
23.800	0.000	1.11	0.00	4.28	1.4	1.949
23.816	0.000	1.11	0.00	4.28	1.4	1.948
23.833	0.000	1.11	0.00	4.28	1.4	1.948
23.850	0.000	1.10	0.00	4.28	1.4	1.947
23.866	0.000	1.10	0.00	4.28	1.4	1.947
23.883	0.000	1.10	0.00	4.28	1.4	1.946
23.900	0.000	1.10	0.00	4.28	1.4	1.946
23.916	0.000	1.10	0.00	4.28	1.4	1.945
23.933	0.000	1.10	0.00	4.28	1.4	1.945
23.950	0.000	1.10	0.00	4.28	1.4	1.944
23.966	0.000	1.10	0.00	4.28	1.4	1.944
23.983	0.000	1.09	0.00	4.28	1.4	1.944
24.000	0.000	1.09	0.00	4.27	1.4	1.943

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 5.179 AF
BASIN STORAGE = 0.114 AF (WITH 0.000 AF INITIALLY FILLED)
OUTFLOW VOLUME = 5.065 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 301.00 TO NODE 302.00 IS CODE = 4

>>>>MODEL PIPEFLOW ROUTING OF STREAM #3<<<<<
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MODEL PIPEFLOW ROUTING OF STREAM 3 WHERE
STORAGE EFFECTS ARE NEGLECTED WITHIN THE PIPE, FLOW
VELOCITIES ARE ESTIMATED BY ASSUMING STEADY FLOW FOR
EACH UNIT INTERVAL(NORMAL DEPTH, Dn), AND FLOWS IN EXCESS
OF (.82)(DIAMETER) ARE PONDED AT THE UPSTREAM INLET:
UNIT INTERVAL FLOW VELOCITY COMPUTED USING Dn UP TO
(0.938)(DIAMETER):

PIPELENGTH(FT) = 364.00 MANNINGS FACTOR = 0.013
UPSTREAM ELEVATION(FT) = 1246.00
DOWNSTREAM ELEVATION(FT) = 1237.00
PIPE DIAMETER(FT) = 2.00

NORMAL DEPTH VELOCITY PIPE ROUTING RESULTS:

TIME (HRS)	INFLOW (CFS)	VELOCITY (FPS)	OUTFLOW (CFS)	UPSTREAM PONDING(AF)
10.000	0.24	0.79	0.24	0.000

10.017	0.24	0.79	0.24	0.000
10.033	0.24	0.80	0.24	0.000
10.050	0.24	0.80	0.24	0.000
10.067	0.24	0.80	0.24	0.000
10.083	0.24	0.80	0.24	0.000
10.100	0.24	0.80	0.24	0.000
10.117	0.24	0.81	0.24	0.000
10.133	0.24	0.81	0.24	0.000
10.150	0.24	0.81	0.24	0.000
10.167	0.24	0.81	0.24	0.000
10.183	0.25	0.81	0.25	0.000
10.200	0.25	0.81	0.25	0.000
10.217	0.25	0.82	0.25	0.000
10.233	0.25	0.82	0.25	0.000
10.250	0.25	0.82	0.25	0.000
10.267	0.25	0.82	0.25	0.000
10.283	0.25	0.82	0.25	0.000
10.300	0.25	0.82	0.25	0.000
10.317	0.25	0.83	0.25	0.000
10.333	0.25	0.83	0.25	0.000
10.350	0.25	0.83	0.25	0.000
10.367	0.25	0.83	0.25	0.000
10.383	0.25	0.83	0.25	0.000
10.400	0.25	0.83	0.25	0.000
10.417	0.25	0.84	0.25	0.000
10.433	0.25	0.84	0.25	0.000
10.450	0.25	0.84	0.25	0.000
10.467	0.25	0.84	0.25	0.000
10.483	0.25	0.84	0.25	0.000
10.500	0.26	0.85	0.26	0.000
10.517	0.26	0.85	0.26	0.000
10.533	0.26	0.85	0.26	0.000
10.550	0.26	0.85	0.26	0.000
10.567	0.26	0.85	0.26	0.000
10.583	0.26	0.85	0.26	0.000
10.600	0.26	0.86	0.26	0.000
10.617	0.26	0.86	0.26	0.000
10.633	0.26	0.86	0.26	0.000
10.650	0.26	0.86	0.26	0.000
10.667	0.26	0.86	0.26	0.000
10.683	0.26	0.87	0.26	0.000
10.700	0.26	0.87	0.26	0.000
10.717	0.26	0.87	0.26	0.000
10.733	0.26	0.87	0.26	0.000
10.750	0.26	0.87	0.26	0.000
10.767	0.26	0.87	0.26	0.000
10.783	0.26	0.88	0.26	0.000
10.800	0.27	0.88	0.27	0.000
10.817	0.27	0.88	0.27	0.000
10.833	0.27	0.88	0.27	0.000
10.850	0.27	0.88	0.27	0.000
10.867	0.27	0.89	0.27	0.000
10.883	0.27	0.89	0.27	0.000
10.900	0.27	0.89	0.27	0.000
10.917	0.27	0.89	0.27	0.000

10.933	0.27	0.89	0.27	0.000
10.950	0.27	0.89	0.27	0.000
10.967	0.27	0.90	0.27	0.000
10.983	0.27	0.90	0.27	0.000
11.000	0.27	0.90	0.27	0.000
11.017	0.27	0.90	0.27	0.000
11.033	0.27	0.90	0.27	0.000
11.050	0.27	0.91	0.27	0.000
11.067	0.27	0.91	0.27	0.000
11.083	0.27	0.91	0.27	0.000
11.100	0.28	0.91	0.28	0.000
11.117	0.28	0.91	0.28	0.000
11.133	0.28	0.92	0.28	0.000
11.150	0.28	0.92	0.28	0.000
11.167	0.28	0.92	0.28	0.000
11.183	0.28	0.92	0.28	0.000
11.200	0.28	0.92	0.28	0.000
11.217	0.28	0.93	0.28	0.000
11.233	0.28	0.93	0.28	0.000
11.250	0.28	0.93	0.28	0.000
11.267	0.28	0.93	0.28	0.000
11.283	0.28	0.93	0.28	0.000
11.300	0.28	0.93	0.28	0.000
11.317	0.28	0.94	0.28	0.000
11.333	0.28	0.94	0.28	0.000
11.350	0.28	0.94	0.28	0.000
11.367	0.28	0.94	0.28	0.000
11.383	0.29	0.94	0.29	0.000
11.400	0.29	0.95	0.29	0.000
11.417	0.29	0.95	0.29	0.000
11.433	0.29	0.95	0.29	0.000
11.450	0.29	0.95	0.29	0.000
11.467	0.29	0.95	0.29	0.000
11.483	0.29	0.96	0.29	0.000
11.500	0.29	0.96	0.29	0.000
11.517	0.29	0.96	0.29	0.000
11.533	0.29	0.96	0.29	0.000
11.550	0.29	0.96	0.29	0.000
11.567	0.29	0.97	0.29	0.000
11.583	0.29	0.97	0.29	0.000
11.600	0.29	0.97	0.29	0.000
11.617	0.29	0.97	0.29	0.000
11.633	0.29	0.97	0.29	0.000
11.650	0.29	0.98	0.29	0.000
11.667	0.30	0.98	0.30	0.000
11.683	0.30	0.98	0.30	0.000
11.700	0.30	0.98	0.30	0.000
11.717	0.30	0.98	0.30	0.000
11.733	0.30	0.99	0.30	0.000
11.750	0.30	0.99	0.30	0.000
11.767	0.30	0.99	0.30	0.000
11.783	0.30	0.99	0.30	0.000
11.800	0.30	0.99	0.30	0.000
11.817	0.30	1.00	0.30	0.000
11.833	0.30	1.00	0.30	0.000

11.850	0.30	1.00	0.30	0.000
11.867	0.30	1.00	0.30	0.000
11.883	0.30	1.01	0.30	0.000
11.900	0.30	1.01	0.30	0.000
11.917	0.30	1.01	0.30	0.000
11.933	0.31	1.01	0.31	0.000
11.950	0.31	1.01	0.31	0.000
11.967	0.31	1.02	0.31	0.000
11.983	0.31	1.02	0.31	0.000
12.000	0.31	1.02	0.31	0.000
12.017	0.31	1.02	0.31	0.000
12.033	0.31	1.02	0.31	0.000
12.050	0.31	1.03	0.31	0.000
12.067	0.31	1.03	0.31	0.000
12.083	0.31	1.03	0.31	0.000
12.100	0.31	1.03	0.31	0.000
12.117	0.31	1.03	0.31	0.000
12.133	0.31	1.04	0.31	0.000
12.150	0.31	1.04	0.31	0.000
12.167	0.31	1.04	0.31	0.000
12.183	0.32	1.04	0.32	0.000
12.200	0.32	1.05	0.32	0.000
12.217	0.32	1.05	0.32	0.000
12.233	0.32	1.05	0.32	0.000
12.250	0.32	1.05	0.32	0.000
12.267	0.32	1.06	0.32	0.000
12.283	0.32	1.06	0.32	0.000
12.300	0.32	1.06	0.32	0.000
12.317	0.32	1.06	0.32	0.000
12.333	0.32	1.06	0.32	0.000
12.350	0.32	1.07	0.32	0.000
12.367	0.32	1.07	0.32	0.000
12.383	0.32	1.07	0.32	0.000
12.400	0.32	1.07	0.32	0.000
12.417	0.33	1.08	0.33	0.000
12.433	0.33	1.08	0.33	0.000
12.450	0.33	1.08	0.33	0.000
12.467	0.33	1.08	0.33	0.000
12.483	0.33	1.09	0.33	0.000
12.500	0.33	1.09	0.33	0.000
12.517	0.33	1.09	0.33	0.000
12.533	0.33	1.09	0.33	0.000
12.550	0.33	1.10	0.33	0.000
12.567	0.33	1.10	0.33	0.000
12.583	0.33	1.10	0.33	0.000
12.600	0.33	1.10	0.33	0.000
12.617	0.33	1.11	0.33	0.000
12.633	0.34	1.11	0.34	0.000
12.650	0.34	1.11	0.34	0.000
12.667	0.34	1.12	0.34	0.000
12.683	0.34	1.12	0.34	0.000
12.700	0.34	1.12	0.34	0.000
12.717	0.34	1.12	0.34	0.000
12.733	0.34	1.13	0.34	0.000
12.750	0.34	1.13	0.34	0.000

12.767	0.34	1.13	0.34	0.000
12.783	0.34	1.13	0.34	0.000
12.800	0.34	1.14	0.34	0.000
12.817	0.34	1.14	0.34	0.000
12.833	0.34	1.14	0.34	0.000
12.850	0.35	1.14	0.35	0.000
12.867	0.35	1.15	0.35	0.000
12.883	0.35	1.15	0.35	0.000
12.900	0.35	1.15	0.35	0.000
12.917	0.35	1.15	0.35	0.000
12.933	0.35	1.16	0.35	0.000
12.950	0.35	1.16	0.35	0.000
12.967	0.35	1.16	0.35	0.000
12.983	0.35	1.17	0.35	0.000
13.000	0.35	1.17	0.35	0.000
13.017	0.35	1.17	0.35	0.000
13.033	0.35	1.17	0.35	0.000
13.050	0.36	1.18	0.36	0.000
13.067	0.36	1.18	0.36	0.000
13.083	0.36	1.18	0.36	0.000
13.100	0.36	1.18	0.36	0.000
13.117	0.36	1.19	0.36	0.000
13.133	0.36	1.19	0.36	0.000
13.150	0.36	1.19	0.36	0.000
13.167	0.36	1.20	0.36	0.000
13.183	0.36	1.20	0.36	0.000
13.200	0.36	1.20	0.36	0.000
13.217	0.36	1.20	0.36	0.000
13.233	0.36	1.21	0.36	0.000
13.250	0.37	1.21	0.37	0.000
13.267	0.37	1.21	0.37	0.000
13.283	0.37	1.22	0.37	0.000
13.300	0.37	1.22	0.37	0.000
13.317	0.37	1.22	0.37	0.000
13.333	0.37	1.22	0.37	0.000
13.350	0.37	1.23	0.37	0.000
13.367	0.37	1.23	0.37	0.000
13.383	0.37	1.23	0.37	0.000
13.400	0.37	1.24	0.37	0.000
13.417	0.37	1.24	0.37	0.000
13.433	0.38	1.24	0.37	0.000
13.450	0.38	1.24	0.38	0.000
13.467	0.38	1.25	0.38	0.000
13.483	0.38	1.25	0.38	0.000
13.500	0.38	1.25	0.38	0.000
13.517	0.38	1.26	0.38	0.000
13.533	0.38	1.26	0.38	0.000
13.550	0.38	1.26	0.38	0.000
13.567	0.38	1.27	0.38	0.000
13.583	0.38	1.27	0.38	0.000
13.600	0.38	1.27	0.38	0.000
13.617	0.38	1.27	0.38	0.000
13.633	0.39	1.28	0.39	0.000
13.650	0.39	1.28	0.39	0.000
13.667	0.39	1.28	0.39	0.000

13.683	0.39	1.29	0.39	0.000
13.700	0.39	1.29	0.39	0.000
13.717	0.39	1.29	0.39	0.000
13.733	0.39	1.30	0.39	0.000
13.750	0.39	1.30	0.39	0.000
13.767	0.39	1.30	0.39	0.000
13.783	0.39	1.31	0.39	0.000
13.800	0.40	1.31	0.40	0.000
13.817	0.40	1.31	0.40	0.000
13.833	0.40	1.32	0.40	0.000
13.850	0.40	1.32	0.40	0.000
13.867	0.40	1.32	0.40	0.000
13.883	0.40	1.32	0.40	0.000
13.900	0.40	1.33	0.40	0.000
13.917	0.40	1.33	0.40	0.000
13.933	0.40	1.33	0.40	0.000
13.950	0.40	1.34	0.40	0.000
13.967	0.41	1.34	0.41	0.000
13.983	0.41	1.34	0.41	0.000
14.000	0.41	1.35	0.41	0.000
14.017	0.41	1.35	0.41	0.000
14.033	0.41	1.35	0.41	0.000
14.050	0.41	1.36	0.41	0.000
14.067	0.41	1.36	0.41	0.000
14.083	0.41	1.36	0.41	0.000
14.100	0.41	1.37	0.41	0.000
14.117	0.41	1.37	0.41	0.000
14.133	0.42	1.37	0.42	0.000
14.150	0.42	1.38	0.42	0.000
14.167	0.42	1.38	0.42	0.000
14.183	0.42	1.39	0.42	0.000
14.200	0.42	1.39	0.42	0.000
14.217	0.44	1.44	0.42	0.000
14.233	0.46	1.53	0.42	0.000
14.250	0.49	1.63	0.42	0.000
14.267	0.52	1.72	0.43	0.000
14.283	0.55	1.81	0.52	0.000
14.300	0.57	1.90	0.67	0.000
14.317	0.60	1.99	0.60	0.000
14.333	0.63	2.08	0.63	0.000
14.350	0.66	2.17	0.66	0.000
14.367	0.68	2.26	0.74	0.000
14.383	0.71	2.35	0.74	0.000
14.400	0.74	2.44	0.74	0.000
14.417	0.76	2.52	0.76	0.000
14.433	0.79	2.61	0.79	0.000
14.450	0.82	2.70	0.82	0.000
14.467	0.84	2.79	0.84	0.000
14.483	0.87	2.87	0.87	0.000
14.500	0.89	2.96	0.89	0.000
14.517	0.92	3.05	0.92	0.000
14.533	0.95	3.14	0.96	0.000
14.550	0.97	3.23	1.02	0.000
14.567	1.00	3.31	1.00	0.000
14.583	1.03	3.40	1.03	0.000

14.600	1.05	3.49	1.05	0.000
14.617	1.08	3.58	1.08	0.000
14.633	1.11	3.67	1.11	0.000
14.650	1.13	3.75	1.13	0.000
14.667	1.16	3.84	1.16	0.000
14.683	1.19	3.93	1.19	0.000
14.700	1.21	4.02	1.21	0.000
14.717	1.24	4.11	1.24	0.000
14.733	1.27	4.19	1.27	0.000
14.750	1.29	4.28	1.29	0.000
14.767	1.32	4.37	1.32	0.000
14.783	1.35	4.46	1.35	0.000
14.800	1.37	4.54	1.37	0.000
14.817	1.40	4.63	1.40	0.000
14.833	1.42	4.72	1.42	0.000
14.850	1.45	4.80	1.45	0.000
14.867	1.48	4.89	1.48	0.000
14.883	1.50	4.97	1.50	0.000
14.900	1.53	5.06	1.53	0.000
14.917	1.55	5.15	1.55	0.000
14.933	1.58	5.23	1.58	0.000
14.950	1.61	5.32	1.61	0.000
14.967	1.63	5.40	1.63	0.000
14.983	1.66	5.49	1.66	0.000
15.000	1.68	5.57	1.68	0.000
15.017	1.71	5.66	1.71	0.000
15.033	1.74	5.75	1.74	0.000
15.050	1.76	5.84	1.76	0.000
15.067	1.79	5.90	1.79	0.000
15.083	1.82	5.92	1.81	0.000
15.100	1.84	5.93	1.82	0.000
15.117	1.87	5.95	1.85	0.000
15.133	1.90	5.97	1.88	0.000
15.150	1.93	5.99	1.91	0.000
15.167	1.96	6.01	1.93	0.000
15.183	1.98	6.03	1.96	0.000
15.200	2.01	6.05	1.99	0.000
15.217	2.04	6.07	2.02	0.000
15.233	2.07	6.09	2.05	0.000
15.250	2.10	6.11	2.08	0.000
15.267	2.13	6.13	2.11	0.000
15.283	2.16	6.15	2.14	0.000
15.300	2.19	6.17	2.17	0.000
15.317	2.22	6.19	2.19	0.000
15.333	2.25	6.22	2.22	0.000
15.350	2.28	6.24	2.25	0.000
15.367	2.30	6.26	2.28	0.000
15.383	2.33	6.28	2.31	0.000
15.400	2.36	6.30	2.34	0.000
15.417	2.39	6.32	2.37	0.000
15.433	2.42	6.34	2.40	0.000
15.450	2.45	6.36	2.43	0.000
15.467	2.48	6.38	2.46	0.000
15.483	2.51	6.40	2.49	0.000
15.500	2.54	6.42	2.52	0.000

15.517	2.58	6.45	2.55	0.000
15.533	2.61	6.47	2.59	0.000
15.550	2.64	6.49	2.62	0.000
15.567	2.68	6.52	2.66	0.000
15.583	2.72	6.55	2.69	0.000
15.600	2.76	6.57	2.73	0.000
15.617	2.80	6.60	2.77	0.000
15.633	2.84	6.63	2.81	0.000
15.650	2.88	6.66	2.85	0.000
15.667	2.92	6.69	2.89	0.000
15.683	2.97	6.72	2.94	0.000
15.700	3.01	6.75	2.98	0.000
15.717	3.06	6.78	3.03	0.000
15.733	3.11	6.82	3.08	0.000
15.750	3.16	6.85	3.13	0.000
15.767	3.21	6.89	3.18	0.000
15.783	3.26	6.92	3.23	0.000
15.800	3.31	6.96	3.28	0.000
15.817	3.36	7.00	3.33	0.000
15.833	3.41	7.03	3.38	0.000
15.850	3.47	7.07	3.44	0.000
15.867	3.52	7.11	3.49	0.000
15.883	3.58	7.15	3.55	0.000
15.900	3.64	7.18	3.60	0.000
15.917	3.69	7.21	3.66	0.000
15.933	3.75	7.24	3.72	0.000
15.950	3.81	7.27	3.78	0.000
15.967	3.87	7.30	3.83	0.000
15.983	3.93	7.34	3.90	0.000
16.000	3.99	7.37	3.96	0.000
16.017	4.24	7.51	4.10	0.000
16.033	4.74	7.78	4.47	0.000
16.050	5.33	8.09	5.04	0.000
16.067	5.99	8.37	5.64	0.000
16.083	6.71	8.66	6.35	0.000
16.100	7.48	8.95	7.11	0.000
16.117	8.32	9.23	7.92	0.000
16.133	9.20	9.51	8.80	0.000
16.150	10.13	9.80	9.73	0.000
16.167	11.11	10.05	10.68	0.000
16.183	12.14	10.26	11.67	0.000
16.200	13.20	10.48	12.73	0.000
16.217	14.30	10.71	13.84	0.000
16.233	15.44	10.89	14.94	0.000
16.250	16.61	11.10	16.13	0.000
16.267	17.82	11.33	17.36	0.000
16.283	18.99	11.51	18.53	0.000
16.300	19.99	11.66	19.59	0.000
16.317	20.81	11.76	20.48	0.000
16.333	21.47	11.84	21.20	0.000
16.350	21.97	11.89	21.76	0.000
16.367	22.33	11.93	22.18	0.000
16.383	22.55	11.95	22.46	0.000
16.400	22.64	11.96	22.60	0.000
16.417	22.61	11.95	22.63	0.000

16.433	22.47	11.94	22.53	0.000
16.450	22.22	11.92	22.33	0.000
16.467	21.88	11.88	22.02	0.000
16.483	21.43	11.84	21.62	0.000
16.500	20.90	11.78	21.11	0.000
16.517	20.28	11.70	20.53	0.000
16.533	19.59	11.61	19.87	0.000
16.550	18.88	11.50	19.15	0.000
16.567	18.19	11.39	18.46	0.000
16.583	17.53	11.28	17.79	0.000
16.600	16.91	11.16	17.15	0.000
16.617	16.31	11.04	16.54	0.000
16.633	15.74	10.94	15.97	0.000
16.650	15.19	10.85	15.42	0.000
16.667	14.66	10.77	14.89	0.000
16.683	14.16	10.69	14.38	0.000
16.700	13.68	10.58	13.88	0.000
16.717	13.21	10.49	13.41	0.000
16.733	12.77	10.39	12.96	0.000
16.750	12.34	10.30	12.52	0.000
16.767	11.92	10.22	12.11	0.000
16.783	11.53	10.14	11.71	0.000
16.800	11.14	10.06	11.32	0.000
16.817	10.78	9.99	10.95	0.000
16.833	10.43	9.89	10.58	0.000
16.850	10.10	9.79	10.24	0.000
16.867	9.78	9.69	9.92	0.000
16.883	9.48	9.60	9.61	0.000
16.900	9.20	9.51	9.32	0.000
16.917	8.93	9.43	9.05	0.000
16.933	8.67	9.35	8.78	0.000
16.950	8.42	9.26	8.53	0.000
16.967	8.19	9.19	8.29	0.000
16.983	7.96	9.11	8.07	0.000
17.000	7.74	9.04	7.85	0.000
17.017	7.54	8.97	7.64	0.000
17.033	7.34	8.91	7.44	0.000
17.050	7.15	8.84	7.25	0.000
17.067	6.97	8.77	7.06	0.000
17.083	6.80	8.70	6.88	0.000
17.100	6.64	8.63	6.71	0.000
17.117	6.48	8.57	6.56	0.000
17.133	6.33	8.51	6.40	0.000
17.150	6.19	8.45	6.26	0.000
17.167	6.05	8.39	6.12	0.000
17.183	5.92	8.34	5.99	0.000
17.200	5.80	8.29	5.86	0.000
17.217	5.68	8.24	5.74	0.000
17.233	5.56	8.19	5.62	0.000
17.250	5.45	8.14	5.51	0.000
17.267	5.35	8.10	5.40	0.000
17.283	5.25	8.05	5.29	0.000
17.300	5.15	7.99	5.20	0.000
17.317	5.05	7.94	5.10	0.000
17.333	4.96	7.89	5.01	0.000

17.350	4.88	7.85	4.92	0.000
17.367	4.80	7.80	4.84	0.000
17.383	4.72	7.76	4.76	0.000
17.400	4.64	7.72	4.68	0.000
17.417	4.57	7.68	4.61	0.000
17.433	4.50	7.64	4.54	0.000
17.450	4.43	7.61	4.47	0.000
17.467	4.37	7.57	4.40	0.000
17.483	4.30	7.54	4.34	0.000
17.500	4.24	7.51	4.28	0.000
17.517	4.19	7.47	4.22	0.000
17.533	4.13	7.44	4.16	0.000
17.550	4.08	7.41	4.11	0.000
17.567	4.04	7.39	4.06	0.000
17.583	4.02	7.38	4.03	0.000
17.600	4.01	7.38	4.02	0.000
17.617	4.01	7.38	4.01	0.000
17.633	4.00	7.37	4.00	0.000
17.650	3.99	7.37	4.00	0.000
17.667	3.98	7.36	3.99	0.000
17.683	3.98	7.36	3.98	0.000
17.700	3.97	7.36	3.97	0.000
17.717	3.96	7.35	3.96	0.000
17.733	3.95	7.35	3.96	0.000
17.750	3.94	7.34	3.95	0.000
17.767	3.94	7.34	3.94	0.000
17.783	3.93	7.33	3.93	0.000
17.800	3.92	7.33	3.92	0.000
17.817	3.91	7.32	3.92	0.000
17.833	3.90	7.32	3.91	0.000
17.850	3.89	7.32	3.90	0.000
17.867	3.88	7.31	3.89	0.000
17.883	3.88	7.31	3.88	0.000
17.900	3.87	7.30	3.87	0.000
17.917	3.86	7.30	3.86	0.000
17.933	3.85	7.29	3.85	0.000
17.950	3.84	7.29	3.85	0.000
17.967	3.83	7.28	3.84	0.000
17.983	3.82	7.28	3.83	0.000
18.000	3.81	7.27	3.82	0.000
18.017	3.80	7.27	3.81	0.000
18.033	3.80	7.26	3.80	0.000
18.050	3.79	7.26	3.79	0.000
18.067	3.78	7.25	3.78	0.000
18.083	3.77	7.25	3.77	0.000
18.100	3.76	7.24	3.76	0.000
18.117	3.75	7.24	3.75	0.000
18.133	3.74	7.23	3.75	0.000
18.150	3.73	7.23	3.74	0.000
18.167	3.72	7.22	3.73	0.000
18.183	3.71	7.22	3.72	0.000
18.200	3.70	7.21	3.71	0.000
18.217	3.69	7.21	3.70	0.000
18.233	3.68	7.20	3.69	0.000
18.250	3.67	7.19	3.68	0.000

18.267	3.66	7.19	3.67	0.000
18.283	3.65	7.18	3.66	0.000
18.300	3.64	7.18	3.64	0.000
18.317	3.63	7.17	3.63	0.000
18.333	3.62	7.17	3.62	0.000
18.350	3.61	7.16	3.61	0.000
18.367	3.59	7.15	3.60	0.000
18.383	3.58	7.15	3.59	0.000
18.400	3.57	7.14	3.58	0.000
18.417	3.56	7.14	3.57	0.000
18.433	3.55	7.13	3.56	0.000
18.450	3.54	7.12	3.54	0.000
18.467	3.53	7.11	3.53	0.000
18.483	3.51	7.10	3.52	0.000
18.500	3.50	7.10	3.51	0.000
18.517	3.49	7.09	3.50	0.000
18.533	3.48	7.08	3.49	0.000
18.550	3.47	7.07	3.48	0.000
18.567	3.46	7.06	3.47	0.000
18.583	3.45	7.06	3.45	0.000
18.600	3.44	7.05	3.44	0.000
18.617	3.43	7.04	3.43	0.000
18.633	3.41	7.03	3.42	0.000
18.650	3.40	7.03	3.41	0.000
18.667	3.39	7.02	3.40	0.000
18.683	3.38	7.01	3.39	0.000
18.700	3.37	7.00	3.38	0.000
18.717	3.36	7.00	3.37	0.000
18.733	3.35	6.99	3.35	0.000
18.750	3.34	6.98	3.34	0.000
18.767	3.33	6.97	3.33	0.000
18.783	3.32	6.96	3.32	0.000
18.800	3.31	6.96	3.31	0.000
18.817	3.29	6.95	3.30	0.000
18.833	3.28	6.94	3.29	0.000
18.850	3.27	6.93	3.28	0.000
18.867	3.26	6.93	3.27	0.000
18.883	3.25	6.92	3.26	0.000
18.900	3.24	6.91	3.25	0.000
18.917	3.23	6.90	3.24	0.000
18.933	3.22	6.90	3.23	0.000
18.950	3.21	6.89	3.22	0.000
18.967	3.20	6.88	3.20	0.000
18.983	3.19	6.88	3.19	0.000
19.000	3.18	6.87	3.18	0.000
19.017	3.17	6.86	3.17	0.000
19.033	3.16	6.85	3.16	0.000
19.050	3.15	6.85	3.15	0.000
19.067	3.14	6.84	3.14	0.000
19.083	3.13	6.83	3.13	0.000
19.100	3.12	6.82	3.12	0.000
19.117	3.11	6.82	3.11	0.000
19.133	3.10	6.81	3.10	0.000
19.150	3.09	6.80	3.09	0.000
19.167	3.08	6.80	3.08	0.000

19.183	3.07	6.79	3.07	0.000
19.200	3.06	6.78	3.06	0.000
19.217	3.05	6.77	3.05	0.000
19.233	3.04	6.77	3.04	0.000
19.250	3.03	6.76	3.03	0.000
19.267	3.02	6.75	3.02	0.000
19.283	3.01	6.75	3.01	0.000
19.300	3.00	6.74	3.00	0.000
19.317	2.99	6.73	2.99	0.000
19.333	2.98	6.73	2.98	0.000
19.350	2.97	6.72	2.97	0.000
19.367	2.96	6.71	2.96	0.000
19.383	2.95	6.71	2.95	0.000
19.400	2.94	6.70	2.94	0.000
19.417	2.93	6.69	2.93	0.000
19.433	2.92	6.69	2.92	0.000
19.450	2.91	6.68	2.91	0.000
19.467	2.90	6.67	2.91	0.000
19.483	2.89	6.67	2.90	0.000
19.500	2.88	6.66	2.89	0.000
19.517	2.87	6.65	2.88	0.000
19.533	2.86	6.65	2.87	0.000
19.550	2.85	6.64	2.86	0.000
19.567	2.84	6.63	2.85	0.000
19.583	2.83	6.63	2.84	0.000
19.600	2.82	6.62	2.83	0.000
19.617	2.82	6.61	2.82	0.000
19.633	2.81	6.61	2.81	0.000
19.650	2.80	6.60	2.80	0.000
19.667	2.79	6.60	2.79	0.000
19.683	2.78	6.59	2.79	0.000
19.700	2.77	6.58	2.78	0.000
19.717	2.76	6.58	2.77	0.000
19.733	2.75	6.57	2.76	0.000
19.750	2.74	6.56	2.75	0.000
19.767	2.73	6.56	2.74	0.000
19.783	2.73	6.55	2.73	0.000
19.800	2.72	6.55	2.72	0.000
19.817	2.71	6.54	2.71	0.000
19.833	2.70	6.53	2.71	0.000
19.850	2.69	6.53	2.70	0.000
19.867	2.68	6.52	2.69	0.000
19.883	2.67	6.52	2.68	0.000
19.900	2.67	6.51	2.67	0.000
19.917	2.66	6.50	2.66	0.000
19.933	2.65	6.50	2.65	0.000
19.950	2.64	6.49	2.65	0.000
19.967	2.63	6.49	2.64	0.000
19.983	2.62	6.48	2.63	0.000
20.000	2.62	6.47	2.62	0.000
20.017	2.61	6.47	2.61	0.000
20.033	2.60	6.46	2.60	0.000
20.050	2.59	6.46	2.60	0.000
20.067	2.58	6.45	2.59	0.000
20.083	2.57	6.45	2.58	0.000

20.100	2.57	6.44	2.57	0.000
20.117	2.56	6.43	2.56	0.000
20.133	2.55	6.43	2.56	0.000
20.150	2.54	6.42	2.55	0.000
20.167	2.53	6.42	2.54	0.000
20.183	2.53	6.41	2.53	0.000
20.200	2.52	6.41	2.52	0.000
20.217	2.51	6.40	2.52	0.000
20.233	2.50	6.40	2.51	0.000
20.250	2.49	6.39	2.50	0.000
20.267	2.49	6.38	2.49	0.000
20.283	2.48	6.38	2.48	0.000
20.300	2.47	6.37	2.48	0.000
20.317	2.46	6.37	2.47	0.000
20.333	2.46	6.36	2.46	0.000
20.350	2.45	6.36	2.45	0.000
20.367	2.44	6.35	2.45	0.000
20.383	2.43	6.35	2.44	0.000
20.400	2.43	6.34	2.43	0.000
20.417	2.42	6.34	2.42	0.000
20.433	2.41	6.33	2.42	0.000
20.450	2.40	6.33	2.41	0.000
20.467	2.40	6.32	2.40	0.000
20.483	2.39	6.32	2.39	0.000
20.500	2.38	6.31	2.39	0.000
20.517	2.38	6.31	2.38	0.000
20.533	2.37	6.30	2.37	0.000
20.550	2.36	6.30	2.37	0.000
20.567	2.35	6.29	2.36	0.000
20.583	2.35	6.29	2.35	0.000
20.600	2.34	6.28	2.34	0.000
20.617	2.33	6.28	2.34	0.000
20.633	2.33	6.27	2.33	0.000
20.650	2.32	6.27	2.32	0.000
20.667	2.31	6.26	2.32	0.000
20.683	2.30	6.26	2.31	0.000
20.700	2.30	6.25	2.30	0.000
20.717	2.29	6.25	2.30	0.000
20.733	2.28	6.24	2.29	0.000
20.750	2.28	6.24	2.28	0.000
20.767	2.27	6.23	2.28	0.000
20.783	2.26	6.23	2.27	0.000
20.800	2.26	6.22	2.26	0.000
20.817	2.25	6.22	2.26	0.000
20.833	2.24	6.21	2.25	0.000
20.850	2.24	6.21	2.24	0.000
20.867	2.23	6.20	2.24	0.000
20.883	2.22	6.20	2.23	0.000
20.900	2.22	6.20	2.22	0.000
20.917	2.21	6.19	2.22	0.000
20.933	2.20	6.19	2.21	0.000
20.950	2.20	6.18	2.20	0.000
20.967	2.19	6.18	2.20	0.000
20.983	2.19	6.17	2.19	0.000
21.000	2.18	6.17	2.18	0.000

21.017	2.17	6.16	2.18	0.000
21.033	2.17	6.16	2.17	0.000
21.050	2.16	6.16	2.16	0.000
21.067	2.15	6.15	2.16	0.000
21.083	2.15	6.15	2.15	0.000
21.100	2.14	6.14	2.15	0.000
21.117	2.14	6.14	2.14	0.000
21.133	2.13	6.13	2.13	0.000
21.150	2.12	6.13	2.13	0.000
21.167	2.12	6.13	2.12	0.000
21.183	2.11	6.12	2.12	0.000
21.200	2.11	6.12	2.11	0.000
21.217	2.10	6.11	2.10	0.000
21.233	2.09	6.11	2.10	0.000
21.250	2.09	6.10	2.09	0.000
21.267	2.08	6.10	2.09	0.000
21.283	2.08	6.10	2.08	0.000
21.300	2.07	6.09	2.07	0.000
21.317	2.06	6.09	2.07	0.000
21.333	2.06	6.08	2.06	0.000
21.350	2.05	6.08	2.06	0.000
21.367	2.05	6.08	2.05	0.000
21.383	2.04	6.07	2.05	0.000
21.400	2.04	6.07	2.04	0.000
21.417	2.03	6.06	2.04	0.000
21.433	2.02	6.06	2.03	0.000
21.450	2.02	6.06	2.02	0.000
21.467	2.01	6.05	2.02	0.000
21.483	2.01	6.05	2.01	0.000
21.500	2.00	6.04	2.01	0.000
21.517	2.00	6.04	2.00	0.000
21.533	1.99	6.04	2.00	0.000
21.550	1.99	6.03	1.99	0.000
21.567	1.98	6.03	1.98	0.000
21.583	1.98	6.03	1.98	0.000
21.600	1.97	6.02	1.97	0.000
21.617	1.96	6.02	1.97	0.000
21.633	1.96	6.01	1.96	0.000
21.650	1.95	6.01	1.96	0.000
21.667	1.95	6.01	1.95	0.000
21.683	1.94	6.00	1.95	0.000
21.700	1.94	6.00	1.94	0.000
21.717	1.93	6.00	1.94	0.000
21.733	1.93	5.99	1.93	0.000
21.750	1.92	5.99	1.93	0.000
21.767	1.92	5.99	1.92	0.000
21.783	1.91	5.98	1.92	0.000
21.800	1.91	5.98	1.91	0.000
21.817	1.90	5.98	1.91	0.000
21.833	1.90	5.97	1.90	0.000
21.850	1.89	5.97	1.90	0.000
21.867	1.89	5.96	1.89	0.000
21.883	1.88	5.96	1.89	0.000
21.900	1.88	5.96	1.88	0.000
21.917	1.87	5.95	1.88	0.000

21.933	1.87	5.95	1.87	0.000
21.950	1.86	5.95	1.87	0.000
21.967	1.86	5.94	1.86	0.000
21.983	1.85	5.94	1.86	0.000
22.000	1.85	5.94	1.85	0.000
22.017	1.84	5.93	1.85	0.000
22.033	1.84	5.93	1.84	0.000
22.050	1.84	5.93	1.84	0.000
22.067	1.83	5.92	1.83	0.000
22.083	1.83	5.92	1.83	0.000
22.100	1.82	5.92	1.82	0.000
22.117	1.82	5.91	1.82	0.000
22.133	1.81	5.91	1.82	0.000
22.150	1.81	5.91	1.81	0.000
22.167	1.80	5.91	1.81	0.000
22.183	1.80	5.90	1.80	0.000
22.200	1.79	5.90	1.80	0.000
22.217	1.79	5.90	1.79	0.000
22.233	1.78	5.89	1.79	0.000
22.250	1.78	5.89	1.78	0.000
22.267	1.78	5.88	1.78	0.000
22.283	1.77	5.87	1.77	0.000
22.300	1.77	5.85	1.77	0.000
22.317	1.76	5.84	1.76	0.000
22.333	1.76	5.82	1.76	0.000
22.350	1.75	5.81	1.75	0.000
22.367	1.75	5.79	1.75	0.000
22.383	1.75	5.78	1.75	0.000
22.400	1.74	5.77	1.74	0.000
22.417	1.74	5.75	1.74	0.000
22.433	1.73	5.74	1.73	0.000
22.450	1.73	5.72	1.73	0.000
22.467	1.72	5.71	1.72	0.000
22.483	1.72	5.70	1.72	0.000
22.500	1.72	5.68	1.72	0.000
22.517	1.71	5.67	1.71	0.000
22.533	1.71	5.65	1.71	0.000
22.550	1.70	5.64	1.70	0.000
22.567	1.70	5.63	1.70	0.000
22.583	1.70	5.61	1.70	0.000
22.600	1.69	5.60	1.69	0.000
22.617	1.69	5.59	1.69	0.000
22.633	1.68	5.58	1.68	0.000
22.650	1.68	5.56	1.68	0.000
22.667	1.68	5.55	1.68	0.000
22.683	1.67	5.54	1.67	0.000
22.700	1.67	5.52	1.67	0.000
22.717	1.66	5.51	1.66	0.000
22.733	1.66	5.50	1.66	0.000
22.750	1.66	5.48	1.66	0.000
22.767	1.65	5.47	1.65	0.000
22.783	1.65	5.46	1.65	0.000
22.800	1.65	5.45	1.65	0.000
22.817	1.64	5.43	1.64	0.000
22.833	1.64	5.42	1.64	0.000

22.850	1.63	5.41	1.63	0.000
22.867	1.63	5.40	1.63	0.000
22.883	1.63	5.38	1.63	0.000
22.900	1.62	5.37	1.62	0.000
22.917	1.62	5.36	1.62	0.000
22.933	1.62	5.35	1.62	0.000
22.950	1.61	5.34	1.61	0.000
22.967	1.61	5.32	1.61	0.000
22.983	1.60	5.31	1.60	0.000
23.000	1.60	5.30	1.60	0.000
23.017	1.60	5.29	1.60	0.000
23.033	1.59	5.28	1.59	0.000
23.050	1.59	5.26	1.59	0.000
23.067	1.59	5.25	1.59	0.000
23.083	1.58	5.24	1.58	0.000
23.100	1.58	5.23	1.58	0.000
23.117	1.58	5.22	1.58	0.000
23.133	1.57	5.21	1.57	0.000
23.150	1.57	5.20	1.57	0.000
23.167	1.57	5.18	1.57	0.000
23.183	1.56	5.17	1.56	0.000
23.200	1.56	5.16	1.56	0.000
23.217	1.56	5.15	1.56	0.000
23.233	1.55	5.14	1.55	0.000
23.250	1.55	5.13	1.55	0.000
23.267	1.55	5.12	1.55	0.000
23.283	1.54	5.11	1.54	0.000
23.300	1.54	5.10	1.54	0.000
23.317	1.54	5.08	1.54	0.000
23.333	1.53	5.07	1.53	0.000
23.350	1.53	5.06	1.53	0.000
23.367	1.53	5.05	1.53	0.000
23.383	1.52	5.04	1.52	0.000
23.400	1.52	5.03	1.52	0.000
23.417	1.52	5.02	1.52	0.000
23.433	1.51	5.01	1.51	0.000
23.450	1.51	5.00	1.51	0.000
23.467	1.51	4.99	1.51	0.000
23.483	1.50	4.98	1.50	0.000
23.500	1.50	4.97	1.50	0.000
23.517	1.50	4.96	1.50	0.000
23.533	1.49	4.95	1.49	0.000
23.550	1.49	4.94	1.49	0.000
23.567	1.49	4.93	1.49	0.000
23.583	1.49	4.92	1.49	0.000
23.600	1.48	4.91	1.48	0.000
23.617	1.48	4.90	1.48	0.000
23.633	1.48	4.89	1.48	0.000
23.650	1.47	4.88	1.47	0.000
23.667	1.47	4.87	1.47	0.000
23.683	1.47	4.86	1.47	0.000
23.700	1.46	4.85	1.46	0.000
23.717	1.46	4.84	1.46	0.000
23.733	1.46	4.83	1.46	0.000
23.750	1.46	4.82	1.46	0.000

23.767	1.45	4.81	1.45	0.000
23.783	1.45	4.80	1.45	0.000
23.800	1.45	4.79	1.45	0.000
23.817	1.44	4.78	1.44	0.000
23.833	1.44	4.77	1.44	0.000
23.850	1.44	4.76	1.44	0.000
23.867	1.44	4.75	1.44	0.000
23.883	1.43	4.74	1.43	0.000
23.900	1.43	4.73	1.43	0.000
23.917	1.43	4.72	1.43	0.000
23.933	1.42	4.71	1.42	0.000
23.950	1.42	4.70	1.42	0.000
23.967	1.42	4.70	1.42	0.000
23.983	1.42	4.69	1.42	0.000
24.000	1.41	4.68	1.41	0.000

FLOW PROCESS FROM NODE 302.00 TO NODE 102.00 IS CODE = 5.1

 >>>>MODEL CHANNEL ROUTING OF STREAM #3 BY THE TRANSLATION METHOD<<<<<
 =====

THE TRANSLATION MODEL NEGLECTS ALL STORAGE ATTENUATION EFFECTS,
 AND MOVES THE STREAM 3 RUNOFF HYDROGRAPH FORWARD IN TIME.

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 15.00 CHANNEL Z = 2.00
 UPSTREAM ELEVATION(FT) = 1237.00
 DOWNSTREAM ELEVATION(FT) = 1232.00
 CHANNEL LENGTH(FT) = 443.00 MANNING'S FACTOR = 0.025
 CONSTANT LOSS RATE(CFS) = 0.00

MEAN-FLOW RATE NORMAL-DEPTH FLOW VELOCITIES(FPS) ARE AS FOLLOWS:

(FLOW RATE (CFS)) [FLOW VELOCITY (FPS)]
 AVERAGED PEAK 5-MINUTE: (16.4).....[3.05]
 AVERAGED PEAK 15-MINUTE: (21.5).....[3.37]
 AVERAGED PEAK 30-MINUTE: (18.9).....[3.21]
 AVERAGED PEAK 1-HOUR: (14.3).....[2.92]
 AVERAGED PEAK 3-HOUR: (7.5).....[2.19]
 AVERAGED PEAK 6-HOUR: (5.1).....[1.88]
 AVERAGED PEAK 24-HOUR: (1.8).....[1.19]

USER-SPECIFIED CHANNEL AVERAGE FLOW VELOCITY(FPS) = 3.420

HYDROGRAPH TRANSLATION TIME

= (CHANNEL LENGTH)/(AVERAGE FLOW VELOCITY)
 = (443.00)/(3.420) = 0.036 HRS

TRANSLATION METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 3) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS
			LOSS (STREAM 3) (CFS)
10.000	0.24	0.24	0.24
10.017	0.24	0.24	0.24
10.033	0.24	0.24	0.24

10.050	0.24	0.24	0.24
10.067	0.24	0.24	0.24
10.083	0.24	0.24	0.24
10.100	0.24	0.24	0.24
10.117	0.24	0.24	0.24
10.133	0.24	0.24	0.24
10.150	0.24	0.24	0.24
10.167	0.24	0.24	0.24
10.183	0.25	0.24	0.24
10.200	0.25	0.24	0.24
10.217	0.25	0.25	0.25
10.233	0.25	0.25	0.25
10.250	0.25	0.25	0.25
10.267	0.25	0.25	0.25
10.283	0.25	0.25	0.25
10.300	0.25	0.25	0.25
10.317	0.25	0.25	0.25
10.333	0.25	0.25	0.25
10.350	0.25	0.25	0.25
10.367	0.25	0.25	0.25
10.383	0.25	0.25	0.25
10.400	0.25	0.25	0.25
10.417	0.25	0.25	0.25
10.433	0.25	0.25	0.25
10.450	0.25	0.25	0.25
10.467	0.25	0.25	0.25
10.483	0.25	0.25	0.25
10.500	0.26	0.25	0.25
10.517	0.26	0.25	0.25
10.533	0.26	0.26	0.26
10.550	0.26	0.26	0.26
10.567	0.26	0.26	0.26
10.583	0.26	0.26	0.26
10.600	0.26	0.26	0.26
10.617	0.26	0.26	0.26
10.633	0.26	0.26	0.26
10.650	0.26	0.26	0.26
10.667	0.26	0.26	0.26
10.683	0.26	0.26	0.26
10.700	0.26	0.26	0.26
10.717	0.26	0.26	0.26
10.733	0.26	0.26	0.26
10.750	0.26	0.26	0.26
10.767	0.26	0.26	0.26
10.783	0.26	0.26	0.26
10.800	0.27	0.26	0.26
10.817	0.27	0.26	0.26
10.833	0.27	0.27	0.27
10.850	0.27	0.27	0.27
10.867	0.27	0.27	0.27
10.883	0.27	0.27	0.27
10.900	0.27	0.27	0.27
10.917	0.27	0.27	0.27
10.933	0.27	0.27	0.27
10.950	0.27	0.27	0.27

10.967	0.27	0.27	0.27
10.983	0.27	0.27	0.27
11.000	0.27	0.27	0.27
11.017	0.27	0.27	0.27
11.033	0.27	0.27	0.27
11.050	0.27	0.27	0.27
11.067	0.27	0.27	0.27
11.083	0.27	0.27	0.27
11.100	0.28	0.27	0.27
11.117	0.28	0.27	0.27
11.133	0.28	0.28	0.28
11.150	0.28	0.28	0.28
11.167	0.28	0.28	0.28
11.183	0.28	0.28	0.28
11.200	0.28	0.28	0.28
11.217	0.28	0.28	0.28
11.233	0.28	0.28	0.28
11.250	0.28	0.28	0.28
11.267	0.28	0.28	0.28
11.283	0.28	0.28	0.28
11.300	0.28	0.28	0.28
11.317	0.28	0.28	0.28
11.333	0.28	0.28	0.28
11.350	0.28	0.28	0.28
11.367	0.28	0.28	0.28
11.383	0.29	0.28	0.28
11.400	0.29	0.28	0.28
11.417	0.29	0.29	0.29
11.433	0.29	0.29	0.29
11.450	0.29	0.29	0.29
11.467	0.29	0.29	0.29
11.483	0.29	0.29	0.29
11.500	0.29	0.29	0.29
11.517	0.29	0.29	0.29
11.533	0.29	0.29	0.29
11.550	0.29	0.29	0.29
11.567	0.29	0.29	0.29
11.583	0.29	0.29	0.29
11.600	0.29	0.29	0.29
11.617	0.29	0.29	0.29
11.633	0.29	0.29	0.29
11.650	0.29	0.29	0.29
11.667	0.30	0.29	0.29
11.683	0.30	0.29	0.29
11.700	0.30	0.30	0.30
11.717	0.30	0.30	0.30
11.733	0.30	0.30	0.30
11.750	0.30	0.30	0.30
11.767	0.30	0.30	0.30
11.783	0.30	0.30	0.30
11.800	0.30	0.30	0.30
11.817	0.30	0.30	0.30
11.833	0.30	0.30	0.30
11.850	0.30	0.30	0.30
11.867	0.30	0.30	0.30

11.883	0.30	0.30	0.30
11.900	0.30	0.30	0.30
11.917	0.30	0.30	0.30
11.933	0.31	0.30	0.30
11.950	0.31	0.30	0.30
11.967	0.31	0.31	0.31
11.983	0.31	0.31	0.31
12.000	0.31	0.31	0.31
12.017	0.31	0.31	0.31
12.033	0.31	0.31	0.31
12.050	0.31	0.31	0.31
12.067	0.31	0.31	0.31
12.083	0.31	0.31	0.31
12.100	0.31	0.31	0.31
12.117	0.31	0.31	0.31
12.133	0.31	0.31	0.31
12.150	0.31	0.31	0.31
12.167	0.31	0.31	0.31
12.183	0.32	0.31	0.31
12.200	0.32	0.31	0.31
12.217	0.32	0.32	0.32
12.233	0.32	0.32	0.32
12.250	0.32	0.32	0.32
12.267	0.32	0.32	0.32
12.283	0.32	0.32	0.32
12.300	0.32	0.32	0.32
12.317	0.32	0.32	0.32
12.333	0.32	0.32	0.32
12.350	0.32	0.32	0.32
12.367	0.32	0.32	0.32
12.383	0.32	0.32	0.32
12.400	0.32	0.32	0.32
12.417	0.33	0.32	0.32
12.433	0.33	0.32	0.32
12.450	0.33	0.33	0.33
12.467	0.33	0.33	0.33
12.483	0.33	0.33	0.33
12.500	0.33	0.33	0.33
12.517	0.33	0.33	0.33
12.533	0.33	0.33	0.33
12.550	0.33	0.33	0.33
12.567	0.33	0.33	0.33
12.583	0.33	0.33	0.33
12.600	0.33	0.33	0.33
12.617	0.33	0.33	0.33
12.633	0.34	0.33	0.33
12.650	0.34	0.33	0.33
12.667	0.34	0.34	0.34
12.683	0.34	0.34	0.34
12.700	0.34	0.34	0.34
12.717	0.34	0.34	0.34
12.733	0.34	0.34	0.34
12.750	0.34	0.34	0.34
12.767	0.34	0.34	0.34
12.783	0.34	0.34	0.34

12.800	0.34	0.34	0.34
12.817	0.34	0.34	0.34
12.833	0.34	0.34	0.34
12.850	0.35	0.34	0.34
12.867	0.35	0.34	0.34
12.883	0.35	0.35	0.35
12.900	0.35	0.35	0.35
12.917	0.35	0.35	0.35
12.933	0.35	0.35	0.35
12.950	0.35	0.35	0.35
12.967	0.35	0.35	0.35
12.983	0.35	0.35	0.35
13.000	0.35	0.35	0.35
13.017	0.35	0.35	0.35
13.033	0.35	0.35	0.35
13.050	0.36	0.35	0.35
13.067	0.36	0.35	0.35
13.083	0.36	0.36	0.36
13.100	0.36	0.36	0.36
13.117	0.36	0.36	0.36
13.133	0.36	0.36	0.36
13.150	0.36	0.36	0.36
13.167	0.36	0.36	0.36
13.183	0.36	0.36	0.36
13.200	0.36	0.36	0.36
13.217	0.36	0.36	0.36
13.233	0.36	0.36	0.36
13.250	0.37	0.36	0.36
13.267	0.37	0.36	0.36
13.283	0.37	0.37	0.37
13.300	0.37	0.37	0.37
13.317	0.37	0.37	0.37
13.333	0.37	0.37	0.37
13.350	0.37	0.37	0.37
13.367	0.37	0.37	0.37
13.383	0.37	0.37	0.37
13.400	0.37	0.37	0.37
13.417	0.37	0.37	0.37
13.433	0.37	0.37	0.37
13.450	0.38	0.37	0.37
13.467	0.38	0.37	0.37
13.483	0.38	0.38	0.38
13.500	0.38	0.38	0.38
13.517	0.38	0.38	0.38
13.533	0.38	0.38	0.38
13.550	0.38	0.38	0.38
13.567	0.38	0.38	0.38
13.583	0.38	0.38	0.38
13.600	0.38	0.38	0.38
13.617	0.38	0.38	0.38
13.633	0.39	0.38	0.38
13.650	0.39	0.38	0.38
13.667	0.39	0.39	0.39
13.683	0.39	0.39	0.39
13.700	0.39	0.39	0.39

13.717	0.39	0.39	0.39
13.733	0.39	0.39	0.39
13.750	0.39	0.39	0.39
13.767	0.39	0.39	0.39
13.783	0.39	0.39	0.39
13.800	0.40	0.39	0.39
13.817	0.40	0.39	0.39
13.833	0.40	0.40	0.40
13.850	0.40	0.40	0.40
13.867	0.40	0.40	0.40
13.883	0.40	0.40	0.40
13.900	0.40	0.40	0.40
13.917	0.40	0.40	0.40
13.933	0.40	0.40	0.40
13.950	0.40	0.40	0.40
13.967	0.41	0.40	0.40
13.983	0.41	0.40	0.40
14.000	0.41	0.40	0.40
14.017	0.41	0.41	0.41
14.033	0.41	0.41	0.41
14.050	0.41	0.41	0.41
14.067	0.41	0.41	0.41
14.083	0.41	0.41	0.41
14.100	0.41	0.41	0.41
14.117	0.41	0.41	0.41
14.133	0.42	0.41	0.41
14.150	0.42	0.41	0.41
14.167	0.42	0.42	0.42
14.183	0.42	0.42	0.42
14.200	0.42	0.42	0.42
14.217	0.42	0.42	0.42
14.233	0.42	0.42	0.42
14.250	0.42	0.42	0.42
14.267	0.43	0.42	0.42
14.283	0.52	0.42	0.42
14.300	0.67	0.43	0.43
14.317	0.60	0.50	0.50
14.333	0.63	0.64	0.64
14.350	0.66	0.61	0.61
14.367	0.74	0.62	0.62
14.383	0.74	0.65	0.65
14.400	0.74	0.72	0.72
14.417	0.76	0.74	0.74
14.433	0.79	0.74	0.74
14.450	0.82	0.76	0.76
14.467	0.84	0.79	0.79
14.483	0.87	0.81	0.81
14.500	0.89	0.84	0.84
14.517	0.92	0.86	0.86
14.533	0.96	0.89	0.89
14.550	1.02	0.92	0.92
14.567	1.00	0.95	0.95
14.583	1.03	1.01	1.01
14.600	1.05	1.00	1.00
14.617	1.08	1.02	1.02

14.633	1.11	1.05	1.05
14.650	1.13	1.08	1.08
14.667	1.16	1.10	1.10
14.683	1.19	1.13	1.13
14.700	1.21	1.16	1.16
14.717	1.24	1.18	1.18
14.733	1.27	1.21	1.21
14.750	1.29	1.24	1.24
14.767	1.32	1.26	1.26
14.783	1.35	1.29	1.29
14.800	1.37	1.32	1.32
14.817	1.40	1.34	1.34
14.833	1.42	1.37	1.37
14.850	1.45	1.39	1.39
14.867	1.48	1.42	1.42
14.883	1.50	1.45	1.45
14.900	1.53	1.47	1.47
14.917	1.55	1.50	1.50
14.933	1.58	1.52	1.52
14.950	1.61	1.55	1.55
14.967	1.63	1.58	1.58
14.983	1.66	1.60	1.60
15.000	1.68	1.63	1.63
15.017	1.71	1.65	1.65
15.033	1.74	1.68	1.68
15.050	1.76	1.71	1.71
15.067	1.79	1.73	1.73
15.083	1.81	1.76	1.76
15.100	1.82	1.79	1.79
15.117	1.85	1.80	1.80
15.133	1.88	1.82	1.82
15.150	1.91	1.85	1.85
15.167	1.93	1.87	1.87
15.183	1.96	1.90	1.90
15.200	1.99	1.93	1.93
15.217	2.02	1.96	1.96
15.233	2.05	1.99	1.99
15.250	2.08	2.02	2.02
15.267	2.11	2.05	2.05
15.283	2.14	2.07	2.07
15.300	2.17	2.10	2.10
15.317	2.19	2.13	2.13
15.333	2.22	2.16	2.16
15.350	2.25	2.19	2.19
15.367	2.28	2.22	2.22
15.383	2.31	2.25	2.25
15.400	2.34	2.28	2.28
15.417	2.37	2.31	2.31
15.433	2.40	2.34	2.34
15.450	2.43	2.37	2.37
15.467	2.46	2.40	2.40
15.483	2.49	2.43	2.43
15.500	2.52	2.46	2.46
15.517	2.55	2.49	2.49
15.533	2.59	2.52	2.52

15.550	2.62	2.55	2.55
15.567	2.66	2.58	2.58
15.583	2.69	2.62	2.62
15.600	2.73	2.65	2.65
15.617	2.77	2.69	2.69
15.633	2.81	2.72	2.72
15.650	2.85	2.76	2.76
15.667	2.89	2.80	2.80
15.683	2.94	2.84	2.84
15.700	2.98	2.89	2.89
15.717	3.03	2.93	2.93
15.733	3.08	2.98	2.98
15.750	3.13	3.02	3.02
15.767	3.18	3.07	3.07
15.783	3.23	3.12	3.12
15.800	3.28	3.17	3.17
15.817	3.33	3.22	3.22
15.833	3.38	3.27	3.27
15.850	3.44	3.32	3.32
15.867	3.49	3.38	3.38
15.883	3.55	3.43	3.43
15.900	3.60	3.48	3.48
15.917	3.66	3.54	3.54
15.933	3.72	3.59	3.59
15.950	3.78	3.65	3.65
15.967	3.83	3.71	3.71
15.983	3.90	3.77	3.77
16.000	3.96	3.83	3.83
16.017	4.10	3.89	3.89
16.033	4.47	3.95	3.95
16.050	5.04	4.08	4.08
16.067	5.64	4.41	4.41
16.083	6.35	4.95	4.95
16.100	7.11	5.55	5.55
16.117	7.92	6.24	6.24
16.133	8.80	6.99	6.99
16.150	9.73	7.79	7.79
16.167	10.68	8.66	8.66
16.183	11.67	9.58	9.58
16.200	12.73	10.53	10.53
16.217	13.84	11.51	11.51
16.233	14.94	12.56	12.56
16.250	16.13	13.66	13.66
16.267	17.36	14.76	14.76
16.283	18.53	15.94	15.94
16.300	19.59	17.16	17.16
16.317	20.48	18.34	18.34
16.333	21.20	19.42	19.42
16.350	21.76	20.34	20.34
16.367	22.18	21.09	21.09
16.383	22.46	21.67	21.67
16.400	22.60	22.11	22.11
16.417	22.63	22.41	22.41
16.433	22.53	22.58	22.58
16.450	22.33	22.62	22.62

16.467	22.02	22.55	22.55
16.483	21.62	22.36	22.36
16.500	21.11	22.07	22.07
16.517	20.53	21.68	21.68
16.533	19.87	21.19	21.19
16.550	19.15	20.62	20.62
16.567	18.46	19.98	19.98
16.583	17.79	19.27	19.27
16.600	17.15	18.57	18.57
16.617	16.54	17.90	17.90
16.633	15.97	17.25	17.25
16.650	15.42	16.64	16.64
16.667	14.89	16.06	16.06
16.683	14.38	15.51	15.51
16.700	13.88	14.98	14.98
16.717	13.41	14.46	14.46
16.733	12.96	13.96	13.96
16.750	12.52	13.48	13.48
16.767	12.11	13.03	13.03
16.783	11.71	12.59	12.59
16.800	11.32	12.17	12.17
16.817	10.95	11.77	11.77
16.833	10.58	11.38	11.38
16.850	10.24	11.01	11.01
16.867	9.92	10.64	10.64
16.883	9.61	10.29	10.29
16.900	9.32	9.97	9.97
16.917	9.05	9.66	9.66
16.933	8.78	9.37	9.37
16.950	8.53	9.09	9.09
16.967	8.29	8.83	8.83
16.983	8.07	8.57	8.57
17.000	7.85	8.33	8.33
17.017	7.64	8.10	8.10
17.033	7.44	7.88	7.88
17.050	7.25	7.67	7.67
17.067	7.06	7.47	7.47
17.083	6.88	7.28	7.28
17.100	6.71	7.09	7.09
17.117	6.56	6.91	6.91
17.133	6.40	6.74	6.74
17.150	6.26	6.58	6.58
17.167	6.12	6.43	6.43
17.183	5.99	6.28	6.28
17.200	5.86	6.14	6.14
17.217	5.74	6.01	6.01
17.233	5.62	5.88	5.88
17.250	5.51	5.76	5.76
17.267	5.40	5.64	5.64
17.283	5.29	5.53	5.53
17.300	5.20	5.42	5.42
17.317	5.10	5.31	5.31
17.333	5.01	5.21	5.21
17.350	4.92	5.12	5.12
17.367	4.84	5.02	5.02

17.383	4.76	4.94	4.94
17.400	4.68	4.85	4.85
17.417	4.61	4.77	4.77
17.433	4.54	4.69	4.69
17.450	4.47	4.62	4.62
17.467	4.40	4.55	4.55
17.483	4.34	4.48	4.48
17.500	4.28	4.41	4.41
17.517	4.22	4.35	4.35
17.533	4.16	4.29	4.29
17.550	4.11	4.23	4.23
17.567	4.06	4.17	4.17
17.583	4.03	4.12	4.12
17.600	4.02	4.07	4.07
17.617	4.01	4.04	4.04
17.633	4.00	4.02	4.02
17.650	4.00	4.01	4.01
17.667	3.99	4.00	4.00
17.683	3.98	4.00	4.00
17.700	3.97	3.99	3.99
17.717	3.96	3.98	3.98
17.733	3.96	3.97	3.97
17.750	3.95	3.97	3.97
17.767	3.94	3.96	3.96
17.783	3.93	3.95	3.95
17.800	3.92	3.94	3.94
17.817	3.92	3.93	3.93
17.833	3.91	3.93	3.93
17.850	3.90	3.92	3.92
17.867	3.89	3.91	3.91
17.883	3.88	3.90	3.90
17.900	3.87	3.89	3.89
17.917	3.86	3.88	3.88
17.933	3.85	3.87	3.87
17.950	3.85	3.86	3.86
17.967	3.84	3.86	3.86
17.983	3.83	3.85	3.85
18.000	3.82	3.84	3.84
18.017	3.81	3.83	3.83
18.033	3.80	3.82	3.82
18.050	3.79	3.81	3.81
18.067	3.78	3.80	3.80
18.083	3.77	3.79	3.79
18.100	3.76	3.78	3.78
18.117	3.75	3.77	3.77
18.133	3.75	3.77	3.77
18.150	3.74	3.76	3.76
18.167	3.73	3.75	3.75
18.183	3.72	3.74	3.74
18.200	3.71	3.73	3.73
18.217	3.70	3.72	3.72
18.233	3.69	3.71	3.71
18.250	3.68	3.70	3.70
18.267	3.67	3.69	3.69
18.283	3.66	3.68	3.68

18.300	3.64	3.67	3.67
18.317	3.63	3.66	3.66
18.333	3.62	3.65	3.65
18.350	3.61	3.64	3.64
18.367	3.60	3.62	3.62
18.383	3.59	3.61	3.61
18.400	3.58	3.60	3.60
18.417	3.57	3.59	3.59
18.433	3.56	3.58	3.58
18.450	3.54	3.57	3.57
18.467	3.53	3.56	3.56
18.483	3.52	3.55	3.55
18.500	3.51	3.53	3.53
18.517	3.50	3.52	3.52
18.533	3.49	3.51	3.51
18.550	3.48	3.50	3.50
18.567	3.47	3.49	3.49
18.583	3.45	3.48	3.48
18.600	3.44	3.47	3.47
18.617	3.43	3.46	3.46
18.633	3.42	3.44	3.44
18.650	3.41	3.43	3.43
18.667	3.40	3.42	3.42
18.683	3.39	3.41	3.41
18.700	3.38	3.40	3.40
18.717	3.37	3.39	3.39
18.733	3.35	3.38	3.38
18.750	3.34	3.37	3.37
18.767	3.33	3.36	3.36
18.783	3.32	3.35	3.35
18.800	3.31	3.33	3.33
18.817	3.30	3.32	3.32
18.833	3.29	3.31	3.31
18.850	3.28	3.30	3.30
18.867	3.27	3.29	3.29
18.883	3.26	3.28	3.28
18.900	3.25	3.27	3.27
18.917	3.24	3.26	3.26
18.933	3.23	3.25	3.25
18.950	3.22	3.24	3.24
18.967	3.20	3.23	3.23
18.983	3.19	3.22	3.22
19.000	3.18	3.21	3.21
19.017	3.17	3.20	3.20
19.033	3.16	3.19	3.19
19.050	3.15	3.18	3.18
19.067	3.14	3.16	3.16
19.083	3.13	3.15	3.15
19.100	3.12	3.14	3.14
19.117	3.11	3.13	3.13
19.133	3.10	3.12	3.12
19.150	3.09	3.11	3.11
19.167	3.08	3.10	3.10
19.183	3.07	3.09	3.09
19.200	3.06	3.08	3.08

19.217	3.05	3.07	3.07
19.233	3.04	3.06	3.06
19.250	3.03	3.05	3.05
19.267	3.02	3.04	3.04
19.283	3.01	3.03	3.03
19.300	3.00	3.02	3.02
19.317	2.99	3.01	3.01
19.333	2.98	3.00	3.00
19.350	2.97	2.99	2.99
19.367	2.96	2.98	2.98
19.383	2.95	2.97	2.97
19.400	2.94	2.96	2.96
19.417	2.93	2.95	2.95
19.433	2.92	2.94	2.94
19.450	2.91	2.94	2.94
19.467	2.91	2.93	2.93
19.483	2.90	2.92	2.92
19.500	2.89	2.91	2.91
19.517	2.88	2.90	2.90
19.533	2.87	2.89	2.89
19.550	2.86	2.88	2.88
19.567	2.85	2.87	2.87
19.583	2.84	2.86	2.86
19.600	2.83	2.85	2.85
19.617	2.82	2.84	2.84
19.633	2.81	2.83	2.83
19.650	2.80	2.82	2.82
19.667	2.79	2.81	2.81
19.683	2.79	2.80	2.80
19.700	2.78	2.80	2.80
19.717	2.77	2.79	2.79
19.733	2.76	2.78	2.78
19.750	2.75	2.77	2.77
19.767	2.74	2.76	2.76
19.783	2.73	2.75	2.75
19.800	2.72	2.74	2.74
19.817	2.71	2.73	2.73
19.833	2.71	2.72	2.72
19.850	2.70	2.72	2.72
19.867	2.69	2.71	2.71
19.883	2.68	2.70	2.70
19.900	2.67	2.69	2.69
19.917	2.66	2.68	2.68
19.933	2.65	2.67	2.67
19.950	2.65	2.66	2.66
19.967	2.64	2.66	2.66
19.983	2.63	2.65	2.65
20.000	2.62	2.64	2.64
20.017	2.61	2.63	2.63
20.033	2.60	2.62	2.62
20.050	2.60	2.61	2.61
20.067	2.59	2.61	2.61
20.083	2.58	2.60	2.60
20.100	2.57	2.59	2.59
20.117	2.56	2.58	2.58

20.133	2.56	2.57	2.57
20.150	2.55	2.56	2.56
20.167	2.54	2.56	2.56
20.183	2.53	2.55	2.55
20.200	2.52	2.54	2.54
20.217	2.52	2.53	2.53
20.233	2.51	2.53	2.53
20.250	2.50	2.52	2.52
20.267	2.49	2.51	2.51
20.283	2.48	2.50	2.50
20.300	2.48	2.49	2.49
20.317	2.47	2.49	2.49
20.333	2.46	2.48	2.48
20.350	2.45	2.47	2.47
20.367	2.45	2.46	2.46
20.383	2.44	2.46	2.46
20.400	2.43	2.45	2.45
20.417	2.42	2.44	2.44
20.433	2.42	2.43	2.43
20.450	2.41	2.43	2.43
20.467	2.40	2.42	2.42
20.483	2.39	2.41	2.41
20.500	2.39	2.40	2.40
20.517	2.38	2.40	2.40
20.533	2.37	2.39	2.39
20.550	2.37	2.38	2.38
20.567	2.36	2.37	2.37
20.583	2.35	2.37	2.37
20.600	2.34	2.36	2.36
20.617	2.34	2.35	2.35
20.633	2.33	2.35	2.35
20.650	2.32	2.34	2.34
20.667	2.32	2.33	2.33
20.683	2.31	2.32	2.32
20.700	2.30	2.32	2.32
20.717	2.30	2.31	2.31
20.733	2.29	2.30	2.30
20.750	2.28	2.30	2.30
20.767	2.28	2.29	2.29
20.783	2.27	2.28	2.28
20.800	2.26	2.28	2.28
20.817	2.26	2.27	2.27
20.833	2.25	2.26	2.26
20.850	2.24	2.26	2.26
20.867	2.24	2.25	2.25
20.883	2.23	2.24	2.24
20.900	2.22	2.24	2.24
20.917	2.22	2.23	2.23
20.933	2.21	2.22	2.22
20.950	2.20	2.22	2.22
20.967	2.20	2.21	2.21
20.983	2.19	2.20	2.20
21.000	2.18	2.20	2.20
21.017	2.18	2.19	2.19
21.033	2.17	2.18	2.18

21.050	2.16	2.18	2.18
21.067	2.16	2.17	2.17
21.083	2.15	2.17	2.17
21.100	2.15	2.16	2.16
21.117	2.14	2.15	2.15
21.133	2.13	2.15	2.15
21.150	2.13	2.14	2.14
21.167	2.12	2.13	2.13
21.183	2.12	2.13	2.13
21.200	2.11	2.12	2.12
21.217	2.10	2.12	2.12
21.233	2.10	2.11	2.11
21.250	2.09	2.10	2.10
21.267	2.09	2.10	2.10
21.283	2.08	2.09	2.09
21.300	2.07	2.09	2.09
21.317	2.07	2.08	2.08
21.333	2.06	2.08	2.08
21.350	2.06	2.07	2.07
21.367	2.05	2.06	2.06
21.383	2.05	2.06	2.06
21.400	2.04	2.05	2.05
21.417	2.04	2.05	2.05
21.433	2.03	2.04	2.04
21.450	2.02	2.04	2.04
21.467	2.02	2.03	2.03
21.483	2.01	2.02	2.02
21.500	2.01	2.02	2.02
21.517	2.00	2.01	2.01
21.533	2.00	2.01	2.01
21.550	1.99	2.00	2.00
21.567	1.98	2.00	2.00
21.583	1.98	1.99	1.99
21.600	1.97	1.99	1.99
21.617	1.97	1.98	1.98
21.633	1.96	1.97	1.97
21.650	1.96	1.97	1.97
21.667	1.95	1.96	1.96
21.683	1.95	1.96	1.96
21.700	1.94	1.95	1.95
21.717	1.94	1.95	1.95
21.733	1.93	1.94	1.94
21.750	1.93	1.94	1.94
21.767	1.92	1.93	1.93
21.783	1.92	1.93	1.93
21.800	1.91	1.92	1.92
21.817	1.91	1.92	1.92
21.833	1.90	1.91	1.91
21.850	1.90	1.91	1.91
21.867	1.89	1.90	1.90
21.883	1.89	1.90	1.90
21.900	1.88	1.89	1.89
21.917	1.88	1.89	1.89
21.933	1.87	1.88	1.88
21.950	1.87	1.88	1.88

21.967	1.86	1.87	1.87
21.983	1.86	1.87	1.87
22.000	1.85	1.86	1.86
22.017	1.85	1.86	1.86
22.033	1.84	1.85	1.85
22.050	1.84	1.85	1.85
22.067	1.83	1.84	1.84
22.083	1.83	1.84	1.84
22.100	1.82	1.83	1.83
22.117	1.82	1.83	1.83
22.133	1.82	1.83	1.83
22.150	1.81	1.82	1.82
22.167	1.81	1.82	1.82
22.183	1.80	1.81	1.81
22.200	1.80	1.81	1.81
22.217	1.79	1.80	1.80
22.233	1.79	1.80	1.80
22.250	1.78	1.79	1.79
22.267	1.78	1.79	1.79
22.283	1.77	1.78	1.78
22.300	1.77	1.78	1.78
22.317	1.76	1.77	1.77
22.333	1.76	1.77	1.77
22.350	1.75	1.76	1.76
22.367	1.75	1.76	1.76
22.383	1.75	1.75	1.75
22.400	1.74	1.75	1.75
22.417	1.74	1.75	1.75
22.433	1.73	1.74	1.74
22.450	1.73	1.74	1.74
22.467	1.72	1.73	1.73
22.483	1.72	1.73	1.73
22.500	1.72	1.73	1.73
22.517	1.71	1.72	1.72
22.533	1.71	1.72	1.72
22.550	1.70	1.71	1.71
22.567	1.70	1.71	1.71
22.583	1.70	1.70	1.70
22.600	1.69	1.70	1.70
22.617	1.69	1.70	1.70
22.633	1.68	1.69	1.69
22.650	1.68	1.69	1.69
22.667	1.68	1.68	1.68
22.683	1.67	1.68	1.68
22.700	1.67	1.68	1.68
22.717	1.66	1.67	1.67
22.733	1.66	1.67	1.67
22.750	1.66	1.67	1.67
22.767	1.65	1.66	1.66
22.783	1.65	1.66	1.66
22.800	1.65	1.65	1.65
22.817	1.64	1.65	1.65
22.833	1.64	1.65	1.65
22.850	1.63	1.64	1.64
22.867	1.63	1.64	1.64

22.883	1.63	1.63	1.63
22.900	1.62	1.63	1.63
22.917	1.62	1.63	1.63
22.933	1.62	1.62	1.62
22.950	1.61	1.62	1.62
22.967	1.61	1.62	1.62
22.983	1.60	1.61	1.61
23.000	1.60	1.61	1.61
23.017	1.60	1.61	1.61
23.033	1.59	1.60	1.60
23.050	1.59	1.60	1.60
23.067	1.59	1.59	1.59
23.083	1.58	1.59	1.59
23.100	1.58	1.59	1.59
23.117	1.58	1.58	1.58
23.133	1.57	1.58	1.58
23.150	1.57	1.58	1.58
23.167	1.57	1.57	1.57
23.183	1.56	1.57	1.57
23.200	1.56	1.57	1.57
23.217	1.56	1.56	1.56
23.233	1.55	1.56	1.56
23.250	1.55	1.56	1.56
23.267	1.55	1.55	1.55
23.283	1.54	1.55	1.55
23.300	1.54	1.55	1.55
23.317	1.54	1.54	1.54
23.333	1.53	1.54	1.54
23.350	1.53	1.54	1.54
23.367	1.53	1.53	1.53
23.383	1.52	1.53	1.53
23.400	1.52	1.53	1.53
23.417	1.52	1.52	1.52
23.433	1.51	1.52	1.52
23.450	1.51	1.52	1.52
23.467	1.51	1.51	1.51
23.483	1.50	1.51	1.51
23.500	1.50	1.51	1.51
23.517	1.50	1.50	1.50
23.533	1.49	1.50	1.50
23.550	1.49	1.50	1.50
23.567	1.49	1.49	1.49
23.583	1.49	1.49	1.49
23.600	1.48	1.49	1.49
23.617	1.48	1.49	1.49
23.633	1.48	1.48	1.48
23.650	1.47	1.48	1.48
23.667	1.47	1.48	1.48
23.683	1.47	1.47	1.47
23.700	1.46	1.47	1.47
23.717	1.46	1.47	1.47
23.733	1.46	1.46	1.46
23.750	1.46	1.46	1.46
23.767	1.45	1.46	1.46
23.783	1.45	1.46	1.46

23.800	1.45	1.45	1.45
23.817	1.44	1.45	1.45
23.833	1.44	1.45	1.45
23.850	1.44	1.44	1.44
23.867	1.44	1.44	1.44
23.883	1.43	1.44	1.44
23.900	1.43	1.44	1.44
23.917	1.43	1.43	1.43
23.933	1.42	1.43	1.43
23.950	1.42	1.43	1.43
23.967	1.42	1.42	1.42
23.983	1.42	1.42	1.42
24.000	1.41	1.42	1.42

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PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 5.065 AF
 OUTFLOW VOLUME = 5.065 AF
 LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 302.00 TO NODE 102.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<<

FLOW PROCESS FROM NODE 102.00 TO NODE 102.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

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STREAM HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)
 (Notes: Time indicated is at END of Each Unit Intervals.
 Peak 5-minute rainfall intensity is modeled as
 a constant value for entire 5-minute period.)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	12.5	25.0	37.5	50.0
10.000	0.6375	1.21	Q V	.	.	.	.
10.017	0.6391	1.22	Q V	.	.	.	.
10.033	0.6408	1.22	Q V	.	.	.	.
10.050	0.6425	1.22	Q V	.	.	.	.
10.067	0.6442	1.22	Q V	.	.	.	.
10.083	0.6459	1.22	Q V	.	.	.	.
10.100	0.6476	1.22	Q V	.	.	.	.
10.117	0.6492	1.23	Q V	.	.	.	.
10.133	0.6509	1.23	Q V	.	.	.	.
10.150	0.6526	1.23	Q V	.	.	.	.
10.167	0.6543	1.23	Q V	.	.	.	.
10.183	0.6560	1.24	Q V	.	.	.	.
10.200	0.6578	1.24	Q V	.	.	.	.
10.217	0.6595	1.25	Q V	.	.	.	.
10.233	0.6612	1.25	Q V	.	.	.	.

10.250	0.6629	1.25	.QV	.	.	.	.
10.267	0.6646	1.25	.QV	.	.	.	.
10.283	0.6664	1.26	.QV	.	.	.	.
10.300	0.6681	1.26	.QV	.	.	.	.
10.317	0.6698	1.26	.QV	.	.	.	.
10.333	0.6716	1.26	.QV	.	.	.	.
10.350	0.6733	1.27	.QV	.	.	.	.
10.367	0.6751	1.27	.QV	.	.	.	.
10.383	0.6768	1.27	.QV	.	.	.	.
10.400	0.6786	1.27	.QV	.	.	.	.
10.417	0.6803	1.28	.QV	.	.	.	.
10.433	0.6821	1.27	.QV	.	.	.	.
10.450	0.6839	1.28	.QV	.	.	.	.
10.467	0.6856	1.28	.QV	.	.	.	.
10.483	0.6874	1.28	.QV	.	.	.	.
10.500	0.6892	1.28	.QV	.	.	.	.
10.517	0.6909	1.28	.QV	.	.	.	.
10.533	0.6927	1.29	.QV	.	.	.	.
10.550	0.6945	1.29	.QV	.	.	.	.
10.567	0.6962	1.29	.QV	.	.	.	.
10.583	0.6980	1.30	.QV	.	.	.	.
10.600	0.6998	1.29	.QV	.	.	.	.
10.617	0.7016	1.29	.QV	.	.	.	.
10.633	0.7034	1.30	.QV	.	.	.	.
10.650	0.7052	1.30	.QV	.	.	.	.
10.667	0.7070	1.31	.QV	.	.	.	.
10.683	0.7088	1.31	.QV	.	.	.	.
10.700	0.7106	1.31	.QV	.	.	.	.
10.717	0.7124	1.32	.QV	.	.	.	.
10.733	0.7142	1.32	.QV	.	.	.	.
10.750	0.7161	1.32	.QV	.	.	.	.
10.767	0.7179	1.33	.QV	.	.	.	.
10.783	0.7197	1.33	.QV	.	.	.	.
10.800	0.7215	1.33	.QV	.	.	.	.
10.817	0.7234	1.34	.QV	.	.	.	.
10.833	0.7252	1.34	.QV	.	.	.	.
10.850	0.7271	1.34	.QV	.	.	.	.
10.867	0.7289	1.34	.QV	.	.	.	.
10.883	0.7308	1.35	.QV	.	.	.	.
10.900	0.7326	1.34	.QV	.	.	.	.
10.917	0.7345	1.34	.QV	.	.	.	.
10.933	0.7363	1.35	.QV	.	.	.	.
10.950	0.7382	1.35	.QV	.	.	.	.
10.967	0.7401	1.35	.QV	.	.	.	.
10.983	0.7419	1.35	.QV	.	.	.	.
11.000	0.7438	1.35	.QV	.	.	.	.
11.017	0.7457	1.36	.QV	.	.	.	.
11.033	0.7475	1.36	.Q V	.	.	.	.
11.050	0.7494	1.36	.Q V	.	.	.	.
11.067	0.7513	1.36	.Q V	.	.	.	.
11.083	0.7532	1.36	.Q V	.	.	.	.
11.100	0.7550	1.37	.Q V	.	.	.	.
11.117	0.7569	1.37	.Q V	.	.	.	.
11.133	0.7588	1.37	.Q V	.	.	.	.
11.150	0.7607	1.38	.Q V	.	.	.	.

11.167	0.7626	1.38	.Q V	.	.	.	.
11.183	0.7645	1.39	.Q V	.	.	.	.
11.200	0.7664	1.39	.Q V	.	.	.	.
11.217	0.7684	1.39	.Q V	.	.	.	.
11.233	0.7703	1.40	.Q V	.	.	.	.
11.250	0.7722	1.40	.Q V	.	.	.	.
11.267	0.7742	1.40	.Q V	.	.	.	.
11.283	0.7761	1.41	.Q V	.	.	.	.
11.300	0.7780	1.41	.Q V	.	.	.	.
11.317	0.7800	1.41	.Q V	.	.	.	.
11.333	0.7819	1.42	.Q V	.	.	.	.
11.350	0.7839	1.42	.Q V	.	.	.	.
11.367	0.7859	1.42	.Q V	.	.	.	.
11.383	0.7878	1.43	.Q V	.	.	.	.
11.400	0.7898	1.42	.Q V	.	.	.	.
11.417	0.7917	1.42	.Q V	.	.	.	.
11.433	0.7937	1.43	.Q V	.	.	.	.
11.450	0.7957	1.43	.Q V	.	.	.	.
11.467	0.7976	1.43	.Q V	.	.	.	.
11.483	0.7996	1.43	.Q V	.	.	.	.
11.500	0.8016	1.44	.Q V	.	.	.	.
11.517	0.8036	1.44	.Q V	.	.	.	.
11.533	0.8056	1.44	.Q V	.	.	.	.
11.550	0.8076	1.44	.Q V	.	.	.	.
11.567	0.8095	1.45	.Q V	.	.	.	.
11.583	0.8115	1.45	.Q V	.	.	.	.
11.600	0.8135	1.45	.Q V	.	.	.	.
11.617	0.8155	1.45	.Q V	.	.	.	.
11.633	0.8175	1.45	.Q V	.	.	.	.
11.650	0.8195	1.46	.Q V	.	.	.	.
11.667	0.8216	1.47	.Q V	.	.	.	.
11.683	0.8236	1.47	.Q V	.	.	.	.
11.700	0.8256	1.48	.Q V	.	.	.	.
11.717	0.8277	1.48	.Q V	.	.	.	.
11.733	0.8297	1.49	.Q V	.	.	.	.
11.750	0.8318	1.49	.Q V	.	.	.	.
11.767	0.8339	1.51	.Q V	.	.	.	.
11.783	0.8359	1.50	.Q V	.	.	.	.
11.800	0.8380	1.50	.Q V	.	.	.	.
11.817	0.8401	1.50	.Q V	.	.	.	.
11.833	0.8421	1.51	.Q V	.	.	.	.
11.850	0.8442	1.51	.Q V	.	.	.	.
11.867	0.8463	1.51	.Q V	.	.	.	.
11.883	0.8484	1.51	.Q V	.	.	.	.
11.900	0.8505	1.51	.Q V	.	.	.	.
11.917	0.8526	1.52	.Q V	.	.	.	.
11.933	0.8546	1.52	.Q V	.	.	.	.
11.950	0.8567	1.52	.Q V	.	.	.	.
11.967	0.8588	1.52	.Q V	.	.	.	.
11.983	0.8609	1.53	.Q V	.	.	.	.
12.000	0.8630	1.53	.Q V	.	.	.	.
12.017	0.8652	1.53	.Q V	.	.	.	.
12.033	0.8673	1.53	.Q V	.	.	.	.
12.050	0.8694	1.54	.Q V	.	.	.	.
12.067	0.8715	1.54	.Q V	.	.	.	.

12.083	0.8736	1.54	.Q V	.	.	.	.
12.100	0.8758	1.54	.Q V	.	.	.	.
12.117	0.8779	1.55	.Q V	.	.	.	.
12.133	0.8801	1.60	.Q V	.	.	.	.
12.150	0.8823	1.62	.Q V	.	.	.	.
12.167	0.8846	1.63	.Q V	.	.	.	.
12.183	0.8868	1.64	.Q V	.	.	.	.
12.200	0.8891	1.65	.Q V	.	.	.	.
12.217	0.8914	1.67	.Q V	.	.	.	.
12.233	0.8937	1.68	.Q V	.	.	.	.
12.250	0.8960	1.69	.Q V	.	.	.	.
12.267	0.8984	1.70	.Q V	.	.	.	.
12.283	0.9007	1.71	.Q V	.	.	.	.
12.300	0.9031	1.72	.Q V	.	.	.	.
12.317	0.9055	1.79	.Q V	.	.	.	.
12.333	0.9079	1.75	.Q V	.	.	.	.
12.350	0.9104	1.75	.Q V	.	.	.	.
12.367	0.9127	1.72	.Q V	.	.	.	.
12.383	0.9151	1.72	.Q V	.	.	.	.
12.400	0.9175	1.72	.Q V	.	.	.	.
12.417	0.9198	1.72	.Q V	.	.	.	.
12.433	0.9222	1.72	.Q V	.	.	.	.
12.450	0.9246	1.73	.Q V	.	.	.	.
12.467	0.9270	1.73	.Q V	.	.	.	.
12.483	0.9294	1.73	.Q V	.	.	.	.
12.500	0.9317	1.73	.Q V	.	.	.	.
12.517	0.9341	1.74	.Q V	.	.	.	.
12.533	0.9365	1.74	.Q V	.	.	.	.
12.550	0.9389	1.74	.Q V	.	.	.	.
12.567	0.9413	1.75	.Q V	.	.	.	.
12.583	0.9437	1.75	.Q V	.	.	.	.
12.600	0.9462	1.75	.Q V	.	.	.	.
12.617	0.9486	1.77	.Q V	.	.	.	.
12.633	0.9510	1.77	.Q V	.	.	.	.
12.650	0.9535	1.78	.Q V	.	.	.	.
12.667	0.9559	1.78	.Q V	.	.	.	.
12.683	0.9584	1.79	.Q V	.	.	.	.
12.700	0.9609	1.79	.Q V	.	.	.	.
12.717	0.9633	1.80	.Q V	.	.	.	.
12.733	0.9658	1.80	.Q V	.	.	.	.
12.750	0.9683	1.81	.Q V	.	.	.	.
12.767	0.9708	1.81	.Q V	.	.	.	.
12.783	0.9733	1.82	.Q V	.	.	.	.
12.800	0.9758	1.82	.Q V	.	.	.	.
12.817	0.9783	1.83	.Q V	.	.	.	.
12.833	0.9809	1.83	.Q V	.	.	.	.
12.850	0.9834	1.84	.Q V	.	.	.	.
12.867	0.9859	1.83	.Q V	.	.	.	.
12.883	0.9884	1.83	.Q V	.	.	.	.
12.900	0.9910	1.84	.Q V	.	.	.	.
12.917	0.9935	1.84	.Q V	.	.	.	.
12.933	0.9960	1.84	.Q V	.	.	.	.
12.950	0.9986	1.85	.Q V	.	.	.	.
12.967	1.0011	1.85	.Q V	.	.	.	.
12.983	1.0037	1.85	.Q V	.	.	.	.

13.000	1.0062	1.86	.Q	V	.	.	.	.
13.017	1.0088	1.86	.Q	V	.	.	.	.
13.033	1.0114	1.86	.Q	V	.	.	.	.
13.050	1.0139	1.87	.Q	V	.	.	.	.
13.067	1.0165	1.87	.Q	V	.	.	.	.
13.083	1.0191	1.87	.Q	V	.	.	.	.
13.100	1.0217	1.88	.Q	V	.	.	.	.
13.117	1.0243	1.89	.Q	V	.	.	.	.
13.133	1.0269	1.90	.Q	V	.	.	.	.
13.150	1.0295	1.91	.Q	V	.	.	.	.
13.167	1.0322	1.91	.Q	V	.	.	.	.
13.183	1.0348	1.92	.Q	V	.	.	.	.
13.200	1.0374	1.93	.Q	V	.	.	.	.
13.217	1.0401	1.93	.Q	V	.	.	.	.
13.233	1.0428	1.94	.Q	V	.	.	.	.
13.250	1.0455	1.94	.Q	V	.	.	.	.
13.267	1.0481	1.95	.Q	V	.	.	.	.
13.283	1.0508	1.96	.Q	V	.	.	.	.
13.300	1.0535	1.96	.Q	V	.	.	.	.
13.317	1.0562	1.97	.Q	V	.	.	.	.
13.333	1.0590	1.97	.Q	V	.	.	.	.
13.350	1.0617	1.98	.Q	V	.	.	.	.
13.367	1.0644	1.99	.Q	V	.	.	.	.
13.383	1.0672	1.98	.Q	V	.	.	.	.
13.400	1.0699	1.98	.Q	V	.	.	.	.
13.417	1.0726	1.98	.Q	V	.	.	.	.
13.433	1.0754	1.99	.Q	V	.	.	.	.
13.450	1.0781	1.99	.Q	V	.	.	.	.
13.467	1.0809	2.00	.Q	V	.	.	.	.
13.483	1.0836	2.00	.Q	V	.	.	.	.
13.500	1.0864	2.00	.Q	V	.	.	.	.
13.517	1.0891	2.01	.Q	V	.	.	.	.
13.533	1.0919	2.01	.Q	V	.	.	.	.
13.550	1.0947	2.02	.Q	V	.	.	.	.
13.567	1.0975	2.02	.Q	V	.	.	.	.
13.583	1.1003	2.03	.Q	V	.	.	.	.
13.600	1.1031	2.05	.Q	V	.	.	.	.
13.617	1.1059	2.05	.Q	V	.	.	.	.
13.633	1.1087	2.06	.Q	V	.	.	.	.
13.650	1.1116	2.07	.Q	V	.	.	.	.
13.667	1.1145	2.08	.Q	V	.	.	.	.
13.683	1.1173	2.09	.Q	V	.	.	.	.
13.700	1.1202	2.09	.Q	V	.	.	.	.
13.717	1.1231	2.10	.Q	V	.	.	.	.
13.733	1.1260	2.11	.Q	V	.	.	.	.
13.750	1.1289	2.12	.Q	V	.	.	.	.
13.767	1.1319	2.12	.Q	V	.	.	.	.
13.783	1.1348	2.13	.Q	V	.	.	.	.
13.800	1.1377	2.14	.Q	V	.	.	.	.
13.817	1.1407	2.15	.Q	V	.	.	.	.
13.833	1.1437	2.15	.Q	V	.	.	.	.
13.850	1.1466	2.15	.Q	V	.	.	.	.
13.867	1.1496	2.15	.Q	V	.	.	.	.
13.883	1.1526	2.16	.Q	V	.	.	.	.
13.900	1.1555	2.16	.Q	V	.	.	.	.

13.917	1.1585	2.17	.Q	V	.	.	.	.
13.933	1.1615	2.17	.Q	V	.	.	.	.
13.950	1.1645	2.18	.Q	V	.	.	.	.
13.967	1.1675	2.18	.Q	V	.	.	.	.
13.983	1.1706	2.19	.Q	V	.	.	.	.
14.000	1.1736	2.19	.Q	V	.	.	.	.
14.017	1.1766	2.20	.Q	V	.	.	.	.
14.033	1.1796	2.20	.Q	V	.	.	.	.
14.050	1.1827	2.21	.Q	V	.	.	.	.
14.067	1.1857	2.21	.Q	V	.	.	.	.
14.083	1.1888	2.23	.Q	V	.	.	.	.
14.100	1.1919	2.25	.Q	V	.	.	.	.
14.117	1.1950	2.26	.Q	V	.	.	.	.
14.133	1.1982	2.28	.Q	V	.	.	.	.
14.150	1.2013	2.29	.Q	V	.	.	.	.
14.167	1.2045	2.30	.Q	V	.	.	.	.
14.183	1.2076	2.31	.Q	V	.	.	.	.
14.200	1.2108	2.32	.Q	V	.	.	.	.
14.217	1.2140	2.33	.Q	V	.	.	.	.
14.233	1.2173	2.34	.Q	V	.	.	.	.
14.250	1.2205	2.35	.Q	V	.	.	.	.
14.267	1.2238	2.36	.Q	V	.	.	.	.
14.283	1.2270	2.37	.Q	V	.	.	.	.
14.300	1.2303	2.39	.Q	V	.	.	.	.
14.317	1.2337	2.47	.Q	V	.	.	.	.
14.333	1.2373	2.63	.Q	V	.	.	.	.
14.350	1.2409	2.60	.Q	V	.	.	.	.
14.367	1.2445	2.60	.Q	V	.	.	.	.
14.383	1.2481	2.63	.Q	V	.	.	.	.
14.400	1.2519	2.71	.Q	V	.	.	.	.
14.417	1.2556	2.73	.Q	V	.	.	.	.
14.433	1.2594	2.73	.Q	V	.	.	.	.
14.450	1.2632	2.76	.Q	V	.	.	.	.
14.467	1.2670	2.79	.Q	V	.	.	.	.
14.483	1.2709	2.83	.Q	V	.	.	.	.
14.500	1.2749	2.86	.Q	V	.	.	.	.
14.517	1.2789	2.89	.Q	V	.	.	.	.
14.533	1.2829	2.91	.Q	V	.	.	.	.
14.550	1.2869	2.94	.Q	V	.	.	.	.
14.567	1.2910	2.98	.Q	V	.	.	.	.
14.583	1.2952	3.05	.Q	V	.	.	.	.
14.600	1.2994	3.06	.Q	V	.	.	.	.
14.617	1.3037	3.10	.Q	V	.	.	.	.
14.633	1.3080	3.14	.Q	V	.	.	.	.
14.650	1.3124	3.18	.Q	V	.	.	.	.
14.667	1.3168	3.22	.Q	V	.	.	.	.
14.683	1.3213	3.26	.Q	V	.	.	.	.
14.700	1.3259	3.30	.Q	V	.	.	.	.
14.717	1.3305	3.34	.Q	V	.	.	.	.
14.733	1.3351	3.38	.Q	V	.	.	.	.
14.750	1.3399	3.44	.Q	V	.	.	.	.
14.767	1.3449	3.65	.Q	V	.	.	.	.
14.783	1.3501	3.81	.Q	V	.	.	.	.
14.800	1.3554	3.84	.Q	V	.	.	.	.
14.817	1.3607	3.83	.Q	V	.	.	.	.

14.833	1.3661	3.95	.	Q V	.	.	.	.
14.850	1.3716	3.98	.	Q V	.	.	.	.
14.867	1.3771	4.01	.	Q V	.	.	.	.
14.883	1.3828	4.08	.	Q V	.	.	.	.
14.900	1.3885	4.14	.	Q V	.	.	.	.
14.917	1.3942	4.20	.	Q V	.	.	.	.
14.933	1.4001	4.26	.	Q V	.	.	.	.
14.950	1.4061	4.37	.	Q V	.	.	.	.
14.967	1.4121	4.38	.	Q V	.	.	.	.
14.983	1.4183	4.44	.	Q V	.	.	.	.
15.000	1.4244	4.50	.	Q V	.	.	.	.
15.017	1.4307	4.55	.	Q V	.	.	.	.
15.033	1.4371	4.61	.	Q V	.	.	.	.
15.050	1.4435	4.67	.	Q V	.	.	.	.
15.067	1.4500	4.74	.	Q V	.	.	.	.
15.083	1.4567	4.82	.	Q V	.	.	.	.
15.100	1.4634	4.89	.	Q V	.	.	.	.
15.117	1.4703	4.96	.	Q V	.	.	.	.
15.133	1.4772	5.03	.	QV	.	.	.	.
15.150	1.4842	5.10	.	QV	.	.	.	.
15.167	1.4914	5.18	.	QV	.	.	.	.
15.183	1.4986	5.26	.	Q V	.	.	.	.
15.200	1.5060	5.34	.	Q V	.	.	.	.
15.217	1.5134	5.42	.	Q V	.	.	.	.
15.233	1.5210	5.47	.	Q V	.	.	.	.
15.250	1.5286	5.55	.	Q V	.	.	.	.
15.267	1.5364	5.64	.	Q V	.	.	.	.
15.283	1.5442	5.71	.	Q V	.	.	.	.
15.300	1.5522	5.79	.	Q V	.	.	.	.
15.317	1.5603	5.87	.	Q V	.	.	.	.
15.333	1.5685	5.94	.	Q V	.	.	.	.
15.350	1.5768	6.01	.	Q V	.	.	.	.
15.367	1.5851	6.09	.	Q V	.	.	.	.
15.383	1.5936	6.16	.	Q V	.	.	.	.
15.400	1.6022	6.23	.	Q V	.	.	.	.
15.417	1.6109	6.31	.	QV	.	.	.	.
15.433	1.6197	6.38	.	QV	.	.	.	.
15.450	1.6286	6.45	.	QV	.	.	.	.
15.467	1.6376	6.53	.	QV	.	.	.	.
15.483	1.6467	6.60	.	QV	.	.	.	.
15.500	1.6558	6.67	.	QV	.	.	.	.
15.517	1.6651	6.75	.	QV	.	.	.	.
15.533	1.6745	6.82	.	QV	.	.	.	.
15.550	1.6840	6.90	.	QV	.	.	.	.
15.567	1.6937	7.02	.	QV	.	.	.	.
15.583	1.7036	7.20	.	QV	.	.	.	.
15.600	1.7137	7.35	.	QV	.	.	.	.
15.617	1.7241	7.51	.	Q	.	.	.	.
15.633	1.7347	7.68	.	Q	.	.	.	.
15.650	1.7455	7.84	.	QV	.	.	.	.
15.667	1.7565	8.00	.	QV	.	.	.	.
15.683	1.7677	8.17	.	QV	.	.	.	.
15.700	1.7792	8.34	.	QV	.	.	.	.
15.717	1.7909	8.50	.	QV	.	.	.	.
15.733	1.8029	8.67	.	QV	.	.	.	.

15.750	1.8150	8.84	.	Q	.	.	.	.
15.767	1.8275	9.02	.	Q	.	.	.	.
15.783	1.8402	9.21	.	Q	.	.	.	.
15.800	1.8531	9.38	.	Q	.	.	.	.
15.817	1.8662	9.55	.	Q	.	.	.	.
15.833	1.8796	9.71	.	Q	.	.	.	.
15.850	1.8932	9.88	.	Q	.	.	.	.
15.867	1.9071	10.11	.	VQ	.	.	.	.
15.883	1.9212	10.23	.	VQ	.	.	.	.
15.900	1.9355	10.39	.	VQ	.	.	.	.
15.917	1.9501	10.57	.	VQ	.	.	.	.
15.933	1.9649	10.74	.	VQ	.	.	.	.
15.950	1.9799	10.92	.	VQ	.	.	.	.
15.967	1.9952	11.10	.	Q	.	.	.	.
15.983	2.0107	11.28	.	VQ	.	.	.	.
16.000	2.0265	11.46	.	VQ	.	.	.	.
16.017	2.0425	11.64	.	VQ	.	.	.	.
16.033	2.0588	11.83	.	VQ	.	.	.	.
16.050	2.0762	12.63	.	V Q	.	.	.	.
16.067	2.0959	14.28	.	V .Q	.	.	.	.
16.083	2.1180	16.05	.	V . Q	.	.	.	.
16.100	2.1427	17.96	.	V . Q	.	.	.	.
16.117	2.1702	19.94	.	V . Q	.	.	.	.
16.133	2.2004	21.89	.	V . Q	.	.	.	.
16.150	2.2333	23.88	.	V . Q	.	.	.	.
16.167	2.2692	26.09	.	V . Q	.	.	.	.
16.183	2.3082	28.32	.	V . Q	.	.	.	.
16.200	2.3504	30.65	.	V . Q	.	.	.	.
16.217	2.3966	33.55	.	V . Q	.	.	.	.
16.233	2.4478	37.12	.	V . Q	.	.	.	.
16.250	2.5027	39.91	.	V . Q	.	.	.	.
16.267	2.5620	43.02	.	V . Q	.	.	.	.
16.283	2.6246	45.47	.	V . Q	.	.	.	.
16.300	2.6885	46.41	.	V . Q	.	.	.	.
16.317	2.7531	46.83	.	.V	.	.	.	.
16.333	2.8186	47.57	.	.V	.	.	.	.
16.350	2.8837	47.29	.	.V	.	.	.	.
16.367	2.9482	46.82	.	.V	.	.	.	.
16.383	3.0122	46.48	.	.V	.	.	.	.
16.400	3.0752	45.72	.	.V	.	.	.	.
16.417	3.1368	44.75	.	.V	.	.	.	.
16.433	3.1970	43.69	.	.V	.	.	.	.
16.450	3.2552	42.28	.	.V	.	.	.	.
16.467	3.3114	40.74	.	.V	.	.	.	.
16.483	3.3653	39.14	.	.V	.	.	.	.
16.500	3.4167	37.37	.	.V	.	.	.	.
16.517	3.4657	35.53	.	.V	.	.	.	.
16.533	3.5123	33.86	.	.V	.	.	.	.
16.550	3.5568	32.28	.	.V	.	.	.	.
16.567	3.5990	30.63	.	.V	.	.	.	.
16.583	3.6401	29.88	.	.V	.	.	.	.
16.600	3.6798	28.81	.	.V	.	.	.	.
16.617	3.7180	27.77	.	.V	.	.	.	.
16.633	3.7549	26.78	.	.V	.	.	.	.
16.650	3.7905	25.82	.	.V	.	.	.	.

16.667	3.8248	24.92	.	.	V	Q.	.	.
16.683	3.8579	24.06	.	.	V	Q.	.	.
16.700	3.8899	23.23	.	.	V	Q.	.	.
16.717	3.9208	22.43	.	.	V	Q.	.	.
16.733	3.9506	21.64	.	.	V	Q.	.	.
16.750	3.9794	20.90	.	.	Q	.	.	.
16.767	4.0072	20.19	.	.	Q	.	.	.
16.783	4.0341	19.50	.	.	QV	.	.	.
16.800	4.0600	18.85	.	.	QV	.	.	.
16.817	4.0852	18.26	.	.	Q	V	.	.
16.833	4.1096	17.70	.	.	Q	V	.	.
16.850	4.1332	17.17	.	.	Q	V	.	.
16.867	4.1562	16.68	.	.	Q	V	.	.
16.883	4.1786	16.26	.	.	Q	V	.	.
16.900	4.2005	15.89	.	.	Q	V	.	.
16.917	4.2219	15.53	.	.	Q	V	.	.
16.933	4.2428	15.19	.	.	Q	V	.	.
16.950	4.2632	14.86	.	.	Q	V	.	.
16.967	4.2833	14.54	.	.	Q	V	.	.
16.983	4.3029	14.23	.	.	Q	V	.	.
17.000	4.3221	13.94	.	.	Q	V	.	.
17.017	4.3409	13.66	.	.	Q	V	.	.
17.033	4.3593	13.39	.	.	Q	V	.	.
17.050	4.3774	13.13	.	.	Q	V	.	.
17.067	4.3952	12.88	.	.	Q	V	.	.
17.083	4.4126	12.65	.	.	Q	V	.	.
17.100	4.4297	12.42	.	.	Q.	V	.	.
17.117	4.4465	12.20	.	.	Q.	V	.	.
17.133	4.4630	11.99	.	.	Q.	V	.	.
17.150	4.4792	11.79	.	.	Q.	V	.	.
17.167	4.4952	11.58	.	.	Q.	V	.	.
17.183	4.5108	11.35	.	.	Q.	V	.	.
17.200	4.5262	11.17	.	.	Q.	V	.	.
17.217	4.5414	11.00	.	.	Q.	V	.	.
17.233	4.5563	10.87	.	.	Q.	V	.	.
17.250	4.5711	10.70	.	.	Q.	V	.	.
17.267	4.5855	10.51	.	.	Q.	V	.	.
17.283	4.5998	10.36	.	.	Q.	V	.	.
17.300	4.6139	10.21	.	.	Q.	V	.	.
17.317	4.6277	10.06	.	.	Q.	V	.	.
17.333	4.6414	9.94	.	.	Q.	V	.	.
17.350	4.6549	9.82	.	.	Q.	V	.	.
17.367	4.6683	9.69	.	.	Q.	V	.	.
17.383	4.6814	9.57	.	.	Q.	V	.	.
17.400	4.6945	9.45	.	.	Q.	V	.	.
17.417	4.7073	9.33	.	.	Q.	V	.	.
17.433	4.7200	9.22	.	.	Q.	V	.	.
17.450	4.7326	9.11	.	.	Q.	V.	.	.
17.467	4.7450	9.01	.	.	Q.	V.	.	.
17.483	4.7572	8.91	.	.	Q.	V.	.	.
17.500	4.7694	8.81	.	.	Q.	V.	.	.
17.517	4.7814	8.71	.	.	Q.	V.	.	.
17.533	4.7933	8.62	.	.	Q.	V.	.	.
17.550	4.8050	8.53	.	.	Q.	V.	.	.
17.567	4.8166	8.44	.	.	Q.	V.	.	.

17.583	4.8282	8.36	.	Q	.	V.	.	.
17.600	4.8396	8.29	.	Q	.	V.	.	.
17.617	4.8509	8.23	.	Q	.	V.	.	.
17.633	4.8622	8.19	.	Q	.	V.	.	.
17.650	4.8734	8.15	.	Q	.	V.	.	.
17.667	4.8846	8.11	.	Q	.	V.	.	.
17.683	4.8957	8.08	.	Q	.	V.	.	.
17.700	4.9068	8.04	.	Q	.	V.	.	.
17.717	4.9178	8.01	.	Q	.	V.	.	.
17.733	4.9288	7.97	.	Q	.	V.	.	.
17.750	4.9398	7.97	.	Q	.	V.	.	.
17.767	4.9507	7.92	.	Q	.	V.	.	.
17.783	4.9615	7.87	.	Q	.	V.	.	.
17.800	4.9723	7.83	.	Q	.	V.	.	.
17.817	4.9830	7.80	.	Q	.	V	.	.
17.833	4.9937	7.76	.	Q	.	V	.	.
17.850	5.0044	7.74	.	Q	.	V	.	.
17.867	5.0150	7.71	.	Q	.	V	.	.
17.883	5.0256	7.67	.	Q	.	V	.	.
17.900	5.0361	7.64	.	Q	.	V	.	.
17.917	5.0466	7.61	.	Q	.	V	.	.
17.933	5.0570	7.58	.	Q	.	V	.	.
17.950	5.0674	7.54	.	Q	.	V	.	.
17.967	5.0778	7.51	.	Q	.	V	.	.
17.983	5.0881	7.48	.	Q	.	V	.	.
18.000	5.0983	7.45	.	Q	.	V	.	.
18.017	5.1085	7.42	.	Q	.	V	.	.
18.033	5.1187	7.38	.	Q	.	V	.	.
18.050	5.1288	7.35	.	Q	.	V	.	.
18.067	5.1389	7.32	.	Q	.	V	.	.
18.083	5.1490	7.29	.	Q	.	V	.	.
18.100	5.1589	7.23	.	Q	.	V	.	.
18.117	5.1688	7.19	.	Q	.	V	.	.
18.133	5.1787	7.15	.	Q	.	V	.	.
18.150	5.1885	7.12	.	Q	.	V	.	.
18.167	5.1982	7.08	.	Q	.	V	.	.
18.183	5.2079	7.04	.	Q	.	V	.	.
18.200	5.2176	7.00	.	Q	.	V	.	.
18.217	5.2272	7.01	.	Q	.	.V	.	.
18.233	5.2368	6.96	.	Q	.	.V	.	.
18.250	5.2463	6.89	.	Q	.	.V	.	.
18.267	5.2558	6.86	.	Q	.	.V	.	.
18.283	5.2651	6.82	.	Q	.	.V	.	.
18.300	5.2745	6.78	.	Q	.	.V	.	.
18.317	5.2838	6.74	.	Q	.	.V	.	.
18.333	5.2930	6.71	.	Q	.	.V	.	.
18.350	5.3022	6.67	.	Q	.	.V	.	.
18.367	5.3114	6.67	.	Q	.	.V	.	.
18.383	5.3206	6.65	.	Q	.	.V	.	.
18.400	5.3297	6.62	.	Q	.	.V	.	.
18.417	5.3388	6.59	.	Q	.	.V	.	.
18.433	5.3478	6.56	.	Q	.	.V	.	.
18.450	5.3568	6.53	.	Q	.	.V	.	.
18.467	5.3657	6.50	.	Q	.	.V	.	.
18.483	5.3747	6.47	.	Q	.	.V	.	.

18.500	5.3835	6.44	.	Q	.	.V	.	.
18.517	5.3924	6.41	.	Q	.	.V	.	.
18.533	5.4011	6.38	.	Q	.	.V	.	.
18.550	5.4099	6.35	.	Q	.	.V	.	.
18.567	5.4186	6.32	.	Q	.	.V	.	.
18.583	5.4273	6.29	.	Q	.	.V	.	.
18.600	5.4359	6.27	.	Q	.	.V	.	.
18.617	5.4445	6.27	.	Q	.	.V	.	.
18.633	5.4531	6.22	.	Q	.	.V	.	.
18.650	5.4616	6.19	.	Q	.	.V	.	.
18.667	5.4701	6.16	.	Q	.	.V	.	.
18.683	5.4786	6.14	.	Q	.	.V	.	.
18.700	5.4870	6.11	.	Q	.	.V	.	.
18.717	5.4954	6.08	.	Q	.	.V	.	.
18.733	5.5037	6.06	.	Q	.	.V	.	.
18.750	5.5120	6.03	.	Q	.	.V	.	.
18.767	5.5203	6.00	.	Q	.	.V	.	.
18.783	5.5285	5.98	.	Q	.	.V	.	.
18.800	5.5367	5.95	.	Q	.	.V	.	.
18.817	5.5449	5.93	.	Q	.	.V	.	.
18.833	5.5530	5.90	.	Q	.	.V	.	.
18.850	5.5611	5.88	.	Q	.	.V	.	.
18.867	5.5692	5.85	.	Q	.	.V	.	.
18.883	5.5772	5.83	.	Q	.	.V	.	.
18.900	5.5852	5.81	.	Q	.	.V	.	.
18.917	5.5932	5.78	.	Q	.	.V	.	.
18.933	5.6011	5.76	.	Q	.	.V	.	.
18.950	5.6090	5.73	.	Q	.	.V	.	.
18.967	5.6169	5.71	.	Q	.	.V	.	.
18.983	5.6247	5.69	.	Q	.	.V	.	.
19.000	5.6325	5.66	.	Q	.	.V	.	.
19.017	5.6403	5.64	.	Q	.	.V	.	.
19.033	5.6480	5.62	.	Q	.	.V	.	.
19.050	5.6557	5.59	.	Q	.	.V	.	.
19.067	5.6634	5.57	.	Q	.	.V	.	.
19.083	5.6710	5.55	.	Q	.	.V	.	.
19.100	5.6786	5.52	.	Q	.	.V	.	.
19.117	5.6862	5.50	.	Q	.	.V	.	.
19.133	5.6938	5.48	.	Q	.	.V	.	.
19.150	5.7013	5.46	.	Q	.	.V	.	.
19.167	5.7088	5.44	.	Q	.	.V	.	.
19.183	5.7162	5.42	.	Q	.	.V	.	.
19.200	5.7237	5.40	.	Q	.	.V	.	.
19.217	5.7311	5.37	.	Q	.	.V	.	.
19.233	5.7384	5.36	.	Q	.	.V	.	.
19.250	5.7458	5.35	.	Q	.	.V	.	.
19.267	5.7531	5.31	.	Q	.	.V	.	.
19.283	5.7604	5.29	.	Q	.	.V	.	.
19.300	5.7677	5.27	.	Q	.	.V	.	.
19.317	5.7749	5.25	.	Q	.	.V	.	.
19.333	5.7821	5.23	.	Q	.	.V	.	.
19.350	5.7893	5.21	.	Q	.	.V	.	.
19.367	5.7964	5.19	.	Q	.	.V	.	.
19.383	5.8035	5.17	.	Q	.	.V	.	.
19.400	5.8106	5.15	.	Q	.	.V	.	.

19.417	5.8177	5.13	.	Q	.	.	V	.	.
19.433	5.8247	5.11	.	Q	.	.	V	.	.
19.450	5.8317	5.09	.	Q	.	.	V	.	.
19.467	5.8387	5.07	.	Q	.	.	V	.	.
19.483	5.8457	5.05	.	Q	.	.	V	.	.
19.500	5.8526	5.03	.	Q	.	.	V	.	.
19.517	5.8595	5.01	.	Q	.	.	V	.	.
19.533	5.8664	4.99	.	Q	.	.	V	.	.
19.550	5.8733	4.98	.	Q	.	.	V	.	.
19.567	5.8801	4.96	.	Q	.	.	V	.	.
19.583	5.8869	4.94	.	Q	.	.	V	.	.
19.600	5.8937	4.92	.	Q	.	.	V	.	.
19.617	5.9004	4.90	.	Q	.	.	V	.	.
19.633	5.9071	4.88	.	Q	.	.	V	.	.
19.650	5.9139	4.87	.	Q	.	.	V	.	.
19.667	5.9205	4.85	.	Q	.	.	V	.	.
19.683	5.9272	4.83	.	Q	.	.	V	.	.
19.700	5.9338	4.81	.	Q	.	.	V	.	.
19.717	5.9404	4.80	.	Q	.	.	V	.	.
19.733	5.9470	4.78	.	Q	.	.	V	.	.
19.750	5.9536	4.76	.	Q	.	.	V	.	.
19.767	5.9601	4.75	.	Q	.	.	V	.	.
19.783	5.9666	4.73	.	Q	.	.	V	.	.
19.800	5.9731	4.71	.	Q	.	.	V	.	.
19.817	5.9796	4.69	.	Q	.	.	V	.	.
19.833	5.9860	4.68	.	Q	.	.	V	.	.
19.850	5.9924	4.66	.	Q	.	.	V	.	.
19.867	5.9988	4.64	.	Q	.	.	V	.	.
19.883	6.0052	4.63	.	Q	.	.	V	.	.
19.900	6.0116	4.61	.	Q	.	.	V	.	.
19.917	6.0179	4.60	.	Q	.	.	V	.	.
19.933	6.0242	4.60	.	Q	.	.	V	.	.
19.950	6.0305	4.56	.	Q	.	.	V	.	.
19.967	6.0368	4.55	.	Q	.	.	V	.	.
19.983	6.0430	4.53	.	Q	.	.	V	.	.
20.000	6.0493	4.52	.	Q	.	.	V	.	.
20.017	6.0555	4.50	.	Q	.	.	V	.	.
20.033	6.0616	4.49	.	Q	.	.	V	.	.
20.050	6.0678	4.47	.	Q	.	.	V	.	.
20.067	6.0739	4.46	.	Q	.	.	V	.	.
20.083	6.0800	4.44	.	Q	.	.	V	.	.
20.100	6.0861	4.43	.	Q	.	.	V	.	.
20.117	6.0922	4.41	.	Q	.	.	V	.	.
20.133	6.0983	4.40	.	Q	.	.	V	.	.
20.150	6.1043	4.38	.	Q	.	.	V	.	.
20.167	6.1103	4.37	.	Q	.	.	V	.	.
20.183	6.1163	4.35	.	Q	.	.	V	.	.
20.200	6.1223	4.34	.	Q	.	.	V	.	.
20.217	6.1282	4.32	.	Q	.	.	V	.	.
20.233	6.1342	4.31	.	Q	.	.	V	.	.
20.250	6.1401	4.30	.	Q	.	.	V	.	.
20.267	6.1460	4.28	.	Q	.	.	V	.	.
20.283	6.1519	4.27	.	Q	.	.	V	.	.
20.300	6.1577	4.25	.	Q	.	.	V	.	.
20.317	6.1636	4.24	.	Q	.	.	V	.	.

20.333	6.1694	4.23	.	Q	.	.	V	.	.
20.350	6.1752	4.21	.	Q	.	.	V	.	.
20.367	6.1810	4.20	.	Q	.	.	V	.	.
20.383	6.1867	4.18	.	Q	.	.	V	.	.
20.400	6.1925	4.17	.	Q	.	.	V	.	.
20.417	6.1982	4.15	.	Q	.	.	V	.	.
20.433	6.2039	4.14	.	Q	.	.	V	.	.
20.450	6.2096	4.13	.	Q	.	.	V	.	.
20.467	6.2153	4.12	.	Q	.	.	V	.	.
20.483	6.2209	4.10	.	Q	.	.	V	.	.
20.500	6.2265	4.09	.	Q	.	.	V	.	.
20.517	6.2322	4.08	.	Q	.	.	V	.	.
20.533	6.2377	4.06	.	Q	.	.	V	.	.
20.550	6.2433	4.05	.	Q	.	.	V	.	.
20.567	6.2489	4.04	.	Q	.	.	V	.	.
20.583	6.2544	4.03	.	Q	.	.	V	.	.
20.600	6.2600	4.01	.	Q	.	.	V	.	.
20.617	6.2655	4.00	.	Q	.	.	V	.	.
20.633	6.2710	3.99	.	Q	.	.	V	.	.
20.650	6.2764	3.98	.	Q	.	.	V	.	.
20.667	6.2819	3.97	.	Q	.	.	V	.	.
20.683	6.2874	3.97	.	Q	.	.	V	.	.
20.700	6.2928	3.94	.	Q	.	.	V	.	.
20.717	6.2982	3.93	.	Q	.	.	V	.	.
20.733	6.3036	3.92	.	Q	.	.	V	.	.
20.750	6.3090	3.91	.	Q	.	.	V	.	.
20.767	6.3144	3.89	.	Q	.	.	V	.	.
20.783	6.3197	3.88	.	Q	.	.	V	.	.
20.800	6.3250	3.87	.	Q	.	.	V	.	.
20.817	6.3303	3.86	.	Q	.	.	V	.	.
20.833	6.3356	3.85	.	Q	.	.	V	.	.
20.850	6.3409	3.84	.	Q	.	.	V	.	.
20.867	6.3462	3.82	.	Q	.	.	V	.	.
20.883	6.3514	3.81	.	Q	.	.	V	.	.
20.900	6.3567	3.80	.	Q	.	.	V	.	.
20.917	6.3619	3.79	.	Q	.	.	V	.	.
20.933	6.3671	3.78	.	Q	.	.	V	.	.
20.950	6.3723	3.77	.	Q	.	.	V	.	.
20.967	6.3775	3.76	.	Q	.	.	V	.	.
20.983	6.3826	3.75	.	Q	.	.	V	.	.
21.000	6.3878	3.74	.	Q	.	.	V	.	.
21.017	6.3929	3.73	.	Q	.	.	V	.	.
21.033	6.3980	3.72	.	Q	.	.	V	.	.
21.050	6.4032	3.71	.	Q	.	.	V	.	.
21.067	6.4082	3.69	.	Q	.	.	V	.	.
21.083	6.4133	3.68	.	Q	.	.	V	.	.
21.100	6.4184	3.67	.	Q	.	.	V	.	.
21.117	6.4234	3.66	.	Q	.	.	V	.	.
21.133	6.4285	3.65	.	Q	.	.	V	.	.
21.150	6.4335	3.64	.	Q	.	.	V	.	.
21.167	6.4385	3.63	.	Q	.	.	V	.	.
21.183	6.4435	3.62	.	Q	.	.	V	.	.
21.200	6.4484	3.61	.	Q	.	.	V	.	.
21.217	6.4534	3.60	.	Q	.	.	V	.	.
21.233	6.4584	3.59	.	Q	.	.	V	.	.

21.250	6.4633	3.58	. Q	.	.	V	.	.
21.267	6.4682	3.57	. Q	.	.	V	.	.
21.283	6.4731	3.56	. Q	.	.	V	.	.
21.300	6.4780	3.55	. Q	.	.	V	.	.
21.317	6.4829	3.54	. Q	.	.	V	.	.
21.333	6.4878	3.54	. Q	.	.	V	.	.
21.350	6.4926	3.53	. Q	.	.	V	.	.
21.367	6.4975	3.52	. Q	.	.	V	.	.
21.383	6.5023	3.51	. Q	.	.	V	.	.
21.400	6.5071	3.50	. Q	.	.	V	.	.
21.417	6.5119	3.49	. Q	.	.	V	.	.
21.433	6.5167	3.48	. Q	.	.	V	.	.
21.450	6.5215	3.47	. Q	.	.	V	.	.
21.467	6.5263	3.46	. Q	.	.	V	.	.
21.483	6.5310	3.46	. Q	.	.	V	.	.
21.500	6.5358	3.45	. Q	.	.	V	.	.
21.517	6.5405	3.43	. Q	.	.	V	.	.
21.533	6.5452	3.42	. Q	.	.	V	.	.
21.550	6.5499	3.42	. Q	.	.	V	.	.
21.567	6.5546	3.41	. Q	.	.	V	.	.
21.583	6.5593	3.40	. Q	.	.	V	.	.
21.600	6.5640	3.39	. Q	.	.	V	.	.
21.617	6.5686	3.38	. Q	.	.	V	.	.
21.633	6.5733	3.37	. Q	.	.	V	.	.
21.650	6.5779	3.36	. Q	.	.	V	.	.
21.667	6.5825	3.35	. Q	.	.	V	.	.
21.683	6.5871	3.35	. Q	.	.	V	.	.
21.700	6.5917	3.34	. Q	.	.	V	.	.
21.717	6.5963	3.33	. Q	.	.	V	.	.
21.733	6.6009	3.32	. Q	.	.	V	.	.
21.750	6.6055	3.31	. Q	.	.	V	.	.
21.767	6.6100	3.30	. Q	.	.	V	.	.
21.783	6.6146	3.30	. Q	.	.	V	.	.
21.800	6.6191	3.29	. Q	.	.	V	.	.
21.817	6.6236	3.28	. Q	.	.	V	.	.
21.833	6.6281	3.27	. Q	.	.	V	.	.
21.850	6.6326	3.26	. Q	.	.	V	.	.
21.867	6.6371	3.26	. Q	.	.	V	.	.
21.883	6.6416	3.25	. Q	.	.	V	.	.
21.900	6.6460	3.24	. Q	.	.	V	.	.
21.917	6.6505	3.23	. Q	.	.	V	.	.
21.933	6.6549	3.22	. Q	.	.	V	.	.
21.950	6.6593	3.22	. Q	.	.	V	.	.
21.967	6.6638	3.21	. Q	.	.	V	.	.
21.983	6.6682	3.20	. Q	.	.	V	.	.
22.000	6.6726	3.19	. Q	.	.	V	.	.
22.017	6.6770	3.19	. Q	.	.	V	.	.
22.033	6.6813	3.18	. Q	.	.	V	.	.
22.050	6.6857	3.17	. Q	.	.	V	.	.
22.067	6.6901	3.16	. Q	.	.	V	.	.
22.083	6.6944	3.16	. Q	.	.	V	.	.
22.100	6.6987	3.15	. Q	.	.	V	.	.
22.117	6.7031	3.14	. Q	.	.	V	.	.
22.133	6.7074	3.13	. Q	.	.	V	.	.
22.150	6.7117	3.13	. Q	.	.	V	.	.

22.167	6.7160	3.12	. Q	.	.	V	.	.
22.183	6.7203	3.11	. Q	.	.	V	.	.
22.200	6.7246	3.10	. Q	.	.	V	.	.
22.217	6.7288	3.10	. Q	.	.	V	.	.
22.233	6.7331	3.09	. Q	.	.	V	.	.
22.250	6.7373	3.08	. Q	.	.	V	.	.
22.267	6.7416	3.08	. Q	.	.	V	.	.
22.283	6.7458	3.07	. Q	.	.	V	.	.
22.300	6.7500	3.06	. Q	.	.	V	.	.
22.317	6.7542	3.05	. Q	.	.	V	.	.
22.333	6.7584	3.04	. Q	.	.	V	.	.
22.350	6.7626	3.04	. Q	.	.	V	.	.
22.367	6.7668	3.03	. Q	.	.	V	.	.
22.383	6.7709	3.02	. Q	.	.	V	.	.
22.400	6.7751	3.02	. Q	.	.	V	.	.
22.417	6.7792	3.01	. Q	.	.	V	.	.
22.433	6.7834	3.00	. Q	.	.	V	.	.
22.450	6.7875	3.00	. Q	.	.	V	.	.
22.467	6.7916	2.99	. Q	.	.	V	.	.
22.483	6.7957	2.98	. Q	.	.	V	.	.
22.500	6.7998	2.98	. Q	.	.	V	.	.
22.517	6.8039	2.97	. Q	.	.	V	.	.
22.533	6.8080	2.96	. Q	.	.	V	.	.
22.550	6.8121	2.96	. Q	.	.	V	.	.
22.567	6.8162	2.95	. Q	.	.	V	.	.
22.583	6.8202	2.95	. Q	.	.	V	.	.
22.600	6.8243	2.94	. Q	.	.	V	.	.
22.617	6.8283	2.93	. Q	.	.	V	.	.
22.633	6.8323	2.93	. Q	.	.	V	.	.
22.650	6.8364	2.92	. Q	.	.	V	.	.
22.667	6.8404	2.91	. Q	.	.	V	.	.
22.683	6.8444	2.91	. Q	.	.	V	.	.
22.700	6.8484	2.90	. Q	.	.	V	.	.
22.717	6.8524	2.90	. Q	.	.	V	.	.
22.733	6.8563	2.89	. Q	.	.	V	.	.
22.750	6.8603	2.88	. Q	.	.	V	.	.
22.767	6.8643	2.88	. Q	.	.	V	.	.
22.783	6.8682	2.87	. Q	.	.	V	.	.
22.800	6.8722	2.87	. Q	.	.	V	.	.
22.817	6.8761	2.86	. Q	.	.	V	.	.
22.833	6.8800	2.85	. Q	.	.	V	.	.
22.850	6.8840	2.85	. Q	.	.	V	.	.
22.867	6.8879	2.84	. Q	.	.	V	.	.
22.883	6.8918	2.84	. Q	.	.	V	.	.
22.900	6.8957	2.83	. Q	.	.	V	.	.
22.917	6.8996	2.82	. Q	.	.	V	.	.
22.933	6.9034	2.82	. Q	.	.	V	.	.
22.950	6.9073	2.81	. Q	.	.	V	.	.
22.967	6.9112	2.81	. Q	.	.	V	.	.
22.983	6.9150	2.80	. Q	.	.	V	.	.
23.000	6.9189	2.80	. Q	.	.	V	.	.
23.017	6.9227	2.79	. Q	.	.	V	.	.
23.033	6.9266	2.78	. Q	.	.	V	.	.
23.050	6.9304	2.78	. Q	.	.	V	.	.
23.067	6.9342	2.77	. Q	.	.	V	.	.

23.083	6.9380	2.77	. Q	.	.	V	.	.
23.100	6.9418	2.76	. Q	.	.	V	.	.
23.117	6.9456	2.76	. Q	.	.	V	.	.
23.133	6.9494	2.75	. Q	.	.	V	.	.
23.150	6.9532	2.75	. Q	.	.	V	.	.
23.167	6.9570	2.74	. Q	.	.	V	.	.
23.183	6.9608	2.73	. Q	.	.	V	.	.
23.200	6.9645	2.73	. Q	.	.	V	.	.
23.217	6.9683	2.72	. Q	.	.	V	.	.
23.233	6.9720	2.72	. Q	.	.	V	.	.
23.250	6.9757	2.71	. Q	.	.	V	.	.
23.267	6.9795	2.71	. Q	.	.	V	.	.
23.283	6.9832	2.71	. Q	.	.	V	.	.
23.300	6.9869	2.70	. Q	.	.	V	.	.
23.317	6.9906	2.69	. Q	.	.	V	.	.
23.333	6.9943	2.69	. Q	.	.	V	.	.
23.350	6.9980	2.68	. Q	.	.	V	.	.
23.367	7.0017	2.68	. Q	.	.	V	.	.
23.383	7.0054	2.67	. Q	.	.	V	.	.
23.400	7.0091	2.67	. Q	.	.	V	.	.
23.417	7.0128	2.66	. Q	.	.	V	.	.
23.433	7.0164	2.66	. Q	.	.	V	.	.
23.450	7.0201	2.65	. Q	.	.	V	.	.
23.467	7.0237	2.65	. Q	.	.	V	.	.
23.483	7.0274	2.64	. Q	.	.	V	.	.
23.500	7.0310	2.64	. Q	.	.	V	.	.
23.517	7.0346	2.63	. Q	.	.	V	.	.
23.533	7.0382	2.63	. Q	.	.	V	.	.
23.550	7.0418	2.62	. Q	.	.	V	.	.
23.567	7.0455	2.62	. Q	.	.	V	.	.
23.583	7.0491	2.61	. Q	.	.	V	.	.
23.600	7.0527	2.61	. Q	.	.	V	.	.
23.617	7.0562	2.60	. Q	.	.	V	.	.
23.633	7.0598	2.60	. Q	.	.	V	.	.
23.650	7.0634	2.59	. Q	.	.	V	.	.
23.667	7.0670	2.59	. Q	.	.	V	.	.
23.683	7.0705	2.59	. Q	.	.	V	.	.
23.700	7.0741	2.58	. Q	.	.	V	.	.
23.717	7.0776	2.58	. Q	.	.	V	.	.
23.733	7.0812	2.57	. Q	.	.	V	.	.
23.750	7.0847	2.57	. Q	.	.	V	.	.
23.767	7.0882	2.56	. Q	.	.	V	.	.
23.783	7.0918	2.56	. Q	.	.	V	.	.
23.800	7.0953	2.55	. Q	.	.	V	.	.
23.817	7.0988	2.55	. Q	.	.	V	.	.
23.833	7.1023	2.54	. Q	.	.	V	.	.
23.850	7.1058	2.54	. Q	.	.	V	.	.
23.867	7.1093	2.54	. Q	.	.	V	.	.
23.883	7.1128	2.53	. Q	.	.	V	.	.
23.900	7.1162	2.53	. Q	.	.	V	.	.
23.917	7.1197	2.52	. Q	.	.	V	.	.
23.933	7.1232	2.52	. Q	.	.	V	.	.
23.950	7.1266	2.51	. Q	.	.	V	.	.
23.967	7.1301	2.51	. Q	.	.	V	.	.
23.983	7.1336	2.51	. Q	.	.	V	.	.

24.000 7.1370 2.50 . Q . . V . .

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1441.0
10%	1405.0
20%	475.0
30%	275.0
40%	205.0
50%	165.0
60%	125.0
70%	100.0
80%	75.0
90%	55.0

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S
USING COUNTY HYDROLOGY MANUAL OF SAN BERNARDINO(1986)
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Ver. 21.0 Release Date: 06/01/2014 License ID 1202

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****

- * CITY OF REDLANDS ENTITLEMENT - TTM# 20336 - MLC HOLDINGS, INC. *
 - * 100-YEAR FLOOD ROUTING *
 - * RYAN KIM HC 6/30/2020 *
- *****

FILE NAME: RED100PR.DAT
TIME/DATE OF STUDY: 17:16 06/30/2020

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

FLOW PROCESS FROM NODE 100.00 TO NODE 101.00 IS CODE = 1.2

>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<

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(SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

- RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
- TOTAL CATCHMENT AREA(ACRES) = 24.45
- SOIL-LOSS RATE, Fm,(INCH/HR) = 0.205
- LOW LOSS FRACTION = 0.225
- TIME OF CONCENTRATION(MIN.) = 16.61
- SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
- USER SPECIFIED RAINFALL VALUES ARE USED:
- RETURN FREQUENCY(YEARS) = 100
- 5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.32
- 30-MINUTE POINT RAINFALL VALUE(INCHES) = 0.83
- 1-HOUR POINT RAINFALL VALUE(INCHES) = 1.20
- 3-HOUR POINT RAINFALL VALUE(INCHES) = 1.97
- 6-HOUR POINT RAINFALL VALUE(INCHES) = 2.71
- 24-HOUR POINT RAINFALL VALUE(INCHES) = 4.97

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 7.16
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 2.96

↑

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

=====

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)
(Notes: Time indicated is at END of Each Unit Intervals.
Peak 5-minute rainfall intensity is modeled as
a constant value for entire 5-minute period.)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	10.9	21.8	32.6	43.5
0.017	0.0001	0.06	Q	.	.	.	.
0.033	0.0003	0.18	Q	.	.	.	.
0.050	0.0007	0.30	Q	.	.	.	.
0.067	0.0013	0.42	Q	.	.	.	.
0.083	0.0021	0.54	Q	.	.	.	.
0.100	0.0030	0.66	Q	.	.	.	.
0.117	0.0040	0.78	Q	.	.	.	.
0.133	0.0053	0.90	Q	.	.	.	.
0.150	0.0067	1.02	Q	.	.	.	.
0.167	0.0082	1.14	VQ	.	.	.	.
0.183	0.0100	1.26	VQ	.	.	.	.
0.200	0.0119	1.38	VQ	.	.	.	.
0.217	0.0139	1.49	VQ	.	.	.	.
0.233	0.0161	1.55	VQ	.	.	.	.
0.250	0.0182	1.55	VQ	.	.	.	.
0.267	0.0203	1.55	VQ	.	.	.	.
0.283	0.0225	1.55	VQ	.	.	.	.
0.300	0.0246	1.55	VQ	.	.	.	.
0.317	0.0267	1.55	VQ	.	.	.	.
0.333	0.0289	1.55	VQ	.	.	.	.
0.350	0.0310	1.55	VQ	.	.	.	.
0.367	0.0331	1.55	VQ	.	.	.	.
0.383	0.0353	1.55	VQ	.	.	.	.
0.400	0.0374	1.55	VQ	.	.	.	.
0.417	0.0396	1.55	VQ	.	.	.	.
0.433	0.0417	1.55	VQ	.	.	.	.
0.450	0.0439	1.56	VQ	.	.	.	.
0.467	0.0460	1.56	VQ	.	.	.	.
0.483	0.0481	1.56	VQ	.	.	.	.
0.500	0.0503	1.56	VQ	.	.	.	.
0.517	0.0524	1.56	VQ	.	.	.	.
0.533	0.0546	1.56	VQ	.	.	.	.
0.550	0.0567	1.56	VQ	.	.	.	.
0.567	0.0589	1.56	VQ	.	.	.	.
0.583	0.0610	1.56	VQ	.	.	.	.

0.600	0.0632	1.56	VQ	.	.	.	.
0.617	0.0653	1.57	VQ	.	.	.	.
0.633	0.0675	1.57	VQ	.	.	.	.
0.650	0.0697	1.57	VQ	.	.	.	.
0.667	0.0718	1.57	VQ	.	.	.	.
0.683	0.0740	1.57	VQ	.	.	.	.
0.700	0.0761	1.57	VQ	.	.	.	.
0.717	0.0783	1.57	VQ	.	.	.	.
0.733	0.0805	1.57	VQ	.	.	.	.
0.750	0.0827	1.58	VQ	.	.	.	.
0.767	0.0848	1.58	VQ	.	.	.	.
0.783	0.0870	1.58	VQ	.	.	.	.
0.800	0.0892	1.58	VQ	.	.	.	.
0.817	0.0914	1.58	VQ	.	.	.	.
0.833	0.0935	1.58	VQ	.	.	.	.
0.850	0.0957	1.58	VQ	.	.	.	.
0.867	0.0979	1.58	VQ	.	.	.	.
0.883	0.1001	1.58	VQ	.	.	.	.
0.900	0.1022	1.58	VQ	.	.	.	.
0.917	0.1044	1.58	VQ	.	.	.	.
0.933	0.1066	1.58	VQ	.	.	.	.
0.950	0.1088	1.58	VQ	.	.	.	.
0.967	0.1110	1.59	VQ	.	.	.	.
0.983	0.1132	1.59	VQ	.	.	.	.
1.000	0.1153	1.59	VQ	.	.	.	.
1.017	0.1175	1.59	VQ	.	.	.	.
1.033	0.1197	1.59	VQ	.	.	.	.
1.050	0.1219	1.59	VQ	.	.	.	.
1.067	0.1241	1.59	VQ	.	.	.	.
1.083	0.1263	1.59	VQ	.	.	.	.
1.100	0.1285	1.59	VQ	.	.	.	.
1.117	0.1307	1.59	VQ	.	.	.	.
1.133	0.1329	1.59	VQ	.	.	.	.
1.150	0.1351	1.60	VQ	.	.	.	.
1.167	0.1373	1.60	VQ	.	.	.	.
1.183	0.1395	1.60	VQ	.	.	.	.
1.200	0.1417	1.60	VQ	.	.	.	.
1.217	0.1439	1.60	VQ	.	.	.	.
1.233	0.1461	1.60	VQ	.	.	.	.
1.250	0.1483	1.60	VQ	.	.	.	.
1.267	0.1505	1.61	VQ	.	.	.	.
1.283	0.1527	1.61	VQ	.	.	.	.
1.300	0.1549	1.61	VQ	.	.	.	.
1.317	0.1571	1.61	VQ	.	.	.	.
1.333	0.1594	1.61	VQ	.	.	.	.
1.350	0.1616	1.61	VQ	.	.	.	.
1.367	0.1638	1.61	VQ	.	.	.	.
1.383	0.1660	1.61	VQ	.	.	.	.
1.400	0.1682	1.61	VQ	.	.	.	.
1.417	0.1705	1.61	VQ	.	.	.	.
1.433	0.1727	1.61	VQ	.	.	.	.
1.450	0.1749	1.62	VQ	.	.	.	.
1.467	0.1771	1.62	VQ	.	.	.	.
1.483	0.1794	1.62	.Q	.	.	.	.
1.500	0.1816	1.62	.Q	.	.	.	.

1.517	0.1838	1.62	.Q	.	.	.	.
1.533	0.1861	1.62	.Q	.	.	.	.
1.550	0.1883	1.62	.Q	.	.	.	.
1.567	0.1905	1.62	.Q	.	.	.	.
1.583	0.1928	1.62	.Q	.	.	.	.
1.600	0.1950	1.62	.Q	.	.	.	.
1.617	0.1972	1.62	.Q	.	.	.	.
1.633	0.1995	1.62	.Q	.	.	.	.
1.650	0.2017	1.63	.Q	.	.	.	.
1.667	0.2039	1.63	.Q	.	.	.	.
1.683	0.2062	1.63	.Q	.	.	.	.
1.700	0.2084	1.63	.Q	.	.	.	.
1.717	0.2107	1.63	.Q	.	.	.	.
1.733	0.2129	1.63	.Q	.	.	.	.
1.750	0.2152	1.63	.Q	.	.	.	.
1.767	0.2174	1.64	.Q	.	.	.	.
1.783	0.2197	1.64	.Q	.	.	.	.
1.800	0.2219	1.64	.Q	.	.	.	.
1.817	0.2242	1.64	.Q	.	.	.	.
1.833	0.2265	1.64	.Q	.	.	.	.
1.850	0.2287	1.64	.Q	.	.	.	.
1.867	0.2310	1.64	.Q	.	.	.	.
1.883	0.2332	1.65	.Q	.	.	.	.
1.900	0.2355	1.65	.Q	.	.	.	.
1.917	0.2378	1.65	.Q	.	.	.	.
1.933	0.2401	1.65	.Q	.	.	.	.
1.950	0.2423	1.65	.Q	.	.	.	.
1.967	0.2446	1.65	.Q	.	.	.	.
1.983	0.2469	1.65	.Q	.	.	.	.
2.000	0.2491	1.65	.Q	.	.	.	.
2.017	0.2514	1.65	.Q	.	.	.	.
2.033	0.2537	1.65	.Q	.	.	.	.
2.050	0.2560	1.65	.Q	.	.	.	.
2.067	0.2582	1.65	.Q	.	.	.	.
2.083	0.2605	1.65	.Q	.	.	.	.
2.100	0.2628	1.65	.Q	.	.	.	.
2.117	0.2651	1.66	.Q	.	.	.	.
2.133	0.2674	1.66	.Q	.	.	.	.
2.150	0.2696	1.66	.Q	.	.	.	.
2.167	0.2719	1.66	.Q	.	.	.	.
2.183	0.2742	1.66	.Q	.	.	.	.
2.200	0.2765	1.66	.Q	.	.	.	.
2.217	0.2788	1.66	.Q	.	.	.	.
2.233	0.2811	1.66	.Q	.	.	.	.
2.250	0.2834	1.67	.Q	.	.	.	.
2.267	0.2857	1.67	.Q	.	.	.	.
2.283	0.2880	1.67	.Q	.	.	.	.
2.300	0.2903	1.67	.Q	.	.	.	.
2.317	0.2926	1.67	.Q	.	.	.	.
2.333	0.2949	1.67	.Q	.	.	.	.
2.350	0.2972	1.67	.Q	.	.	.	.
2.367	0.2995	1.68	.Q	.	.	.	.
2.383	0.3018	1.68	.Q	.	.	.	.
2.400	0.3041	1.68	.Q	.	.	.	.
2.417	0.3064	1.68	.Q	.	.	.	.

2.433	0.3087	1.68	.Q	.	.	.	.
2.450	0.3111	1.68	.Q	.	.	.	.
2.467	0.3134	1.68	.Q	.	.	.	.
2.483	0.3157	1.68	.Q	.	.	.	.
2.500	0.3180	1.69	.Q	.	.	.	.
2.517	0.3203	1.69	.Q	.	.	.	.
2.533	0.3227	1.69	.Q	.	.	.	.
2.550	0.3250	1.69	.Q	.	.	.	.
2.567	0.3273	1.69	.Q	.	.	.	.
2.583	0.3296	1.69	.Q	.	.	.	.
2.600	0.3320	1.69	.Q	.	.	.	.
2.617	0.3343	1.69	.Q	.	.	.	.
2.633	0.3366	1.69	.Q	.	.	.	.
2.650	0.3390	1.69	.Q	.	.	.	.
2.667	0.3413	1.69	.Q	.	.	.	.
2.683	0.3436	1.69	.Q	.	.	.	.
2.700	0.3460	1.69	.Q	.	.	.	.
2.717	0.3483	1.70	.Q	.	.	.	.
2.733	0.3506	1.70	.Q	.	.	.	.
2.750	0.3530	1.70	.Q	.	.	.	.
2.767	0.3553	1.70	.Q	.	.	.	.
2.783	0.3577	1.70	.Q	.	.	.	.
2.800	0.3600	1.70	.QV	.	.	.	.
2.817	0.3623	1.70	.QV	.	.	.	.
2.833	0.3647	1.71	.QV	.	.	.	.
2.850	0.3671	1.71	.QV	.	.	.	.
2.867	0.3694	1.71	.QV	.	.	.	.
2.883	0.3718	1.71	.QV	.	.	.	.
2.900	0.3741	1.71	.QV	.	.	.	.
2.917	0.3765	1.71	.QV	.	.	.	.
2.933	0.3788	1.72	.QV	.	.	.	.
2.950	0.3812	1.72	.QV	.	.	.	.
2.967	0.3836	1.72	.QV	.	.	.	.
2.983	0.3860	1.72	.QV	.	.	.	.
3.000	0.3883	1.72	.QV	.	.	.	.
3.017	0.3907	1.72	.QV	.	.	.	.
3.033	0.3931	1.72	.QV	.	.	.	.
3.050	0.3954	1.72	.QV	.	.	.	.
3.067	0.3978	1.73	.QV	.	.	.	.
3.083	0.4002	1.73	.QV	.	.	.	.
3.100	0.4026	1.73	.QV	.	.	.	.
3.117	0.4050	1.73	.QV	.	.	.	.
3.133	0.4073	1.73	.QV	.	.	.	.
3.150	0.4097	1.73	.QV	.	.	.	.
3.167	0.4121	1.73	.QV	.	.	.	.
3.183	0.4145	1.73	.QV	.	.	.	.
3.200	0.4169	1.73	.QV	.	.	.	.
3.217	0.4193	1.73	.QV	.	.	.	.
3.233	0.4217	1.73	.QV	.	.	.	.
3.250	0.4240	1.73	.QV	.	.	.	.
3.267	0.4264	1.74	.QV	.	.	.	.
3.283	0.4288	1.74	.QV	.	.	.	.
3.300	0.4312	1.74	.QV	.	.	.	.
3.317	0.4336	1.74	.QV	.	.	.	.
3.333	0.4360	1.74	.QV	.	.	.	.

3.350	0.4384	1.74	.QV	.	.	.	.
3.367	0.4408	1.75	.QV	.	.	.	.
3.383	0.4432	1.75	.QV	.	.	.	.
3.400	0.4456	1.75	.QV	.	.	.	.
3.417	0.4480	1.75	.QV	.	.	.	.
3.433	0.4505	1.75	.QV	.	.	.	.
3.450	0.4529	1.75	.QV	.	.	.	.
3.467	0.4553	1.76	.QV	.	.	.	.
3.483	0.4577	1.76	.QV	.	.	.	.
3.500	0.4601	1.76	.QV	.	.	.	.
3.517	0.4626	1.76	.QV	.	.	.	.
3.533	0.4650	1.76	.QV	.	.	.	.
3.550	0.4674	1.76	.QV	.	.	.	.
3.567	0.4698	1.76	.QV	.	.	.	.
3.583	0.4723	1.77	.QV	.	.	.	.
3.600	0.4747	1.77	.QV	.	.	.	.
3.617	0.4771	1.77	.QV	.	.	.	.
3.633	0.4796	1.77	.QV	.	.	.	.
3.650	0.4820	1.77	.QV	.	.	.	.
3.667	0.4845	1.77	.QV	.	.	.	.
3.683	0.4869	1.77	.QV	.	.	.	.
3.700	0.4893	1.77	.QV	.	.	.	.
3.717	0.4918	1.77	.QV	.	.	.	.
3.733	0.4942	1.77	.QV	.	.	.	.
3.750	0.4967	1.77	.QV	.	.	.	.
3.767	0.4991	1.78	.QV	.	.	.	.
3.783	0.5016	1.78	.QV	.	.	.	.
3.800	0.5040	1.78	.QV	.	.	.	.
3.817	0.5065	1.78	.QV	.	.	.	.
3.833	0.5089	1.78	.QV	.	.	.	.
3.850	0.5114	1.78	.QV	.	.	.	.
3.867	0.5138	1.78	.QV	.	.	.	.
3.883	0.5163	1.78	.QV	.	.	.	.
3.900	0.5187	1.79	.QV	.	.	.	.
3.917	0.5212	1.79	.QV	.	.	.	.
3.933	0.5237	1.79	.QV	.	.	.	.
3.950	0.5261	1.79	.QV	.	.	.	.
3.967	0.5286	1.79	.QV	.	.	.	.
3.983	0.5311	1.80	.QV	.	.	.	.
4.000	0.5336	1.80	.QV	.	.	.	.
4.017	0.5360	1.80	.QV	.	.	.	.
4.033	0.5385	1.80	.Q V	.	.	.	.
4.050	0.5410	1.80	.Q V	.	.	.	.
4.067	0.5435	1.80	.Q V	.	.	.	.
4.083	0.5460	1.81	.Q V	.	.	.	.
4.100	0.5485	1.81	.Q V	.	.	.	.
4.117	0.5510	1.81	.Q V	.	.	.	.
4.133	0.5534	1.81	.Q V	.	.	.	.
4.150	0.5559	1.81	.Q V	.	.	.	.
4.167	0.5584	1.81	.Q V	.	.	.	.
4.183	0.5609	1.81	.Q V	.	.	.	.
4.200	0.5634	1.81	.Q V	.	.	.	.
4.217	0.5659	1.82	.Q V	.	.	.	.
4.233	0.5684	1.82	.Q V	.	.	.	.
4.250	0.5709	1.82	.Q V	.	.	.	.

4.267	0.5734	1.82	.Q V	.	.	.	.
4.283	0.5760	1.82	.Q V	.	.	.	.
4.300	0.5785	1.82	.Q V	.	.	.	.
4.317	0.5810	1.82	.Q V	.	.	.	.
4.333	0.5835	1.82	.Q V	.	.	.	.
4.350	0.5860	1.82	.Q V	.	.	.	.
4.367	0.5885	1.82	.Q V	.	.	.	.
4.383	0.5910	1.83	.Q V	.	.	.	.
4.400	0.5935	1.83	.Q V	.	.	.	.
4.417	0.5960	1.83	.Q V	.	.	.	.
4.433	0.5986	1.83	.Q V	.	.	.	.
4.450	0.6011	1.83	.Q V	.	.	.	.
4.467	0.6036	1.83	.Q V	.	.	.	.
4.483	0.6062	1.84	.Q V	.	.	.	.
4.500	0.6087	1.84	.Q V	.	.	.	.
4.517	0.6112	1.84	.Q V	.	.	.	.
4.533	0.6138	1.84	.Q V	.	.	.	.
4.550	0.6163	1.84	.Q V	.	.	.	.
4.567	0.6188	1.85	.Q V	.	.	.	.
4.583	0.6214	1.85	.Q V	.	.	.	.
4.600	0.6239	1.85	.Q V	.	.	.	.
4.617	0.6265	1.85	.Q V	.	.	.	.
4.633	0.6290	1.85	.Q V	.	.	.	.
4.650	0.6316	1.86	.Q V	.	.	.	.
4.667	0.6342	1.86	.Q V	.	.	.	.
4.683	0.6367	1.86	.Q V	.	.	.	.
4.700	0.6393	1.86	.Q V	.	.	.	.
4.717	0.6418	1.86	.Q V	.	.	.	.
4.733	0.6444	1.86	.Q V	.	.	.	.
4.750	0.6470	1.86	.Q V	.	.	.	.
4.767	0.6495	1.86	.Q V	.	.	.	.
4.783	0.6521	1.86	.Q V	.	.	.	.
4.800	0.6547	1.87	.Q V	.	.	.	.
4.817	0.6573	1.87	.Q V	.	.	.	.
4.833	0.6598	1.87	.Q V	.	.	.	.
4.850	0.6624	1.87	.Q V	.	.	.	.
4.867	0.6650	1.87	.Q V	.	.	.	.
4.883	0.6676	1.87	.Q V	.	.	.	.
4.900	0.6701	1.87	.Q V	.	.	.	.
4.917	0.6727	1.87	.Q V	.	.	.	.
4.933	0.6753	1.87	.Q V	.	.	.	.
4.950	0.6779	1.88	.Q V	.	.	.	.
4.967	0.6805	1.88	.Q V	.	.	.	.
4.983	0.6831	1.88	.Q V	.	.	.	.
5.000	0.6856	1.88	.Q V	.	.	.	.
5.017	0.6882	1.88	.Q V	.	.	.	.
5.033	0.6908	1.89	.Q V	.	.	.	.
5.050	0.6934	1.89	.Q V	.	.	.	.
5.067	0.6960	1.89	.Q V	.	.	.	.
5.083	0.6987	1.89	.Q V	.	.	.	.
5.100	0.7013	1.90	.Q V	.	.	.	.
5.117	0.7039	1.90	.Q V	.	.	.	.
5.133	0.7065	1.90	.Q V	.	.	.	.
5.150	0.7091	1.90	.Q V	.	.	.	.
5.167	0.7117	1.90	.Q V	.	.	.	.

5.183	0.7144	1.91	.Q V	.	.	.	.
5.200	0.7170	1.91	.Q V	.	.	.	.
5.217	0.7196	1.91	.Q V	.	.	.	.
5.233	0.7223	1.91	.Q V	.	.	.	.
5.250	0.7249	1.91	.Q V	.	.	.	.
5.267	0.7275	1.91	.Q V	.	.	.	.
5.283	0.7302	1.91	.Q V	.	.	.	.
5.300	0.7328	1.92	.Q V	.	.	.	.
5.317	0.7354	1.92	.Q V	.	.	.	.
5.333	0.7381	1.92	.Q V	.	.	.	.
5.350	0.7407	1.92	.Q V	.	.	.	.
5.367	0.7434	1.92	.Q V	.	.	.	.
5.383	0.7460	1.92	.Q V	.	.	.	.
5.400	0.7487	1.92	.Q V	.	.	.	.
5.417	0.7513	1.92	.Q V	.	.	.	.
5.433	0.7540	1.92	.Q V	.	.	.	.
5.450	0.7566	1.93	.Q V	.	.	.	.
5.467	0.7593	1.93	.Q V	.	.	.	.
5.483	0.7619	1.93	.Q V	.	.	.	.
5.500	0.7646	1.93	.Q V	.	.	.	.
5.517	0.7672	1.93	.Q V	.	.	.	.
5.533	0.7699	1.93	.Q V	.	.	.	.
5.550	0.7726	1.94	.Q V	.	.	.	.
5.567	0.7752	1.94	.Q V	.	.	.	.
5.583	0.7779	1.94	.Q V	.	.	.	.
5.600	0.7806	1.94	.Q V	.	.	.	.
5.617	0.7833	1.95	.Q V	.	.	.	.
5.633	0.7859	1.95	.Q V	.	.	.	.
5.650	0.7886	1.95	.Q V	.	.	.	.
5.667	0.7913	1.95	.Q V	.	.	.	.
5.683	0.7940	1.95	.Q V	.	.	.	.
5.700	0.7967	1.96	.Q V	.	.	.	.
5.717	0.7994	1.96	.Q V	.	.	.	.
5.733	0.8021	1.96	.Q V	.	.	.	.
5.750	0.8048	1.96	.Q V	.	.	.	.
5.767	0.8075	1.97	.Q V	.	.	.	.
5.783	0.8102	1.97	.Q V	.	.	.	.
5.800	0.8129	1.97	.Q V	.	.	.	.
5.817	0.8157	1.97	.Q V	.	.	.	.
5.833	0.8184	1.97	.Q V	.	.	.	.
5.850	0.8211	1.97	.Q V	.	.	.	.
5.867	0.8238	1.97	.Q V	.	.	.	.
5.883	0.8265	1.97	.Q V	.	.	.	.
5.900	0.8292	1.98	.Q V	.	.	.	.
5.917	0.8320	1.98	.Q V	.	.	.	.
5.933	0.8347	1.98	.Q V	.	.	.	.
5.950	0.8374	1.98	.Q V	.	.	.	.
5.967	0.8401	1.98	.Q V	.	.	.	.
5.983	0.8429	1.98	.Q V	.	.	.	.
6.000	0.8456	1.98	.Q V	.	.	.	.
6.017	0.8483	1.98	.Q V	.	.	.	.
6.033	0.8511	1.98	.Q V	.	.	.	.
6.050	0.8538	1.99	.Q V	.	.	.	.
6.067	0.8565	1.99	.Q V	.	.	.	.
6.083	0.8593	1.99	.Q V	.	.	.	.

6.100	0.8620	1.99	.Q	V	.	.	.	.
6.117	0.8648	2.00	.Q	V	.	.	.	.
6.133	0.8675	2.00	.Q	V	.	.	.	.
6.150	0.8703	2.00	.Q	V	.	.	.	.
6.167	0.8731	2.00	.Q	V	.	.	.	.
6.183	0.8758	2.01	.Q	V	.	.	.	.
6.200	0.8786	2.01	.Q	V	.	.	.	.
6.217	0.8814	2.01	.Q	V	.	.	.	.
6.233	0.8841	2.01	.Q	V	.	.	.	.
6.250	0.8869	2.02	.Q	V	.	.	.	.
6.267	0.8897	2.02	.Q	V	.	.	.	.
6.283	0.8925	2.02	.Q	V	.	.	.	.
6.300	0.8953	2.02	.Q	V	.	.	.	.
6.317	0.8981	2.03	.Q	V	.	.	.	.
6.333	0.9009	2.03	.Q	V	.	.	.	.
6.350	0.9037	2.03	.Q	V	.	.	.	.
6.367	0.9064	2.03	.Q	V	.	.	.	.
6.383	0.9092	2.03	.Q	V	.	.	.	.
6.400	0.9120	2.03	.Q	V	.	.	.	.
6.417	0.9149	2.03	.Q	V	.	.	.	.
6.433	0.9177	2.04	.Q	V	.	.	.	.
6.450	0.9205	2.04	.Q	V	.	.	.	.
6.467	0.9233	2.04	.Q	V	.	.	.	.
6.483	0.9261	2.04	.Q	V	.	.	.	.
6.500	0.9289	2.04	.Q	V	.	.	.	.
6.517	0.9317	2.04	.Q	V	.	.	.	.
6.533	0.9345	2.04	.Q	V	.	.	.	.
6.550	0.9373	2.04	.Q	V	.	.	.	.
6.567	0.9402	2.05	.Q	V	.	.	.	.
6.583	0.9430	2.05	.Q	V	.	.	.	.
6.600	0.9458	2.05	.Q	V	.	.	.	.
6.617	0.9486	2.05	.Q	V	.	.	.	.
6.633	0.9515	2.05	.Q	V	.	.	.	.
6.650	0.9543	2.06	.Q	V	.	.	.	.
6.667	0.9571	2.06	.Q	V	.	.	.	.
6.683	0.9600	2.06	.Q	V	.	.	.	.
6.700	0.9628	2.07	.Q	V	.	.	.	.
6.717	0.9657	2.07	.Q	V	.	.	.	.
6.733	0.9685	2.07	.Q	V	.	.	.	.
6.750	0.9714	2.07	.Q	V	.	.	.	.
6.767	0.9742	2.08	.Q	V	.	.	.	.
6.783	0.9771	2.08	.Q	V	.	.	.	.
6.800	0.9800	2.08	.Q	V	.	.	.	.
6.817	0.9828	2.08	.Q	V	.	.	.	.
6.833	0.9857	2.09	.Q	V	.	.	.	.
6.850	0.9886	2.09	.Q	V	.	.	.	.
6.867	0.9915	2.09	.Q	V	.	.	.	.
6.883	0.9944	2.09	.Q	V	.	.	.	.
6.900	0.9972	2.10	.Q	V	.	.	.	.
6.917	1.0001	2.10	.Q	V	.	.	.	.
6.933	1.0030	2.10	.Q	V	.	.	.	.
6.950	1.0059	2.10	.Q	V	.	.	.	.
6.967	1.0088	2.10	.Q	V	.	.	.	.
6.983	1.0117	2.10	.Q	V	.	.	.	.
7.000	1.0146	2.10	.Q	V	.	.	.	.

7.017	1.0175	2.11	.Q	V	.	.	.	.
7.033	1.0204	2.11	.Q	V	.	.	.	.
7.050	1.0233	2.11	.Q	V	.	.	.	.
7.067	1.0262	2.11	.Q	V	.	.	.	.
7.083	1.0291	2.11	.Q	V	.	.	.	.
7.100	1.0320	2.11	.Q	V	.	.	.	.
7.117	1.0350	2.11	.Q	V	.	.	.	.
7.133	1.0379	2.12	.Q	V	.	.	.	.
7.150	1.0408	2.12	.Q	V	.	.	.	.
7.167	1.0437	2.12	.Q	V	.	.	.	.
7.183	1.0466	2.12	.Q	V	.	.	.	.
7.200	1.0496	2.13	.Q	V	.	.	.	.
7.217	1.0525	2.13	.Q	V	.	.	.	.
7.233	1.0554	2.13	.Q	V	.	.	.	.
7.250	1.0584	2.14	.Q	V	.	.	.	.
7.267	1.0613	2.14	.Q	V	.	.	.	.
7.283	1.0643	2.14	.Q	V	.	.	.	.
7.300	1.0672	2.14	.Q	V	.	.	.	.
7.317	1.0702	2.15	.Q	V	.	.	.	.
7.333	1.0732	2.15	.Q	V	.	.	.	.
7.350	1.0761	2.15	.Q	V	.	.	.	.
7.367	1.0791	2.16	.Q	V	.	.	.	.
7.383	1.0821	2.16	.Q	V	.	.	.	.
7.400	1.0850	2.16	.Q	V	.	.	.	.
7.417	1.0880	2.17	.Q	V	.	.	.	.
7.433	1.0910	2.17	.Q	V	.	.	.	.
7.450	1.0940	2.17	.Q	V	.	.	.	.
7.467	1.0970	2.17	.Q	V	.	.	.	.
7.483	1.1000	2.17	.Q	V	.	.	.	.
7.500	1.1030	2.17	.Q	V	.	.	.	.
7.517	1.1060	2.18	.Q	V	.	.	.	.
7.533	1.1090	2.18	.Q	V	.	.	.	.
7.550	1.1120	2.18	.Q	V	.	.	.	.
7.567	1.1150	2.18	.Q	V	.	.	.	.
7.583	1.1180	2.18	.Q	V	.	.	.	.
7.600	1.1210	2.18	.Q	V	.	.	.	.
7.617	1.1240	2.19	.Q	V	.	.	.	.
7.633	1.1270	2.19	.Q	V	.	.	.	.
7.650	1.1300	2.19	.Q	V	.	.	.	.
7.667	1.1330	2.19	.Q	V	.	.	.	.
7.683	1.1361	2.19	.Q	V	.	.	.	.
7.700	1.1391	2.19	.Q	V	.	.	.	.
7.717	1.1421	2.20	.Q	V	.	.	.	.
7.733	1.1451	2.20	.Q	V	.	.	.	.
7.750	1.1482	2.20	.Q	V	.	.	.	.
7.767	1.1512	2.21	.Q	V	.	.	.	.
7.783	1.1543	2.21	.Q	V	.	.	.	.
7.800	1.1573	2.21	.Q	V	.	.	.	.
7.817	1.1604	2.22	.Q	V	.	.	.	.
7.833	1.1634	2.22	.Q	V	.	.	.	.
7.850	1.1665	2.22	.Q	V	.	.	.	.
7.867	1.1695	2.23	.Q	V	.	.	.	.
7.883	1.1726	2.23	.Q	V	.	.	.	.
7.900	1.1757	2.23	.Q	V	.	.	.	.
7.917	1.1788	2.24	.Q	V	.	.	.	.

7.933	1.1819	2.24	. Q	V	.	.	.	.
7.950	1.1849	2.24	. Q	V	.	.	.	.
7.967	1.1880	2.25	. Q	V	.	.	.	.
7.983	1.1911	2.25	. Q	V	.	.	.	.
8.000	1.1942	2.25	. Q	V	.	.	.	.
8.017	1.1973	2.25	. Q	V	.	.	.	.
8.033	1.2004	2.25	. Q	V	.	.	.	.
8.050	1.2035	2.26	. Q	V	.	.	.	.
8.067	1.2067	2.26	. Q	V	.	.	.	.
8.083	1.2098	2.26	. Q	V	.	.	.	.
8.100	1.2129	2.26	. Q	V	.	.	.	.
8.117	1.2160	2.26	. Q	V	.	.	.	.
8.133	1.2191	2.26	. Q	V	.	.	.	.
8.150	1.2222	2.27	. Q	V	.	.	.	.
8.167	1.2254	2.27	. Q	V	.	.	.	.
8.183	1.2285	2.27	. Q	V	.	.	.	.
8.200	1.2316	2.27	. Q	V	.	.	.	.
8.217	1.2347	2.27	. Q	V	.	.	.	.
8.233	1.2379	2.27	. Q	V	.	.	.	.
8.250	1.2410	2.28	. Q	V	.	.	.	.
8.267	1.2442	2.28	. Q	V	.	.	.	.
8.283	1.2473	2.28	. Q	V	.	.	.	.
8.300	1.2504	2.29	. Q	V	.	.	.	.
8.317	1.2536	2.29	. Q	V	.	.	.	.
8.333	1.2568	2.29	. Q	V	.	.	.	.
8.350	1.2599	2.30	. Q	V	.	.	.	.
8.367	1.2631	2.30	. Q	V	.	.	.	.
8.383	1.2663	2.31	. Q	V	.	.	.	.
8.400	1.2695	2.31	. Q	V	.	.	.	.
8.417	1.2726	2.31	. Q	V	.	.	.	.
8.433	1.2758	2.32	. Q	V	.	.	.	.
8.450	1.2790	2.32	. Q	V	.	.	.	.
8.467	1.2822	2.32	. Q	V	.	.	.	.
8.483	1.2854	2.33	. Q	V	.	.	.	.
8.500	1.2886	2.33	. Q	V	.	.	.	.
8.517	1.2919	2.33	. Q	V	.	.	.	.
8.533	1.2951	2.34	. Q	V	.	.	.	.
8.550	1.2983	2.34	. Q	V	.	.	.	.
8.567	1.3015	2.34	. Q	V	.	.	.	.
8.583	1.3048	2.34	. Q	V	.	.	.	.
8.600	1.3080	2.35	. Q	V	.	.	.	.
8.617	1.3112	2.35	. Q	V	.	.	.	.
8.633	1.3145	2.35	. Q	V	.	.	.	.
8.650	1.3177	2.35	. Q	V	.	.	.	.
8.667	1.3209	2.35	. Q	V	.	.	.	.
8.683	1.3242	2.36	. Q	V	.	.	.	.
8.700	1.3274	2.36	. Q	V	.	.	.	.
8.717	1.3307	2.36	. Q	V	.	.	.	.
8.733	1.3339	2.36	. Q	V	.	.	.	.
8.750	1.3372	2.36	. Q	V	.	.	.	.
8.767	1.3405	2.37	. Q	V	.	.	.	.
8.783	1.3437	2.37	. Q	V	.	.	.	.
8.800	1.3470	2.37	. Q	V	.	.	.	.
8.817	1.3502	2.37	. Q	V	.	.	.	.
8.833	1.3535	2.38	. Q	V	.	.	.	.

8.850	1.3568	2.38	. Q	V .	.	.	.
8.867	1.3601	2.38	. Q	V .	.	.	.
8.883	1.3634	2.39	. Q	V .	.	.	.
8.900	1.3667	2.39	. Q	V .	.	.	.
8.917	1.3700	2.40	. Q	V .	.	.	.
8.933	1.3733	2.40	. Q	V .	.	.	.
8.950	1.3766	2.41	. Q	V .	.	.	.
8.967	1.3799	2.41	. Q	V .	.	.	.
8.983	1.3832	2.41	. Q	V .	.	.	.
9.000	1.3866	2.42	. Q	V .	.	.	.
9.017	1.3899	2.42	. Q	V .	.	.	.
9.033	1.3932	2.43	. Q	V .	.	.	.
9.050	1.3966	2.43	. Q	V .	.	.	.
9.067	1.3999	2.43	. Q	V .	.	.	.
9.083	1.4033	2.44	. Q	V .	.	.	.
9.100	1.4067	2.44	. Q	V .	.	.	.
9.117	1.4100	2.44	. Q	V .	.	.	.
9.133	1.4134	2.45	. Q	V .	.	.	.
9.150	1.4168	2.45	. Q	V .	.	.	.
9.167	1.4201	2.45	. Q	V .	.	.	.
9.183	1.4235	2.45	. Q	V .	.	.	.
9.200	1.4269	2.45	. Q	V .	.	.	.
9.217	1.4303	2.46	. Q	V .	.	.	.
9.233	1.4337	2.46	. Q	V .	.	.	.
9.250	1.4371	2.46	. Q	V .	.	.	.
9.267	1.4404	2.46	. Q	V .	.	.	.
9.283	1.4438	2.46	. Q	V .	.	.	.
9.300	1.4472	2.47	. Q	V .	.	.	.
9.317	1.4506	2.47	. Q	V .	.	.	.
9.333	1.4540	2.47	. Q	V .	.	.	.
9.350	1.4575	2.47	. Q	V .	.	.	.
9.367	1.4609	2.48	. Q	V .	.	.	.
9.383	1.4643	2.48	. Q	V .	.	.	.
9.400	1.4677	2.49	. Q	V .	.	.	.
9.417	1.4711	2.49	. Q	V .	.	.	.
9.433	1.4746	2.50	. Q	V .	.	.	.
9.450	1.4780	2.50	. Q	V .	.	.	.
9.467	1.4815	2.50	. Q	V .	.	.	.
9.483	1.4849	2.51	. Q	V .	.	.	.
9.500	1.4884	2.51	. Q	V .	.	.	.
9.517	1.4919	2.52	. Q	V .	.	.	.
9.533	1.4953	2.52	. Q	V .	.	.	.
9.550	1.4988	2.53	. Q	V .	.	.	.
9.567	1.5023	2.53	. Q	V .	.	.	.
9.583	1.5058	2.54	. Q	V .	.	.	.
9.600	1.5093	2.54	. Q	V .	.	.	.
9.617	1.5128	2.55	. Q	V .	.	.	.
9.633	1.5163	2.55	. Q	V .	.	.	.
9.650	1.5198	2.55	. Q	V .	.	.	.
9.667	1.5234	2.56	. Q	V .	.	.	.
9.683	1.5269	2.56	. Q	V .	.	.	.
9.700	1.5304	2.56	. Q	V .	.	.	.
9.717	1.5339	2.56	. Q	V .	.	.	.
9.733	1.5375	2.57	. Q	V .	.	.	.
9.750	1.5410	2.57	. Q	V .	.	.	.

9.767	1.5446	2.57	. Q	V .	.	.	.
9.783	1.5481	2.57	. Q	V .	.	.	.
9.800	1.5517	2.58	. Q	V .	.	.	.
9.817	1.5552	2.58	. Q	V .	.	.	.
9.833	1.5588	2.58	. Q	V .	.	.	.
9.850	1.5623	2.58	. Q	V .	.	.	.
9.867	1.5659	2.59	. Q	V .	.	.	.
9.883	1.5695	2.59	. Q	V .	.	.	.
9.900	1.5730	2.59	. Q	V .	.	.	.
9.917	1.5766	2.59	. Q	V .	.	.	.
9.933	1.5802	2.60	. Q	V .	.	.	.
9.950	1.5838	2.60	. Q	V .	.	.	.
9.967	1.5874	2.61	. Q	V .	.	.	.
9.983	1.5910	2.62	. Q	V .	.	.	.
10.000	1.5946	2.62	. Q	V .	.	.	.
10.017	1.5982	2.63	. Q	V .	.	.	.
10.033	1.6018	2.63	. Q	V .	.	.	.
10.050	1.6054	2.64	. Q	V .	.	.	.
10.067	1.6091	2.64	. Q	V .	.	.	.
10.083	1.6127	2.65	. Q	V .	.	.	.
10.100	1.6164	2.65	. Q	V .	.	.	.
10.117	1.6200	2.66	. Q	V .	.	.	.
10.133	1.6237	2.66	. Q	V .	.	.	.
10.150	1.6274	2.67	. Q	V .	.	.	.
10.167	1.6311	2.67	. Q	V .	.	.	.
10.183	1.6348	2.68	. Q	V .	.	.	.
10.200	1.6385	2.68	. Q	V .	.	.	.
10.217	1.6422	2.69	. Q	V .	.	.	.
10.233	1.6459	2.69	. Q	V .	.	.	.
10.250	1.6496	2.69	. Q	V .	.	.	.
10.267	1.6533	2.70	. Q	V .	.	.	.
10.283	1.6570	2.70	. Q	V .	.	.	.
10.300	1.6607	2.70	. Q	V .	.	.	.
10.317	1.6645	2.70	. Q	V .	.	.	.
10.333	1.6682	2.71	. Q	V .	.	.	.
10.350	1.6719	2.71	. Q	V .	.	.	.
10.367	1.6756	2.71	. Q	V .	.	.	.
10.383	1.6794	2.72	. Q	V .	.	.	.
10.400	1.6831	2.72	. Q	V .	.	.	.
10.417	1.6869	2.72	. Q	V .	.	.	.
10.433	1.6906	2.72	. Q	V .	.	.	.
10.450	1.6944	2.73	. Q	V .	.	.	.
10.467	1.6982	2.73	. Q	V .	.	.	.
10.483	1.7019	2.74	. Q	V .	.	.	.
10.500	1.7057	2.74	. Q	V .	.	.	.
10.517	1.7095	2.75	. Q	V .	.	.	.
10.533	1.7133	2.75	. Q	V .	.	.	.
10.550	1.7171	2.76	. Q	V .	.	.	.
10.567	1.7209	2.77	. Q	V .	.	.	.
10.583	1.7247	2.77	. Q	V .	.	.	.
10.600	1.7285	2.78	. Q	V .	.	.	.
10.617	1.7324	2.78	. Q	V .	.	.	.
10.633	1.7362	2.79	. Q	V .	.	.	.
10.650	1.7401	2.80	. Q	V .	.	.	.
10.667	1.7439	2.80	. Q	V .	.	.	.

10.683	1.7478	2.81	. Q	V.	.	.	.
10.700	1.7517	2.82	. Q	V.	.	.	.
10.717	1.7556	2.82	. Q	V.	.	.	.
10.733	1.7595	2.83	. Q	V.	.	.	.
10.750	1.7634	2.83	. Q	V.	.	.	.
10.767	1.7673	2.84	. Q	V.	.	.	.
10.783	1.7712	2.84	. Q	V.	.	.	.
10.800	1.7751	2.84	. Q	V.	.	.	.
10.817	1.7790	2.85	. Q	V.	.	.	.
10.833	1.7829	2.85	. Q	V.	.	.	.
10.850	1.7869	2.85	. Q	V.	.	.	.
10.867	1.7908	2.86	. Q	V.	.	.	.
10.883	1.7947	2.86	. Q	V	.	.	.
10.900	1.7987	2.86	. Q	V	.	.	.
10.917	1.8026	2.87	. Q	V	.	.	.
10.933	1.8066	2.87	. Q	V	.	.	.
10.950	1.8106	2.87	. Q	V	.	.	.
10.967	1.8145	2.88	. Q	V	.	.	.
10.983	1.8185	2.88	. Q	V	.	.	.
11.000	1.8225	2.88	. Q	V	.	.	.
11.017	1.8264	2.89	. Q	V	.	.	.
11.033	1.8304	2.89	. Q	V	.	.	.
11.050	1.8344	2.90	. Q	V	.	.	.
11.067	1.8384	2.91	. Q	V	.	.	.
11.083	1.8424	2.91	. Q	V	.	.	.
11.100	1.8465	2.92	. Q	V	.	.	.
11.117	1.8505	2.93	. Q	V	.	.	.
11.133	1.8545	2.94	. Q	V	.	.	.
11.150	1.8586	2.94	. Q	V	.	.	.
11.167	1.8626	2.95	. Q	V	.	.	.
11.183	1.8667	2.96	. Q	V	.	.	.
11.200	1.8708	2.97	. Q	V	.	.	.
11.217	1.8749	2.97	. Q	V	.	.	.
11.233	1.8790	2.98	. Q	V	.	.	.
11.250	1.8831	2.99	. Q	V	.	.	.
11.267	1.8872	2.99	. Q	V	.	.	.
11.283	1.8914	3.00	. Q	V	.	.	.
11.300	1.8955	3.01	. Q	V	.	.	.
11.317	1.8997	3.01	. Q	V	.	.	.
11.333	1.9038	3.02	. Q	V	.	.	.
11.350	1.9080	3.02	. Q	V	.	.	.
11.367	1.9122	3.02	. Q	V	.	.	.
11.383	1.9163	3.03	. Q	V	.	.	.
11.400	1.9205	3.03	. Q	V	.	.	.
11.417	1.9247	3.04	. Q	V	.	.	.
11.433	1.9289	3.04	. Q	V	.	.	.
11.450	1.9331	3.04	. Q	V	.	.	.
11.467	1.9373	3.05	. Q	V	.	.	.
11.483	1.9415	3.05	. Q	V	.	.	.
11.500	1.9457	3.06	. Q	V	.	.	.
11.517	1.9499	3.06	. Q	V	.	.	.
11.533	1.9541	3.06	. Q	V	.	.	.
11.550	1.9583	3.07	. Q	V	.	.	.
11.567	1.9626	3.07	. Q	V	.	.	.
11.583	1.9668	3.08	. Q	V	.	.	.

11.600	1.9711	3.09	. Q	.V	.	.	.
11.617	1.9753	3.10	. Q	.V	.	.	.
11.633	1.9796	3.10	. Q	.V	.	.	.
11.650	1.9839	3.11	. Q	.V	.	.	.
11.667	1.9882	3.12	. Q	.V	.	.	.
11.683	1.9925	3.13	. Q	.V	.	.	.
11.700	1.9968	3.14	. Q	.V	.	.	.
11.717	2.0012	3.15	. Q	.V	.	.	.
11.733	2.0055	3.16	. Q	.V	.	.	.
11.750	2.0099	3.17	. Q	.V	.	.	.
11.767	2.0142	3.17	. Q	.V	.	.	.
11.783	2.0186	3.18	. Q	.V	.	.	.
11.800	2.0230	3.19	. Q	.V	.	.	.
11.817	2.0274	3.20	. Q	.V	.	.	.
11.833	2.0319	3.21	. Q	.V	.	.	.
11.850	2.0363	3.22	. Q	.V	.	.	.
11.867	2.0407	3.22	. Q	.V	.	.	.
11.883	2.0452	3.23	. Q	.V	.	.	.
11.900	2.0496	3.23	. Q	.V	.	.	.
11.917	2.0541	3.24	. Q	.V	.	.	.
11.933	2.0585	3.24	. Q	.V	.	.	.
11.950	2.0630	3.25	. Q	.V	.	.	.
11.967	2.0675	3.25	. Q	.V	.	.	.
11.983	2.0720	3.26	. Q	.V	.	.	.
12.000	2.0765	3.26	. Q	.V	.	.	.
12.017	2.0810	3.27	. Q	.V	.	.	.
12.033	2.0855	3.27	. Q	.V	.	.	.
12.050	2.0900	3.28	. Q	.V	.	.	.
12.067	2.0945	3.28	. Q	.V	.	.	.
12.083	2.0990	3.29	. Q	.V	.	.	.
12.100	2.1036	3.29	. Q	.V	.	.	.
12.117	2.1081	3.30	. Q	.V	.	.	.
12.133	2.1127	3.30	. Q	.V	.	.	.
12.150	2.1172	3.32	. Q	.V	.	.	.
12.167	2.1218	3.34	. Q	.V	.	.	.
12.183	2.1265	3.37	. Q	.V	.	.	.
12.200	2.1311	3.39	. Q	.V	.	.	.
12.217	2.1358	3.41	. Q	.V	.	.	.
12.233	2.1406	3.43	. Q	.V	.	.	.
12.250	2.1453	3.45	. Q	.V	.	.	.
12.267	2.1501	3.47	. Q	. V	.	.	.
12.283	2.1549	3.49	. Q	. V	.	.	.
12.300	2.1597	3.51	. Q	. V	.	.	.
12.317	2.1646	3.54	. Q	. V	.	.	.
12.333	2.1695	3.56	. Q	. V	.	.	.
12.350	2.1744	3.58	. Q	. V	.	.	.
12.367	2.1794	3.60	. Q	. V	.	.	.
12.383	2.1844	3.62	. Q	. V	.	.	.
12.400	2.1894	3.64	. Q	. V	.	.	.
12.417	2.1944	3.65	. Q	. V	.	.	.
12.433	2.1995	3.66	. Q	. V	.	.	.
12.450	2.2045	3.67	. Q	. V	.	.	.
12.467	2.2096	3.67	. Q	. V	.	.	.
12.483	2.2147	3.68	. Q	. V	.	.	.
12.500	2.2197	3.69	. Q	. V	.	.	.

12.517	2.2248	3.69	.	Q	.	V	.	.	.
12.533	2.2299	3.70	.	Q	.	V	.	.	.
12.550	2.2350	3.70	.	Q	.	V	.	.	.
12.567	2.2401	3.71	.	Q	.	V	.	.	.
12.583	2.2452	3.72	.	Q	.	V	.	.	.
12.600	2.2504	3.72	.	Q	.	V	.	.	.
12.617	2.2555	3.73	.	Q	.	V	.	.	.
12.633	2.2606	3.73	.	Q	.	V	.	.	.
12.650	2.2658	3.74	.	Q	.	V	.	.	.
12.667	2.2709	3.75	.	Q	.	V	.	.	.
12.683	2.2761	3.75	.	Q	.	V	.	.	.
12.700	2.2813	3.76	.	Q	.	V	.	.	.
12.717	2.2865	3.78	.	Q	.	V	.	.	.
12.733	2.2917	3.79	.	Q	.	V	.	.	.
12.750	2.2970	3.80	.	Q	.	V	.	.	.
12.767	2.3022	3.82	.	Q	.	V	.	.	.
12.783	2.3075	3.83	.	Q	.	V	.	.	.
12.800	2.3128	3.85	.	Q	.	V	.	.	.
12.817	2.3181	3.86	.	Q	.	V	.	.	.
12.833	2.3234	3.87	.	Q	.	V	.	.	.
12.850	2.3288	3.89	.	Q	.	V	.	.	.
12.867	2.3342	3.90	.	Q	.	V	.	.	.
12.883	2.3396	3.91	.	Q	.	V	.	.	.
12.900	2.3450	3.93	.	Q	.	V	.	.	.
12.917	2.3504	3.94	.	Q	.	V	.	.	.
12.933	2.3558	3.95	.	Q	.	V	.	.	.
12.950	2.3613	3.97	.	Q	.	V	.	.	.
12.967	2.3668	3.98	.	Q	.	V	.	.	.
12.983	2.3723	3.99	.	Q	.	V	.	.	.
13.000	2.3778	4.00	.	Q	.	V	.	.	.
13.017	2.3833	4.00	.	Q	.	V	.	.	.
13.033	2.3888	4.01	.	Q	.	V	.	.	.
13.050	2.3944	4.02	.	Q	.	V	.	.	.
13.067	2.3999	4.03	.	Q	.	V	.	.	.
13.083	2.4055	4.03	.	Q	.	V	.	.	.
13.100	2.4110	4.04	.	Q	.	V	.	.	.
13.117	2.4166	4.05	.	Q	.	V	.	.	.
13.133	2.4222	4.06	.	Q	.	V	.	.	.
13.150	2.4278	4.06	.	Q	.	V	.	.	.
13.167	2.4334	4.07	.	Q	.	V	.	.	.
13.183	2.4390	4.08	.	Q	.	V	.	.	.
13.200	2.4447	4.09	.	Q	.	V	.	.	.
13.217	2.4503	4.10	.	Q	.	V	.	.	.
13.233	2.4560	4.10	.	Q	.	V	.	.	.
13.250	2.4616	4.12	.	Q	.	V	.	.	.
13.267	2.4673	4.14	.	Q	.	V	.	.	.
13.283	2.4730	4.15	.	Q	.	V	.	.	.
13.300	2.4788	4.17	.	Q	.	V	.	.	.
13.317	2.4846	4.19	.	Q	.	V	.	.	.
13.333	2.4904	4.21	.	Q	.	V	.	.	.
13.350	2.4962	4.23	.	Q	.	V	.	.	.
13.367	2.5020	4.24	.	Q	.	V	.	.	.
13.383	2.5079	4.26	.	Q	.	V	.	.	.
13.400	2.5138	4.28	.	Q	.	V	.	.	.
13.417	2.5197	4.30	.	Q	.	V	.	.	.

13.433	2.5256	4.31	.	Q	.	V	.	.	.
13.450	2.5316	4.33	.	Q	.	V	.	.	.
13.467	2.5376	4.35	.	Q	.	V	.	.	.
13.483	2.5436	4.37	.	Q	.	V	.	.	.
13.500	2.5497	4.39	.	Q	.	V	.	.	.
13.517	2.5557	4.40	.	Q	.	V	.	.	.
13.533	2.5618	4.41	.	Q	.	V	.	.	.
13.550	2.5679	4.42	.	Q	.	V	.	.	.
13.567	2.5740	4.43	.	Q	.	V	.	.	.
13.583	2.5801	4.45	.	Q	.	V	.	.	.
13.600	2.5863	4.46	.	Q	.	V	.	.	.
13.617	2.5924	4.47	.	Q	.	V	.	.	.
13.633	2.5986	4.48	.	Q	.	V	.	.	.
13.650	2.6048	4.49	.	Q	.	V	.	.	.
13.667	2.6110	4.50	.	Q	.	V	.	.	.
13.683	2.6172	4.51	.	Q	.	V	.	.	.
13.700	2.6234	4.52	.	Q	.	V	.	.	.
13.717	2.6296	4.53	.	Q	.	V	.	.	.
13.733	2.6359	4.54	.	Q	.	V	.	.	.
13.750	2.6421	4.55	.	Q	.	V	.	.	.
13.767	2.6484	4.56	.	Q	.	V	.	.	.
13.783	2.6547	4.57	.	Q	.	V	.	.	.
13.800	2.6610	4.59	.	Q	.	V	.	.	.
13.817	2.6674	4.61	.	Q	.	V	.	.	.
13.833	2.6738	4.64	.	Q	.	V	.	.	.
13.850	2.6802	4.66	.	Q	.	V	.	.	.
13.867	2.6867	4.69	.	Q	.	V	.	.	.
13.883	2.6931	4.71	.	Q	.	V	.	.	.
13.900	2.6997	4.74	.	Q	.	V	.	.	.
13.917	2.7062	4.76	.	Q	.	V	.	.	.
13.933	2.7128	4.79	.	Q	.	V	.	.	.
13.950	2.7194	4.81	.	Q	.	V	.	.	.
13.967	2.7261	4.84	.	Q	.	V	.	.	.
13.983	2.7328	4.86	.	Q	.	V	.	.	.
14.000	2.7395	4.89	.	Q	.	V	.	.	.
14.017	2.7463	4.91	.	Q	.	V	.	.	.
14.033	2.7531	4.94	.	Q	.	V	.	.	.
14.050	2.7599	4.96	.	Q	.	V	.	.	.
14.067	2.7668	4.99	.	Q	.	V	.	.	.
14.083	2.7737	5.00	.	Q	.	V	.	.	.
14.100	2.7806	5.01	.	Q	.	V	.	.	.
14.117	2.7875	5.02	.	Q	.	V	.	.	.
14.133	2.7944	5.03	.	Q	.	V	.	.	.
14.150	2.8014	5.04	.	Q	.	V	.	.	.
14.167	2.8083	5.05	.	Q	.	V	.	.	.
14.183	2.8153	5.06	.	Q	.	V	.	.	.
14.200	2.8223	5.07	.	Q	.	V	.	.	.
14.217	2.8293	5.08	.	Q	.	V	.	.	.
14.233	2.8363	5.09	.	Q	.	V	.	.	.
14.250	2.8433	5.10	.	Q	.	V	.	.	.
14.267	2.8503	5.11	.	Q	.	V	.	.	.
14.283	2.8574	5.12	.	Q	.	V	.	.	.
14.300	2.8645	5.13	.	Q	.	V	.	.	.
14.317	2.8715	5.14	.	Q	.	V	.	.	.
14.333	2.8786	5.15	.	Q	.	V	.	.	.

14.350	2.8858	5.17	.	Q	.	V	.	.	.
14.367	2.8929	5.20	.	Q	.	V	.	.	.
14.383	2.9001	5.24	.	Q	.	V	.	.	.
14.400	2.9074	5.28	.	Q	.	V	.	.	.
14.417	2.9147	5.31	.	Q	.	V	.	.	.
14.433	2.9221	5.35	.	Q	.	V	.	.	.
14.450	2.9295	5.39	.	Q	.	V	.	.	.
14.467	2.9370	5.43	.	Q	.	V	.	.	.
14.483	2.9445	5.46	.	Q	.	V	.	.	.
14.500	2.9521	5.50	.	Q	.	V	.	.	.
14.517	2.9597	5.54	.	Q	.	V	.	.	.
14.533	2.9674	5.57	.	Q	.	V	.	.	.
14.550	2.9751	5.61	.	Q	.	V	.	.	.
14.567	2.9829	5.65	.	Q	.	V	.	.	.
14.583	2.9907	5.69	.	Q	.	V	.	.	.
14.600	2.9986	5.72	.	Q	.	V	.	.	.
14.617	3.0066	5.76	.	Q	.	V	.	.	.
14.633	3.0145	5.79	.	Q	.	V	.	.	.
14.650	3.0225	5.81	.	Q	.	V	.	.	.
14.667	3.0306	5.84	.	Q	.	V	.	.	.
14.683	3.0387	5.86	.	Q	.	V	.	.	.
14.700	3.0468	5.89	.	Q	.	V	.	.	.
14.717	3.0549	5.91	.	Q	.	V	.	.	.
14.733	3.0631	5.94	.	Q	.	V	.	.	.
14.750	3.0713	5.96	.	Q	.	V	.	.	.
14.767	3.0796	5.99	.	Q	.	V	.	.	.
14.783	3.0878	6.01	.	Q	.	V	.	.	.
14.800	3.0962	6.04	.	Q	.	V	.	.	.
14.817	3.1045	6.06	.	Q	.	V	.	.	.
14.833	3.1129	6.09	.	Q	.	V	.	.	.
14.850	3.1213	6.11	.	Q	.	V	.	.	.
14.867	3.1298	6.14	.	Q	.	V	.	.	.
14.883	3.1383	6.16	.	Q	.	V	.	.	.
14.900	3.1468	6.19	.	Q	.	V	.	.	.
14.917	3.1554	6.25	.	Q	.	V	.	.	.
14.933	3.1641	6.32	.	Q	.	V	.	.	.
14.950	3.1729	6.39	.	Q	.	V	.	.	.
14.967	3.1818	6.46	.	Q	.	V	.	.	.
14.983	3.1908	6.53	.	Q	.	V	.	.	.
15.000	3.1999	6.60	.	Q	.	V	.	.	.
15.017	3.2091	6.67	.	Q	.	V	.	.	.
15.033	3.2184	6.74	.	Q	.	V	.	.	.
15.050	3.2277	6.81	.	Q	.	V	.	.	.
15.067	3.2372	6.88	.	Q	.	V	.	.	.
15.083	3.2468	6.95	.	Q	.	V	.	.	.
15.100	3.2564	7.02	.	Q	.	V	.	.	.
15.117	3.2662	7.09	.	Q	.	V	.	.	.
15.133	3.2761	7.16	.	Q	.	V	.	.	.
15.150	3.2860	7.22	.	Q	.	V	.	.	.
15.167	3.2961	7.29	.	Q	.	V	.	.	.
15.183	3.3062	7.36	.	Q	.	V	.	.	.
15.200	3.3164	7.41	.	Q	.	V	.	.	.
15.217	3.3267	7.46	.	Q	.	V	.	.	.
15.233	3.3370	7.51	.	Q	.	V	.	.	.
15.250	3.3474	7.56	.	Q	.	V	.	.	.

15.267	3.3579	7.62	.	Q	.	V	.	.	.
15.283	3.3685	7.67	.	Q	.	V	.	.	.
15.300	3.3791	7.72	.	Q	.	V	.	.	.
15.317	3.3898	7.77	.	Q	.	V	.	.	.
15.333	3.4006	7.82	.	Q	.	V	.	.	.
15.350	3.4114	7.87	.	Q	.	V.	.	.	.
15.367	3.4224	7.93	.	Q	.	V.	.	.	.
15.383	3.4334	7.98	.	Q	.	V.	.	.	.
15.400	3.4444	8.03	.	Q	.	V.	.	.	.
15.417	3.4555	8.08	.	Q	.	V.	.	.	.
15.433	3.4667	8.13	.	Q	.	V.	.	.	.
15.450	3.4780	8.19	.	Q	.	V.	.	.	.
15.467	3.4896	8.41	.	Q	.	V.	.	.	.
15.483	3.5016	8.71	.	Q	.	V.	.	.	.
15.500	3.5140	9.01	.	Q	.	V.	.	.	.
15.517	3.5268	9.30	.	Q	.	V.	.	.	.
15.533	3.5401	9.60	.	Q	.	V.	.	.	.
15.550	3.5537	9.90	.	Q.	.	V.	.	.	.
15.567	3.5677	10.19	.	Q.	.	V.	.	.	.
15.583	3.5822	10.49	.	Q.	.	V	.	.	.
15.600	3.5970	10.79	.	Q.	.	V	.	.	.
15.617	3.6123	11.08	.	Q	.	V	.	.	.
15.633	3.6280	11.38	.	Q	.	V	.	.	.
15.650	3.6441	11.68	.	Q	.	V	.	.	.
15.667	3.6606	11.97	.	.Q	.	V	.	.	.
15.683	3.6775	12.27	.	.Q	.	V	.	.	.
15.700	3.6948	12.57	.	.Q	.	V	.	.	.
15.717	3.7125	12.86	.	.Q	.	V	.	.	.
15.733	3.7306	13.15	.	. Q	.	V	.	.	.
15.750	3.7490	13.37	.	. Q	.	V	.	.	.
15.767	3.7677	13.60	.	. Q	.	.V	.	.	.
15.783	3.7868	13.82	.	. Q	.	.V	.	.	.
15.800	3.8061	14.04	.	. Q	.	.V	.	.	.
15.817	3.8258	14.27	.	. Q	.	.V	.	.	.
15.833	3.8457	14.49	.	. Q	.	.V	.	.	.
15.850	3.8660	14.71	.	. Q	.	.V	.	.	.
15.867	3.8866	14.94	.	. Q	.	.V	.	.	.
15.883	3.9075	15.16	.	. Q	.	.V	.	.	.
15.900	3.9287	15.38	.	. Q	.	.V	.	.	.
15.917	3.9501	15.61	.	. Q	.	. V	.	.	.
15.933	3.9720	15.83	.	. Q	.	. V	.	.	.
15.950	3.9941	16.05	.	. Q	.	. V	.	.	.
15.967	4.0165	16.28	.	. Q	.	. V	.	.	.
15.983	4.0392	16.50	.	. Q	.	. V	.	.	.
16.000	4.0622	16.72	.	. Q	.	. V	.	.	.
16.017	4.0865	17.64	.	. Q	.	. V	.	.	.
16.033	4.1130	19.24	.	. Q	.	. V	.	.	.
16.050	4.1418	20.85	.	. Q.	.	V	.	.	.
16.067	4.1727	22.45	.	. Q	.	V	.	.	.
16.083	4.2058	24.06	.	. QV	.	.	.	.	.
16.100	4.2412	25.66	.	. Q	.	.	.	.	.
16.117	4.2787	27.27	.	. V Q	.	.	.	.	.
16.133	4.3185	28.87	.	. V Q	.	.	.	.	.
16.150	4.3605	30.48	.	. V	.	Q.	.	.	.
16.167	4.4047	32.08	.	. V	.	Q.	.	.	.

16.183	4.4511	33.69	.	.	.	V	Q	.	.
16.200	4.4997	35.29	.	.	.	V	.	Q	.
16.217	4.5505	36.90	.	.	.	V	.	Q	.
16.233	4.6035	38.50	.	.	.	V	.	Q	.
16.250	4.6588	40.11	.	.	.	V	.	Q	.
16.267	4.7162	41.71	.	.	.	V	.	Q	.
16.283	4.7761	43.50	.	.	.	V	.	Q	.
16.300	4.8336	41.74	.	.	.	V	.	Q	.
16.317	4.8884	39.76	.	.	.	V	.	Q	.
16.333	4.9404	37.77	.	.	.	V	.	Q	.
16.350	4.9897	35.79	.	.	.	V	.	Q	.
16.367	5.0363	33.80	.	.	.	V	.	Q	.
16.383	5.0801	31.82	.	.	.	VQ.	.	.	.
16.400	5.1212	29.83	.	.	.	QV	.	.	.
16.417	5.1596	27.85	.	.	.	Q	V	.	.
16.433	5.1952	25.86	.	.	.	Q	V.	.	.
16.450	5.2281	23.88	.	.	.	Q	V.	.	.
16.467	5.2582	21.89	.	.	.	Q	V.	.	.
16.483	5.2857	19.91	.	.	.	Q	V.	.	.
16.500	5.3103	17.92	.	.	.	Q	V.	.	.
16.517	5.3323	15.94	.	.	.	Q	V.	.	.
16.533	5.3515	13.95	.	.	.	Q	V.	.	.
16.550	5.3680	11.97	.	.	.	Q	V.	.	.
16.567	5.3825	10.50	.	Q.	.	.	V	.	.
16.583	5.3965	10.22	.	Q.	.	.	V	.	.
16.600	5.4103	9.99	.	Q.	.	.	V	.	.
16.617	5.4238	9.76	.	Q.	.	.	V	.	.
16.633	5.4369	9.53	.	Q.	.	.	V	.	.
16.650	5.4497	9.30	.	Q.	.	.	V	.	.
16.667	5.4622	9.07	.	Q.	.	.	V	.	.
16.683	5.4744	8.84	.	Q.	.	.	V	.	.
16.700	5.4863	8.61	.	Q.	.	.	V	.	.
16.717	5.4978	8.38	.	Q.	.	.	V	.	.
16.733	5.5090	8.15	.	Q.	.	.	V	.	.
16.750	5.5199	7.92	.	Q.	.	.	V	.	.
16.767	5.5305	7.69	.	Q.	.	.	V	.	.
16.783	5.5408	7.46	.	Q.	.	.	V	.	.
16.800	5.5508	7.23	.	Q.	.	.	V	.	.
16.817	5.5604	7.00	.	Q.	.	.	.V	.	.
16.833	5.5698	6.78	.	Q.	.	.	.V	.	.
16.850	5.5789	6.64	.	Q.	.	.	.V	.	.
16.867	5.5880	6.57	.	Q.	.	.	.V	.	.
16.883	5.5969	6.49	.	Q.	.	.	.V	.	.
16.900	5.6057	6.42	.	Q.	.	.	.V	.	.
16.917	5.6145	6.34	.	Q.	.	.	.V	.	.
16.933	5.6231	6.26	.	Q.	.	.	.V	.	.
16.950	5.6316	6.19	.	Q.	.	.	.V	.	.
16.967	5.6401	6.11	.	Q.	.	.	.V	.	.
16.983	5.6484	6.04	.	Q.	.	.	.V	.	.
17.000	5.6566	5.96	.	Q.	.	.	.V	.	.
17.017	5.6647	5.89	.	Q.	.	.	.V	.	.
17.033	5.6727	5.81	.	Q.	.	.	.V	.	.
17.050	5.6806	5.73	.	Q.	.	.	.V	.	.
17.067	5.6884	5.66	.	Q.	.	.	.V	.	.
17.083	5.6961	5.58	.	Q.	.	.	.V	.	.

17.100	5.7037	5.51	.	Q	.	.	.	.V	.
17.117	5.7111	5.44	.	Q	.	.	.	.V	.
17.133	5.7186	5.39	.	Q	.	.	.	.V	.
17.150	5.7259	5.35	.	Q	.	.	.	.V	.
17.167	5.7333	5.31	.	Q	.	.	.	.V	.
17.183	5.7405	5.27	.	Q	.	.	.	.V	.
17.200	5.7477	5.23	.	Q	.	.	.	.V	.
17.217	5.7549	5.19	.	Q	.	.	.	.V	.
17.233	5.7620	5.15	.	Q	.	.	.	.V	.
17.250	5.7690	5.11	.	Q	.	.	.	.V	.
17.267	5.7760	5.07	.	Q	.	.	.	.V	.
17.283	5.7829	5.03	.	Q	.	.	.	.V	.
17.300	5.7898	4.99	.	Q	.	.	.	.V	.
17.317	5.7966	4.95	.	Q	.	.	.	.V	.
17.333	5.8034	4.91	.	Q	.	.	.	.V	.
17.350	5.8101	4.87	.	Q	.	.	.	.V	.
17.367	5.8168	4.83	.	Q	.	.	.	.V	.
17.383	5.8234	4.79	.	Q	.	.	.	.V	.
17.400	5.8299	4.76	.	Q	.	.	.	.V	.
17.417	5.8364	4.73	.	Q	.	.	.	.V	.
17.433	5.8429	4.69	.	Q	.	.	.	.V	.
17.450	5.8493	4.66	.	Q	.	.	.	.V	.
17.467	5.8557	4.63	.	Q	.	.	.	.V	.
17.483	5.8620	4.60	.	Q	.	.	.	.V	.
17.500	5.8683	4.57	.	Q	.	.	.	.V	.
17.517	5.8746	4.54	.	Q	.	.	.	.V	.
17.533	5.8808	4.51	.	Q	.	.	.	.V	.
17.550	5.8870	4.47	.	Q	.	.	.	.V	.
17.567	5.8931	4.44	.	Q	.	.	.	.V	.
17.583	5.8991	4.41	.	Q	.	.	.	.V	.
17.600	5.9052	4.38	.	Q	.	.	.	.V	.
17.617	5.9112	4.35	.	Q	.	.	.	.V	.
17.633	5.9171	4.32	.	Q	.	.	.	.V	.
17.650	5.9230	4.28	.	Q	.	.	.	.V	.
17.667	5.9289	4.25	.	Q	.	.	.	.V	.
17.683	5.9347	4.23	.	Q	.	.	.	.V	.
17.700	5.9405	4.21	.	Q	.	.	.	.V	.
17.717	5.9462	4.18	.	Q	.	.	.	.V	.
17.733	5.9520	4.16	.	Q	.	.	.	.V	.
17.750	5.9577	4.14	.	Q	.	.	.	.V	.
17.767	5.9633	4.11	.	Q	.	.	.	.V	.
17.783	5.9690	4.09	.	Q	.	.	.	.V	.
17.800	5.9746	4.07	.	Q	.	.	.	.V	.
17.817	5.9801	4.04	.	Q	.	.	.	.V	.
17.833	5.9857	4.02	.	Q	.	.	.	.V	.
17.850	5.9912	4.00	.	Q	.	.	.	.V	.
17.867	5.9966	3.97	.	Q	.	.	.	.V	.
17.883	6.0021	3.95	.	Q	.	.	.	.V	.
17.900	6.0075	3.93	.	Q	.	.	.	.V	.
17.917	6.0129	3.90	.	Q	.	.	.	.V	.
17.933	6.0182	3.88	.	Q	.	.	.	.V	.
17.950	6.0235	3.86	.	Q	.	.	.	.V	.
17.967	6.0288	3.83	.	Q	.	.	.	.V	.
17.983	6.0341	3.81	.	Q	.	.	.	.V	.
18.000	6.0393	3.79	.	Q	.	.	.	.V	.

18.017	6.0445	3.77	.	Q	.	.	.	V	.
18.033	6.0496	3.75	.	Q	.	.	.	V	.
18.050	6.0548	3.73	.	Q	.	.	.	V	.
18.067	6.0599	3.70	.	Q	.	.	.	V	.
18.083	6.0649	3.68	.	Q	.	.	.	V	.
18.100	6.0700	3.66	.	Q	.	.	.	V	.
18.117	6.0750	3.64	.	Q	.	.	.	V	.
18.133	6.0800	3.62	.	Q	.	.	.	V	.
18.150	6.0849	3.60	.	Q	.	.	.	V	.
18.167	6.0899	3.58	.	Q	.	.	.	V	.
18.183	6.0948	3.55	.	Q	.	.	.	V	.
18.200	6.0996	3.53	.	Q	.	.	.	V	.
18.217	6.1045	3.51	.	Q	.	.	.	V	.
18.233	6.1093	3.49	.	Q	.	.	.	V	.
18.250	6.1140	3.47	.	Q	.	.	.	V	.
18.267	6.1188	3.45	.	Q	.	.	.	V	.
18.283	6.1235	3.42	.	Q	.	.	.	V	.
18.300	6.1282	3.40	.	Q	.	.	.	V	.
18.317	6.1328	3.38	.	Q	.	.	.	V	.
18.333	6.1375	3.36	.	Q	.	.	.	V	.
18.350	6.1421	3.34	.	Q	.	.	.	V	.
18.367	6.1466	3.32	.	Q	.	.	.	V	.
18.383	6.1512	3.30	.	Q	.	.	.	V	.
18.400	6.1557	3.27	.	Q	.	.	.	V	.
18.417	6.1602	3.25	.	Q	.	.	.	V	.
18.433	6.1646	3.23	.	Q	.	.	.	V	.
18.450	6.1690	3.21	.	Q	.	.	.	V	.
18.467	6.1734	3.19	.	Q	.	.	.	V	.
18.483	6.1778	3.17	.	Q	.	.	.	V	.
18.500	6.1821	3.15	.	Q	.	.	.	V	.
18.517	6.1865	3.13	.	Q	.	.	.	V	.
18.533	6.1907	3.12	.	Q	.	.	.	V	.
18.550	6.1950	3.11	.	Q	.	.	.	V	.
18.567	6.1993	3.10	.	Q	.	.	.	V	.
18.583	6.2036	3.09	.	Q	.	.	.	V	.
18.600	6.2078	3.07	.	Q	.	.	.	V	.
18.617	6.2120	3.06	.	Q	.	.	.	V	.
18.633	6.2162	3.05	.	Q	.	.	.	V	.
18.650	6.2204	3.04	.	Q	.	.	.	V	.
18.667	6.2246	3.03	.	Q	.	.	.	V	.
18.683	6.2287	3.01	.	Q	.	.	.	V	.
18.700	6.2328	3.00	.	Q	.	.	.	V	.
18.717	6.2370	2.99	.	Q	.	.	.	V	.
18.733	6.2411	2.98	.	Q	.	.	.	V	.
18.750	6.2452	2.97	.	Q	.	.	.	V	.
18.767	6.2492	2.95	.	Q	.	.	.	V	.
18.783	6.2533	2.94	.	Q	.	.	.	V	.
18.800	6.2573	2.93	.	Q	.	.	.	V	.
18.817	6.2613	2.92	.	Q	.	.	.	V	.
18.833	6.2654	2.91	.	Q	.	.	.	V	.
18.850	6.2694	2.90	.	Q	.	.	.	V	.
18.867	6.2733	2.89	.	Q	.	.	.	V	.
18.883	6.2773	2.88	.	Q	.	.	.	V	.
18.900	6.2813	2.87	.	Q	.	.	.	V	.
18.917	6.2852	2.86	.	Q	.	.	.	V	.

18.933	6.2891	2.85	. Q	.	.	.	V	.
18.950	6.2931	2.84	. Q	.	.	.	V	.
18.967	6.2970	2.83	. Q	.	.	.	V	.
18.983	6.3009	2.82	. Q	.	.	.	V	.
19.000	6.3047	2.81	. Q	.	.	.	V	.
19.017	6.3086	2.80	. Q	.	.	.	V	.
19.033	6.3124	2.79	. Q	.	.	.	V	.
19.050	6.3163	2.78	. Q	.	.	.	V	.
19.067	6.3201	2.77	. Q	.	.	.	V	.
19.083	6.3239	2.77	. Q	.	.	.	V	.
19.100	6.3277	2.76	. Q	.	.	.	V	.
19.117	6.3315	2.75	. Q	.	.	.	V	.
19.133	6.3353	2.74	. Q	.	.	.	V	.
19.150	6.3390	2.73	. Q	.	.	.	V	.
19.167	6.3428	2.72	. Q	.	.	.	V	.
19.183	6.3465	2.71	. Q	.	.	.	V	.
19.200	6.3502	2.71	. Q	.	.	.	V	.
19.217	6.3539	2.70	. Q	.	.	.	V	.
19.233	6.3576	2.69	. Q	.	.	.	V	.
19.250	6.3613	2.68	. Q	.	.	.	V	.
19.267	6.3650	2.67	. Q	.	.	.	V	.
19.283	6.3687	2.66	. Q	.	.	.	V	.
19.300	6.3723	2.65	. Q	.	.	.	V	.
19.317	6.3760	2.64	. Q	.	.	.	V	.
19.333	6.3796	2.64	. Q	.	.	.	V	.
19.350	6.3832	2.63	. Q	.	.	.	V	.
19.367	6.3868	2.62	. Q	.	.	.	V	.
19.383	6.3904	2.61	. Q	.	.	.	V	.
19.400	6.3940	2.61	. Q	.	.	.	V	.
19.417	6.3976	2.60	. Q	.	.	.	V	.
19.433	6.4012	2.59	. Q	.	.	.	V	.
19.450	6.4047	2.58	. Q	.	.	.	V	.
19.467	6.4083	2.58	. Q	.	.	.	V	.
19.483	6.4118	2.57	. Q	.	.	.	V	.
19.500	6.4154	2.56	. Q	.	.	.	V	.
19.517	6.4189	2.55	. Q	.	.	.	V	.
19.533	6.4224	2.55	. Q	.	.	.	V	.
19.550	6.4259	2.54	. Q	.	.	.	V	.
19.567	6.4294	2.53	. Q	.	.	.	V	.
19.583	6.4329	2.52	. Q	.	.	.	V	.
19.600	6.4363	2.52	. Q	.	.	.	V	.
19.617	6.4398	2.51	. Q	.	.	.	V	.
19.633	6.4432	2.50	. Q	.	.	.	V	.
19.650	6.4467	2.50	. Q	.	.	.	V	.
19.667	6.4501	2.49	. Q	.	.	.	V	.
19.683	6.4535	2.48	. Q	.	.	.	V	.
19.700	6.4569	2.48	. Q	.	.	.	V	.
19.717	6.4603	2.47	. Q	.	.	.	V	.
19.733	6.4637	2.46	. Q	.	.	.	V	.
19.750	6.4671	2.46	. Q	.	.	.	V	.
19.767	6.4705	2.45	. Q	.	.	.	V	.
19.783	6.4738	2.44	. Q	.	.	.	V	.
19.800	6.4772	2.44	. Q	.	.	.	V	.
19.817	6.4806	2.43	. Q	.	.	.	V	.
19.833	6.4839	2.42	. Q	.	.	.	V	.

19.850	6.4872	2.42	. Q	.	.	.	V	.
19.867	6.4905	2.41	. Q	.	.	.	V	.
19.883	6.4939	2.40	. Q	.	.	.	V	.
19.900	6.4972	2.40	. Q	.	.	.	V	.
19.917	6.5005	2.39	. Q	.	.	.	V	.
19.933	6.5037	2.39	. Q	.	.	.	V	.
19.950	6.5070	2.38	. Q	.	.	.	V	.
19.967	6.5103	2.38	. Q	.	.	.	V	.
19.983	6.5136	2.37	. Q	.	.	.	V	.
20.000	6.5168	2.36	. Q	.	.	.	V	.
20.017	6.5201	2.36	. Q	.	.	.	V	.
20.033	6.5233	2.35	. Q	.	.	.	V	.
20.050	6.5265	2.35	. Q	.	.	.	V	.
20.067	6.5298	2.34	. Q	.	.	.	V	.
20.083	6.5330	2.33	. Q	.	.	.	V	.
20.100	6.5362	2.33	. Q	.	.	.	V	.
20.117	6.5394	2.32	. Q	.	.	.	V	.
20.133	6.5426	2.32	. Q	.	.	.	V	.
20.150	6.5458	2.31	. Q	.	.	.	V	.
20.167	6.5489	2.31	. Q	.	.	.	V	.
20.183	6.5521	2.30	. Q	.	.	.	V	.
20.200	6.5553	2.30	. Q	.	.	.	V	.
20.217	6.5584	2.29	. Q	.	.	.	V	.
20.233	6.5616	2.28	. Q	.	.	.	V	.
20.250	6.5647	2.28	. Q	.	.	.	V	.
20.267	6.5678	2.27	. Q	.	.	.	V	.
20.283	6.5710	2.27	. Q	.	.	.	V	.
20.300	6.5741	2.26	. Q	.	.	.	V	.
20.317	6.5772	2.26	. Q	.	.	.	V	.
20.333	6.5803	2.25	. Q	.	.	.	V	.
20.350	6.5834	2.25	. Q	.	.	.	V	.
20.367	6.5865	2.24	. Q	.	.	.	V	.
20.383	6.5896	2.24	. Q	.	.	.	V	.
20.400	6.5926	2.23	. Q	.	.	.	V	.
20.417	6.5957	2.23	. Q	.	.	.	V	.
20.433	6.5988	2.22	. Q	.	.	.	V	.
20.450	6.6018	2.22	. Q	.	.	.	V	.
20.467	6.6049	2.21	. Q	.	.	.	V	.
20.483	6.6079	2.21	. Q	.	.	.	V	.
20.500	6.6109	2.20	. Q	.	.	.	V	.
20.517	6.6140	2.20	. Q	.	.	.	V	.
20.533	6.6170	2.19	. Q	.	.	.	V	.
20.550	6.6200	2.19	. Q	.	.	.	V	.
20.567	6.6230	2.18	. Q	.	.	.	V	.
20.583	6.6260	2.18	. Q	.	.	.	V	.
20.600	6.6290	2.17	.Q	.	.	.	V	.
20.617	6.6320	2.17	.Q	.	.	.	V	.
20.633	6.6350	2.17	.Q	.	.	.	V	.
20.650	6.6380	2.16	.Q	.	.	.	V	.
20.667	6.6409	2.16	.Q	.	.	.	V	.
20.683	6.6439	2.15	.Q	.	.	.	V	.
20.700	6.6468	2.15	.Q	.	.	.	V	.
20.717	6.6498	2.14	.Q	.	.	.	V	.
20.733	6.6527	2.14	.Q	.	.	.	V	.
20.750	6.6557	2.13	.Q	.	.	.	V	.

20.767	6.6586	2.13	.Q	.	.	.	V	.
20.783	6.6615	2.12	.Q	.	.	.	V	.
20.800	6.6645	2.12	.Q	.	.	.	V	.
20.817	6.6674	2.12	.Q	.	.	.	V	.
20.833	6.6703	2.11	.Q	.	.	.	V	.
20.850	6.6732	2.11	.Q	.	.	.	V	.
20.867	6.6761	2.10	.Q	.	.	.	V	.
20.883	6.6790	2.10	.Q	.	.	.	V	.
20.900	6.6819	2.09	.Q	.	.	.	V	.
20.917	6.6847	2.09	.Q	.	.	.	V	.
20.933	6.6876	2.09	.Q	.	.	.	V	.
20.950	6.6905	2.08	.Q	.	.	.	V	.
20.967	6.6933	2.08	.Q	.	.	.	V	.
20.983	6.6962	2.07	.Q	.	.	.	V	.
21.000	6.6990	2.07	.Q	.	.	.	V	.
21.017	6.7019	2.07	.Q	.	.	.	V	.
21.033	6.7047	2.06	.Q	.	.	.	V	.
21.050	6.7076	2.06	.Q	.	.	.	V	.
21.067	6.7104	2.05	.Q	.	.	.	V	.
21.083	6.7132	2.05	.Q	.	.	.	V	.
21.100	6.7160	2.05	.Q	.	.	.	V	.
21.117	6.7188	2.04	.Q	.	.	.	V	.
21.133	6.7216	2.04	.Q	.	.	.	V	.
21.150	6.7244	2.03	.Q	.	.	.	V	.
21.167	6.7272	2.03	.Q	.	.	.	V	.
21.183	6.7300	2.03	.Q	.	.	.	V	.
21.200	6.7328	2.02	.Q	.	.	.	V	.
21.217	6.7356	2.02	.Q	.	.	.	V	.
21.233	6.7384	2.01	.Q	.	.	.	V	.
21.250	6.7411	2.01	.Q	.	.	.	V	.
21.267	6.7439	2.01	.Q	.	.	.	V	.
21.283	6.7467	2.00	.Q	.	.	.	V	.
21.300	6.7494	2.00	.Q	.	.	.	V	.
21.317	6.7522	2.00	.Q	.	.	.	V	.
21.333	6.7549	1.99	.Q	.	.	.	V	.
21.350	6.7576	1.99	.Q	.	.	.	V	.
21.367	6.7604	1.98	.Q	.	.	.	V	.
21.383	6.7631	1.98	.Q	.	.	.	V	.
21.400	6.7658	1.98	.Q	.	.	.	V	.
21.417	6.7686	1.97	.Q	.	.	.	V	.
21.433	6.7713	1.97	.Q	.	.	.	V	.
21.450	6.7740	1.97	.Q	.	.	.	V	.
21.467	6.7767	1.96	.Q	.	.	.	V	.
21.483	6.7794	1.96	.Q	.	.	.	V	.
21.500	6.7821	1.96	.Q	.	.	.	V	.
21.517	6.7848	1.95	.Q	.	.	.	V	.
21.533	6.7874	1.95	.Q	.	.	.	V	.
21.550	6.7901	1.95	.Q	.	.	.	V	.
21.567	6.7928	1.94	.Q	.	.	.	V	.
21.583	6.7955	1.94	.Q	.	.	.	V	.
21.600	6.7981	1.94	.Q	.	.	.	V	.
21.617	6.8008	1.93	.Q	.	.	.	V	.
21.633	6.8035	1.93	.Q	.	.	.	V	.
21.650	6.8061	1.93	.Q	.	.	.	V	.
21.667	6.8088	1.92	.Q	.	.	.	V	.

21.683	6.8114	1.92	.Q	.	.	.	V .
21.700	6.8140	1.92	.Q	.	.	.	V .
21.717	6.8167	1.91	.Q	.	.	.	V .
21.733	6.8193	1.91	.Q	.	.	.	V .
21.750	6.8219	1.91	.Q	.	.	.	V .
21.767	6.8246	1.90	.Q	.	.	.	V .
21.783	6.8272	1.90	.Q	.	.	.	V .
21.800	6.8298	1.90	.Q	.	.	.	V .
21.817	6.8324	1.89	.Q	.	.	.	V .
21.833	6.8350	1.89	.Q	.	.	.	V .
21.850	6.8376	1.89	.Q	.	.	.	V .
21.867	6.8402	1.88	.Q	.	.	.	V .
21.883	6.8428	1.88	.Q	.	.	.	V .
21.900	6.8454	1.88	.Q	.	.	.	V .
21.917	6.8479	1.87	.Q	.	.	.	V .
21.933	6.8505	1.87	.Q	.	.	.	V .
21.950	6.8531	1.87	.Q	.	.	.	V .
21.967	6.8557	1.87	.Q	.	.	.	V .
21.983	6.8582	1.86	.Q	.	.	.	V .
22.000	6.8608	1.86	.Q	.	.	.	V .
22.017	6.8633	1.86	.Q	.	.	.	V .
22.033	6.8659	1.85	.Q	.	.	.	V .
22.050	6.8684	1.85	.Q	.	.	.	V .
22.067	6.8710	1.85	.Q	.	.	.	V .
22.083	6.8735	1.84	.Q	.	.	.	V .
22.100	6.8761	1.84	.Q	.	.	.	V .
22.117	6.8786	1.84	.Q	.	.	.	V .
22.133	6.8811	1.83	.Q	.	.	.	V .
22.150	6.8836	1.83	.Q	.	.	.	V .
22.167	6.8862	1.83	.Q	.	.	.	V .
22.183	6.8887	1.83	.Q	.	.	.	V .
22.200	6.8912	1.82	.Q	.	.	.	V .
22.217	6.8937	1.82	.Q	.	.	.	V .
22.233	6.8962	1.82	.Q	.	.	.	V .
22.250	6.8987	1.82	.Q	.	.	.	V .
22.267	6.9012	1.81	.Q	.	.	.	V .
22.283	6.9037	1.81	.Q	.	.	.	V .
22.300	6.9062	1.81	.Q	.	.	.	V .
22.317	6.9087	1.80	.Q	.	.	.	V .
22.333	6.9111	1.80	.Q	.	.	.	V .
22.350	6.9136	1.80	.Q	.	.	.	V .
22.367	6.9161	1.80	.Q	.	.	.	V .
22.383	6.9186	1.79	.Q	.	.	.	V .
22.400	6.9210	1.79	.Q	.	.	.	V .
22.417	6.9235	1.79	.Q	.	.	.	V .
22.433	6.9259	1.78	.Q	.	.	.	V .
22.450	6.9284	1.78	.Q	.	.	.	V .
22.467	6.9308	1.78	.Q	.	.	.	V .
22.483	6.9333	1.78	.Q	.	.	.	V .
22.500	6.9357	1.77	.Q	.	.	.	V .
22.517	6.9382	1.77	.Q	.	.	.	V .
22.533	6.9406	1.77	.Q	.	.	.	V .
22.550	6.9430	1.77	.Q	.	.	.	V .
22.567	6.9455	1.76	.Q	.	.	.	V .
22.583	6.9479	1.76	.Q	.	.	.	V .

22.600	6.9503	1.76	.Q	.	.	.	V .
22.617	6.9527	1.76	.Q	.	.	.	V .
22.633	6.9552	1.75	.Q	.	.	.	V .
22.650	6.9576	1.75	.Q	.	.	.	V .
22.667	6.9600	1.75	.Q	.	.	.	V .
22.683	6.9624	1.75	.Q	.	.	.	V .
22.700	6.9648	1.74	.Q	.	.	.	V .
22.717	6.9672	1.74	.Q	.	.	.	V .
22.733	6.9696	1.74	.Q	.	.	.	V .
22.750	6.9720	1.74	.Q	.	.	.	V .
22.767	6.9743	1.73	.Q	.	.	.	V .
22.783	6.9767	1.73	.Q	.	.	.	V .
22.800	6.9791	1.73	.Q	.	.	.	V .
22.817	6.9815	1.73	.Q	.	.	.	V .
22.833	6.9839	1.72	.Q	.	.	.	V .
22.850	6.9862	1.72	.Q	.	.	.	V .
22.867	6.9886	1.72	.Q	.	.	.	V .
22.883	6.9910	1.72	.Q	.	.	.	V .
22.900	6.9933	1.71	.Q	.	.	.	V .
22.917	6.9957	1.71	.Q	.	.	.	V .
22.933	6.9980	1.71	.Q	.	.	.	V .
22.950	7.0004	1.71	.Q	.	.	.	V .
22.967	7.0027	1.70	.Q	.	.	.	V .
22.983	7.0051	1.70	.Q	.	.	.	V .
23.000	7.0074	1.70	.Q	.	.	.	V .
23.017	7.0097	1.70	.Q	.	.	.	V .
23.033	7.0121	1.69	.Q	.	.	.	V .
23.050	7.0144	1.69	.Q	.	.	.	V .
23.067	7.0167	1.69	.Q	.	.	.	V .
23.083	7.0190	1.69	.Q	.	.	.	V .
23.100	7.0214	1.68	.Q	.	.	.	V .
23.117	7.0237	1.68	.Q	.	.	.	V .
23.133	7.0260	1.68	.Q	.	.	.	V .
23.150	7.0283	1.68	.Q	.	.	.	V .
23.167	7.0306	1.68	.Q	.	.	.	V .
23.183	7.0329	1.67	.Q	.	.	.	V .
23.200	7.0352	1.67	.Q	.	.	.	V .
23.217	7.0375	1.67	.Q	.	.	.	V .
23.233	7.0398	1.67	.Q	.	.	.	V .
23.250	7.0421	1.66	.Q	.	.	.	V .
23.267	7.0444	1.66	.Q	.	.	.	V .
23.283	7.0467	1.66	.Q	.	.	.	V .
23.300	7.0490	1.66	.Q	.	.	.	V .
23.317	7.0512	1.66	.Q	.	.	.	V .
23.333	7.0535	1.65	.Q	.	.	.	V .
23.350	7.0558	1.65	.Q	.	.	.	V .
23.367	7.0581	1.65	.Q	.	.	.	V .
23.383	7.0603	1.65	.Q	.	.	.	V .
23.400	7.0626	1.64	.Q	.	.	.	V .
23.417	7.0649	1.64	.Q	.	.	.	V .
23.433	7.0671	1.64	.Q	.	.	.	V .
23.450	7.0694	1.64	.Q	.	.	.	V .
23.467	7.0716	1.64	.Q	.	.	.	V .
23.483	7.0739	1.63	.Q	.	.	.	V .
23.500	7.0761	1.63	.Q	.	.	.	V .

23.517	7.0784	1.63	.Q	.	.	.	V.
23.533	7.0806	1.63	.Q	.	.	.	V.
23.550	7.0829	1.63	.Q	.	.	.	V.
23.567	7.0851	1.62	.Q	.	.	.	V.
23.583	7.0873	1.62	.Q	.	.	.	V.
23.600	7.0896	1.62	.Q	.	.	.	V.
23.617	7.0918	1.62	.Q	.	.	.	V.
23.633	7.0940	1.62	.Q	.	.	.	V.
23.650	7.0962	1.61	.Q	.	.	.	V.
23.667	7.0985	1.61	.Q	.	.	.	V.
23.683	7.1007	1.61	.Q	.	.	.	V.
23.700	7.1029	1.61	.Q	.	.	.	V.
23.717	7.1051	1.61	.Q	.	.	.	V.
23.733	7.1073	1.60	.Q	.	.	.	V.
23.750	7.1095	1.60	.Q	.	.	.	V.
23.767	7.1117	1.60	.Q	.	.	.	V.
23.783	7.1139	1.60	.Q	.	.	.	V.
23.800	7.1161	1.60	.Q	.	.	.	V.
23.817	7.1183	1.59	.Q	.	.	.	V.
23.833	7.1205	1.59	.Q	.	.	.	V.
23.850	7.1227	1.59	.Q	.	.	.	V.
23.867	7.1249	1.59	.Q	.	.	.	V.
23.883	7.1271	1.59	.Q	.	.	.	V.
23.900	7.1292	1.58	.Q	.	.	.	V.
23.917	7.1314	1.58	.Q	.	.	.	V.
23.933	7.1336	1.58	.Q	.	.	.	V.
23.950	7.1358	1.58	.Q	.	.	.	V.
23.967	7.1379	1.58	.Q	.	.	.	V.
23.983	7.1401	1.57	.Q	.	.	.	V.
24.000	7.1423	1.57	.Q	.	.	.	V.
24.017	7.1444	1.57	.Q	.	.	.	V.
24.033	7.1466	1.57	.Q	.	.	.	V.
24.050	7.1487	1.50	.Q	.	.	.	V.
24.067	7.1506	1.41	.Q	.	.	.	V.
24.083	7.1524	1.32	.Q	.	.	.	V.
24.100	7.1541	1.22	.Q	.	.	.	V.
24.117	7.1556	1.13	.Q	.	.	.	V.
24.133	7.1571	1.03	Q	.	.	.	V.
24.150	7.1584	0.94	Q	.	.	.	V.
24.167	7.1595	0.84	Q	.	.	.	V.
24.183	7.1606	0.75	Q	.	.	.	V.
24.200	7.1615	0.66	Q	.	.	.	V.
24.217	7.1622	0.56	Q	.	.	.	V.
24.233	7.1629	0.47	Q	.	.	.	V.
24.250	7.1634	0.37	Q	.	.	.	V.
24.267	7.1638	0.28	Q	.	.	.	V.
24.283	7.1640	0.18	Q	.	.	.	V.
24.300	7.1641	0.09	Q	.	.	.	V

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
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Percentage	Value
0%	1458.0
10%	1240.0
20%	365.0
30%	245.0
40%	150.0
50%	125.0
60%	95.0
70%	75.0
80%	50.0
90%	25.0

FLOW PROCESS FROM NODE 101.00 TO NODE 102.00 IS CODE = 4

>>>>MODEL PIPEFLOW ROUTING OF STREAM #1<<<<<

MODEL PIPEFLOW ROUTING OF STREAM 1 WHERE
 STORAGE EFFECTS ARE NEGLECTED WITHIN THE PIPE, FLOW
 VELOCITIES ARE ESTIMATED BY ASSUMING STEADY FLOW FOR
 EACH UNIT INTERVAL(NORMAL DEPTH, Dn), AND FLOWS IN EXCESS
 OF (.82)(DIAMETER) ARE PONDED AT THE UPSTREAM INLET:
 UNIT INTERVAL FLOW VELOCITY COMPUTED USING Dn UP TO
 (0.938)(DIAMETER):

PIPELENGTH(FT) = 1381.00 MANNINGS FACTOR = 0.013
 UPSTREAM ELEVATION(FT) = 1280.00
 DOWNSTREAM ELEVATION(FT) = 1245.00
 PIPE DIAMETER(FT) = 2.00

NORMAL DEPTH VELOCITY PIPE ROUTING RESULTS:

TIME (HRS)	INFLOW (CFS)	VELOCITY (FPS)	OUTFLOW (CFS)	UPSTREAM PONDING(AF)
10.000	2.62	6.54	2.61	0.000
10.017	2.63	6.54	2.61	0.000
10.033	2.63	6.54	2.62	0.000
10.050	2.64	6.55	2.62	0.000
10.067	2.64	6.55	2.63	0.000
10.083	2.65	6.55	2.63	0.000
10.100	2.65	6.56	2.64	0.000
10.117	2.66	6.56	2.64	0.000
10.133	2.66	6.57	2.65	0.000
10.150	2.67	6.57	2.66	0.000
10.167	2.67	6.57	2.66	0.000
10.183	2.68	6.58	2.67	0.000
10.200	2.68	6.58	2.67	0.000
10.217	2.69	6.58	2.68	0.000
10.233	2.69	6.58	2.68	0.000

10.250	2.69	6.59	2.69	0.000
10.267	2.70	6.59	2.69	0.000
10.283	2.70	6.59	2.69	0.000
10.300	2.70	6.59	2.69	0.000
10.317	2.70	6.59	2.70	0.000
10.333	2.71	6.60	2.70	0.000
10.350	2.71	6.60	2.70	0.000
10.367	2.71	6.60	2.71	0.000
10.383	2.72	6.60	2.71	0.000
10.400	2.72	6.60	2.71	0.000
10.417	2.72	6.61	2.71	0.000
10.433	2.72	6.61	2.72	0.000
10.450	2.73	6.61	2.72	0.000
10.467	2.73	6.61	2.72	0.000
10.483	2.74	6.62	2.73	0.000
10.500	2.74	6.62	2.73	0.000
10.517	2.75	6.62	2.73	0.000
10.533	2.75	6.63	2.74	0.000
10.550	2.76	6.63	2.74	0.000
10.567	2.77	6.64	2.75	0.000
10.583	2.77	6.64	2.76	0.000
10.600	2.78	6.65	2.76	0.000
10.617	2.78	6.65	2.77	0.000
10.633	2.79	6.65	2.78	0.000
10.650	2.80	6.66	2.78	0.000
10.667	2.80	6.66	2.79	0.000
10.683	2.81	6.67	2.79	0.000
10.700	2.82	6.67	2.80	0.000
10.717	2.82	6.68	2.81	0.000
10.733	2.83	6.68	2.81	0.000
10.750	2.83	6.68	2.82	0.000
10.767	2.84	6.69	2.83	0.000
10.783	2.84	6.69	2.83	0.000
10.800	2.84	6.69	2.84	0.000
10.817	2.85	6.69	2.84	0.000
10.833	2.85	6.70	2.84	0.000
10.850	2.85	6.70	2.85	0.000
10.867	2.86	6.70	2.85	0.000
10.883	2.86	6.70	2.85	0.000
10.900	2.86	6.71	2.86	0.000
10.917	2.87	6.71	2.86	0.000
10.933	2.87	6.71	2.86	0.000
10.950	2.87	6.71	2.87	0.000
10.967	2.88	6.71	2.87	0.000
10.983	2.88	6.72	2.87	0.000
11.000	2.88	6.72	2.88	0.000
11.017	2.89	6.72	2.88	0.000
11.033	2.89	6.73	2.88	0.000
11.050	2.90	6.73	2.89	0.000
11.067	2.91	6.74	2.89	0.000
11.083	2.91	6.74	2.90	0.000
11.100	2.92	6.75	2.90	0.000
11.117	2.93	6.75	2.91	0.000
11.133	2.94	6.76	2.92	0.000
11.150	2.94	6.76	2.93	0.000

11.167	2.95	6.77	2.93	0.000
11.183	2.96	6.77	2.94	0.000
11.200	2.97	6.78	2.95	0.000
11.217	2.97	6.78	2.96	0.000
11.233	2.98	6.79	2.96	0.000
11.250	2.99	6.79	2.97	0.000
11.267	2.99	6.80	2.98	0.000
11.283	3.00	6.80	2.98	0.000
11.300	3.01	6.81	2.99	0.000
11.317	3.01	6.81	3.00	0.000
11.333	3.02	6.81	3.01	0.000
11.350	3.02	6.82	3.01	0.000
11.367	3.02	6.82	3.02	0.000
11.383	3.03	6.82	3.02	0.000
11.400	3.03	6.82	3.02	0.000
11.417	3.04	6.83	3.03	0.000
11.433	3.04	6.83	3.03	0.000
11.450	3.04	6.83	3.04	0.000
11.467	3.05	6.84	3.04	0.000
11.483	3.05	6.84	3.04	0.000
11.500	3.06	6.84	3.05	0.000
11.517	3.06	6.84	3.05	0.000
11.533	3.06	6.85	3.06	0.000
11.550	3.07	6.85	3.06	0.000
11.567	3.07	6.85	3.06	0.000
11.583	3.08	6.86	3.07	0.000
11.600	3.09	6.86	3.07	0.000
11.617	3.10	6.87	3.08	0.000
11.633	3.10	6.87	3.08	0.000
11.650	3.11	6.88	3.09	0.000
11.667	3.12	6.89	3.10	0.000
11.683	3.13	6.89	3.11	0.000
11.700	3.14	6.90	3.12	0.000
11.717	3.15	6.90	3.13	0.000
11.733	3.16	6.91	3.14	0.000
11.750	3.17	6.92	3.15	0.000
11.767	3.17	6.92	3.15	0.000
11.783	3.18	6.93	3.16	0.000
11.800	3.19	6.93	3.17	0.000
11.817	3.20	6.94	3.18	0.000
11.833	3.21	6.95	3.19	0.000
11.850	3.22	6.95	3.20	0.000
11.867	3.22	6.96	3.21	0.000
11.883	3.23	6.96	3.22	0.000
11.900	3.23	6.96	3.22	0.000
11.917	3.24	6.97	3.23	0.000
11.933	3.24	6.97	3.23	0.000
11.950	3.25	6.97	3.24	0.000
11.967	3.25	6.98	3.24	0.000
11.983	3.26	6.98	3.25	0.000
12.000	3.26	6.98	3.25	0.000
12.017	3.27	6.99	3.26	0.000
12.033	3.27	6.99	3.26	0.000
12.050	3.28	6.99	3.27	0.000
12.067	3.28	7.00	3.27	0.000

12.083	3.29	7.00	3.27	0.000
12.100	3.29	7.00	3.28	0.000
12.117	3.30	7.01	3.28	0.000
12.133	3.30	7.01	3.29	0.000
12.150	3.32	7.03	3.29	0.000
12.167	3.34	7.04	3.30	0.000
12.183	3.37	7.06	3.31	0.000
12.200	3.39	7.07	3.34	0.000
12.217	3.41	7.09	3.36	0.000
12.233	3.43	7.10	3.38	0.000
12.250	3.45	7.12	3.40	0.000
12.267	3.47	7.13	3.43	0.000
12.283	3.49	7.15	3.45	0.000
12.300	3.51	7.16	3.47	0.000
12.317	3.54	7.18	3.49	0.000
12.333	3.56	7.19	3.51	0.000
12.350	3.58	7.21	3.53	0.000
12.367	3.60	7.22	3.55	0.000
12.383	3.62	7.23	3.58	0.000
12.400	3.64	7.24	3.60	0.000
12.417	3.65	7.25	3.62	0.000
12.433	3.66	7.25	3.64	0.000
12.450	3.67	7.26	3.66	0.000
12.467	3.67	7.26	3.66	0.000
12.483	3.68	7.26	3.67	0.000
12.500	3.69	7.27	3.67	0.000
12.517	3.69	7.27	3.68	0.000
12.533	3.70	7.27	3.68	0.000
12.550	3.70	7.28	3.69	0.000
12.567	3.71	7.28	3.70	0.000
12.583	3.72	7.28	3.70	0.000
12.600	3.72	7.29	3.71	0.000
12.617	3.73	7.29	3.71	0.000
12.633	3.73	7.29	3.72	0.000
12.650	3.74	7.30	3.73	0.000
12.667	3.75	7.30	3.73	0.000
12.683	3.75	7.30	3.74	0.000
12.700	3.76	7.31	3.74	0.000
12.717	3.78	7.32	3.75	0.000
12.733	3.79	7.32	3.76	0.000
12.750	3.80	7.33	3.77	0.000
12.767	3.82	7.34	3.79	0.000
12.783	3.83	7.35	3.80	0.000
12.800	3.85	7.35	3.81	0.000
12.817	3.86	7.36	3.83	0.000
12.833	3.87	7.37	3.84	0.000
12.850	3.89	7.38	3.86	0.000
12.867	3.90	7.38	3.87	0.000
12.883	3.91	7.39	3.88	0.000
12.900	3.93	7.40	3.90	0.000
12.917	3.94	7.41	3.91	0.000
12.933	3.95	7.41	3.92	0.000
12.950	3.97	7.42	3.94	0.000
12.967	3.98	7.43	3.95	0.000
12.983	3.99	7.43	3.96	0.000

13.000	4.00	7.44	3.98	0.000
13.017	4.00	7.44	3.99	0.000
13.033	4.01	7.44	3.99	0.000
13.050	4.02	7.45	4.00	0.000
13.067	4.03	7.45	4.01	0.000
13.083	4.03	7.46	4.02	0.000
13.100	4.04	7.46	4.02	0.000
13.117	4.05	7.46	4.03	0.000
13.133	4.06	7.47	4.04	0.000
13.150	4.06	7.47	4.05	0.000
13.167	4.07	7.48	4.06	0.000
13.183	4.08	7.48	4.06	0.000
13.200	4.09	7.49	4.07	0.000
13.217	4.10	7.49	4.08	0.000
13.233	4.10	7.49	4.09	0.000
13.250	4.12	7.50	4.09	0.000
13.267	4.14	7.51	4.10	0.000
13.283	4.15	7.52	4.11	0.000
13.300	4.17	7.53	4.13	0.000
13.317	4.19	7.54	4.15	0.000
13.333	4.21	7.55	4.17	0.000
13.350	4.23	7.56	4.19	0.000
13.367	4.24	7.57	4.20	0.000
13.383	4.26	7.58	4.22	0.000
13.400	4.28	7.59	4.24	0.000
13.417	4.30	7.60	4.26	0.000
13.433	4.31	7.61	4.28	0.000
13.450	4.33	7.62	4.29	0.000
13.467	4.35	7.63	4.31	0.000
13.483	4.37	7.64	4.33	0.000
13.500	4.39	7.65	4.35	0.000
13.517	4.40	7.66	4.37	0.000
13.533	4.41	7.66	4.38	0.000
13.550	4.42	7.67	4.40	0.000
13.567	4.43	7.67	4.42	0.000
13.583	4.45	7.68	4.42	0.000
13.600	4.46	7.68	4.44	0.000
13.617	4.47	7.69	4.45	0.000
13.633	4.48	7.70	4.46	0.000
13.650	4.49	7.70	4.47	0.000
13.667	4.50	7.71	4.48	0.000
13.683	4.51	7.71	4.49	0.000
13.700	4.52	7.72	4.50	0.000
13.717	4.53	7.72	4.51	0.000
13.733	4.54	7.73	4.52	0.000
13.750	4.55	7.74	4.53	0.000
13.767	4.56	7.74	4.54	0.000
13.783	4.57	7.75	4.55	0.000
13.800	4.59	7.76	4.56	0.000
13.817	4.61	7.77	4.57	0.000
13.833	4.64	7.78	4.59	0.000
13.850	4.66	7.80	4.61	0.000
13.867	4.69	7.81	4.64	0.000
13.883	4.71	7.82	4.66	0.000
13.900	4.74	7.84	4.69	0.000

13.917	4.76	7.85	4.71	0.000
13.933	4.79	7.86	4.74	0.000
13.950	4.81	7.88	4.76	0.000
13.967	4.84	7.89	4.79	0.000
13.983	4.86	7.90	4.81	0.000
14.000	4.89	7.92	4.84	0.000
14.017	4.91	7.93	4.86	0.000
14.033	4.94	7.94	4.89	0.000
14.050	4.96	7.96	4.91	0.000
14.067	4.99	7.97	4.94	0.000
14.083	5.00	7.98	4.96	0.000
14.100	5.01	7.98	4.99	0.000
14.117	5.02	7.99	5.00	0.000
14.133	5.03	7.99	5.01	0.000
14.150	5.04	8.00	5.02	0.000
14.167	5.05	8.01	5.03	0.000
14.183	5.06	8.01	5.04	0.000
14.200	5.07	8.02	5.05	0.000
14.217	5.08	8.02	5.06	0.000
14.233	5.09	8.03	5.07	0.000
14.250	5.10	8.03	5.08	0.000
14.267	5.11	8.04	5.09	0.000
14.283	5.12	8.04	5.10	0.000
14.300	5.13	8.05	5.11	0.000
14.317	5.14	8.06	5.12	0.000
14.333	5.15	8.06	5.13	0.000
14.350	5.17	8.07	5.14	0.000
14.367	5.20	8.09	5.15	0.000
14.383	5.24	8.11	5.17	0.000
14.400	5.28	8.13	5.21	0.000
14.417	5.31	8.15	5.25	0.000
14.433	5.35	8.17	5.28	0.000
14.450	5.39	8.19	5.32	0.000
14.467	5.43	8.21	5.36	0.000
14.483	5.46	8.22	5.40	0.000
14.500	5.50	8.24	5.43	0.000
14.517	5.54	8.25	5.46	0.000
14.533	5.57	8.27	5.50	0.000
14.550	5.61	8.28	5.54	0.000
14.567	5.65	8.30	5.57	0.000
14.583	5.69	8.31	5.61	0.000
14.600	5.72	8.33	5.65	0.000
14.617	5.76	8.34	5.69	0.000
14.633	5.79	8.36	5.72	0.000
14.650	5.81	8.37	5.76	0.000
14.667	5.84	8.38	5.79	0.000
14.683	5.86	8.39	5.82	0.000
14.700	5.89	8.40	5.84	0.000
14.717	5.91	8.41	5.87	0.000
14.733	5.94	8.42	5.89	0.000
14.750	5.96	8.43	5.92	0.000
14.767	5.99	8.44	5.94	0.000
14.783	6.01	8.45	5.96	0.000
14.800	6.04	8.46	5.99	0.000
14.817	6.06	8.47	6.01	0.000

14.833	6.09	8.48	6.04	0.000
14.850	6.11	8.49	6.06	0.000
14.867	6.14	8.50	6.09	0.000
14.883	6.16	8.51	6.11	0.000
14.900	6.19	8.52	6.14	0.000
14.917	6.25	8.55	6.16	0.000
14.933	6.32	8.58	6.19	0.000
14.950	6.39	8.61	6.26	0.000
14.967	6.46	8.64	6.33	0.000
14.983	6.53	8.66	6.40	0.000
15.000	6.60	8.69	6.47	0.000
15.017	6.67	8.72	6.54	0.000
15.033	6.74	8.75	6.61	0.000
15.050	6.81	8.78	6.68	0.000
15.067	6.88	8.81	6.75	0.000
15.083	6.95	8.84	6.82	0.000
15.100	7.02	8.86	6.89	0.000
15.117	7.09	8.89	6.96	0.000
15.133	7.16	8.92	7.03	0.000
15.150	7.22	8.95	7.10	0.000
15.167	7.29	8.97	7.17	0.000
15.183	7.36	8.99	7.24	0.000
15.200	7.41	9.01	7.30	0.000
15.217	7.46	9.03	7.36	0.000
15.233	7.51	9.04	7.42	0.000
15.250	7.56	9.06	7.47	0.000
15.267	7.62	9.08	7.52	0.000
15.283	7.67	9.10	7.57	0.000
15.300	7.72	9.11	7.62	0.000
15.317	7.77	9.13	7.68	0.000
15.333	7.82	9.15	7.73	0.000
15.350	7.87	9.16	7.78	0.000
15.367	7.93	9.18	7.83	0.000
15.383	7.98	9.20	7.88	0.000
15.400	8.03	9.22	7.94	0.000
15.417	8.08	9.23	7.99	0.000
15.433	8.13	9.25	8.04	0.000
15.450	8.19	9.27	8.09	0.000
15.467	8.41	9.34	8.14	0.000
15.483	8.71	9.44	8.20	0.000
15.500	9.01	9.54	8.47	0.000
15.517	9.30	9.63	8.80	0.000
15.533	9.60	9.72	9.10	0.000
15.550	9.90	9.81	9.39	0.000
15.567	10.19	9.90	9.70	0.000
15.583	10.49	9.99	10.00	0.000
15.600	10.79	10.08	10.31	0.000
15.617	11.08	10.15	10.62	0.000
15.633	11.38	10.21	10.92	0.000
15.650	11.68	10.27	11.15	0.000
15.667	11.97	10.33	11.45	0.000
15.683	12.27	10.39	11.76	0.000
15.700	12.57	10.45	12.06	0.000
15.717	12.86	10.51	12.36	0.000
15.733	13.15	10.57	12.66	0.000

15.750	13.37	10.62	12.97	0.000
15.767	13.60	10.66	13.25	0.000
15.783	13.82	10.71	13.47	0.000
15.800	14.04	10.76	13.69	0.000
15.817	14.27	10.80	13.92	0.000
15.833	14.49	10.85	14.14	0.000
15.850	14.71	10.88	14.37	0.000
15.867	14.94	10.92	14.58	0.000
15.883	15.16	10.95	14.79	0.000
15.900	15.38	10.99	15.01	0.000
15.917	15.61	11.02	15.24	0.000
15.933	15.83	11.06	15.47	0.000
15.950	16.05	11.10	15.69	0.000
15.967	16.28	11.13	15.92	0.000
15.983	16.50	11.18	16.14	0.000
16.000	16.72	11.22	16.37	0.000
16.017	17.64	11.39	16.61	0.000
16.033	19.24	11.66	16.84	0.000
16.050	20.85	11.88	18.65	0.000
16.067	22.45	12.06	20.41	0.000
16.083	24.06	12.23	21.59	0.000
16.100	25.66	12.42	23.25	0.000
16.117	27.27	12.58	24.99	0.000
16.133	28.87	12.73	26.51	0.000
16.150	30.48	12.83	28.17	0.000
16.167	32.08	12.93	29.62	0.000
16.183	33.69	13.00	31.26	0.000
16.200	35.29	13.05	32.76	0.000
16.217	36.90	13.07	34.28	0.001
16.233	38.50	13.07	35.55	0.005
16.250	40.11	13.07	36.02	0.010
16.267	41.71	13.07	36.02	0.018
16.283	43.50	13.07	36.02	0.028
16.300	41.74	13.07	36.02	0.036
16.317	39.76	13.07	36.02	0.041
16.333	37.77	13.07	36.02	0.044
16.350	35.79	13.07	36.02	0.044
16.367	33.80	13.07	36.02	0.041
16.383	31.82	13.07	36.02	0.035
16.400	29.83	13.07	36.02	0.026
16.417	27.85	13.07	36.02	0.015
16.433	25.86	13.07	36.02	0.001
16.450	23.88	12.31	36.02	0.000
16.467	21.89	12.01	30.60	0.000
16.483	19.91	11.76	23.25	0.000
16.500	17.92	11.45	20.94	0.000
16.517	15.94	11.08	19.04	0.000
16.533	13.95	10.74	17.73	0.000
16.550	11.97	10.32	14.89	0.000
16.567	10.50	10.00	13.19	0.000
16.583	10.22	9.91	11.23	0.000
16.600	9.99	9.84	10.07	0.000
16.617	9.76	9.77	10.11	0.000
16.633	9.53	9.70	9.90	0.000
16.650	9.30	9.63	9.68	0.000

16.667	9.07	9.56	9.45	0.000
16.683	8.84	9.49	9.23	0.000
16.700	8.61	9.41	9.00	0.000
16.717	8.38	9.33	8.77	0.000
16.733	8.15	9.26	8.54	0.000
16.750	7.92	9.18	8.32	0.000
16.767	7.69	9.10	8.10	0.000
16.783	7.46	9.03	7.87	0.000
16.800	7.23	8.95	7.65	0.000
16.817	7.00	8.86	7.43	0.000
16.833	6.78	8.76	7.20	0.000
16.850	6.64	8.71	6.95	0.000
16.867	6.57	8.68	6.72	0.000
16.883	6.49	8.65	6.62	0.000
16.900	6.42	8.62	6.55	0.000
16.917	6.34	8.59	6.48	0.000
16.933	6.26	8.55	6.40	0.000
16.950	6.19	8.52	6.33	0.000
16.967	6.11	8.49	6.25	0.000
16.983	6.04	8.46	6.18	0.000
17.000	5.96	8.43	6.11	0.000
17.017	5.89	8.40	6.03	0.000
17.033	5.81	8.37	5.96	0.000
17.050	5.73	8.33	5.88	0.000
17.067	5.66	8.30	5.81	0.000
17.083	5.58	8.27	5.73	0.000
17.100	5.51	8.24	5.66	0.000
17.117	5.44	8.21	5.58	0.000
17.133	5.39	8.19	5.51	0.000
17.150	5.35	8.17	5.44	0.000
17.167	5.31	8.15	5.39	0.000
17.183	5.27	8.13	5.34	0.000
17.200	5.23	8.10	5.30	0.000
17.217	5.19	8.08	5.27	0.000
17.233	5.15	8.06	5.23	0.000
17.250	5.11	8.04	5.19	0.000
17.267	5.07	8.02	5.15	0.000
17.283	5.03	8.00	5.11	0.000
17.300	4.99	7.98	5.07	0.000
17.317	4.95	7.95	5.03	0.000
17.333	4.91	7.93	4.99	0.000
17.350	4.87	7.91	4.95	0.000
17.367	4.83	7.89	4.91	0.000
17.383	4.79	7.87	4.87	0.000
17.400	4.76	7.85	4.83	0.000
17.417	4.73	7.83	4.79	0.000
17.433	4.69	7.81	4.76	0.000
17.450	4.66	7.80	4.73	0.000
17.467	4.63	7.78	4.69	0.000
17.483	4.60	7.76	4.66	0.000
17.500	4.57	7.75	4.63	0.000
17.517	4.54	7.73	4.60	0.000
17.533	4.51	7.71	4.57	0.000
17.550	4.47	7.69	4.54	0.000
17.567	4.44	7.68	4.51	0.000

17.583	4.41	7.66	4.48	0.000
17.600	4.38	7.64	4.44	0.000
17.617	4.35	7.63	4.43	0.000
17.633	4.32	7.61	4.39	0.000
17.650	4.28	7.59	4.35	0.000
17.667	4.25	7.58	4.32	0.000
17.683	4.23	7.56	4.29	0.000
17.700	4.21	7.55	4.26	0.000
17.717	4.18	7.54	4.23	0.000
17.733	4.16	7.52	4.21	0.000
17.750	4.14	7.51	4.18	0.000
17.767	4.11	7.50	4.16	0.000
17.783	4.09	7.49	4.14	0.000
17.800	4.07	7.47	4.12	0.000
17.817	4.04	7.46	4.09	0.000
17.833	4.02	7.45	4.07	0.000
17.850	4.00	7.44	4.05	0.000
17.867	3.97	7.42	4.02	0.000
17.883	3.95	7.41	4.00	0.000
17.900	3.93	7.40	3.98	0.000
17.917	3.90	7.39	3.95	0.000
17.933	3.88	7.37	3.93	0.000
17.950	3.86	7.36	3.91	0.000
17.967	3.83	7.35	3.88	0.000
17.983	3.81	7.34	3.86	0.000
18.000	3.79	7.32	3.84	0.000
18.017	3.77	7.31	3.82	0.000
18.033	3.75	7.30	3.80	0.000
18.050	3.73	7.29	3.78	0.000
18.067	3.70	7.28	3.75	0.000
18.083	3.68	7.27	3.73	0.000
18.100	3.66	7.25	3.71	0.000
18.117	3.64	7.24	3.69	0.000
18.133	3.62	7.23	3.67	0.000
18.150	3.60	7.22	3.65	0.000
18.167	3.58	7.20	3.63	0.000
18.183	3.55	7.19	3.60	0.000
18.200	3.53	7.17	3.58	0.000
18.217	3.51	7.16	3.56	0.000
18.233	3.49	7.14	3.53	0.000
18.250	3.47	7.13	3.51	0.000
18.267	3.45	7.11	3.49	0.000
18.283	3.42	7.10	3.47	0.000
18.300	3.40	7.08	3.45	0.000
18.317	3.38	7.07	3.43	0.000
18.333	3.36	7.05	3.41	0.000
18.350	3.34	7.04	3.38	0.000
18.367	3.32	7.02	3.36	0.000
18.383	3.30	7.01	3.34	0.000
18.400	3.27	6.99	3.32	0.000
18.417	3.25	6.98	3.30	0.000
18.433	3.23	6.96	3.28	0.000
18.450	3.21	6.95	3.26	0.000
18.467	3.19	6.93	3.24	0.000
18.483	3.17	6.92	3.21	0.000

18.500	3.15	6.90	3.19	0.000
18.517	3.13	6.89	3.17	0.000
18.533	3.12	6.89	3.15	0.000
18.550	3.11	6.88	3.13	0.000
18.567	3.10	6.87	3.12	0.000
18.583	3.09	6.86	3.11	0.000
18.600	3.07	6.85	3.10	0.000
18.617	3.06	6.84	3.09	0.000
18.633	3.05	6.84	3.08	0.000
18.650	3.04	6.83	3.07	0.000
18.667	3.03	6.82	3.05	0.000
18.683	3.01	6.81	3.04	0.000
18.700	3.00	6.80	3.03	0.000
18.717	2.99	6.79	3.02	0.000
18.733	2.98	6.79	3.01	0.000
18.750	2.97	6.78	2.99	0.000
18.767	2.95	6.77	2.98	0.000
18.783	2.94	6.76	2.97	0.000
18.800	2.93	6.75	2.96	0.000
18.817	2.92	6.75	2.95	0.000
18.833	2.91	6.74	2.94	0.000
18.850	2.90	6.73	2.93	0.000
18.867	2.89	6.73	2.92	0.000
18.883	2.88	6.72	2.91	0.000
18.900	2.87	6.71	2.90	0.000
18.917	2.86	6.71	2.89	0.000
18.933	2.85	6.70	2.88	0.000
18.950	2.84	6.69	2.87	0.000
18.967	2.83	6.68	2.86	0.000
18.983	2.82	6.68	2.85	0.000
19.000	2.81	6.67	2.84	0.000
19.017	2.80	6.66	2.83	0.000
19.033	2.79	6.66	2.82	0.000
19.050	2.78	6.65	2.81	0.000
19.067	2.77	6.64	2.80	0.000
19.083	2.77	6.64	2.79	0.000
19.100	2.76	6.63	2.78	0.000
19.117	2.75	6.62	2.77	0.000
19.133	2.74	6.62	2.76	0.000
19.150	2.73	6.61	2.75	0.000
19.167	2.72	6.61	2.74	0.000
19.183	2.71	6.60	2.74	0.000
19.200	2.71	6.59	2.73	0.000
19.217	2.70	6.59	2.72	0.000
19.233	2.69	6.58	2.71	0.000
19.250	2.68	6.58	2.70	0.000
19.267	2.67	6.57	2.69	0.000
19.283	2.66	6.56	2.68	0.000
19.300	2.65	6.56	2.68	0.000
19.317	2.64	6.55	2.67	0.000
19.333	2.64	6.55	2.66	0.000
19.350	2.63	6.54	2.65	0.000
19.367	2.62	6.54	2.64	0.000
19.383	2.61	6.53	2.63	0.000
19.400	2.61	6.53	2.63	0.000

19.417	2.60	6.52	2.62	0.000
19.433	2.59	6.52	2.61	0.000
19.450	2.58	6.51	2.60	0.000
19.467	2.58	6.50	2.60	0.000
19.483	2.57	6.50	2.59	0.000
19.500	2.56	6.49	2.58	0.000
19.517	2.55	6.49	2.57	0.000
19.533	2.55	6.48	2.57	0.000
19.550	2.54	6.48	2.56	0.000
19.567	2.53	6.47	2.55	0.000
19.583	2.52	6.47	2.54	0.000
19.600	2.52	6.46	2.54	0.000
19.617	2.51	6.46	2.53	0.000
19.633	2.50	6.45	2.52	0.000
19.650	2.50	6.45	2.51	0.000
19.667	2.49	6.44	2.51	0.000
19.683	2.48	6.44	2.50	0.000
19.700	2.48	6.43	2.49	0.000
19.717	2.47	6.43	2.49	0.000
19.733	2.46	6.43	2.48	0.000
19.750	2.46	6.42	2.47	0.000
19.767	2.45	6.42	2.47	0.000
19.783	2.44	6.41	2.46	0.000
19.800	2.44	6.41	2.45	0.000
19.817	2.43	6.40	2.45	0.000
19.833	2.42	6.40	2.44	0.000
19.850	2.42	6.39	2.44	0.000
19.867	2.41	6.39	2.43	0.000
19.883	2.40	6.38	2.42	0.000
19.900	2.40	6.38	2.42	0.000
19.917	2.39	6.38	2.41	0.000
19.933	2.39	6.37	2.40	0.000
19.950	2.38	6.37	2.40	0.000
19.967	2.38	6.36	2.39	0.000
19.983	2.37	6.36	2.39	0.000
20.000	2.36	6.36	2.38	0.000
20.017	2.36	6.35	2.37	0.000
20.033	2.35	6.35	2.37	0.000
20.050	2.35	6.34	2.36	0.000
20.067	2.34	6.34	2.36	0.000
20.083	2.33	6.34	2.35	0.000
20.100	2.33	6.33	2.34	0.000
20.117	2.32	6.33	2.34	0.000
20.133	2.32	6.32	2.33	0.000
20.150	2.31	6.32	2.33	0.000
20.167	2.31	6.31	2.32	0.000
20.183	2.30	6.31	2.32	0.000
20.200	2.30	6.31	2.31	0.000
20.217	2.29	6.30	2.30	0.000
20.233	2.28	6.30	2.30	0.000
20.250	2.28	6.30	2.29	0.000
20.267	2.27	6.29	2.29	0.000
20.283	2.27	6.29	2.28	0.000
20.300	2.26	6.29	2.28	0.000
20.317	2.26	6.28	2.27	0.000

20.333	2.25	6.28	2.27	0.000
20.350	2.25	6.27	2.26	0.000
20.367	2.24	6.27	2.26	0.000
20.383	2.24	6.27	2.25	0.000
20.400	2.23	6.26	2.25	0.000
20.417	2.23	6.26	2.24	0.000
20.433	2.22	6.26	2.24	0.000
20.450	2.22	6.25	2.23	0.000
20.467	2.21	6.25	2.23	0.000
20.483	2.21	6.25	2.22	0.000
20.500	2.20	6.24	2.22	0.000
20.517	2.20	6.24	2.21	0.000
20.533	2.19	6.24	2.21	0.000
20.550	2.19	6.23	2.20	0.000
20.567	2.18	6.23	2.20	0.000
20.583	2.18	6.23	2.19	0.000
20.600	2.17	6.22	2.19	0.000
20.617	2.17	6.22	2.18	0.000
20.633	2.17	6.22	2.18	0.000
20.650	2.16	6.21	2.17	0.000
20.667	2.16	6.21	2.17	0.000
20.683	2.15	6.21	2.16	0.000
20.700	2.15	6.20	2.16	0.000
20.717	2.14	6.20	2.15	0.000
20.733	2.14	6.20	2.15	0.000
20.750	2.13	6.19	2.15	0.000
20.767	2.13	6.19	2.14	0.000
20.783	2.12	6.19	2.14	0.000
20.800	2.12	6.18	2.13	0.000
20.817	2.12	6.18	2.13	0.000
20.833	2.11	6.18	2.12	0.000
20.850	2.11	6.18	2.12	0.000
20.867	2.10	6.17	2.12	0.000
20.883	2.10	6.17	2.11	0.000
20.900	2.09	6.17	2.11	0.000
20.917	2.09	6.16	2.10	0.000
20.933	2.09	6.16	2.10	0.000
20.950	2.08	6.16	2.09	0.000
20.967	2.08	6.15	2.09	0.000
20.983	2.07	6.15	2.09	0.000
21.000	2.07	6.15	2.08	0.000
21.017	2.07	6.15	2.08	0.000
21.033	2.06	6.14	2.07	0.000
21.050	2.06	6.14	2.07	0.000
21.067	2.05	6.14	2.06	0.000
21.083	2.05	6.14	2.06	0.000
21.100	2.05	6.13	2.06	0.000
21.117	2.04	6.13	2.05	0.000
21.133	2.04	6.13	2.05	0.000
21.150	2.03	6.12	2.05	0.000
21.167	2.03	6.12	2.04	0.000
21.183	2.03	6.12	2.04	0.000
21.200	2.02	6.12	2.03	0.000
21.217	2.02	6.11	2.03	0.000
21.233	2.01	6.11	2.03	0.000

21.250	2.01	6.11	2.02	0.000
21.267	2.01	6.11	2.02	0.000
21.283	2.00	6.10	2.01	0.000
21.300	2.00	6.10	2.01	0.000
21.317	2.00	6.10	2.01	0.000
21.333	1.99	6.10	2.00	0.000
21.350	1.99	6.09	2.00	0.000
21.367	1.98	6.09	2.00	0.000
21.383	1.98	6.09	1.99	0.000
21.400	1.98	6.09	1.99	0.000
21.417	1.97	6.08	1.98	0.000
21.433	1.97	6.08	1.98	0.000
21.450	1.97	6.08	1.98	0.000
21.467	1.96	6.08	1.97	0.000
21.483	1.96	6.07	1.97	0.000
21.500	1.96	6.07	1.97	0.000
21.517	1.95	6.07	1.96	0.000
21.533	1.95	6.07	1.96	0.000
21.550	1.95	6.06	1.96	0.000
21.567	1.94	6.06	1.95	0.000
21.583	1.94	6.06	1.95	0.000
21.600	1.94	6.06	1.95	0.000
21.617	1.93	6.05	1.94	0.000
21.633	1.93	6.05	1.94	0.000
21.650	1.93	6.05	1.94	0.000
21.667	1.92	6.05	1.93	0.000
21.683	1.92	6.04	1.93	0.000
21.700	1.92	6.04	1.93	0.000
21.717	1.91	6.04	1.92	0.000
21.733	1.91	6.04	1.92	0.000
21.750	1.91	6.03	1.92	0.000
21.767	1.90	6.03	1.91	0.000
21.783	1.90	6.03	1.91	0.000
21.800	1.90	6.03	1.91	0.000
21.817	1.89	6.03	1.90	0.000
21.833	1.89	6.02	1.90	0.000
21.850	1.89	6.02	1.90	0.000
21.867	1.88	6.02	1.89	0.000
21.883	1.88	6.02	1.89	0.000
21.900	1.88	6.01	1.89	0.000
21.917	1.87	6.01	1.88	0.000
21.933	1.87	6.01	1.88	0.000
21.950	1.87	6.01	1.88	0.000
21.967	1.87	6.01	1.87	0.000
21.983	1.86	6.00	1.87	0.000
22.000	1.86	6.00	1.87	0.000
22.017	1.86	6.00	1.87	0.000
22.033	1.85	6.00	1.86	0.000
22.050	1.85	6.00	1.86	0.000
22.067	1.85	5.99	1.86	0.000
22.083	1.84	5.99	1.85	0.000
22.100	1.84	5.99	1.85	0.000
22.117	1.84	5.99	1.85	0.000
22.133	1.83	5.99	1.84	0.000
22.150	1.83	5.98	1.84	0.000

22.167	1.83	5.98	1.84	0.000
22.183	1.83	5.98	1.83	0.000
22.200	1.82	5.98	1.83	0.000
22.217	1.82	5.98	1.83	0.000
22.233	1.82	5.97	1.83	0.000
22.250	1.82	5.97	1.82	0.000
22.267	1.81	5.97	1.82	0.000
22.283	1.81	5.97	1.82	0.000
22.300	1.81	5.97	1.82	0.000
22.317	1.80	5.96	1.81	0.000
22.333	1.80	5.96	1.81	0.000
22.350	1.80	5.95	1.81	0.000
22.367	1.80	5.94	1.80	0.000
22.383	1.79	5.93	1.80	0.000
22.400	1.79	5.92	1.79	0.000
22.417	1.79	5.92	1.79	0.000
22.433	1.78	5.91	1.78	0.000
22.450	1.78	5.90	1.78	0.000
22.467	1.78	5.89	1.78	0.000
22.483	1.78	5.88	1.78	0.000
22.500	1.77	5.87	1.77	0.000
22.517	1.77	5.86	1.77	0.000
22.533	1.77	5.85	1.77	0.000
22.550	1.77	5.85	1.77	0.000
22.567	1.76	5.84	1.76	0.000
22.583	1.76	5.83	1.76	0.000
22.600	1.76	5.82	1.76	0.000
22.617	1.76	5.81	1.76	0.000
22.633	1.75	5.80	1.75	0.000
22.650	1.75	5.79	1.75	0.000
22.667	1.75	5.78	1.75	0.000
22.683	1.75	5.78	1.74	0.000
22.700	1.74	5.77	1.74	0.000
22.717	1.74	5.76	1.74	0.000
22.733	1.74	5.75	1.74	0.000
22.750	1.74	5.74	1.74	0.000
22.767	1.73	5.74	1.73	0.000
22.783	1.73	5.73	1.73	0.000
22.800	1.73	5.72	1.74	0.000
22.817	1.73	5.71	1.73	0.000
22.833	1.72	5.70	1.72	0.000
22.850	1.72	5.69	1.72	0.000
22.867	1.72	5.69	1.72	0.000
22.883	1.72	5.68	1.72	0.000
22.900	1.71	5.67	1.71	0.000
22.917	1.71	5.66	1.71	0.000
22.933	1.71	5.65	1.71	0.000
22.950	1.71	5.65	1.71	0.000
22.967	1.70	5.64	1.70	0.000
22.983	1.70	5.63	1.70	0.000
23.000	1.70	5.62	1.70	0.000
23.017	1.70	5.62	1.70	0.000
23.033	1.69	5.61	1.69	0.000
23.050	1.69	5.60	1.69	0.000
23.067	1.69	5.59	1.69	0.000

23.083	1.69	5.58	1.69	0.000
23.100	1.68	5.58	1.68	0.000
23.117	1.68	5.57	1.68	0.000
23.133	1.68	5.56	1.68	0.000
23.150	1.68	5.55	1.68	0.000
23.167	1.68	5.55	1.68	0.000
23.183	1.67	5.54	1.67	0.000
23.200	1.67	5.53	1.67	0.000
23.217	1.67	5.52	1.67	0.000
23.233	1.67	5.52	1.67	0.000
23.250	1.66	5.51	1.66	0.000
23.267	1.66	5.50	1.66	0.000
23.283	1.66	5.49	1.66	0.000
23.300	1.66	5.49	1.66	0.000
23.317	1.66	5.48	1.66	0.000
23.333	1.65	5.47	1.65	0.000
23.350	1.65	5.47	1.65	0.000
23.367	1.65	5.46	1.65	0.000
23.383	1.65	5.45	1.65	0.000
23.400	1.64	5.44	1.64	0.000
23.417	1.64	5.44	1.64	0.000
23.433	1.64	5.43	1.64	0.000
23.450	1.64	5.42	1.64	0.000
23.467	1.64	5.42	1.64	0.000
23.483	1.63	5.41	1.63	0.000
23.500	1.63	5.40	1.63	0.000
23.517	1.63	5.39	1.63	0.000
23.533	1.63	5.39	1.63	0.000
23.550	1.63	5.38	1.63	0.000
23.567	1.62	5.37	1.62	0.000
23.583	1.62	5.37	1.62	0.000
23.600	1.62	5.36	1.62	0.000
23.617	1.62	5.35	1.62	0.000
23.633	1.62	5.35	1.62	0.000
23.650	1.61	5.34	1.61	0.000
23.667	1.61	5.33	1.61	0.000
23.683	1.61	5.33	1.61	0.000
23.700	1.61	5.32	1.61	0.000
23.717	1.61	5.31	1.61	0.000
23.733	1.60	5.31	1.60	0.000
23.750	1.60	5.30	1.60	0.000
23.767	1.60	5.29	1.60	0.000
23.783	1.60	5.29	1.60	0.000
23.800	1.60	5.28	1.59	0.000
23.817	1.59	5.27	1.59	0.000
23.833	1.59	5.27	1.59	0.000
23.850	1.59	5.26	1.59	0.000
23.867	1.59	5.25	1.59	0.000
23.883	1.59	5.25	1.59	0.000
23.900	1.58	5.24	1.58	0.000
23.917	1.58	5.24	1.58	0.000
23.933	1.58	5.23	1.58	0.000
23.950	1.58	5.22	1.58	0.000
23.967	1.58	5.22	1.58	0.000
23.983	1.57	5.21	1.57	0.000

24.000 1.57 5.20 1.57 0.000

FLOW PROCESS FROM NODE 200.00 TO NODE 201.00 IS CODE = 1.2

>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<

(SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #2)

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA(ACRES) = 18.29
SOIL-LOSS RATE, Fm,(INCH/HR) = 0.199
LOW LOSS FRACTION = 0.258
TIME OF CONCENTRATION(MIN.) = 14.01
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY(YEARS) = 100
5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.32
30-MINUTE POINT RAINFALL VALUE(INCHES) = 0.83
1-HOUR POINT RAINFALL VALUE(INCHES) = 1.20
3-HOUR POINT RAINFALL VALUE(INCHES) = 1.98
6-HOUR POINT RAINFALL VALUE(INCHES) = 2.72
24-HOUR POINT RAINFALL VALUE(INCHES) = 4.97

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 5.18
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 2.39

^

24 - HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)
(Notes: Time indicated is at END of Each Unit Intervals.
Peak 5-minute rainfall intensity is modeled as
a constant value for entire 5-minute period.)

Table with 7 columns: TIME(HRS), VOLUME(AF), Q(CFS), and four numerical values (0., 8.9, 17.9, 26.8, 35.7). Rows show data points from 0.017 to 0.167 hours.

0.183	0.0007	0.25	Q	.	.	.	.
0.200	0.0012	0.33	Q	.	.	.	.
0.217	0.0018	0.41	Q	.	.	.	.
0.233	0.0024	0.49	Q	.	.	.	.
0.250	0.0032	0.57	Q	.	.	.	.
0.267	0.0041	0.65	Q	.	.	.	.
0.283	0.0051	0.73	Q	.	.	.	.
0.300	0.0062	0.80	Q	.	.	.	.
0.317	0.0074	0.88	Q	.	.	.	.
0.333	0.0088	0.96	VQ	.	.	.	.
0.350	0.0102	1.04	VQ	.	.	.	.
0.367	0.0117	1.10	VQ	.	.	.	.
0.383	0.0132	1.11	VQ	.	.	.	.
0.400	0.0148	1.11	VQ	.	.	.	.
0.417	0.0163	1.11	VQ	.	.	.	.
0.433	0.0178	1.11	VQ	.	.	.	.
0.450	0.0193	1.11	VQ	.	.	.	.
0.467	0.0209	1.11	VQ	.	.	.	.
0.483	0.0224	1.11	VQ	.	.	.	.
0.500	0.0239	1.11	VQ	.	.	.	.
0.517	0.0255	1.11	VQ	.	.	.	.
0.533	0.0270	1.11	VQ	.	.	.	.
0.550	0.0285	1.11	VQ	.	.	.	.
0.567	0.0301	1.11	VQ	.	.	.	.
0.583	0.0316	1.11	VQ	.	.	.	.
0.600	0.0331	1.11	VQ	.	.	.	.
0.617	0.0347	1.11	VQ	.	.	.	.
0.633	0.0362	1.12	VQ	.	.	.	.
0.650	0.0377	1.12	VQ	.	.	.	.
0.667	0.0393	1.12	VQ	.	.	.	.
0.683	0.0408	1.12	VQ	.	.	.	.
0.700	0.0424	1.12	VQ	.	.	.	.
0.717	0.0439	1.12	VQ	.	.	.	.
0.733	0.0455	1.12	VQ	.	.	.	.
0.750	0.0470	1.12	VQ	.	.	.	.
0.767	0.0485	1.12	VQ	.	.	.	.
0.783	0.0501	1.12	VQ	.	.	.	.
0.800	0.0516	1.12	VQ	.	.	.	.
0.817	0.0532	1.13	VQ	.	.	.	.
0.833	0.0547	1.13	VQ	.	.	.	.
0.850	0.0563	1.13	VQ	.	.	.	.
0.867	0.0579	1.13	VQ	.	.	.	.
0.883	0.0594	1.13	VQ	.	.	.	.
0.900	0.0610	1.13	VQ	.	.	.	.
0.917	0.0625	1.13	VQ	.	.	.	.
0.933	0.0641	1.13	VQ	.	.	.	.
0.950	0.0656	1.13	VQ	.	.	.	.
0.967	0.0672	1.13	VQ	.	.	.	.
0.983	0.0687	1.13	VQ	.	.	.	.
1.000	0.0703	1.13	VQ	.	.	.	.
1.017	0.0719	1.13	VQ	.	.	.	.
1.033	0.0734	1.13	VQ	.	.	.	.
1.050	0.0750	1.13	VQ	.	.	.	.
1.067	0.0765	1.13	VQ	.	.	.	.
1.083	0.0781	1.13	VQ	.	.	.	.

1.100	0.0797	1.14	VQ	.	.	.	.
1.117	0.0812	1.14	VQ	.	.	.	.
1.133	0.0828	1.14	VQ	.	.	.	.
1.150	0.0844	1.14	VQ	.	.	.	.
1.167	0.0859	1.14	VQ	.	.	.	.
1.183	0.0875	1.14	VQ	.	.	.	.
1.200	0.0891	1.14	VQ	.	.	.	.
1.217	0.0907	1.14	VQ	.	.	.	.
1.233	0.0922	1.14	VQ	.	.	.	.
1.250	0.0938	1.14	VQ	.	.	.	.
1.267	0.0954	1.14	VQ	.	.	.	.
1.283	0.0970	1.15	VQ	.	.	.	.
1.300	0.0985	1.15	VQ	.	.	.	.
1.317	0.1001	1.15	VQ	.	.	.	.
1.333	0.1017	1.15	VQ	.	.	.	.
1.350	0.1033	1.15	VQ	.	.	.	.
1.367	0.1049	1.15	VQ	.	.	.	.
1.383	0.1064	1.15	VQ	.	.	.	.
1.400	0.1080	1.15	VQ	.	.	.	.
1.417	0.1096	1.15	VQ	.	.	.	.
1.433	0.1112	1.15	VQ	.	.	.	.
1.450	0.1128	1.15	VQ	.	.	.	.
1.467	0.1144	1.15	VQ	.	.	.	.
1.483	0.1159	1.15	VQ	.	.	.	.
1.500	0.1175	1.15	VQ	.	.	.	.
1.517	0.1191	1.15	VQ	.	.	.	.
1.533	0.1207	1.15	VQ	.	.	.	.
1.550	0.1223	1.15	VQ	.	.	.	.
1.567	0.1239	1.16	VQ	.	.	.	.
1.583	0.1255	1.16	VQ	.	.	.	.
1.600	0.1271	1.16	VQ	.	.	.	.
1.617	0.1287	1.16	VQ	.	.	.	.
1.633	0.1303	1.16	.Q	.	.	.	.
1.650	0.1319	1.16	.Q	.	.	.	.
1.667	0.1335	1.16	.Q	.	.	.	.
1.683	0.1351	1.16	.Q	.	.	.	.
1.700	0.1367	1.16	.Q	.	.	.	.
1.717	0.1383	1.16	.Q	.	.	.	.
1.733	0.1399	1.17	.Q	.	.	.	.
1.750	0.1415	1.17	.Q	.	.	.	.
1.767	0.1431	1.17	.Q	.	.	.	.
1.783	0.1447	1.17	.Q	.	.	.	.
1.800	0.1463	1.17	.Q	.	.	.	.
1.817	0.1479	1.17	.Q	.	.	.	.
1.833	0.1495	1.17	.Q	.	.	.	.
1.850	0.1512	1.17	.Q	.	.	.	.
1.867	0.1528	1.17	.Q	.	.	.	.
1.883	0.1544	1.17	.Q	.	.	.	.
1.900	0.1560	1.17	.Q	.	.	.	.
1.917	0.1576	1.17	.Q	.	.	.	.
1.933	0.1592	1.17	.Q	.	.	.	.
1.950	0.1608	1.17	.Q	.	.	.	.
1.967	0.1625	1.17	.Q	.	.	.	.
1.983	0.1641	1.17	.Q	.	.	.	.
2.000	0.1657	1.17	.Q	.	.	.	.

2.017	0.1673	1.18	.Q	.	.	.	.
2.033	0.1689	1.18	.Q	.	.	.	.
2.050	0.1705	1.18	.Q	.	.	.	.
2.067	0.1722	1.18	.Q	.	.	.	.
2.083	0.1738	1.18	.Q	.	.	.	.
2.100	0.1754	1.18	.Q	.	.	.	.
2.117	0.1771	1.18	.Q	.	.	.	.
2.133	0.1787	1.18	.Q	.	.	.	.
2.150	0.1803	1.18	.Q	.	.	.	.
2.167	0.1819	1.19	.Q	.	.	.	.
2.183	0.1836	1.19	.Q	.	.	.	.
2.200	0.1852	1.19	.Q	.	.	.	.
2.217	0.1869	1.19	.Q	.	.	.	.
2.233	0.1885	1.19	.Q	.	.	.	.
2.250	0.1901	1.19	.Q	.	.	.	.
2.267	0.1918	1.19	.Q	.	.	.	.
2.283	0.1934	1.19	.Q	.	.	.	.
2.300	0.1950	1.19	.Q	.	.	.	.
2.317	0.1967	1.19	.Q	.	.	.	.
2.333	0.1983	1.19	.Q	.	.	.	.
2.350	0.2000	1.19	.Q	.	.	.	.
2.367	0.2016	1.19	.Q	.	.	.	.
2.383	0.2033	1.19	.Q	.	.	.	.
2.400	0.2049	1.19	.Q	.	.	.	.
2.417	0.2066	1.20	.Q	.	.	.	.
2.433	0.2082	1.20	.Q	.	.	.	.
2.450	0.2099	1.20	.Q	.	.	.	.
2.467	0.2115	1.20	.Q	.	.	.	.
2.483	0.2132	1.20	.Q	.	.	.	.
2.500	0.2148	1.20	.Q	.	.	.	.
2.517	0.2165	1.20	.Q	.	.	.	.
2.533	0.2181	1.20	.Q	.	.	.	.
2.550	0.2198	1.20	.Q	.	.	.	.
2.567	0.2214	1.20	.Q	.	.	.	.
2.583	0.2231	1.20	.Q	.	.	.	.
2.600	0.2247	1.21	.Q	.	.	.	.
2.617	0.2264	1.21	.Q	.	.	.	.
2.633	0.2281	1.21	.Q	.	.	.	.
2.650	0.2297	1.21	.Q	.	.	.	.
2.667	0.2314	1.21	.Q	.	.	.	.
2.683	0.2331	1.21	.Q	.	.	.	.
2.700	0.2347	1.21	.Q	.	.	.	.
2.717	0.2364	1.21	.Q	.	.	.	.
2.733	0.2381	1.21	.Q	.	.	.	.
2.750	0.2398	1.21	.Q	.	.	.	.
2.767	0.2414	1.21	.Q	.	.	.	.
2.783	0.2431	1.22	.Q	.	.	.	.
2.800	0.2448	1.22	.Q	.	.	.	.
2.817	0.2465	1.22	.Q	.	.	.	.
2.833	0.2481	1.22	.Q	.	.	.	.
2.850	0.2498	1.22	.Q	.	.	.	.
2.867	0.2515	1.22	.Q	.	.	.	.
2.883	0.2532	1.22	.Q	.	.	.	.
2.900	0.2548	1.22	.Q	.	.	.	.
2.917	0.2565	1.22	.Q	.	.	.	.

2.933	0.2582	1.22	.Q	.	.	.	.
2.950	0.2599	1.22	.QV	.	.	.	.
2.967	0.2616	1.22	.QV	.	.	.	.
2.983	0.2633	1.22	.QV	.	.	.	.
3.000	0.2649	1.23	.QV	.	.	.	.
3.017	0.2666	1.23	.QV	.	.	.	.
3.033	0.2683	1.23	.QV	.	.	.	.
3.050	0.2700	1.23	.QV	.	.	.	.
3.067	0.2717	1.23	.QV	.	.	.	.
3.083	0.2734	1.23	.QV	.	.	.	.
3.100	0.2751	1.23	.QV	.	.	.	.
3.117	0.2768	1.23	.QV	.	.	.	.
3.133	0.2785	1.23	.QV	.	.	.	.
3.150	0.2802	1.24	.QV	.	.	.	.
3.167	0.2819	1.24	.QV	.	.	.	.
3.183	0.2836	1.24	.QV	.	.	.	.
3.200	0.2853	1.24	.QV	.	.	.	.
3.217	0.2870	1.24	.QV	.	.	.	.
3.233	0.2887	1.24	.QV	.	.	.	.
3.250	0.2904	1.24	.QV	.	.	.	.
3.267	0.2922	1.24	.QV	.	.	.	.
3.283	0.2939	1.24	.QV	.	.	.	.
3.300	0.2956	1.24	.QV	.	.	.	.
3.317	0.2973	1.24	.QV	.	.	.	.
3.333	0.2990	1.24	.QV	.	.	.	.
3.350	0.3007	1.24	.QV	.	.	.	.
3.367	0.3024	1.24	.QV	.	.	.	.
3.383	0.3041	1.24	.QV	.	.	.	.
3.400	0.3059	1.25	.QV	.	.	.	.
3.417	0.3076	1.25	.QV	.	.	.	.
3.433	0.3093	1.25	.QV	.	.	.	.
3.450	0.3110	1.25	.QV	.	.	.	.
3.467	0.3127	1.25	.QV	.	.	.	.
3.483	0.3145	1.25	.QV	.	.	.	.
3.500	0.3162	1.25	.QV	.	.	.	.
3.517	0.3179	1.25	.QV	.	.	.	.
3.533	0.3196	1.26	.QV	.	.	.	.
3.550	0.3214	1.26	.QV	.	.	.	.
3.567	0.3231	1.26	.QV	.	.	.	.
3.583	0.3248	1.26	.QV	.	.	.	.
3.600	0.3266	1.26	.QV	.	.	.	.
3.617	0.3283	1.26	.QV	.	.	.	.
3.633	0.3300	1.26	.QV	.	.	.	.
3.650	0.3318	1.26	.QV	.	.	.	.
3.667	0.3335	1.26	.QV	.	.	.	.
3.683	0.3353	1.26	.QV	.	.	.	.
3.700	0.3370	1.27	.QV	.	.	.	.
3.717	0.3388	1.27	.QV	.	.	.	.
3.733	0.3405	1.27	.QV	.	.	.	.
3.750	0.3422	1.27	.QV	.	.	.	.
3.767	0.3440	1.27	.QV	.	.	.	.
3.783	0.3457	1.27	.QV	.	.	.	.
3.800	0.3475	1.27	.QV	.	.	.	.
3.817	0.3492	1.27	.QV	.	.	.	.
3.833	0.3510	1.27	.QV	.	.	.	.

3.850	0.3527	1.27	.QV	.	.	.	.
3.867	0.3545	1.27	.QV	.	.	.	.
3.883	0.3562	1.27	.QV	.	.	.	.
3.900	0.3580	1.27	.QV	.	.	.	.
3.917	0.3598	1.28	.QV	.	.	.	.
3.933	0.3615	1.28	.QV	.	.	.	.
3.950	0.3633	1.28	.QV	.	.	.	.
3.967	0.3650	1.28	.QV	.	.	.	.
3.983	0.3668	1.28	.QV	.	.	.	.
4.000	0.3686	1.28	.QV	.	.	.	.
4.017	0.3703	1.28	.QV	.	.	.	.
4.033	0.3721	1.28	.QV	.	.	.	.
4.050	0.3739	1.29	.QV	.	.	.	.
4.067	0.3756	1.29	.QV	.	.	.	.
4.083	0.3774	1.29	.QV	.	.	.	.
4.100	0.3792	1.29	.QV	.	.	.	.
4.117	0.3810	1.29	.QV	.	.	.	.
4.133	0.3828	1.29	.QV	.	.	.	.
4.150	0.3845	1.29	.QV	.	.	.	.
4.167	0.3863	1.29	.QV	.	.	.	.
4.183	0.3881	1.29	.QV	.	.	.	.
4.200	0.3899	1.29	.Q V	.	.	.	.
4.217	0.3917	1.29	.Q V	.	.	.	.
4.233	0.3935	1.30	.Q V	.	.	.	.
4.250	0.3952	1.30	.Q V	.	.	.	.
4.267	0.3970	1.30	.Q V	.	.	.	.
4.283	0.3988	1.30	.Q V	.	.	.	.
4.300	0.4006	1.30	.Q V	.	.	.	.
4.317	0.4024	1.30	.Q V	.	.	.	.
4.333	0.4042	1.30	.Q V	.	.	.	.
4.350	0.4060	1.30	.Q V	.	.	.	.
4.367	0.4078	1.30	.Q V	.	.	.	.
4.383	0.4096	1.30	.Q V	.	.	.	.
4.400	0.4114	1.31	.Q V	.	.	.	.
4.417	0.4132	1.31	.Q V	.	.	.	.
4.433	0.4150	1.31	.Q V	.	.	.	.
4.450	0.4168	1.31	.Q V	.	.	.	.
4.467	0.4186	1.31	.Q V	.	.	.	.
4.483	0.4204	1.31	.Q V	.	.	.	.
4.500	0.4222	1.31	.Q V	.	.	.	.
4.517	0.4240	1.32	.Q V	.	.	.	.
4.533	0.4258	1.32	.Q V	.	.	.	.
4.550	0.4276	1.32	.Q V	.	.	.	.
4.567	0.4294	1.32	.Q V	.	.	.	.
4.583	0.4313	1.32	.Q V	.	.	.	.
4.600	0.4331	1.32	.Q V	.	.	.	.
4.617	0.4349	1.32	.Q V	.	.	.	.
4.633	0.4367	1.32	.Q V	.	.	.	.
4.650	0.4385	1.32	.Q V	.	.	.	.
4.667	0.4404	1.32	.Q V	.	.	.	.
4.683	0.4422	1.32	.Q V	.	.	.	.
4.700	0.4440	1.32	.Q V	.	.	.	.
4.717	0.4458	1.33	.Q V	.	.	.	.
4.733	0.4477	1.33	.Q V	.	.	.	.
4.750	0.4495	1.33	.Q V	.	.	.	.

4.767	0.4513	1.33	.Q V	.	.	.	.
4.783	0.4532	1.33	.Q V	.	.	.	.
4.800	0.4550	1.33	.Q V	.	.	.	.
4.817	0.4568	1.33	.Q V	.	.	.	.
4.833	0.4587	1.33	.Q V	.	.	.	.
4.850	0.4605	1.33	.Q V	.	.	.	.
4.867	0.4623	1.34	.Q V	.	.	.	.
4.883	0.4642	1.34	.Q V	.	.	.	.
4.900	0.4660	1.34	.Q V	.	.	.	.
4.917	0.4679	1.34	.Q V	.	.	.	.
4.933	0.4697	1.34	.Q V	.	.	.	.
4.950	0.4716	1.34	.Q V	.	.	.	.
4.967	0.4734	1.34	.Q V	.	.	.	.
4.983	0.4753	1.35	.Q V	.	.	.	.
5.000	0.4771	1.35	.Q V	.	.	.	.
5.017	0.4790	1.35	.Q V	.	.	.	.
5.033	0.4808	1.35	.Q V	.	.	.	.
5.050	0.4827	1.35	.Q V	.	.	.	.
5.067	0.4846	1.35	.Q V	.	.	.	.
5.083	0.4864	1.35	.Q V	.	.	.	.
5.100	0.4883	1.35	.Q V	.	.	.	.
5.117	0.4902	1.35	.Q V	.	.	.	.
5.133	0.4920	1.35	.Q V	.	.	.	.
5.150	0.4939	1.36	.Q V	.	.	.	.
5.167	0.4958	1.36	.Q V	.	.	.	.
5.183	0.4976	1.36	.Q V	.	.	.	.
5.200	0.4995	1.36	.Q V	.	.	.	.
5.217	0.5014	1.36	.Q V	.	.	.	.
5.233	0.5032	1.36	.Q V	.	.	.	.
5.250	0.5051	1.36	.Q V	.	.	.	.
5.267	0.5070	1.36	.Q V	.	.	.	.
5.283	0.5089	1.36	.Q V	.	.	.	.
5.300	0.5107	1.36	.Q V	.	.	.	.
5.317	0.5126	1.37	.Q V	.	.	.	.
5.333	0.5145	1.37	.Q V	.	.	.	.
5.350	0.5164	1.37	.Q V	.	.	.	.
5.367	0.5183	1.37	.Q V	.	.	.	.
5.383	0.5202	1.37	.Q V	.	.	.	.
5.400	0.5221	1.37	.Q V	.	.	.	.
5.417	0.5240	1.38	.Q V	.	.	.	.
5.433	0.5258	1.38	.Q V	.	.	.	.
5.450	0.5277	1.38	.Q V	.	.	.	.
5.467	0.5296	1.38	.Q V	.	.	.	.
5.483	0.5316	1.38	.Q V	.	.	.	.
5.500	0.5335	1.38	.Q V	.	.	.	.
5.517	0.5354	1.38	.Q V	.	.	.	.
5.533	0.5373	1.38	.Q V	.	.	.	.
5.550	0.5392	1.39	.Q V	.	.	.	.
5.567	0.5411	1.39	.Q V	.	.	.	.
5.583	0.5430	1.39	.Q V	.	.	.	.
5.600	0.5449	1.39	.Q V	.	.	.	.
5.617	0.5468	1.39	.Q V	.	.	.	.
5.633	0.5487	1.39	.Q V	.	.	.	.
5.650	0.5507	1.39	.Q V	.	.	.	.
5.667	0.5526	1.39	.Q V	.	.	.	.

5.683	0.5545	1.39	.Q	V	.	.	.	.
5.700	0.5564	1.39	.Q	V	.	.	.	.
5.717	0.5583	1.39	.Q	V	.	.	.	.
5.733	0.5603	1.39	.Q	V	.	.	.	.
5.750	0.5622	1.40	.Q	V	.	.	.	.
5.767	0.5641	1.40	.Q	V	.	.	.	.
5.783	0.5660	1.40	.Q	V	.	.	.	.
5.800	0.5680	1.40	.Q	V	.	.	.	.
5.817	0.5699	1.40	.Q	V	.	.	.	.
5.833	0.5718	1.41	.Q	V	.	.	.	.
5.850	0.5738	1.41	.Q	V	.	.	.	.
5.867	0.5757	1.41	.Q	V	.	.	.	.
5.883	0.5776	1.41	.Q	V	.	.	.	.
5.900	0.5796	1.41	.Q	V	.	.	.	.
5.917	0.5815	1.41	.Q	V	.	.	.	.
5.933	0.5835	1.42	.Q	V	.	.	.	.
5.950	0.5854	1.42	.Q	V	.	.	.	.
5.967	0.5874	1.42	.Q	V	.	.	.	.
5.983	0.5894	1.42	.Q	V	.	.	.	.
6.000	0.5913	1.42	.Q	V	.	.	.	.
6.017	0.5933	1.42	.Q	V	.	.	.	.
6.033	0.5952	1.42	.Q	V	.	.	.	.
6.050	0.5972	1.42	.Q	V	.	.	.	.
6.067	0.5991	1.42	.Q	V	.	.	.	.
6.083	0.6011	1.42	.Q	V	.	.	.	.
6.100	0.6031	1.43	.Q	V	.	.	.	.
6.117	0.6050	1.43	.Q	V	.	.	.	.
6.133	0.6070	1.43	.Q	V	.	.	.	.
6.150	0.6090	1.43	.Q	V	.	.	.	.
6.167	0.6109	1.43	.Q	V	.	.	.	.
6.183	0.6129	1.43	.Q	V	.	.	.	.
6.200	0.6149	1.43	.Q	V	.	.	.	.
6.217	0.6169	1.43	.Q	V	.	.	.	.
6.233	0.6188	1.43	.Q	V	.	.	.	.
6.250	0.6208	1.44	.Q	V	.	.	.	.
6.267	0.6228	1.44	.Q	V	.	.	.	.
6.283	0.6248	1.44	.Q	V	.	.	.	.
6.300	0.6268	1.44	.Q	V	.	.	.	.
6.317	0.6287	1.44	.Q	V	.	.	.	.
6.333	0.6307	1.45	.Q	V	.	.	.	.
6.350	0.6327	1.45	.Q	V	.	.	.	.
6.367	0.6347	1.45	.Q	V	.	.	.	.
6.383	0.6367	1.45	.Q	V	.	.	.	.
6.400	0.6387	1.45	.Q	V	.	.	.	.
6.417	0.6407	1.45	.Q	V	.	.	.	.
6.433	0.6427	1.46	.Q	V	.	.	.	.
6.450	0.6447	1.46	.Q	V	.	.	.	.
6.467	0.6468	1.46	.Q	V	.	.	.	.
6.483	0.6488	1.46	.Q	V	.	.	.	.
6.500	0.6508	1.46	.Q	V	.	.	.	.
6.517	0.6528	1.46	.Q	V	.	.	.	.
6.533	0.6548	1.46	.Q	V	.	.	.	.
6.550	0.6568	1.46	.Q	V	.	.	.	.
6.567	0.6588	1.46	.Q	V	.	.	.	.
6.583	0.6609	1.47	.Q	V	.	.	.	.

6.600	0.6629	1.47	.Q	V	.	.	.	.
6.617	0.6649	1.47	.Q	V	.	.	.	.
6.633	0.6669	1.47	.Q	V	.	.	.	.
6.650	0.6689	1.47	.Q	V	.	.	.	.
6.667	0.6710	1.47	.Q	V	.	.	.	.
6.683	0.6730	1.47	.Q	V	.	.	.	.
6.700	0.6750	1.47	.Q	V	.	.	.	.
6.717	0.6771	1.48	.Q	V	.	.	.	.
6.733	0.6791	1.48	.Q	V	.	.	.	.
6.750	0.6811	1.48	.Q	V	.	.	.	.
6.767	0.6832	1.48	.Q	V	.	.	.	.
6.783	0.6852	1.48	.Q	V	.	.	.	.
6.800	0.6873	1.49	.Q	V	.	.	.	.
6.817	0.6893	1.49	.Q	V	.	.	.	.
6.833	0.6914	1.49	.Q	V	.	.	.	.
6.850	0.6934	1.49	.Q	V	.	.	.	.
6.867	0.6955	1.49	.Q	V	.	.	.	.
6.883	0.6975	1.50	.Q	V	.	.	.	.
6.900	0.6996	1.50	.Q	V	.	.	.	.
6.917	0.7017	1.50	.Q	V	.	.	.	.
6.933	0.7037	1.50	.Q	V	.	.	.	.
6.950	0.7058	1.50	.Q	V	.	.	.	.
6.967	0.7079	1.50	.Q	V	.	.	.	.
6.983	0.7099	1.50	.Q	V	.	.	.	.
7.000	0.7120	1.50	.Q	V	.	.	.	.
7.017	0.7141	1.51	.Q	V	.	.	.	.
7.033	0.7162	1.51	.Q	V	.	.	.	.
7.050	0.7182	1.51	.Q	V	.	.	.	.
7.067	0.7203	1.51	.Q	V	.	.	.	.
7.083	0.7224	1.51	.Q	V	.	.	.	.
7.100	0.7245	1.51	.Q	V	.	.	.	.
7.117	0.7266	1.51	.Q	V	.	.	.	.
7.133	0.7286	1.51	.Q	V	.	.	.	.
7.150	0.7307	1.51	.Q	V	.	.	.	.
7.167	0.7328	1.52	.Q	V	.	.	.	.
7.183	0.7349	1.52	.Q	V	.	.	.	.
7.200	0.7370	1.52	.Q	V	.	.	.	.
7.217	0.7391	1.52	.Q	V	.	.	.	.
7.233	0.7412	1.52	.Q	V	.	.	.	.
7.250	0.7433	1.53	.Q	V	.	.	.	.
7.267	0.7454	1.53	.Q	V	.	.	.	.
7.283	0.7475	1.53	.Q	V	.	.	.	.
7.300	0.7496	1.53	.Q	V	.	.	.	.
7.317	0.7517	1.54	.Q	V	.	.	.	.
7.333	0.7539	1.54	.Q	V	.	.	.	.
7.350	0.7560	1.54	.Q	V	.	.	.	.
7.367	0.7581	1.54	.Q	V	.	.	.	.
7.383	0.7602	1.54	.Q	V	.	.	.	.
7.400	0.7624	1.54	.Q	V	.	.	.	.
7.417	0.7645	1.55	.Q	V	.	.	.	.
7.433	0.7666	1.55	.Q	V	.	.	.	.
7.450	0.7688	1.55	.Q	V	.	.	.	.
7.467	0.7709	1.55	.Q	V	.	.	.	.
7.483	0.7730	1.55	.Q	V	.	.	.	.
7.500	0.7752	1.55	.Q	V	.	.	.	.

7.517	0.7773	1.55	.Q	V	.	.	.	.
7.533	0.7794	1.55	.Q	V	.	.	.	.
7.550	0.7816	1.55	.Q	V	.	.	.	.
7.567	0.7837	1.56	.Q	V	.	.	.	.
7.583	0.7859	1.56	.Q	V	.	.	.	.
7.600	0.7880	1.56	.Q	V	.	.	.	.
7.617	0.7902	1.56	.Q	V	.	.	.	.
7.633	0.7923	1.56	.Q	V	.	.	.	.
7.650	0.7945	1.56	.Q	V	.	.	.	.
7.667	0.7966	1.57	.Q	V	.	.	.	.
7.683	0.7988	1.57	.Q	V	.	.	.	.
7.700	0.8010	1.57	.Q	V	.	.	.	.
7.717	0.8031	1.57	.Q	V	.	.	.	.
7.733	0.8053	1.58	.Q	V	.	.	.	.
7.750	0.8075	1.58	.Q	V	.	.	.	.
7.767	0.8096	1.58	.Q	V	.	.	.	.
7.783	0.8118	1.58	.Q	V	.	.	.	.
7.800	0.8140	1.59	.Q	V	.	.	.	.
7.817	0.8162	1.59	.Q	V	.	.	.	.
7.833	0.8184	1.59	.Q	V	.	.	.	.
7.850	0.8206	1.59	.Q	V	.	.	.	.
7.867	0.8228	1.59	.Q	V	.	.	.	.
7.883	0.8250	1.59	.Q	V	.	.	.	.
7.900	0.8272	1.60	.Q	V	.	.	.	.
7.917	0.8294	1.60	.Q	V	.	.	.	.
7.933	0.8316	1.60	.Q	V	.	.	.	.
7.950	0.8338	1.60	.Q	V	.	.	.	.
7.967	0.8360	1.60	.Q	V	.	.	.	.
7.983	0.8382	1.60	.Q	V	.	.	.	.
8.000	0.8404	1.60	.Q	V	.	.	.	.
8.017	0.8426	1.60	.Q	V	.	.	.	.
8.033	0.8448	1.61	.Q	V	.	.	.	.
8.050	0.8470	1.61	.Q	V	.	.	.	.
8.067	0.8492	1.61	.Q	V	.	.	.	.
8.083	0.8515	1.61	.Q	V	.	.	.	.
8.100	0.8537	1.61	.Q	V	.	.	.	.
8.117	0.8559	1.61	.Q	V	.	.	.	.
8.133	0.8581	1.62	.Q	V	.	.	.	.
8.150	0.8604	1.62	.Q	V	.	.	.	.
8.167	0.8626	1.62	.Q	V	.	.	.	.
8.183	0.8648	1.63	.Q	V	.	.	.	.
8.200	0.8671	1.63	.Q	V	.	.	.	.
8.217	0.8693	1.63	.Q	V	.	.	.	.
8.233	0.8716	1.63	.Q	V	.	.	.	.
8.250	0.8738	1.64	.Q	V	.	.	.	.
8.267	0.8761	1.64	.Q	V	.	.	.	.
8.283	0.8783	1.64	.Q	V	.	.	.	.
8.300	0.8806	1.64	.Q	V	.	.	.	.
8.317	0.8829	1.64	.Q	V	.	.	.	.
8.333	0.8851	1.65	.Q	V	.	.	.	.
8.350	0.8874	1.65	.Q	V	.	.	.	.
8.367	0.8897	1.65	.Q	V	.	.	.	.
8.383	0.8919	1.65	.Q	V	.	.	.	.
8.400	0.8942	1.65	.Q	V	.	.	.	.
8.417	0.8965	1.65	.Q	V	.	.	.	.

8.433	0.8988	1.65	.Q	V	.	.	.
8.450	0.9011	1.66	.Q	V	.	.	.
8.467	0.9033	1.66	.Q	V	.	.	.
8.483	0.9056	1.66	.Q	V	.	.	.
8.500	0.9079	1.66	.Q	V	.	.	.
8.517	0.9102	1.66	.Q	V	.	.	.
8.533	0.9125	1.66	.Q	V	.	.	.
8.550	0.9148	1.66	.Q	V	.	.	.
8.567	0.9171	1.67	.Q	V	.	.	.
8.583	0.9194	1.67	.Q	V	.	.	.
8.600	0.9217	1.67	.Q	V	.	.	.
8.617	0.9240	1.68	.Q	V	.	.	.
8.633	0.9263	1.68	.Q	V	.	.	.
8.650	0.9286	1.68	.Q	V	.	.	.
8.667	0.9309	1.68	.Q	V	.	.	.
8.683	0.9333	1.69	.Q	V	.	.	.
8.700	0.9356	1.69	.Q	V	.	.	.
8.717	0.9379	1.69	.Q	V	.	.	.
8.733	0.9402	1.70	.Q	V	.	.	.
8.750	0.9426	1.70	.Q	V	.	.	.
8.767	0.9449	1.70	.Q	V	.	.	.
8.783	0.9473	1.70	.Q	V	.	.	.
8.800	0.9496	1.70	.Q	V	.	.	.
8.817	0.9520	1.71	.Q	V	.	.	.
8.833	0.9543	1.71	.Q	V	.	.	.
8.850	0.9567	1.71	.Q	V	.	.	.
8.867	0.9590	1.71	.Q	V	.	.	.
8.883	0.9614	1.71	.Q	V	.	.	.
8.900	0.9637	1.71	.Q	V	.	.	.
8.917	0.9661	1.71	.Q	V	.	.	.
8.933	0.9685	1.72	.Q	V	.	.	.
8.950	0.9708	1.72	.Q	V	.	.	.
8.967	0.9732	1.72	.Q	V	.	.	.
8.983	0.9756	1.72	.Q	V	.	.	.
9.000	0.9779	1.72	.Q	V	.	.	.
9.017	0.9803	1.72	.Q	V	.	.	.
9.033	0.9827	1.73	.Q	V	.	.	.
9.050	0.9851	1.73	.Q	V	.	.	.
9.067	0.9875	1.73	.Q	V	.	.	.
9.083	0.9899	1.74	.Q	V	.	.	.
9.100	0.9923	1.74	.Q	V	.	.	.
9.117	0.9947	1.74	.Q	V	.	.	.
9.133	0.9971	1.75	.Q	V	.	.	.
9.150	0.9995	1.75	.Q	V	.	.	.
9.167	1.0019	1.75	.Q	V	.	.	.
9.183	1.0043	1.76	.Q	V	.	.	.
9.200	1.0067	1.76	.Q	V	.	.	.
9.217	1.0091	1.76	.Q	V	.	.	.
9.233	1.0116	1.76	.Q	V	.	.	.
9.250	1.0140	1.77	.Q	V	.	.	.
9.267	1.0164	1.77	.Q	V	.	.	.
9.283	1.0189	1.77	.Q	V	.	.	.
9.300	1.0213	1.77	.Q	V	.	.	.
9.317	1.0238	1.77	.Q	V	.	.	.
9.333	1.0262	1.77	.Q	V	.	.	.

9.350	1.0287	1.78	.Q	V	.	.	.
9.367	1.0311	1.78	.Q	V	.	.	.
9.383	1.0336	1.78	.Q	V	.	.	.
9.400	1.0360	1.78	.Q	V	.	.	.
9.417	1.0385	1.78	.Q	V	.	.	.
9.433	1.0409	1.78	.Q	V	.	.	.
9.450	1.0434	1.79	.Q	V	.	.	.
9.467	1.0458	1.79	.Q	V	.	.	.
9.483	1.0483	1.79	.Q	V	.	.	.
9.500	1.0508	1.79	.Q	V	.	.	.
9.517	1.0533	1.80	.Q	V	.	.	.
9.533	1.0557	1.80	.Q	V	.	.	.
9.550	1.0582	1.80	.Q	V	.	.	.
9.567	1.0607	1.81	.Q	V	.	.	.
9.583	1.0632	1.81	.Q	V	.	.	.
9.600	1.0657	1.81	.Q	V	.	.	.
9.617	1.0682	1.82	.Q	V	.	.	.
9.633	1.0707	1.82	.Q	V	.	.	.
9.650	1.0732	1.83	.Q	V	.	.	.
9.667	1.0758	1.83	.Q	V	.	.	.
9.683	1.0783	1.83	.Q	V	.	.	.
9.700	1.0808	1.84	.Q	V	.	.	.
9.717	1.0833	1.84	.Q	V	.	.	.
9.733	1.0859	1.84	.Q	V	.	.	.
9.750	1.0884	1.84	.Q	V	.	.	.
9.767	1.0910	1.84	.Q	V	.	.	.
9.783	1.0935	1.84	.Q	V	.	.	.
9.800	1.0960	1.85	.Q	V	.	.	.
9.817	1.0986	1.85	.Q	V	.	.	.
9.833	1.1011	1.85	.Q	V	.	.	.
9.850	1.1037	1.85	.Q	V	.	.	.
9.867	1.1062	1.85	.Q	V	.	.	.
9.883	1.1088	1.86	.Q	V	.	.	.
9.900	1.1114	1.86	.Q	V	.	.	.
9.917	1.1139	1.86	.Q	V	.	.	.
9.933	1.1165	1.86	.Q	V	.	.	.
9.950	1.1190	1.86	.Q	V	.	.	.
9.967	1.1216	1.87	.Q	V	.	.	.
9.983	1.1242	1.87	.Q	V	.	.	.
10.000	1.1268	1.88	.Q	V	.	.	.
10.017	1.1294	1.88	.Q	V	.	.	.
10.033	1.1320	1.88	.Q	V	.	.	.
10.050	1.1346	1.89	.Q	V	.	.	.
10.067	1.1372	1.89	.Q	V	.	.	.
10.083	1.1398	1.90	.Q	V	.	.	.
10.100	1.1424	1.90	.Q	V	.	.	.
10.117	1.1450	1.90	.Q	V	.	.	.
10.133	1.1477	1.91	.Q	V	.	.	.
10.150	1.1503	1.91	.Q	V	.	.	.
10.167	1.1529	1.91	.Q	V	.	.	.
10.183	1.1556	1.92	.Q	V	.	.	.
10.200	1.1582	1.92	.Q	V	.	.	.
10.217	1.1609	1.92	.Q	V	.	.	.
10.233	1.1635	1.92	.Q	V	.	.	.
10.250	1.1662	1.93	.Q	V	.	.	.

10.267	1.1688	1.93	. Q	V.	.	.	.
10.283	1.1715	1.93	. Q	V.	.	.	.
10.300	1.1741	1.93	. Q	V.	.	.	.
10.317	1.1768	1.93	. Q	V.	.	.	.
10.333	1.1795	1.94	. Q	V.	.	.	.
10.350	1.1821	1.94	. Q	V.	.	.	.
10.367	1.1848	1.94	. Q	V.	.	.	.
10.383	1.1875	1.94	. Q	V.	.	.	.
10.400	1.1902	1.94	. Q	V.	.	.	.
10.417	1.1928	1.95	. Q	V.	.	.	.
10.433	1.1955	1.95	. Q	V.	.	.	.
10.450	1.1982	1.96	. Q	V.	.	.	.
10.467	1.2009	1.96	. Q	V.	.	.	.
10.483	1.2036	1.97	. Q	V.	.	.	.
10.500	1.2063	1.97	. Q	V.	.	.	.
10.517	1.2091	1.97	. Q	V.	.	.	.
10.533	1.2118	1.98	. Q	V.	.	.	.
10.550	1.2145	1.98	. Q	V.	.	.	.
10.567	1.2173	1.99	. Q	V.	.	.	.
10.583	1.2200	1.99	. Q	V.	.	.	.
10.600	1.2227	2.00	. Q	V.	.	.	.
10.617	1.2255	2.00	. Q	V.	.	.	.
10.633	1.2283	2.00	. Q	V.	.	.	.
10.650	1.2310	2.01	. Q	V.	.	.	.
10.667	1.2338	2.01	. Q	V.	.	.	.
10.683	1.2366	2.01	. Q	V.	.	.	.
10.700	1.2393	2.01	. Q	V.	.	.	.
10.717	1.2421	2.02	. Q	V.	.	.	.
10.733	1.2449	2.02	. Q	V.	.	.	.
10.750	1.2477	2.02	. Q	V.	.	.	.
10.767	1.2505	2.02	. Q	V.	.	.	.
10.783	1.2533	2.03	. Q	V.	.	.	.
10.800	1.2561	2.03	. Q	V.	.	.	.
10.817	1.2589	2.03	. Q	V.	.	.	.
10.833	1.2617	2.03	. Q	V.	.	.	.
10.850	1.2645	2.04	. Q	V.	.	.	.
10.867	1.2673	2.04	. Q	V.	.	.	.
10.883	1.2701	2.04	. Q	V.	.	.	.
10.900	1.2729	2.05	. Q	V.	.	.	.
10.917	1.2757	2.05	. Q	V.	.	.	.
10.933	1.2786	2.06	. Q	V.	.	.	.
10.950	1.2814	2.06	. Q	V.	.	.	.
10.967	1.2842	2.07	. Q	V.	.	.	.
10.983	1.2871	2.07	. Q	V.	.	.	.
11.000	1.2900	2.08	. Q	V.	.	.	.
11.017	1.2928	2.08	. Q	V.	.	.	.
11.033	1.2957	2.09	. Q	V	.	.	.
11.050	1.2986	2.09	. Q	V	.	.	.
11.067	1.3015	2.10	. Q	V	.	.	.
11.083	1.3044	2.10	. Q	V	.	.	.
11.100	1.3073	2.11	. Q	V	.	.	.
11.117	1.3102	2.11	. Q	V	.	.	.
11.133	1.3131	2.11	. Q	V	.	.	.
11.150	1.3160	2.12	. Q	V	.	.	.
11.167	1.3189	2.12	. Q	V	.	.	.

11.183	1.3218	2.12	. Q	V	.	.	.
11.200	1.3248	2.12	. Q	V	.	.	.
11.217	1.3277	2.13	. Q	V	.	.	.
11.233	1.3306	2.13	. Q	V	.	.	.
11.250	1.3336	2.13	. Q	V	.	.	.
11.267	1.3365	2.13	. Q	V	.	.	.
11.283	1.3394	2.14	. Q	V	.	.	.
11.300	1.3424	2.14	. Q	V	.	.	.
11.317	1.3453	2.14	. Q	V	.	.	.
11.333	1.3483	2.15	. Q	V	.	.	.
11.350	1.3513	2.15	. Q	V	.	.	.
11.367	1.3542	2.16	. Q	V	.	.	.
11.383	1.3572	2.16	. Q	V	.	.	.
11.400	1.3602	2.17	. Q	V	.	.	.
11.417	1.3632	2.17	. Q	V	.	.	.
11.433	1.3662	2.18	. Q	V	.	.	.
11.450	1.3692	2.18	. Q	V	.	.	.
11.467	1.3722	2.19	. Q	V	.	.	.
11.483	1.3752	2.20	. Q	V	.	.	.
11.500	1.3783	2.20	. Q	V	.	.	.
11.517	1.3813	2.21	. Q	V	.	.	.
11.533	1.3844	2.21	. Q	V	.	.	.
11.550	1.3874	2.22	. Q	V	.	.	.
11.567	1.3905	2.23	. Q	V	.	.	.
11.583	1.3935	2.23	. Q	V	.	.	.
11.600	1.3966	2.23	. Q	V	.	.	.
11.617	1.3997	2.24	. Q	V	.	.	.
11.633	1.4028	2.24	. Q	V	.	.	.
11.650	1.4059	2.24	. Q	V	.	.	.
11.667	1.4090	2.24	. Q	V	.	.	.
11.683	1.4121	2.25	. Q	V	.	.	.
11.700	1.4152	2.25	. Q	V	.	.	.
11.717	1.4183	2.25	. Q	V	.	.	.
11.733	1.4214	2.26	. Q	V	.	.	.
11.750	1.4245	2.26	. Q	V	.	.	.
11.767	1.4276	2.26	. Q	.V	.	.	.
11.783	1.4307	2.27	. Q	.V	.	.	.
11.800	1.4339	2.27	. Q	.V	.	.	.
11.817	1.4370	2.28	. Q	.V	.	.	.
11.833	1.4401	2.28	. Q	.V	.	.	.
11.850	1.4433	2.29	. Q	.V	.	.	.
11.867	1.4465	2.30	. Q	.V	.	.	.
11.883	1.4496	2.30	. Q	.V	.	.	.
11.900	1.4528	2.31	. Q	.V	.	.	.
11.917	1.4560	2.32	. Q	.V	.	.	.
11.933	1.4592	2.32	. Q	.V	.	.	.
11.950	1.4624	2.33	. Q	.V	.	.	.
11.967	1.4656	2.34	. Q	.V	.	.	.
11.983	1.4689	2.34	. Q	.V	.	.	.
12.000	1.4721	2.35	. Q	.V	.	.	.
12.017	1.4753	2.36	. Q	.V	.	.	.
12.033	1.4786	2.36	. Q	.V	.	.	.
12.050	1.4819	2.37	. Q	.V	.	.	.
12.067	1.4851	2.38	. Q	.V	.	.	.
12.083	1.4884	2.39	. Q	.V	.	.	.

12.100	1.4917	2.40	. Q	.V	.	.	.
12.117	1.4951	2.41	. Q	.V	.	.	.
12.133	1.4984	2.42	. Q	.V	.	.	.
12.150	1.5018	2.43	. Q	.V	.	.	.
12.167	1.5051	2.44	. Q	.V	.	.	.
12.183	1.5085	2.45	. Q	.V	.	.	.
12.200	1.5119	2.46	. Q	.V	.	.	.
12.217	1.5153	2.47	. Q	.V	.	.	.
12.233	1.5187	2.48	. Q	.V	.	.	.
12.250	1.5222	2.49	. Q	.V	.	.	.
12.267	1.5256	2.50	. Q	.V	.	.	.
12.283	1.5291	2.52	. Q	.V	.	.	.
12.300	1.5326	2.53	. Q	.V	.	.	.
12.317	1.5361	2.54	. Q	.V	.	.	.
12.333	1.5396	2.55	. Q	.V	.	.	.
12.350	1.5431	2.56	. Q	.V	.	.	.
12.367	1.5466	2.57	. Q	.V	.	.	.
12.383	1.5502	2.58	. Q	.V	.	.	.
12.400	1.5538	2.59	. Q	.V	.	.	.
12.417	1.5573	2.60	. Q	. V	.	.	.
12.433	1.5609	2.61	. Q	. V	.	.	.
12.450	1.5646	2.63	. Q	. V	.	.	.
12.467	1.5682	2.64	. Q	. V	.	.	.
12.483	1.5718	2.65	. Q	. V	.	.	.
12.500	1.5755	2.66	. Q	. V	.	.	.
12.517	1.5792	2.67	. Q	. V	.	.	.
12.533	1.5829	2.67	. Q	. V	.	.	.
12.550	1.5865	2.67	. Q	. V	.	.	.
12.567	1.5902	2.68	. Q	. V	.	.	.
12.583	1.5939	2.68	. Q	. V	.	.	.
12.600	1.5976	2.69	. Q	. V	.	.	.
12.617	1.6013	2.69	. Q	. V	.	.	.
12.633	1.6051	2.70	. Q	. V	.	.	.
12.650	1.6088	2.70	. Q	. V	.	.	.
12.667	1.6125	2.71	. Q	. V	.	.	.
12.683	1.6162	2.71	. Q	. V	.	.	.
12.700	1.6200	2.72	. Q	. V	.	.	.
12.717	1.6237	2.72	. Q	. V	.	.	.
12.733	1.6275	2.72	. Q	. V	.	.	.
12.750	1.6312	2.73	. Q	. V	.	.	.
12.767	1.6350	2.74	. Q	. V	.	.	.
12.783	1.6388	2.75	. Q	. V	.	.	.
12.800	1.6426	2.76	. Q	. V	.	.	.
12.817	1.6464	2.77	. Q	. V	.	.	.
12.833	1.6503	2.78	. Q	. V	.	.	.
12.850	1.6541	2.79	. Q	. V	.	.	.
12.867	1.6580	2.80	. Q	. V	.	.	.
12.883	1.6618	2.81	. Q	. V	.	.	.
12.900	1.6657	2.82	. Q	. V	.	.	.
12.917	1.6696	2.83	. Q	. V	.	.	.
12.933	1.6736	2.84	. Q	. V	.	.	.
12.950	1.6775	2.85	. Q	. V	.	.	.
12.967	1.6814	2.86	. Q	. V	.	.	.
12.983	1.6854	2.87	. Q	. V	.	.	.
13.000	1.6893	2.88	. Q	. V	.	.	.

13.017	1.6933	2.88	.	Q	.	V	.	.	.
13.033	1.6973	2.89	.	Q	.	V	.	.	.
13.050	1.7013	2.89	.	Q	.	V	.	.	.
13.067	1.7053	2.90	.	Q	.	V	.	.	.
13.083	1.7093	2.90	.	Q	.	V	.	.	.
13.100	1.7133	2.91	.	Q	.	V	.	.	.
13.117	1.7173	2.92	.	Q	.	V	.	.	.
13.133	1.7213	2.92	.	Q	.	V	.	.	.
13.150	1.7254	2.93	.	Q	.	V	.	.	.
13.167	1.7294	2.93	.	Q	.	V	.	.	.
13.183	1.7334	2.94	.	Q	.	V	.	.	.
13.200	1.7375	2.94	.	Q	.	V	.	.	.
13.217	1.7416	2.95	.	Q	.	V	.	.	.
13.233	1.7456	2.97	.	Q	.	V	.	.	.
13.250	1.7498	2.98	.	Q	.	V	.	.	.
13.267	1.7539	2.99	.	Q	.	V	.	.	.
13.283	1.7580	3.00	.	Q	.	V	.	.	.
13.300	1.7622	3.02	.	Q	.	V	.	.	.
13.317	1.7663	3.03	.	Q	.	V	.	.	.
13.333	1.7705	3.04	.	Q	.	V	.	.	.
13.350	1.7747	3.06	.	Q	.	V	.	.	.
13.367	1.7790	3.07	.	Q	.	V	.	.	.
13.383	1.7832	3.08	.	Q	.	V	.	.	.
13.400	1.7875	3.09	.	Q	.	V	.	.	.
13.417	1.7917	3.11	.	Q	.	V	.	.	.
13.433	1.7960	3.12	.	Q	.	V	.	.	.
13.450	1.8004	3.13	.	Q	.	V	.	.	.
13.467	1.8047	3.14	.	Q	.	V	.	.	.
13.483	1.8090	3.14	.	Q	.	V	.	.	.
13.500	1.8133	3.15	.	Q	.	V	.	.	.
13.517	1.8177	3.16	.	Q	.	V	.	.	.
13.533	1.8220	3.16	.	Q	.	V	.	.	.
13.550	1.8264	3.17	.	Q	.	V	.	.	.
13.567	1.8308	3.18	.	Q	.	V	.	.	.
13.583	1.8352	3.19	.	Q	.	V	.	.	.
13.600	1.8396	3.19	.	Q	.	V	.	.	.
13.617	1.8440	3.20	.	Q	.	V	.	.	.
13.633	1.8484	3.21	.	Q	.	V	.	.	.
13.650	1.8528	3.22	.	Q	.	V	.	.	.
13.667	1.8573	3.22	.	Q	.	V	.	.	.
13.683	1.8617	3.24	.	Q	.	V	.	.	.
13.700	1.8662	3.25	.	Q	.	V	.	.	.
13.717	1.8707	3.27	.	Q	.	V	.	.	.
13.733	1.8752	3.29	.	Q	.	V	.	.	.
13.750	1.8798	3.30	.	Q	.	V	.	.	.
13.767	1.8844	3.32	.	Q	.	V	.	.	.
13.783	1.8890	3.34	.	Q	.	V	.	.	.
13.800	1.8936	3.35	.	Q	.	V	.	.	.
13.817	1.8982	3.37	.	Q	.	V	.	.	.
13.833	1.9029	3.39	.	Q	.	V	.	.	.
13.850	1.9076	3.40	.	Q	.	V	.	.	.
13.867	1.9123	3.42	.	Q	.	V	.	.	.
13.883	1.9170	3.44	.	Q	.	V	.	.	.
13.900	1.9218	3.45	.	Q	.	V	.	.	.
13.917	1.9265	3.46	.	Q	.	V	.	.	.

13.933	1.9313	3.47	.	Q	.	V	.	.	.
13.950	1.9361	3.48	.	Q	.	V	.	.	.
13.967	1.9409	3.49	.	Q	.	V	.	.	.
13.983	1.9458	3.50	.	Q	.	V	.	.	.
14.000	1.9506	3.51	.	Q	.	V	.	.	.
14.017	1.9554	3.52	.	Q	.	V	.	.	.
14.033	1.9603	3.53	.	Q	.	V	.	.	.
14.050	1.9652	3.54	.	Q	.	V	.	.	.
14.067	1.9701	3.55	.	Q	.	V	.	.	.
14.083	1.9750	3.56	.	Q	.	V	.	.	.
14.100	1.9799	3.57	.	Q	.	V	.	.	.
14.117	1.9848	3.58	.	Q	.	V	.	.	.
14.133	1.9898	3.59	.	Q	.	V	.	.	.
14.150	1.9948	3.61	.	Q	.	V	.	.	.
14.167	1.9998	3.63	.	Q	.	V	.	.	.
14.183	2.0048	3.65	.	Q	.	V	.	.	.
14.200	2.0099	3.67	.	Q	.	V	.	.	.
14.217	2.0150	3.70	.	Q	.	V	.	.	.
14.233	2.0201	3.72	.	Q	.	V	.	.	.
14.250	2.0252	3.74	.	Q	.	V	.	.	.
14.267	2.0304	3.76	.	Q	.	V	.	.	.
14.283	2.0356	3.78	.	Q	.	V	.	.	.
14.300	2.0409	3.81	.	Q	.	V	.	.	.
14.317	2.0461	3.83	.	Q	.	V	.	.	.
14.333	2.0514	3.85	.	Q	.	V	.	.	.
14.350	2.0568	3.87	.	Q	.	V	.	.	.
14.367	2.0621	3.89	.	Q	.	V	.	.	.
14.383	2.0675	3.91	.	Q	.	V	.	.	.
14.400	2.0729	3.93	.	Q	.	V	.	.	.
14.417	2.0784	3.94	.	Q	.	V	.	.	.
14.433	2.0838	3.95	.	Q	.	V	.	.	.
14.450	2.0893	3.97	.	Q	.	V	.	.	.
14.467	2.0948	3.98	.	Q	.	V	.	.	.
14.483	2.1003	4.00	.	Q	.	V	.	.	.
14.500	2.1058	4.01	.	Q	.	V	.	.	.
14.517	2.1113	4.03	.	Q	.	V	.	.	.
14.533	2.1169	4.04	.	Q	.	V	.	.	.
14.550	2.1225	4.05	.	Q	.	V	.	.	.
14.567	2.1281	4.07	.	Q	.	V	.	.	.
14.583	2.1337	4.08	.	Q	.	V	.	.	.
14.600	2.1394	4.10	.	Q	.	V	.	.	.
14.617	2.1450	4.12	.	Q	.	V	.	.	.
14.633	2.1508	4.16	.	Q	.	V	.	.	.
14.650	2.1565	4.19	.	Q	.	V	.	.	.
14.667	2.1624	4.23	.	Q	.	V	.	.	.
14.683	2.1682	4.27	.	Q	.	V	.	.	.
14.700	2.1742	4.30	.	Q	.	V	.	.	.
14.717	2.1801	4.34	.	Q	.	V	.	.	.
14.733	2.1862	4.37	.	Q	.	V	.	.	.
14.750	2.1922	4.41	.	Q	.	V	.	.	.
14.767	2.1984	4.44	.	Q	.	V	.	.	.
14.783	2.2045	4.48	.	Q	.	V	.	.	.
14.800	2.2107	4.52	.	Q	.	V	.	.	.
14.817	2.2170	4.55	.	Q	.	V	.	.	.
14.833	2.2233	4.59	.	Q	.	V	.	.	.

14.850	2.2297	4.62	.	Q	.	V	.	.	.
14.867	2.2361	4.64	.	Q	.	V	.	.	.
14.883	2.2425	4.66	.	Q	.	V	.	.	.
14.900	2.2490	4.69	.	Q	.	V	.	.	.
14.917	2.2554	4.71	.	Q	.	V	.	.	.
14.933	2.2620	4.73	.	Q	.	V	.	.	.
14.950	2.2685	4.76	.	Q	.	V	.	.	.
14.967	2.2751	4.78	.	Q	.	V	.	.	.
14.983	2.2817	4.80	.	Q	.	V	.	.	.
15.000	2.2883	4.82	.	Q	.	V	.	.	.
15.017	2.2950	4.85	.	Q	.	V	.	.	.
15.033	2.3017	4.87	.	Q	.	V	.	.	.
15.050	2.3085	4.89	.	Q	.	V	.	.	.
15.067	2.3152	4.92	.	Q	.	V	.	.	.
15.083	2.3221	4.96	.	Q	.	V	.	.	.
15.100	2.3290	5.03	.	Q	.	V	.	.	.
15.117	2.3360	5.09	.	Q	.	V	.	.	.
15.133	2.3431	5.16	.	Q	.	V	.	.	.
15.150	2.3503	5.22	.	Q	.	V	.	.	.
15.167	2.3576	5.29	.	Q	.	V	.	.	.
15.183	2.3650	5.35	.	Q	.	V	.	.	.
15.200	2.3724	5.42	.	Q	.	V	.	.	.
15.217	2.3800	5.48	.	Q	.	V	.	.	.
15.233	2.3876	5.55	.	Q	.	V	.	.	.
15.250	2.3954	5.61	.	Q	.	V	.	.	.
15.267	2.4032	5.68	.	Q	.	V	.	.	.
15.283	2.4111	5.74	.	Q	.	V	.	.	.
15.300	2.4191	5.81	.	Q	.	V	.	.	.
15.317	2.4272	5.87	.	Q	.	V	.	.	.
15.333	2.4354	5.95	.	Q	.	V	.	.	.
15.350	2.4437	6.02	.	Q	.	V	.	.	.
15.367	2.4520	6.09	.	Q	.	V	.	.	.
15.383	2.4605	6.16	.	Q	.	V	.	.	.
15.400	2.4691	6.23	.	Q	.	V	.	.	.
15.417	2.4778	6.30	.	Q	.	V	.	.	.
15.433	2.4866	6.37	.	Q	.	V	.	.	.
15.450	2.4954	6.44	.	Q	.	V	.	.	.
15.467	2.5044	6.51	.	Q	.	V	.	.	.
15.483	2.5135	6.58	.	Q	.	V	.	.	.
15.500	2.5226	6.65	.	Q	.	V	.	.	.
15.517	2.5319	6.72	.	Q	.	V	.	.	.
15.533	2.5413	6.80	.	Q	.	V	.	.	.
15.550	2.5508	6.96	.	Q	.	V	.	.	.
15.567	2.5608	7.21	.	Q	.	V	.	.	.
15.583	2.5710	7.45	.	Q	.	V	.	.	.
15.600	2.5817	7.70	.	Q	.	V	.	.	.
15.617	2.5926	7.95	.	Q	.	V	.	.	.
15.633	2.6039	8.20	.	Q	.	V	.	.	.
15.650	2.6155	8.45	.	Q	.	V	.	.	.
15.667	2.6275	8.69	.	Q	.	V	.	.	.
15.683	2.6398	8.94	.	Q	.	V	.	.	.
15.700	2.6525	9.19	.	Q	.	V	.	.	.
15.717	2.6655	9.44	.	Q	.	V	.	.	.
15.733	2.6788	9.69	.	Q	.	V	.	.	.
15.750	2.6925	9.93	.	.Q	.	V	.	.	.

15.767	2.7065	10.18	.	.Q	V	.	.
15.783	2.7209	10.44	.	.Q	.V	.	.
15.800	2.7357	10.72	.	.Q	.V	.	.
15.817	2.7508	10.99	.	. Q	.V	.	.
15.833	2.7663	11.26	.	. Q	.V	.	.
15.850	2.7822	11.53	.	. Q	.V	.	.
15.867	2.7985	11.81	.	. Q	.V	.	.
15.883	2.8151	12.08	.	. Q	.V	.	.
15.900	2.8321	12.35	.	. Q	.V	.	.
15.917	2.8495	12.62	.	. Q	.V	.	.
15.933	2.8673	12.90	.	. Q	. V	.	.
15.950	2.8854	13.17	.	. Q	. V	.	.
15.967	2.9039	13.44	.	. Q	. V	.	.
15.983	2.9228	13.72	.	. Q	. V	.	.
16.000	2.9421	13.99	.	. Q	. V	.	.
16.017	2.9626	14.90	.	. Q	. V	.	.
16.033	2.9853	16.44	.	. Q	. V	.	.
16.050	3.0100	17.98	.	. Q	. V	.	.
16.067	3.0369	19.53	.	. Q	. V	.	.
16.083	3.0660	21.07	.	. Q	. V	.	.
16.100	3.0971	22.61	.	. V	. Q	.	.
16.117	3.1304	24.16	.	. V	. Q	.	.
16.133	3.1658	25.70	.	. V	. Q	.	.
16.150	3.2033	27.24	.	. V	. Q	.	.
16.167	3.2430	28.79	.	. V	. Q	.	.
16.183	3.2847	30.33	.	. V	. Q	.	.
16.200	3.3286	31.88	.	. V	. Q	.	.
16.217	3.3747	33.42	.	. V	. Q	.	.
16.233	3.4239	35.75	.	. V	. Q	.	.
16.250	3.4718	34.80	.	. V	. Q	.	.
16.267	3.5171	32.86	.	. V	. Q	.	.
16.283	3.5597	30.92	.	. V	. Q	.	.
16.300	3.5996	28.98	.	. V	. Q	.	.
16.317	3.6369	27.04	.	. V	. Q	.	.
16.333	3.6715	25.11	.	. Q	. V	.	.
16.350	3.7034	23.17	.	. Q	. V	.	.
16.367	3.7326	21.23	.	. Q	. V	.	.
16.383	3.7592	19.29	.	. Q	. V	.	.
16.400	3.7831	17.35	.	. Q	. V	.	.
16.417	3.8043	15.41	.	. Q	. V	.	.
16.433	3.8229	13.47	.	. Q	. V	.	.
16.450	3.8388	11.53	.	. Q	. V	.	.
16.467	3.8520	9.60	.	. Q	. V	.	.
16.483	3.8636	8.48	.	. Q	. V	.	.
16.500	3.8750	8.24	.	. Q	. V	.	.
16.517	3.8860	8.01	.	. Q	. V	.	.
16.533	3.8967	7.78	.	. Q	. V	.	.
16.550	3.9071	7.55	.	. Q	. V	.	.
16.567	3.9172	7.31	.	. Q	. V	.	.
16.583	3.9270	7.08	.	. Q	. V	.	.
16.600	3.9364	6.85	.	. Q	. V	.	.
16.617	3.9455	6.61	.	. Q	. V	.	.
16.633	3.9543	6.38	.	. Q	. V	.	.
16.650	3.9628	6.15	.	. Q	. V	.	.
16.667	3.9709	5.92	.	. Q	. V	.	.

16.683	3.9788	5.68	.	Q	.	.	V	.
16.700	3.9863	5.45	.	Q	.	.	V	.
16.717	3.9936	5.30	.	Q	.	.	V	.
16.733	4.0008	5.22	.	Q	.	.	V	.
16.750	4.0078	5.15	.	Q	.	.	V	.
16.767	4.0148	5.08	.	Q	.	.	V	.
16.783	4.0217	5.01	.	Q	.	.	.V	.
16.800	4.0286	4.94	.	Q	.	.	.V	.
16.817	4.0353	4.87	.	Q	.	.	.V	.
16.833	4.0419	4.80	.	Q	.	.	.V	.
16.850	4.0484	4.73	.	Q	.	.	.V	.
16.867	4.0548	4.66	.	Q	.	.	.V	.
16.883	4.0611	4.58	.	Q	.	.	.V	.
16.900	4.0673	4.51	.	Q	.	.	.V	.
16.917	4.0734	4.44	.	Q	.	.	.V	.
16.933	4.0795	4.37	.	Q	.	.	.V	.
16.950	4.0854	4.31	.	Q	.	.	.V	.
16.967	4.0913	4.27	.	Q	.	.	.V	.
16.983	4.0971	4.23	.	Q	.	.	.V	.
17.000	4.1029	4.18	.	Q	.	.	.V	.
17.017	4.1086	4.14	.	Q	.	.	.V	.
17.033	4.1142	4.10	.	Q	.	.	.V	.
17.050	4.1198	4.06	.	Q	.	.	.V	.
17.067	4.1253	4.01	.	Q	.	.	.V	.
17.083	4.1308	3.97	.	Q	.	.	.V	.
17.100	4.1362	3.93	.	Q	.	.	.V	.
17.117	4.1416	3.89	.	Q	.	.	.V	.
17.133	4.1469	3.84	.	Q	.	.	.V	.
17.150	4.1521	3.80	.	Q	.	.	.V	.
17.167	4.1573	3.76	.	Q	.	.	.V	.
17.183	4.1624	3.72	.	Q	.	.	.V	.
17.200	4.1675	3.69	.	Q	.	.	.V	.
17.217	4.1725	3.66	.	Q	.	.	.V	.
17.233	4.1775	3.64	.	Q	.	.	.V	.
17.250	4.1825	3.61	.	Q	.	.	.V	.
17.267	4.1874	3.58	.	Q	.	.	.V	.
17.283	4.1923	3.55	.	Q	.	.	.V	.
17.300	4.1972	3.52	.	Q	.	.	.V	.
17.317	4.2020	3.49	.	Q	.	.	.V	.
17.333	4.2068	3.47	.	Q	.	.	.V	.
17.350	4.2115	3.44	.	Q	.	.	.V	.
17.367	4.2162	3.41	.	Q	.	.	.V	.
17.383	4.2208	3.38	.	Q	.	.	.V	.
17.400	4.2255	3.35	.	Q	.	.	.V	.
17.417	4.2300	3.33	.	Q	.	.	.V	.
17.433	4.2346	3.30	.	Q	.	.	.V	.
17.450	4.2391	3.28	.	Q	.	.	.V	.
17.467	4.2436	3.26	.	Q	.	.	.V	.
17.483	4.2481	3.24	.	Q	.	.	.V	.
17.500	4.2525	3.22	.	Q	.	.	.V	.
17.517	4.2569	3.20	.	Q	.	.	.V	.
17.533	4.2613	3.17	.	Q	.	.	.V	.
17.550	4.2656	3.15	.	Q	.	.	.V	.
17.567	4.2699	3.13	.	Q	.	.	.V	.
17.583	4.2742	3.11	.	Q	.	.	.V	.

17.600	4.2785	3.09	.	Q	.	.	.	V	.
17.617	4.2827	3.07	.	Q	.	.	.	V	.
17.633	4.2869	3.04	.	Q	.	.	.	V	.
17.650	4.2910	3.02	.	Q	.	.	.	V	.
17.667	4.2952	3.01	.	Q	.	.	.	V	.
17.683	4.2993	2.99	.	Q	.	.	.	V	.
17.700	4.3034	2.97	.	Q	.	.	.	V	.
17.717	4.3075	2.96	.	Q	.	.	.	V	.
17.733	4.3115	2.94	.	Q	.	.	.	V	.
17.750	4.3155	2.92	.	Q	.	.	.	V	.
17.767	4.3195	2.91	.	Q	.	.	.	V	.
17.783	4.3235	2.89	.	Q	.	.	.	V	.
17.800	4.3275	2.87	.	Q	.	.	.	V	.
17.817	4.3314	2.85	.	Q	.	.	.	V	.
17.833	4.3353	2.84	.	Q	.	.	.	V	.
17.850	4.3392	2.82	.	Q	.	.	.	V	.
17.867	4.3431	2.80	.	Q	.	.	.	V	.
17.883	4.3469	2.79	.	Q	.	.	.	V	.
17.900	4.3507	2.77	.	Q	.	.	.	V	.
17.917	4.3545	2.76	.	Q	.	.	.	V	.
17.933	4.3583	2.75	.	Q	.	.	.	V	.
17.950	4.3621	2.73	.	Q	.	.	.	V	.
17.967	4.3658	2.72	.	Q	.	.	.	V	.
17.983	4.3696	2.71	.	Q	.	.	.	V	.
18.000	4.3733	2.69	.	Q	.	.	.	V	.
18.017	4.3770	2.68	.	Q	.	.	.	V	.
18.033	4.3806	2.67	.	Q	.	.	.	V	.
18.050	4.3843	2.65	.	Q	.	.	.	V	.
18.067	4.3879	2.64	.	Q	.	.	.	V	.
18.083	4.3915	2.62	.	Q	.	.	.	V	.
18.100	4.3951	2.61	.	Q	.	.	.	V	.
18.117	4.3987	2.59	.	Q	.	.	.	V	.
18.133	4.4023	2.57	.	Q	.	.	.	V	.
18.150	4.4058	2.55	.	Q	.	.	.	V	.
18.167	4.4093	2.53	.	Q	.	.	.	V	.
18.183	4.4127	2.51	.	Q	.	.	.	V	.
18.200	4.4162	2.49	.	Q	.	.	.	V	.
18.217	4.4196	2.47	.	Q	.	.	.	V	.
18.233	4.4229	2.45	.	Q	.	.	.	V	.
18.250	4.4263	2.43	.	Q	.	.	.	V	.
18.267	4.4296	2.41	.	Q	.	.	.	V	.
18.283	4.4329	2.39	.	Q	.	.	.	V	.
18.300	4.4362	2.37	.	Q	.	.	.	V	.
18.317	4.4394	2.35	.	Q	.	.	.	V	.
18.333	4.4426	2.33	.	Q	.	.	.	V	.
18.350	4.4458	2.31	.	Q	.	.	.	V	.
18.367	4.4490	2.30	.	Q	.	.	.	V	.
18.383	4.4521	2.29	.	Q	.	.	.	V	.
18.400	4.4553	2.29	.	Q	.	.	.	V	.
18.417	4.4584	2.28	.	Q	.	.	.	V	.
18.433	4.4615	2.27	.	Q	.	.	.	V	.
18.450	4.4646	2.26	.	Q	.	.	.	V	.
18.467	4.4677	2.25	.	Q	.	.	.	V	.
18.483	4.4708	2.24	.	Q	.	.	.	V	.
18.500	4.4739	2.23	.	Q	.	.	.	V	.

18.517	4.4769	2.22	. Q	.	.	.	V	.
18.533	4.4800	2.21	. Q	.	.	.	V	.
18.550	4.4830	2.20	. Q	.	.	.	V	.
18.567	4.4860	2.19	. Q	.	.	.	V	.
18.583	4.4890	2.18	. Q	.	.	.	V	.
18.600	4.4920	2.17	. Q	.	.	.	V	.
18.617	4.4950	2.17	. Q	.	.	.	V	.
18.633	4.4980	2.16	. Q	.	.	.	V	.
18.650	4.5010	2.15	. Q	.	.	.	V	.
18.667	4.5039	2.14	. Q	.	.	.	V	.
18.683	4.5068	2.13	. Q	.	.	.	V	.
18.700	4.5098	2.13	. Q	.	.	.	V	.
18.717	4.5127	2.12	. Q	.	.	.	V	.
18.733	4.5156	2.11	. Q	.	.	.	V	.
18.750	4.5185	2.10	. Q	.	.	.	V	.
18.767	4.5214	2.09	. Q	.	.	.	V	.
18.783	4.5243	2.09	. Q	.	.	.	V	.
18.800	4.5271	2.08	. Q	.	.	.	V	.
18.817	4.5300	2.07	. Q	.	.	.	V	.
18.833	4.5328	2.06	. Q	.	.	.	V	.
18.850	4.5356	2.06	. Q	.	.	.	V	.
18.867	4.5385	2.05	. Q	.	.	.	V	.
18.883	4.5413	2.04	. Q	.	.	.	V	.
18.900	4.5441	2.03	. Q	.	.	.	V	.
18.917	4.5469	2.03	. Q	.	.	.	V	.
18.933	4.5497	2.02	. Q	.	.	.	V	.
18.950	4.5524	2.01	. Q	.	.	.	V	.
18.967	4.5552	2.01	. Q	.	.	.	V	.
18.983	4.5579	2.00	. Q	.	.	.	V	.
19.000	4.5607	1.99	. Q	.	.	.	V	.
19.017	4.5634	1.99	. Q	.	.	.	V	.
19.033	4.5662	1.98	. Q	.	.	.	V	.
19.050	4.5689	1.97	. Q	.	.	.	V	.
19.067	4.5716	1.97	. Q	.	.	.	V	.
19.083	4.5743	1.96	. Q	.	.	.	V	.
19.100	4.5770	1.95	. Q	.	.	.	V	.
19.117	4.5796	1.95	. Q	.	.	.	V	.
19.133	4.5823	1.94	. Q	.	.	.	V	.
19.150	4.5850	1.94	. Q	.	.	.	V	.
19.167	4.5876	1.93	. Q	.	.	.	V	.
19.183	4.5903	1.92	. Q	.	.	.	V	.
19.200	4.5929	1.92	. Q	.	.	.	V	.
19.217	4.5956	1.91	. Q	.	.	.	V	.
19.233	4.5982	1.90	. Q	.	.	.	V	.
19.250	4.6008	1.90	. Q	.	.	.	V	.
19.267	4.6034	1.89	. Q	.	.	.	V	.
19.283	4.6060	1.89	. Q	.	.	.	V	.
19.300	4.6086	1.88	. Q	.	.	.	V	.
19.317	4.6112	1.88	. Q	.	.	.	V	.
19.333	4.6138	1.87	. Q	.	.	.	V	.
19.350	4.6163	1.86	. Q	.	.	.	V	.
19.367	4.6189	1.86	. Q	.	.	.	V	.
19.383	4.6214	1.85	. Q	.	.	.	V	.
19.400	4.6240	1.85	. Q	.	.	.	V	.
19.417	4.6265	1.84	. Q	.	.	.	V	.

19.433	4.6291	1.84	. Q	.	.	.	V	.
19.450	4.6316	1.83	. Q	.	.	.	V	.
19.467	4.6341	1.83	. Q	.	.	.	V	.
19.483	4.6366	1.82	. Q	.	.	.	V	.
19.500	4.6391	1.82	. Q	.	.	.	V	.
19.517	4.6416	1.81	. Q	.	.	.	V	.
19.533	4.6441	1.81	. Q	.	.	.	V	.
19.550	4.6466	1.80	. Q	.	.	.	V	.
19.567	4.6490	1.80	. Q	.	.	.	V	.
19.583	4.6515	1.79	. Q	.	.	.	V	.
19.600	4.6540	1.79	.Q	.	.	.	V	.
19.617	4.6564	1.78	.Q	.	.	.	V	.
19.633	4.6589	1.78	.Q	.	.	.	V	.
19.650	4.6613	1.77	.Q	.	.	.	V	.
19.667	4.6637	1.77	.Q	.	.	.	V	.
19.683	4.6662	1.76	.Q	.	.	.	V	.
19.700	4.6686	1.76	.Q	.	.	.	V	.
19.717	4.6710	1.75	.Q	.	.	.	V	.
19.733	4.6734	1.75	.Q	.	.	.	V	.
19.750	4.6758	1.74	.Q	.	.	.	V	.
19.767	4.6782	1.74	.Q	.	.	.	V	.
19.783	4.6806	1.73	.Q	.	.	.	V	.
19.800	4.6830	1.73	.Q	.	.	.	V	.
19.817	4.6853	1.72	.Q	.	.	.	V	.
19.833	4.6877	1.72	.Q	.	.	.	V	.
19.850	4.6901	1.72	.Q	.	.	.	V	.
19.867	4.6924	1.71	.Q	.	.	.	V	.
19.883	4.6948	1.71	.Q	.	.	.	V	.
19.900	4.6971	1.70	.Q	.	.	.	V	.
19.917	4.6994	1.70	.Q	.	.	.	V	.
19.933	4.7018	1.69	.Q	.	.	.	V	.
19.950	4.7041	1.69	.Q	.	.	.	V	.
19.967	4.7064	1.68	.Q	.	.	.	V	.
19.983	4.7087	1.68	.Q	.	.	.	V	.
20.000	4.7110	1.68	.Q	.	.	.	V	.
20.017	4.7134	1.67	.Q	.	.	.	V	.
20.033	4.7156	1.67	.Q	.	.	.	V	.
20.050	4.7179	1.66	.Q	.	.	.	V	.
20.067	4.7202	1.66	.Q	.	.	.	V	.
20.083	4.7225	1.66	.Q	.	.	.	V	.
20.100	4.7248	1.65	.Q	.	.	.	V	.
20.117	4.7271	1.65	.Q	.	.	.	V	.
20.133	4.7293	1.64	.Q	.	.	.	V	.
20.150	4.7316	1.64	.Q	.	.	.	V	.
20.167	4.7338	1.64	.Q	.	.	.	V	.
20.183	4.7361	1.63	.Q	.	.	.	V	.
20.200	4.7383	1.63	.Q	.	.	.	V	.
20.217	4.7406	1.62	.Q	.	.	.	V	.
20.233	4.7428	1.62	.Q	.	.	.	V	.
20.250	4.7450	1.62	.Q	.	.	.	V	.
20.267	4.7472	1.61	.Q	.	.	.	V	.
20.283	4.7495	1.61	.Q	.	.	.	V	.
20.300	4.7517	1.61	.Q	.	.	.	V	.
20.317	4.7539	1.60	.Q	.	.	.	V	.
20.333	4.7561	1.60	.Q	.	.	.	V	.

20.350	4.7583	1.59	.Q	.	.	.	V	.
20.367	4.7605	1.59	.Q	.	.	.	V	.
20.383	4.7627	1.59	.Q	.	.	.	V	.
20.400	4.7648	1.58	.Q	.	.	.	V	.
20.417	4.7670	1.58	.Q	.	.	.	V	.
20.433	4.7692	1.58	.Q	.	.	.	V	.
20.450	4.7713	1.57	.Q	.	.	.	V	.
20.467	4.7735	1.57	.Q	.	.	.	V	.
20.483	4.7757	1.57	.Q	.	.	.	V	.
20.500	4.7778	1.56	.Q	.	.	.	V	.
20.517	4.7800	1.56	.Q	.	.	.	V	.
20.533	4.7821	1.56	.Q	.	.	.	V	.
20.550	4.7843	1.55	.Q	.	.	.	V	.
20.567	4.7864	1.55	.Q	.	.	.	V	.
20.583	4.7885	1.55	.Q	.	.	.	V	.
20.600	4.7906	1.54	.Q	.	.	.	V	.
20.617	4.7928	1.54	.Q	.	.	.	V	.
20.633	4.7949	1.54	.Q	.	.	.	V	.
20.650	4.7970	1.53	.Q	.	.	.	V	.
20.667	4.7991	1.53	.Q	.	.	.	V	.
20.683	4.8012	1.53	.Q	.	.	.	V	.
20.700	4.8033	1.52	.Q	.	.	.	V	.
20.717	4.8054	1.52	.Q	.	.	.	V	.
20.733	4.8075	1.52	.Q	.	.	.	V	.
20.750	4.8096	1.51	.Q	.	.	.	V	.
20.767	4.8116	1.51	.Q	.	.	.	V	.
20.783	4.8137	1.51	.Q	.	.	.	V	.
20.800	4.8158	1.50	.Q	.	.	.	V	.
20.817	4.8179	1.50	.Q	.	.	.	V	.
20.833	4.8199	1.50	.Q	.	.	.	V	.
20.850	4.8220	1.50	.Q	.	.	.	V	.
20.867	4.8240	1.49	.Q	.	.	.	V	.
20.883	4.8261	1.49	.Q	.	.	.	V	.
20.900	4.8281	1.49	.Q	.	.	.	V	.
20.917	4.8302	1.48	.Q	.	.	.	V	.
20.933	4.8322	1.48	.Q	.	.	.	V	.
20.950	4.8343	1.48	.Q	.	.	.	V	.
20.967	4.8363	1.47	.Q	.	.	.	V	.
20.983	4.8383	1.47	.Q	.	.	.	V	.
21.000	4.8403	1.47	.Q	.	.	.	V	.
21.017	4.8424	1.47	.Q	.	.	.	V	.
21.033	4.8444	1.46	.Q	.	.	.	V	.
21.050	4.8464	1.46	.Q	.	.	.	V	.
21.067	4.8484	1.46	.Q	.	.	.	V	.
21.083	4.8504	1.45	.Q	.	.	.	V	.
21.100	4.8524	1.45	.Q	.	.	.	V	.
21.117	4.8544	1.45	.Q	.	.	.	V	.
21.133	4.8564	1.45	.Q	.	.	.	V	.
21.150	4.8584	1.44	.Q	.	.	.	V	.
21.167	4.8604	1.44	.Q	.	.	.	V	.
21.183	4.8623	1.44	.Q	.	.	.	V	.
21.200	4.8643	1.44	.Q	.	.	.	V	.
21.217	4.8663	1.43	.Q	.	.	.	V	.
21.233	4.8683	1.43	.Q	.	.	.	V	.
21.250	4.8702	1.43	.Q	.	.	.	V	.

21.267	4.8722	1.42	.Q	.	.	.	V	.
21.283	4.8741	1.42	.Q	.	.	.	V	.
21.300	4.8761	1.42	.Q	.	.	.	V	.
21.317	4.8780	1.42	.Q	.	.	.	V	.
21.333	4.8800	1.41	.Q	.	.	.	V	.
21.350	4.8819	1.41	.Q	.	.	.	V	.
21.367	4.8839	1.41	.Q	.	.	.	V	.
21.383	4.8858	1.41	.Q	.	.	.	V	.
21.400	4.8877	1.40	.Q	.	.	.	V	.
21.417	4.8897	1.40	.Q	.	.	.	V	.
21.433	4.8916	1.40	.Q	.	.	.	V	.
21.450	4.8935	1.40	.Q	.	.	.	V	.
21.467	4.8954	1.39	.Q	.	.	.	V	.
21.483	4.8974	1.39	.Q	.	.	.	V	.
21.500	4.8993	1.39	.Q	.	.	.	V	.
21.517	4.9012	1.39	.Q	.	.	.	V	.
21.533	4.9031	1.38	.Q	.	.	.	V	.
21.550	4.9050	1.38	.Q	.	.	.	V	.
21.567	4.9069	1.38	.Q	.	.	.	V	.
21.583	4.9088	1.38	.Q	.	.	.	V	.
21.600	4.9107	1.37	.Q	.	.	.	V	.
21.617	4.9126	1.37	.Q	.	.	.	V	.
21.633	4.9145	1.37	.Q	.	.	.	V	.
21.650	4.9163	1.37	.Q	.	.	.	V	.
21.667	4.9182	1.36	.Q	.	.	.	V	.
21.683	4.9201	1.36	.Q	.	.	.	V	.
21.700	4.9220	1.36	.Q	.	.	.	V	.
21.717	4.9238	1.36	.Q	.	.	.	V	.
21.733	4.9257	1.36	.Q	.	.	.	V	.
21.750	4.9276	1.35	.Q	.	.	.	V	.
21.767	4.9294	1.35	.Q	.	.	.	V	.
21.783	4.9313	1.35	.Q	.	.	.	V	.
21.800	4.9331	1.35	.Q	.	.	.	V	.
21.817	4.9350	1.34	.Q	.	.	.	V	.
21.833	4.9368	1.34	.Q	.	.	.	V	.
21.850	4.9387	1.34	.Q	.	.	.	V	.
21.867	4.9405	1.34	.Q	.	.	.	V	.
21.883	4.9424	1.33	.Q	.	.	.	V	.
21.900	4.9442	1.33	.Q	.	.	.	V	.
21.917	4.9460	1.33	.Q	.	.	.	V	.
21.933	4.9479	1.33	.Q	.	.	.	V	.
21.950	4.9497	1.33	.Q	.	.	.	V	.
21.967	4.9515	1.32	.Q	.	.	.	V	.
21.983	4.9533	1.32	.Q	.	.	.	V	.
22.000	4.9551	1.32	.Q	.	.	.	V	.
22.017	4.9570	1.32	.Q	.	.	.	V	.
22.033	4.9588	1.32	.Q	.	.	.	V	.
22.050	4.9606	1.31	.Q	.	.	.	V	.
22.067	4.9624	1.31	.Q	.	.	.	V	.
22.083	4.9642	1.31	.Q	.	.	.	V	.
22.100	4.9660	1.31	.Q	.	.	.	V	.
22.117	4.9678	1.30	.Q	.	.	.	V	.
22.133	4.9696	1.30	.Q	.	.	.	V	.
22.150	4.9714	1.30	.Q	.	.	.	V	.
22.167	4.9732	1.30	.Q	.	.	.	V	.

22.183	4.9750	1.30	.Q	.	.	.	V .
22.200	4.9767	1.29	.Q	.	.	.	V .
22.217	4.9785	1.29	.Q	.	.	.	V .
22.233	4.9803	1.29	.Q	.	.	.	V .
22.250	4.9821	1.29	.Q	.	.	.	V .
22.267	4.9838	1.29	.Q	.	.	.	V .
22.283	4.9856	1.28	.Q	.	.	.	V .
22.300	4.9874	1.28	.Q	.	.	.	V .
22.317	4.9891	1.28	.Q	.	.	.	V .
22.333	4.9909	1.28	.Q	.	.	.	V .
22.350	4.9927	1.28	.Q	.	.	.	V .
22.367	4.9944	1.27	.Q	.	.	.	V .
22.383	4.9962	1.27	.Q	.	.	.	V .
22.400	4.9979	1.27	.Q	.	.	.	V .
22.417	4.9997	1.27	.Q	.	.	.	V .
22.433	5.0014	1.27	.Q	.	.	.	V .
22.450	5.0032	1.27	.Q	.	.	.	V .
22.467	5.0049	1.26	.Q	.	.	.	V .
22.483	5.0066	1.26	.Q	.	.	.	V .
22.500	5.0084	1.26	.Q	.	.	.	V .
22.517	5.0101	1.26	.Q	.	.	.	V .
22.533	5.0118	1.26	.Q	.	.	.	V .
22.550	5.0136	1.25	.Q	.	.	.	V .
22.567	5.0153	1.25	.Q	.	.	.	V .
22.583	5.0170	1.25	.Q	.	.	.	V .
22.600	5.0187	1.25	.Q	.	.	.	V .
22.617	5.0204	1.25	.Q	.	.	.	V .
22.633	5.0221	1.24	.Q	.	.	.	V .
22.650	5.0239	1.24	.Q	.	.	.	V .
22.667	5.0256	1.24	.Q	.	.	.	V .
22.683	5.0273	1.24	.Q	.	.	.	V .
22.700	5.0290	1.24	.Q	.	.	.	V .
22.717	5.0307	1.24	.Q	.	.	.	V .
22.733	5.0324	1.23	.Q	.	.	.	V .
22.750	5.0341	1.23	.Q	.	.	.	V .
22.767	5.0358	1.23	.Q	.	.	.	V .
22.783	5.0375	1.23	.Q	.	.	.	V .
22.800	5.0392	1.23	.Q	.	.	.	V .
22.817	5.0408	1.22	.Q	.	.	.	V .
22.833	5.0425	1.22	.Q	.	.	.	V .
22.850	5.0442	1.22	.Q	.	.	.	V .
22.867	5.0459	1.22	.Q	.	.	.	V .
22.883	5.0476	1.22	.Q	.	.	.	V .
22.900	5.0492	1.22	.Q	.	.	.	V .
22.917	5.0509	1.21	.Q	.	.	.	V .
22.933	5.0526	1.21	.Q	.	.	.	V .
22.950	5.0542	1.21	.Q	.	.	.	V .
22.967	5.0559	1.21	.Q	.	.	.	V .
22.983	5.0576	1.21	.Q	.	.	.	V .
23.000	5.0592	1.21	.Q	.	.	.	V .
23.017	5.0609	1.20	.Q	.	.	.	V .
23.033	5.0626	1.20	.Q	.	.	.	V .
23.050	5.0642	1.20	.Q	.	.	.	V .
23.067	5.0659	1.20	.Q	.	.	.	V .
23.083	5.0675	1.20	.Q	.	.	.	V .

23.100	5.0692	1.20	.Q	.	.	.	V.
23.117	5.0708	1.19	.Q	.	.	.	V.
23.133	5.0724	1.19	.Q	.	.	.	V.
23.150	5.0741	1.19	.Q	.	.	.	V.
23.167	5.0757	1.19	.Q	.	.	.	V.
23.183	5.0774	1.19	.Q	.	.	.	V.
23.200	5.0790	1.19	.Q	.	.	.	V.
23.217	5.0806	1.18	.Q	.	.	.	V.
23.233	5.0823	1.18	.Q	.	.	.	V.
23.250	5.0839	1.18	.Q	.	.	.	V.
23.267	5.0855	1.18	.Q	.	.	.	V.
23.283	5.0871	1.18	.Q	.	.	.	V.
23.300	5.0888	1.18	.Q	.	.	.	V.
23.317	5.0904	1.18	.Q	.	.	.	V.
23.333	5.0920	1.17	.Q	.	.	.	V.
23.350	5.0936	1.17	.Q	.	.	.	V.
23.367	5.0952	1.17	.Q	.	.	.	V.
23.383	5.0968	1.17	.Q	.	.	.	V.
23.400	5.0984	1.17	.Q	.	.	.	V.
23.417	5.1000	1.17	.Q	.	.	.	V.
23.433	5.1016	1.16	.Q	.	.	.	V.
23.450	5.1033	1.16	.Q	.	.	.	V.
23.467	5.1049	1.16	.Q	.	.	.	V.
23.483	5.1064	1.16	.Q	.	.	.	V.
23.500	5.1080	1.16	.Q	.	.	.	V.
23.517	5.1096	1.16	.Q	.	.	.	V.
23.533	5.1112	1.16	.Q	.	.	.	V.
23.550	5.1128	1.15	.Q	.	.	.	V.
23.567	5.1144	1.15	.Q	.	.	.	V.
23.583	5.1160	1.15	.Q	.	.	.	V.
23.600	5.1176	1.15	.Q	.	.	.	V.
23.617	5.1192	1.15	.Q	.	.	.	V.
23.633	5.1207	1.15	.Q	.	.	.	V.
23.650	5.1223	1.15	.Q	.	.	.	V.
23.667	5.1239	1.14	.Q	.	.	.	V.
23.683	5.1255	1.14	.Q	.	.	.	V.
23.700	5.1270	1.14	.Q	.	.	.	V.
23.717	5.1286	1.14	.Q	.	.	.	V.
23.733	5.1302	1.14	.Q	.	.	.	V.
23.750	5.1317	1.14	.Q	.	.	.	V.
23.767	5.1333	1.14	.Q	.	.	.	V.
23.783	5.1349	1.13	.Q	.	.	.	V.
23.800	5.1364	1.13	.Q	.	.	.	V.
23.817	5.1380	1.13	.Q	.	.	.	V.
23.833	5.1395	1.13	.Q	.	.	.	V.
23.850	5.1411	1.13	.Q	.	.	.	V.
23.867	5.1426	1.13	.Q	.	.	.	V.
23.883	5.1442	1.13	.Q	.	.	.	V.
23.900	5.1457	1.12	.Q	.	.	.	V.
23.917	5.1473	1.12	.Q	.	.	.	V.
23.933	5.1488	1.12	.Q	.	.	.	V.
23.950	5.1504	1.12	.Q	.	.	.	V.
23.967	5.1519	1.12	.Q	.	.	.	V.
23.983	5.1535	1.12	.Q	.	.	.	V.
24.000	5.1550	1.12	.Q	.	.	.	V.

24.017	5.1565	1.11	.Q	.	.	.	V.
24.033	5.1581	1.11	.Q	.	.	.	V.
24.050	5.1596	1.11	.Q	.	.	.	V.
24.067	5.1611	1.11	.Q	.	.	.	V.
24.083	5.1627	1.11	.Q	.	.	.	V.
24.100	5.1642	1.11	.Q	.	.	.	V.
24.117	5.1657	1.11	.Q	.	.	.	V.
24.133	5.1672	1.11	.Q	.	.	.	V.
24.150	5.1687	1.10	.Q	.	.	.	V.
24.167	5.1703	1.10	.Q	.	.	.	V.
24.183	5.1718	1.09	.Q	.	.	.	V.
24.200	5.1732	1.01	.Q	.	.	.	V.
24.217	5.1744	0.93	.Q	.	.	.	V.
24.233	5.1756	0.85	Q	.	.	.	V.
24.250	5.1767	0.78	Q	.	.	.	V.
24.267	5.1776	0.70	Q	.	.	.	V.
24.283	5.1785	0.62	Q	.	.	.	V.
24.300	5.1792	0.54	Q	.	.	.	V.
24.317	5.1799	0.46	Q	.	.	.	V.
24.333	5.1804	0.38	Q	.	.	.	V.
24.350	5.1808	0.30	Q	.	.	.	V.
24.367	5.1811	0.22	Q	.	.	.	V.
24.383	5.1813	0.15	Q	.	.	.	V.
24.400	5.1814	0.07	Q	.	.	.	V.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1464.0
10%	950.0
20%	305.0
30%	195.0
40%	125.0
50%	105.0
60%	80.0
70%	65.0
80%	45.0
90%	20.0

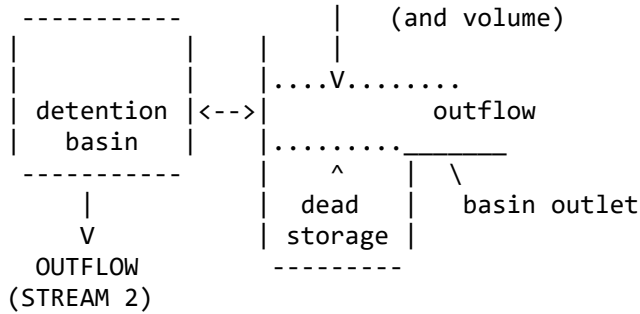
FLOW PROCESS FROM NODE 201.00 TO NODE 201.00 IS CODE = 3.2

 >>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
 =====

INFLOW
(STREAM 2)

|
|
V

__effective depth



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
 THROUGH A FLOW-THROUGH DETENTION BASIN
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE(AF) = 0.000
 SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
 SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
 DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	3.00	0.19	0.623
3	4.00	0.21	0.904
4	5.00	3.80	1.221
5	6.00	24.25	1.570
6	7.00	41.26	1.958

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MODIFIED-PULS BASIN ROUTING MODEL RESULTS(1-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
 MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH(FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME(AF)
10.000	0.000	1.88	0.00	4.25	1.1	0.984
10.017	0.000	1.88	0.00	4.26	1.1	0.985
10.033	0.000	1.88	0.00	4.26	1.1	0.986
10.050	0.000	1.89	0.00	4.26	1.1	0.987
10.067	0.000	1.89	0.00	4.27	1.2	0.988
10.083	0.000	1.90	0.00	4.27	1.2	0.989
10.100	0.000	1.90	0.00	4.27	1.2	0.990
10.117	0.000	1.90	0.00	4.28	1.2	0.991
10.133	0.000	1.91	0.00	4.28	1.2	0.992
10.150	0.000	1.91	0.00	4.28	1.2	0.993
10.167	0.000	1.91	0.00	4.28	1.2	0.994
10.183	0.000	1.92	0.00	4.29	1.2	0.995

10.200	0.000	1.92	0.00	4.29	1.2	0.996
10.217	0.000	1.92	0.00	4.29	1.3	0.997
10.233	0.000	1.92	0.00	4.30	1.3	0.998
10.250	0.000	1.93	0.00	4.30	1.3	0.999
10.267	0.000	1.93	0.00	4.30	1.3	1.000
10.283	0.000	1.93	0.00	4.30	1.3	1.001
10.300	0.000	1.93	0.00	4.31	1.3	1.001
10.317	0.000	1.93	0.00	4.31	1.3	1.002
10.333	0.000	1.94	0.00	4.31	1.3	1.003
10.350	0.000	1.94	0.00	4.32	1.3	1.004
10.367	0.000	1.94	0.00	4.32	1.3	1.005
10.383	0.000	1.94	0.00	4.32	1.4	1.006
10.400	0.000	1.94	0.00	4.32	1.4	1.006
10.417	0.000	1.95	0.00	4.33	1.4	1.007
10.433	0.000	1.95	0.00	4.33	1.4	1.008
10.450	0.000	1.96	0.00	4.33	1.4	1.009
10.467	0.000	1.96	0.00	4.33	1.4	1.010
10.483	0.000	1.97	0.00	4.34	1.4	1.010
10.500	0.000	1.97	0.00	4.34	1.4	1.011
10.517	0.000	1.97	0.00	4.34	1.4	1.012
10.533	0.000	1.98	0.00	4.34	1.4	1.013
10.550	0.000	1.98	0.00	4.34	1.4	1.013
10.567	0.000	1.99	0.00	4.35	1.5	1.014
10.583	0.000	1.99	0.00	4.35	1.5	1.015
10.600	0.000	2.00	0.00	4.35	1.5	1.016
10.617	0.000	2.00	0.00	4.35	1.5	1.016
10.633	0.000	2.00	0.00	4.36	1.5	1.017
10.650	0.000	2.01	0.00	4.36	1.5	1.018
10.667	0.000	2.01	0.00	4.36	1.5	1.018
10.683	0.000	2.01	0.00	4.36	1.5	1.019
10.700	0.000	2.01	0.00	4.37	1.5	1.020
10.717	0.000	2.02	0.00	4.37	1.5	1.020
10.733	0.000	2.02	0.00	4.37	1.5	1.021
10.750	0.000	2.02	0.00	4.37	1.5	1.022
10.767	0.000	2.02	0.00	4.37	1.5	1.022
10.783	0.000	2.03	0.00	4.38	1.6	1.023
10.800	0.000	2.03	0.00	4.38	1.6	1.024
10.817	0.000	2.03	0.00	4.38	1.6	1.024
10.833	0.000	2.03	0.00	4.38	1.6	1.025
10.850	0.000	2.04	0.00	4.38	1.6	1.026
10.867	0.000	2.04	0.00	4.39	1.6	1.026
10.883	0.000	2.04	0.00	4.39	1.6	1.027
10.900	0.000	2.05	0.00	4.39	1.6	1.027
10.917	0.000	2.05	0.00	4.39	1.6	1.028
10.933	0.000	2.06	0.00	4.39	1.6	1.029
10.950	0.000	2.06	0.00	4.40	1.6	1.029
10.967	0.000	2.07	0.00	4.40	1.6	1.030
10.983	0.000	2.07	0.00	4.40	1.6	1.030
11.000	0.000	2.08	0.00	4.40	1.6	1.031
11.017	0.000	2.08	0.00	4.40	1.7	1.032
11.033	0.000	2.09	0.00	4.40	1.7	1.032
11.050	0.000	2.09	0.00	4.41	1.7	1.033
11.067	0.000	2.10	0.00	4.41	1.7	1.033
11.083	0.000	2.10	0.00	4.41	1.7	1.034
11.100	0.000	2.11	0.00	4.41	1.7	1.035

11.117	0.000	2.11	0.00	4.41	1.7	1.035
11.133	0.000	2.11	0.00	4.42	1.7	1.036
11.150	0.000	2.12	0.00	4.42	1.7	1.036
11.167	0.000	2.12	0.00	4.42	1.7	1.037
11.183	0.000	2.12	0.00	4.42	1.7	1.037
11.200	0.000	2.12	0.00	4.42	1.7	1.038
11.217	0.000	2.13	0.00	4.42	1.7	1.038
11.233	0.000	2.13	0.00	4.43	1.7	1.039
11.250	0.000	2.13	0.00	4.43	1.7	1.040
11.267	0.000	2.13	0.00	4.43	1.7	1.040
11.283	0.000	2.14	0.00	4.43	1.8	1.041
11.300	0.000	2.14	0.00	4.43	1.8	1.041
11.317	0.000	2.14	0.00	4.43	1.8	1.042
11.333	0.000	2.15	0.00	4.44	1.8	1.042
11.350	0.000	2.15	0.00	4.44	1.8	1.043
11.367	0.000	2.16	0.00	4.44	1.8	1.043
11.383	0.000	2.16	0.00	4.44	1.8	1.044
11.400	0.000	2.17	0.00	4.44	1.8	1.044
11.417	0.000	2.17	0.00	4.44	1.8	1.045
11.433	0.000	2.18	0.00	4.45	1.8	1.045
11.450	0.000	2.18	0.00	4.45	1.8	1.046
11.467	0.000	2.19	0.00	4.45	1.8	1.046
11.483	0.000	2.20	0.00	4.45	1.8	1.047
11.500	0.000	2.20	0.00	4.45	1.8	1.047
11.517	0.000	2.21	0.00	4.45	1.8	1.048
11.533	0.000	2.21	0.00	4.46	1.8	1.048
11.550	0.000	2.22	0.00	4.46	1.8	1.049
11.567	0.000	2.23	0.00	4.46	1.9	1.049
11.583	0.000	2.23	0.00	4.46	1.9	1.050
11.600	0.000	2.23	0.00	4.46	1.9	1.050
11.617	0.000	2.24	0.00	4.46	1.9	1.051
11.633	0.000	2.24	0.00	4.46	1.9	1.051
11.650	0.000	2.24	0.00	4.47	1.9	1.052
11.667	0.000	2.24	0.00	4.47	1.9	1.052
11.683	0.000	2.25	0.00	4.47	1.9	1.053
11.700	0.000	2.25	0.00	4.47	1.9	1.053
11.717	0.000	2.25	0.00	4.47	1.9	1.054
11.733	0.000	2.26	0.00	4.47	1.9	1.054
11.750	0.000	2.26	0.00	4.48	1.9	1.055
11.767	0.000	2.26	0.00	4.48	1.9	1.055
11.783	0.000	2.27	0.00	4.48	1.9	1.056
11.800	0.000	2.27	0.00	4.48	1.9	1.056
11.817	0.000	2.28	0.00	4.48	1.9	1.057
11.833	0.000	2.28	0.00	4.48	1.9	1.057
11.850	0.000	2.29	0.00	4.48	1.9	1.058
11.867	0.000	2.30	0.00	4.49	2.0	1.058
11.883	0.000	2.30	0.00	4.49	2.0	1.059
11.900	0.000	2.31	0.00	4.49	2.0	1.059
11.917	0.000	2.32	0.00	4.49	2.0	1.059
11.933	0.000	2.32	0.00	4.49	2.0	1.060
11.950	0.000	2.33	0.00	4.49	2.0	1.060
11.967	0.000	2.34	0.00	4.50	2.0	1.061
11.983	0.000	2.34	0.00	4.50	2.0	1.061
12.000	0.000	2.35	0.00	4.50	2.0	1.062
12.017	0.000	2.36	0.00	4.50	2.0	1.062

12.033	0.000	2.36	0.00	4.50	2.0	1.063
12.050	0.000	2.37	0.00	4.50	2.0	1.063
12.067	0.000	2.38	0.00	4.50	2.0	1.064
12.083	0.000	2.39	0.00	4.51	2.0	1.064
12.100	0.000	2.40	0.00	4.51	2.0	1.065
12.117	0.000	2.41	0.00	4.51	2.0	1.065
12.133	0.000	2.42	0.00	4.51	2.0	1.066
12.150	0.000	2.43	0.00	4.51	2.0	1.066
12.167	0.000	2.44	0.00	4.51	2.1	1.067
12.183	0.000	2.45	0.00	4.52	2.1	1.068
12.200	0.000	2.46	0.00	4.52	2.1	1.068
12.217	0.000	2.47	0.00	4.52	2.1	1.069
12.233	0.000	2.48	0.00	4.52	2.1	1.069
12.250	0.000	2.49	0.00	4.52	2.1	1.070
12.267	0.000	2.50	0.00	4.52	2.1	1.070
12.283	0.000	2.52	0.00	4.53	2.1	1.071
12.300	0.000	2.53	0.00	4.53	2.1	1.072
12.317	0.000	2.54	0.00	4.53	2.1	1.072
12.333	0.000	2.55	0.00	4.53	2.1	1.073
12.350	0.000	2.56	0.00	4.53	2.1	1.073
12.367	0.000	2.57	0.00	4.54	2.1	1.074
12.383	0.000	2.58	0.00	4.54	2.1	1.075
12.400	0.000	2.59	0.00	4.54	2.1	1.075
12.417	0.000	2.60	0.00	4.54	2.2	1.076
12.433	0.000	2.61	0.00	4.54	2.2	1.076
12.450	0.000	2.63	0.00	4.55	2.2	1.077
12.467	0.000	2.64	0.00	4.55	2.2	1.078
12.483	0.000	2.65	0.00	4.55	2.2	1.078
12.500	0.000	2.66	0.00	4.55	2.2	1.079
12.517	0.000	2.67	0.00	4.55	2.2	1.080
12.533	0.000	2.67	0.00	4.56	2.2	1.080
12.550	0.000	2.67	0.00	4.56	2.2	1.081
12.567	0.000	2.68	0.00	4.56	2.2	1.082
12.583	0.000	2.68	0.00	4.56	2.2	1.082
12.600	0.000	2.69	0.00	4.56	2.2	1.083
12.617	0.000	2.69	0.00	4.57	2.2	1.083
12.633	0.000	2.70	0.00	4.57	2.2	1.084
12.650	0.000	2.70	0.00	4.57	2.3	1.085
12.667	0.000	2.71	0.00	4.57	2.3	1.085
12.683	0.000	2.71	0.00	4.57	2.3	1.086
12.700	0.000	2.72	0.00	4.58	2.3	1.086
12.717	0.000	2.72	0.00	4.58	2.3	1.087
12.733	0.000	2.72	0.00	4.58	2.3	1.088
12.750	0.000	2.73	0.00	4.58	2.3	1.088
12.767	0.000	2.74	0.00	4.58	2.3	1.089
12.783	0.000	2.75	0.00	4.59	2.3	1.090
12.800	0.000	2.76	0.00	4.59	2.3	1.090
12.817	0.000	2.77	0.00	4.59	2.3	1.091
12.833	0.000	2.78	0.00	4.59	2.3	1.091
12.850	0.000	2.79	0.00	4.59	2.3	1.092
12.867	0.000	2.80	0.00	4.60	2.3	1.093
12.883	0.000	2.81	0.00	4.60	2.4	1.093
12.900	0.000	2.82	0.00	4.60	2.4	1.094
12.917	0.000	2.83	0.00	4.60	2.4	1.095
12.933	0.000	2.84	0.00	4.60	2.4	1.095

12.950	0.000	2.85	0.00	4.61	2.4	1.096
12.967	0.000	2.86	0.00	4.61	2.4	1.097
12.983	0.000	2.87	0.00	4.61	2.4	1.097
13.000	0.000	2.88	0.00	4.61	2.4	1.098
13.017	0.000	2.88	0.00	4.61	2.4	1.099
13.033	0.000	2.89	0.00	4.62	2.4	1.099
13.050	0.000	2.89	0.00	4.62	2.4	1.100
13.067	0.000	2.90	0.00	4.62	2.4	1.100
13.083	0.000	2.90	0.00	4.62	2.4	1.101
13.100	0.000	2.91	0.00	4.62	2.4	1.102
13.117	0.000	2.92	0.00	4.63	2.5	1.102
13.133	0.000	2.92	0.00	4.63	2.5	1.103
13.150	0.000	2.93	0.00	4.63	2.5	1.104
13.167	0.000	2.93	0.00	4.63	2.5	1.104
13.183	0.000	2.94	0.00	4.63	2.5	1.105
13.200	0.000	2.94	0.00	4.64	2.5	1.106
13.217	0.000	2.95	0.00	4.64	2.5	1.106
13.233	0.000	2.97	0.00	4.64	2.5	1.107
13.250	0.000	2.98	0.00	4.64	2.5	1.107
13.267	0.000	2.99	0.00	4.64	2.5	1.108
13.283	0.000	3.00	0.00	4.65	2.5	1.109
13.300	0.000	3.02	0.00	4.65	2.5	1.109
13.317	0.000	3.03	0.00	4.65	2.5	1.110
13.333	0.000	3.04	0.00	4.65	2.5	1.111
13.350	0.000	3.06	0.00	4.65	2.6	1.111
13.367	0.000	3.07	0.00	4.66	2.6	1.112
13.383	0.000	3.08	0.00	4.66	2.6	1.113
13.400	0.000	3.09	0.00	4.66	2.6	1.114
13.417	0.000	3.11	0.00	4.66	2.6	1.114
13.433	0.000	3.12	0.00	4.67	2.6	1.115
13.450	0.000	3.13	0.00	4.67	2.6	1.116
13.467	0.000	3.14	0.00	4.67	2.6	1.116
13.483	0.000	3.14	0.00	4.67	2.6	1.117
13.500	0.000	3.15	0.00	4.67	2.6	1.118
13.517	0.000	3.16	0.00	4.68	2.6	1.119
13.533	0.000	3.16	0.00	4.68	2.6	1.119
13.550	0.000	3.17	0.00	4.68	2.7	1.120
13.567	0.000	3.18	0.00	4.68	2.7	1.121
13.583	0.000	3.19	0.00	4.69	2.7	1.121
13.600	0.000	3.19	0.00	4.69	2.7	1.122
13.617	0.000	3.20	0.00	4.69	2.7	1.123
13.633	0.000	3.21	0.00	4.69	2.7	1.124
13.650	0.000	3.22	0.00	4.69	2.7	1.124
13.667	0.000	3.22	0.00	4.70	2.7	1.125
13.683	0.000	3.24	0.00	4.70	2.7	1.126
13.700	0.000	3.25	0.00	4.70	2.7	1.126
13.717	0.000	3.27	0.00	4.70	2.7	1.127
13.733	0.000	3.29	0.00	4.71	2.7	1.128
13.750	0.000	3.30	0.00	4.71	2.8	1.129
13.767	0.000	3.32	0.00	4.71	2.8	1.129
13.783	0.000	3.34	0.00	4.71	2.8	1.130
13.800	0.000	3.35	0.00	4.72	2.8	1.131
13.817	0.000	3.37	0.00	4.72	2.8	1.132
13.833	0.000	3.39	0.00	4.72	2.8	1.133
13.850	0.000	3.40	0.00	4.72	2.8	1.133

13.867	0.000	3.42	0.00	4.73	2.8	1.134
13.883	0.000	3.44	0.00	4.73	2.8	1.135
13.900	0.000	3.45	0.00	4.73	2.8	1.136
13.917	0.000	3.46	0.00	4.73	2.8	1.137
13.933	0.000	3.47	0.00	4.74	2.9	1.138
13.950	0.000	3.48	0.00	4.74	2.9	1.139
13.967	0.000	3.49	0.00	4.74	2.9	1.139
13.983	0.000	3.50	0.00	4.75	2.9	1.140
14.000	0.000	3.51	0.00	4.75	2.9	1.141
14.017	0.000	3.52	0.00	4.75	2.9	1.142
14.033	0.000	3.53	0.00	4.75	2.9	1.143
14.050	0.000	3.54	0.00	4.76	2.9	1.144
14.067	0.000	3.55	0.00	4.76	2.9	1.145
14.083	0.000	3.56	0.00	4.76	2.9	1.145
14.100	0.000	3.57	0.00	4.76	2.9	1.146
14.117	0.000	3.58	0.00	4.77	3.0	1.147
14.133	0.000	3.59	0.00	4.77	3.0	1.148
14.150	0.000	3.61	0.00	4.77	3.0	1.149
14.167	0.000	3.63	0.00	4.78	3.0	1.150
14.183	0.000	3.65	0.00	4.78	3.0	1.151
14.200	0.000	3.67	0.00	4.78	3.0	1.152
14.217	0.000	3.70	0.00	4.78	3.0	1.153
14.233	0.000	3.72	0.00	4.79	3.0	1.153
14.250	0.000	3.74	0.00	4.79	3.0	1.154
14.267	0.000	3.76	0.00	4.79	3.1	1.155
14.283	0.000	3.78	0.00	4.80	3.1	1.156
14.300	0.000	3.81	0.00	4.80	3.1	1.157
14.317	0.000	3.83	0.00	4.80	3.1	1.158
14.333	0.000	3.85	0.00	4.81	3.1	1.159
14.350	0.000	3.87	0.00	4.81	3.1	1.161
14.367	0.000	3.89	0.00	4.81	3.1	1.162
14.383	0.000	3.91	0.00	4.82	3.1	1.163
14.400	0.000	3.93	0.00	4.82	3.1	1.164
14.417	0.000	3.94	0.00	4.82	3.2	1.165
14.433	0.000	3.95	0.00	4.83	3.2	1.166
14.450	0.000	3.97	0.00	4.83	3.2	1.167
14.467	0.000	3.98	0.00	4.83	3.2	1.168
14.483	0.000	4.00	0.00	4.84	3.2	1.169
14.500	0.000	4.01	0.00	4.84	3.2	1.170
14.517	0.000	4.03	0.00	4.84	3.2	1.171
14.533	0.000	4.04	0.00	4.85	3.2	1.172
14.550	0.000	4.05	0.00	4.85	3.3	1.174
14.567	0.000	4.07	0.00	4.85	3.3	1.175
14.583	0.000	4.08	0.00	4.86	3.3	1.176
14.600	0.000	4.10	0.00	4.86	3.3	1.177
14.617	0.000	4.12	0.00	4.86	3.3	1.178
14.633	0.000	4.16	0.00	4.87	3.3	1.179
14.650	0.000	4.19	0.00	4.87	3.3	1.180
14.667	0.000	4.23	0.00	4.88	3.3	1.182
14.683	0.000	4.27	0.00	4.88	3.4	1.183
14.700	0.000	4.30	0.00	4.88	3.4	1.184
14.717	0.000	4.34	0.00	4.89	3.4	1.185
14.733	0.000	4.37	0.00	4.89	3.4	1.187
14.750	0.000	4.41	0.00	4.90	3.4	1.188
14.767	0.000	4.44	0.00	4.90	3.4	1.189

14.783	0.000	4.48	0.00	4.90	3.5	1.191
14.800	0.000	4.52	0.00	4.91	3.5	1.192
14.817	0.000	4.55	0.00	4.91	3.5	1.194
14.833	0.000	4.59	0.00	4.92	3.5	1.195
14.850	0.000	4.62	0.00	4.92	3.5	1.197
14.867	0.000	4.64	0.00	4.93	3.5	1.198
14.883	0.000	4.66	0.00	4.93	3.6	1.200
14.900	0.000	4.69	0.00	4.94	3.6	1.201
14.917	0.000	4.71	0.00	4.94	3.6	1.203
14.933	0.000	4.73	0.00	4.95	3.6	1.204
14.950	0.000	4.76	0.00	4.95	3.6	1.206
14.967	0.000	4.78	0.00	4.96	3.6	1.208
14.983	0.000	4.80	0.00	4.96	3.7	1.209
15.000	0.000	4.82	0.00	4.97	3.7	1.211
15.017	0.000	4.85	0.00	4.97	3.7	1.212
15.033	0.000	4.87	0.00	4.98	3.7	1.214
15.050	0.000	4.89	0.00	4.98	3.7	1.216
15.067	0.000	4.92	0.00	4.99	3.7	1.217
15.083	0.000	4.96	0.00	4.99	3.8	1.219
15.100	0.000	5.03	0.00	5.00	3.8	1.221
15.117	0.000	5.09	0.00	5.00	3.8	1.222
15.133	0.000	5.16	0.00	5.01	3.9	1.224
15.150	0.000	5.22	0.00	5.01	4.0	1.226
15.167	0.000	5.29	0.00	5.02	4.1	1.227
15.183	0.000	5.35	0.00	5.02	4.2	1.229
15.200	0.000	5.42	0.00	5.03	4.3	1.230
15.217	0.000	5.48	0.00	5.03	4.4	1.232
15.233	0.000	5.55	0.00	5.04	4.5	1.233
15.250	0.000	5.61	0.00	5.04	4.6	1.235
15.267	0.000	5.68	0.00	5.04	4.6	1.236
15.283	0.000	5.74	0.00	5.05	4.7	1.238
15.300	0.000	5.81	0.00	5.05	4.8	1.239
15.317	0.000	5.87	0.00	5.06	4.9	1.240
15.333	0.000	5.95	0.00	5.06	5.0	1.242
15.350	0.000	6.02	0.00	5.06	5.0	1.243
15.367	0.000	6.09	0.00	5.07	5.1	1.244
15.383	0.000	6.16	0.00	5.07	5.2	1.246
15.400	0.000	6.23	0.00	5.07	5.3	1.247
15.417	0.000	6.30	0.00	5.08	5.4	1.248
15.433	0.000	6.37	0.00	5.08	5.4	1.250
15.450	0.000	6.44	0.00	5.09	5.5	1.251
15.467	0.000	6.51	0.00	5.09	5.6	1.252
15.483	0.000	6.58	0.00	5.09	5.7	1.253
15.500	0.000	6.65	0.00	5.10	5.7	1.255
15.517	0.000	6.72	0.00	5.10	5.8	1.256
15.533	0.000	6.80	0.00	5.10	5.9	1.257
15.550	0.000	6.96	0.00	5.11	6.0	1.259
15.567	0.000	7.21	0.00	5.11	6.0	1.260
15.583	0.000	7.45	0.00	5.12	6.1	1.262
15.600	0.000	7.70	0.00	5.12	6.3	1.264
15.617	0.000	7.95	0.00	5.13	6.4	1.266
15.633	0.000	8.20	0.00	5.14	6.5	1.268
15.650	0.000	8.45	0.00	5.14	6.7	1.271
15.667	0.000	8.69	0.00	5.15	6.8	1.273
15.683	0.000	8.94	0.00	5.16	7.0	1.276

15.700	0.000	9.19	0.00	5.17	7.1	1.279
15.717	0.000	9.44	0.00	5.17	7.3	1.282
15.733	0.000	9.69	0.00	5.18	7.5	1.285
15.750	0.000	9.93	0.00	5.19	7.6	1.288
15.767	0.000	10.18	0.00	5.20	7.8	1.291
15.783	0.000	10.44	0.00	5.21	8.0	1.295
15.800	0.000	10.72	0.00	5.22	8.2	1.298
15.817	0.000	10.99	0.00	5.23	8.4	1.302
15.833	0.000	11.26	0.00	5.24	8.6	1.305
15.850	0.000	11.53	0.00	5.25	8.9	1.309
15.867	0.000	11.81	0.00	5.26	9.1	1.313
15.883	0.000	12.08	0.00	5.27	9.3	1.317
15.900	0.000	12.35	0.00	5.29	9.5	1.321
15.917	0.000	12.62	0.00	5.30	9.8	1.325
15.933	0.000	12.90	0.00	5.31	10.0	1.329
15.950	0.000	13.17	0.00	5.32	10.2	1.333
15.967	0.000	13.44	0.00	5.33	10.5	1.337
15.983	0.000	13.72	0.00	5.34	10.7	1.341
16.000	0.000	13.99	0.00	5.36	10.9	1.345
16.017	0.000	14.90	0.00	5.37	11.2	1.350
16.033	0.000	16.44	0.00	5.39	11.6	1.357
16.050	0.000	17.98	0.00	5.41	12.0	1.365
16.067	0.000	19.53	0.00	5.44	12.5	1.375
16.083	0.000	21.07	0.00	5.47	13.1	1.386
16.100	0.000	22.61	0.00	5.51	13.8	1.398
16.117	0.000	24.16	0.00	5.54	14.5	1.411
16.133	0.000	25.70	0.00	5.59	15.4	1.425
16.150	0.000	27.24	0.00	5.63	16.2	1.440
16.167	0.000	28.79	0.00	5.67	17.1	1.457
16.183	0.000	30.33	0.00	5.72	18.1	1.473
16.200	0.000	31.88	0.00	5.77	19.1	1.491
16.217	0.000	33.42	0.00	5.83	20.2	1.509
16.233	0.000	35.75	0.00	5.88	21.3	1.529
16.250	0.000	34.80	0.00	5.93	22.4	1.546
16.267	0.000	32.86	0.00	5.97	23.3	1.560
16.283	0.000	30.92	0.00	6.00	23.9	1.569
16.300	0.000	28.98	0.00	6.01	24.3	1.576
16.317	0.000	27.04	0.00	6.02	24.6	1.579
16.333	0.000	25.11	0.00	6.02	24.7	1.580
16.350	0.000	23.17	0.00	6.02	24.6	1.578
16.367	0.000	21.23	0.00	6.01	24.5	1.573
16.383	0.000	19.29	0.00	5.99	24.2	1.566
16.400	0.000	17.35	0.00	5.96	23.8	1.557
16.417	0.000	15.41	0.00	5.93	23.2	1.547
16.433	0.000	13.47	0.00	5.90	22.5	1.534
16.450	0.000	11.53	0.00	5.86	21.7	1.520
16.467	0.000	9.60	0.00	5.81	20.9	1.505
16.483	0.000	8.48	0.00	5.77	20.0	1.489
16.500	0.000	8.24	0.00	5.72	19.1	1.474
16.517	0.000	8.01	0.00	5.68	18.2	1.460
16.533	0.000	7.78	0.00	5.65	17.4	1.447
16.550	0.000	7.55	0.00	5.61	16.7	1.434
16.567	0.000	7.31	0.00	5.58	15.9	1.422
16.583	0.000	7.08	0.00	5.54	15.3	1.411
16.600	0.000	6.85	0.00	5.51	14.6	1.400

16.617	0.000	6.61	0.00	5.48	14.0	1.390
16.633	0.000	6.38	0.00	5.46	13.4	1.380
16.650	0.000	6.15	0.00	5.43	12.9	1.371
16.667	0.000	5.92	0.00	5.40	12.3	1.362
16.683	0.000	5.68	0.00	5.38	11.8	1.354
16.700	0.000	5.45	0.00	5.36	11.3	1.346
16.717	0.000	5.30	0.00	5.34	10.9	1.338
16.733	0.000	5.22	0.00	5.31	10.4	1.331
16.750	0.000	5.15	0.00	5.30	10.0	1.324
16.767	0.000	5.08	0.00	5.28	9.7	1.318
16.783	0.000	5.01	0.00	5.26	9.3	1.312
16.800	0.000	4.94	0.00	5.24	9.0	1.306
16.817	0.000	4.87	0.00	5.23	8.6	1.301
16.833	0.000	4.80	0.00	5.22	8.4	1.296
16.850	0.000	4.73	0.00	5.20	8.1	1.292
16.867	0.000	4.66	0.00	5.19	7.8	1.287
16.883	0.000	4.58	0.00	5.18	7.6	1.283
16.900	0.000	4.51	0.00	5.17	7.3	1.279
16.917	0.000	4.44	0.00	5.16	7.1	1.276
16.933	0.000	4.37	0.00	5.15	6.9	1.272
16.950	0.000	4.31	0.00	5.14	6.7	1.269
16.967	0.000	4.27	0.00	5.13	6.5	1.266
16.983	0.000	4.23	0.00	5.12	6.3	1.263
17.000	0.000	4.18	0.00	5.11	6.2	1.260
17.017	0.000	4.14	0.00	5.10	6.0	1.258
17.033	0.000	4.10	0.00	5.10	5.9	1.255
17.050	0.000	4.06	0.00	5.09	5.7	1.253
17.067	0.000	4.01	0.00	5.08	5.6	1.251
17.083	0.000	3.97	0.00	5.08	5.5	1.249
17.100	0.000	3.93	0.00	5.07	5.4	1.247
17.117	0.000	3.89	0.00	5.07	5.2	1.245
17.133	0.000	3.84	0.00	5.06	5.1	1.243
17.150	0.000	3.80	0.00	5.06	5.0	1.241
17.167	0.000	3.76	0.00	5.05	4.9	1.240
17.183	0.000	3.72	0.00	5.05	4.8	1.238
17.200	0.000	3.69	0.00	5.04	4.8	1.237
17.217	0.000	3.66	0.00	5.04	4.7	1.235
17.233	0.000	3.64	0.00	5.04	4.6	1.234
17.250	0.000	3.61	0.00	5.03	4.5	1.233
17.267	0.000	3.58	0.00	5.03	4.4	1.231
17.283	0.000	3.55	0.00	5.03	4.4	1.230
17.300	0.000	3.52	0.00	5.02	4.3	1.229
17.317	0.000	3.49	0.00	5.02	4.2	1.228
17.333	0.000	3.47	0.00	5.02	4.2	1.227
17.350	0.000	3.44	0.00	5.01	4.1	1.226
17.367	0.000	3.41	0.00	5.01	4.1	1.225
17.383	0.000	3.38	0.00	5.01	4.0	1.224
17.400	0.000	3.35	0.00	5.01	4.0	1.224
17.417	0.000	3.33	0.00	5.00	3.9	1.223
17.433	0.000	3.30	0.00	5.00	3.9	1.222
17.450	0.000	3.28	0.00	5.00	3.8	1.221
17.467	0.000	3.26	0.00	5.00	3.8	1.220
17.483	0.000	3.24	0.00	5.00	3.8	1.220
17.500	0.000	3.22	0.00	4.99	3.8	1.219
17.517	0.000	3.20	0.00	4.99	3.8	1.218

17.533	0.000	3.17	0.00	4.99	3.8	1.217
17.550	0.000	3.15	0.00	4.99	3.8	1.216
17.567	0.000	3.13	0.00	4.98	3.7	1.216
17.583	0.000	3.11	0.00	4.98	3.7	1.215
17.600	0.000	3.09	0.00	4.98	3.7	1.214
17.617	0.000	3.07	0.00	4.97	3.7	1.213
17.633	0.000	3.04	0.00	4.97	3.7	1.212
17.650	0.000	3.02	0.00	4.97	3.7	1.211
17.667	0.000	3.01	0.00	4.97	3.7	1.210
17.683	0.000	2.99	0.00	4.96	3.7	1.209
17.700	0.000	2.97	0.00	4.96	3.7	1.208
17.717	0.000	2.96	0.00	4.96	3.7	1.207
17.733	0.000	2.94	0.00	4.95	3.6	1.206
17.750	0.000	2.92	0.00	4.95	3.6	1.205
17.767	0.000	2.91	0.00	4.95	3.6	1.204
17.783	0.000	2.89	0.00	4.94	3.6	1.203
17.800	0.000	2.87	0.00	4.94	3.6	1.202
17.817	0.000	2.85	0.00	4.94	3.6	1.201
17.833	0.000	2.84	0.00	4.94	3.6	1.200
17.850	0.000	2.82	0.00	4.93	3.6	1.199
17.867	0.000	2.80	0.00	4.93	3.5	1.198
17.883	0.000	2.79	0.00	4.93	3.5	1.197
17.900	0.000	2.77	0.00	4.92	3.5	1.196
17.917	0.000	2.76	0.00	4.92	3.5	1.195
17.933	0.000	2.75	0.00	4.92	3.5	1.194
17.950	0.000	2.73	0.00	4.91	3.5	1.193
17.967	0.000	2.72	0.00	4.91	3.5	1.192
17.983	0.000	2.71	0.00	4.91	3.5	1.191
18.000	0.000	2.69	0.00	4.90	3.5	1.190
18.017	0.000	2.68	0.00	4.90	3.4	1.189
18.033	0.000	2.67	0.00	4.90	3.4	1.188
18.050	0.000	2.65	0.00	4.89	3.4	1.187
18.067	0.000	2.64	0.00	4.89	3.4	1.186
18.083	0.000	2.62	0.00	4.89	3.4	1.185
18.100	0.000	2.61	0.00	4.88	3.4	1.184
18.117	0.000	2.59	0.00	4.88	3.4	1.183
18.133	0.000	2.57	0.00	4.88	3.4	1.182
18.150	0.000	2.55	0.00	4.87	3.3	1.180
18.167	0.000	2.53	0.00	4.87	3.3	1.179
18.183	0.000	2.51	0.00	4.87	3.3	1.178
18.200	0.000	2.49	0.00	4.86	3.3	1.177
18.217	0.000	2.47	0.00	4.86	3.3	1.176
18.233	0.000	2.45	0.00	4.85	3.3	1.175
18.250	0.000	2.43	0.00	4.85	3.3	1.174
18.267	0.000	2.41	0.00	4.85	3.3	1.173
18.283	0.000	2.39	0.00	4.84	3.2	1.171
18.300	0.000	2.37	0.00	4.84	3.2	1.170
18.317	0.000	2.35	0.00	4.84	3.2	1.169
18.333	0.000	2.33	0.00	4.83	3.2	1.168
18.350	0.000	2.31	0.00	4.83	3.2	1.167
18.367	0.000	2.30	0.00	4.82	3.2	1.165
18.383	0.000	2.29	0.00	4.82	3.2	1.164
18.400	0.000	2.29	0.00	4.82	3.1	1.163
18.417	0.000	2.28	0.00	4.81	3.1	1.162
18.433	0.000	2.27	0.00	4.81	3.1	1.161

18.450	0.000	2.26	0.00	4.81	3.1	1.159
18.467	0.000	2.25	0.00	4.80	3.1	1.158
18.483	0.000	2.24	0.00	4.80	3.1	1.157
18.500	0.000	2.23	0.00	4.79	3.1	1.156
18.517	0.000	2.22	0.00	4.79	3.1	1.155
18.533	0.000	2.21	0.00	4.79	3.0	1.154
18.550	0.000	2.20	0.00	4.78	3.0	1.152
18.567	0.000	2.19	0.00	4.78	3.0	1.151
18.583	0.000	2.18	0.00	4.78	3.0	1.150
18.600	0.000	2.17	0.00	4.77	3.0	1.149
18.617	0.000	2.17	0.00	4.77	3.0	1.148
18.633	0.000	2.16	0.00	4.77	3.0	1.147
18.650	0.000	2.15	0.00	4.76	3.0	1.146
18.667	0.000	2.14	0.00	4.76	2.9	1.145
18.683	0.000	2.13	0.00	4.76	2.9	1.144
18.700	0.000	2.13	0.00	4.75	2.9	1.142
18.717	0.000	2.12	0.00	4.75	2.9	1.141
18.733	0.000	2.11	0.00	4.75	2.9	1.140
18.750	0.000	2.10	0.00	4.74	2.9	1.139
18.767	0.000	2.09	0.00	4.74	2.9	1.138
18.783	0.000	2.09	0.00	4.74	2.9	1.137
18.800	0.000	2.08	0.00	4.73	2.8	1.136
18.817	0.000	2.07	0.00	4.73	2.8	1.135
18.833	0.000	2.06	0.00	4.73	2.8	1.134
18.850	0.000	2.06	0.00	4.72	2.8	1.133
18.867	0.000	2.05	0.00	4.72	2.8	1.132
18.883	0.000	2.04	0.00	4.72	2.8	1.131
18.900	0.000	2.03	0.00	4.71	2.8	1.130
18.917	0.000	2.03	0.00	4.71	2.8	1.129
18.933	0.000	2.02	0.00	4.71	2.8	1.128
18.950	0.000	2.01	0.00	4.70	2.7	1.127
18.967	0.000	2.01	0.00	4.70	2.7	1.126
18.983	0.000	2.00	0.00	4.70	2.7	1.125
19.000	0.000	1.99	0.00	4.69	2.7	1.124
19.017	0.000	1.99	0.00	4.69	2.7	1.123
19.033	0.000	1.98	0.00	4.69	2.7	1.122
19.050	0.000	1.97	0.00	4.68	2.7	1.121
19.067	0.000	1.97	0.00	4.68	2.7	1.120
19.083	0.000	1.96	0.00	4.68	2.7	1.119
19.100	0.000	1.95	0.00	4.68	2.6	1.118
19.117	0.000	1.95	0.00	4.67	2.6	1.117
19.133	0.000	1.94	0.00	4.67	2.6	1.116
19.150	0.000	1.94	0.00	4.67	2.6	1.115
19.167	0.000	1.93	0.00	4.66	2.6	1.114
19.183	0.000	1.92	0.00	4.66	2.6	1.113
19.200	0.000	1.92	0.00	4.66	2.6	1.113
19.217	0.000	1.91	0.00	4.66	2.6	1.112
19.233	0.000	1.90	0.00	4.65	2.6	1.111
19.250	0.000	1.90	0.00	4.65	2.5	1.110
19.267	0.000	1.89	0.00	4.65	2.5	1.109
19.283	0.000	1.89	0.00	4.64	2.5	1.108
19.300	0.000	1.88	0.00	4.64	2.5	1.107
19.317	0.000	1.88	0.00	4.64	2.5	1.106
19.333	0.000	1.87	0.00	4.64	2.5	1.105
19.350	0.000	1.86	0.00	4.63	2.5	1.105

19.367	0.000	1.86	0.00	4.63	2.5	1.104
19.383	0.000	1.85	0.00	4.63	2.5	1.103
19.400	0.000	1.85	0.00	4.62	2.5	1.102
19.417	0.000	1.84	0.00	4.62	2.4	1.101
19.433	0.000	1.84	0.00	4.62	2.4	1.100
19.450	0.000	1.83	0.00	4.62	2.4	1.100
19.467	0.000	1.83	0.00	4.61	2.4	1.099
19.483	0.000	1.82	0.00	4.61	2.4	1.098
19.500	0.000	1.82	0.00	4.61	2.4	1.097
19.517	0.000	1.81	0.00	4.61	2.4	1.096
19.533	0.000	1.81	0.00	4.60	2.4	1.096
19.550	0.000	1.80	0.00	4.60	2.4	1.095
19.567	0.000	1.80	0.00	4.60	2.4	1.094
19.583	0.000	1.79	0.00	4.60	2.4	1.093
19.600	0.000	1.79	0.00	4.59	2.3	1.092
19.617	0.000	1.78	0.00	4.59	2.3	1.092
19.633	0.000	1.78	0.00	4.59	2.3	1.091
19.650	0.000	1.77	0.00	4.59	2.3	1.090
19.667	0.000	1.77	0.00	4.58	2.3	1.089
19.683	0.000	1.76	0.00	4.58	2.3	1.089
19.700	0.000	1.76	0.00	4.58	2.3	1.088
19.717	0.000	1.75	0.00	4.58	2.3	1.087
19.733	0.000	1.75	0.00	4.58	2.3	1.086
19.750	0.000	1.74	0.00	4.57	2.3	1.086
19.767	0.000	1.74	0.00	4.57	2.3	1.085
19.783	0.000	1.73	0.00	4.57	2.3	1.084
19.800	0.000	1.73	0.00	4.57	2.2	1.084
19.817	0.000	1.72	0.00	4.56	2.2	1.083
19.833	0.000	1.72	0.00	4.56	2.2	1.082
19.850	0.000	1.72	0.00	4.56	2.2	1.081
19.867	0.000	1.71	0.00	4.56	2.2	1.081
19.883	0.000	1.71	0.00	4.56	2.2	1.080
19.900	0.000	1.70	0.00	4.55	2.2	1.079
19.917	0.000	1.70	0.00	4.55	2.2	1.079
19.933	0.000	1.69	0.00	4.55	2.2	1.078
19.950	0.000	1.69	0.00	4.55	2.2	1.077
19.967	0.000	1.68	0.00	4.54	2.2	1.077
19.983	0.000	1.68	0.00	4.54	2.2	1.076
20.000	0.000	1.68	0.00	4.54	2.2	1.075
20.017	0.000	1.67	0.00	4.54	2.1	1.075
20.033	0.000	1.67	0.00	4.54	2.1	1.074
20.050	0.000	1.66	0.00	4.53	2.1	1.073
20.067	0.000	1.66	0.00	4.53	2.1	1.073
20.083	0.000	1.66	0.00	4.53	2.1	1.072
20.100	0.000	1.65	0.00	4.53	2.1	1.071
20.117	0.000	1.65	0.00	4.53	2.1	1.071
20.133	0.000	1.64	0.00	4.52	2.1	1.070
20.150	0.000	1.64	0.00	4.52	2.1	1.070
20.167	0.000	1.64	0.00	4.52	2.1	1.069
20.183	0.000	1.63	0.00	4.52	2.1	1.068
20.200	0.000	1.63	0.00	4.52	2.1	1.068
20.217	0.000	1.62	0.00	4.51	2.1	1.067
20.233	0.000	1.62	0.00	4.51	2.1	1.067
20.250	0.000	1.62	0.00	4.51	2.0	1.066
20.267	0.000	1.61	0.00	4.51	2.0	1.065

20.283	0.000	1.61	0.00	4.51	2.0	1.065
20.300	0.000	1.61	0.00	4.51	2.0	1.064
20.317	0.000	1.60	0.00	4.50	2.0	1.064
20.333	0.000	1.60	0.00	4.50	2.0	1.063
20.350	0.000	1.59	0.00	4.50	2.0	1.063
20.367	0.000	1.59	0.00	4.50	2.0	1.062
20.383	0.000	1.59	0.00	4.50	2.0	1.061
20.400	0.000	1.58	0.00	4.49	2.0	1.061
20.417	0.000	1.58	0.00	4.49	2.0	1.060
20.433	0.000	1.58	0.00	4.49	2.0	1.060
20.450	0.000	1.57	0.00	4.49	2.0	1.059
20.467	0.000	1.57	0.00	4.49	2.0	1.059
20.483	0.000	1.57	0.00	4.49	2.0	1.058
20.500	0.000	1.56	0.00	4.48	2.0	1.058
20.517	0.000	1.56	0.00	4.48	1.9	1.057
20.533	0.000	1.56	0.00	4.48	1.9	1.056
20.550	0.000	1.55	0.00	4.48	1.9	1.056
20.567	0.000	1.55	0.00	4.48	1.9	1.055
20.583	0.000	1.55	0.00	4.48	1.9	1.055
20.600	0.000	1.54	0.00	4.47	1.9	1.054
20.617	0.000	1.54	0.00	4.47	1.9	1.054
20.633	0.000	1.54	0.00	4.47	1.9	1.053
20.650	0.000	1.53	0.00	4.47	1.9	1.053
20.667	0.000	1.53	0.00	4.47	1.9	1.052
20.683	0.000	1.53	0.00	4.47	1.9	1.052
20.700	0.000	1.52	0.00	4.46	1.9	1.051
20.717	0.000	1.52	0.00	4.46	1.9	1.051
20.733	0.000	1.52	0.00	4.46	1.9	1.050
20.750	0.000	1.51	0.00	4.46	1.9	1.050
20.767	0.000	1.51	0.00	4.46	1.9	1.049
20.783	0.000	1.51	0.00	4.46	1.9	1.049
20.800	0.000	1.50	0.00	4.46	1.8	1.048
20.817	0.000	1.50	0.00	4.45	1.8	1.048
20.833	0.000	1.50	0.00	4.45	1.8	1.048
20.850	0.000	1.50	0.00	4.45	1.8	1.047
20.867	0.000	1.49	0.00	4.45	1.8	1.047
20.883	0.000	1.49	0.00	4.45	1.8	1.046
20.900	0.000	1.49	0.00	4.45	1.8	1.046
20.917	0.000	1.48	0.00	4.45	1.8	1.045
20.933	0.000	1.48	0.00	4.44	1.8	1.045
20.950	0.000	1.48	0.00	4.44	1.8	1.044
20.967	0.000	1.47	0.00	4.44	1.8	1.044
20.983	0.000	1.47	0.00	4.44	1.8	1.043
21.000	0.000	1.47	0.00	4.44	1.8	1.043
21.017	0.000	1.47	0.00	4.44	1.8	1.043
21.033	0.000	1.46	0.00	4.44	1.8	1.042
21.050	0.000	1.46	0.00	4.43	1.8	1.042
21.067	0.000	1.46	0.00	4.43	1.8	1.041
21.083	0.000	1.45	0.00	4.43	1.8	1.041
21.100	0.000	1.45	0.00	4.43	1.8	1.040
21.117	0.000	1.45	0.00	4.43	1.8	1.040
21.133	0.000	1.45	0.00	4.43	1.7	1.040
21.150	0.000	1.44	0.00	4.43	1.7	1.039
21.167	0.000	1.44	0.00	4.43	1.7	1.039
21.183	0.000	1.44	0.00	4.42	1.7	1.038

21.200	0.000	1.44	0.00	4.42	1.7	1.038
21.217	0.000	1.43	0.00	4.42	1.7	1.038
21.233	0.000	1.43	0.00	4.42	1.7	1.037
21.250	0.000	1.43	0.00	4.42	1.7	1.037
21.267	0.000	1.42	0.00	4.42	1.7	1.036
21.283	0.000	1.42	0.00	4.42	1.7	1.036
21.300	0.000	1.42	0.00	4.42	1.7	1.036
21.317	0.000	1.42	0.00	4.41	1.7	1.035
21.333	0.000	1.41	0.00	4.41	1.7	1.035
21.350	0.000	1.41	0.00	4.41	1.7	1.034
21.367	0.000	1.41	0.00	4.41	1.7	1.034
21.383	0.000	1.41	0.00	4.41	1.7	1.034
21.400	0.000	1.40	0.00	4.41	1.7	1.033
21.417	0.000	1.40	0.00	4.41	1.7	1.033
21.433	0.000	1.40	0.00	4.41	1.7	1.033
21.450	0.000	1.40	0.00	4.40	1.7	1.032
21.467	0.000	1.39	0.00	4.40	1.7	1.032
21.483	0.000	1.39	0.00	4.40	1.7	1.031
21.500	0.000	1.39	0.00	4.40	1.7	1.031
21.517	0.000	1.39	0.00	4.40	1.6	1.031
21.533	0.000	1.38	0.00	4.40	1.6	1.030
21.550	0.000	1.38	0.00	4.40	1.6	1.030
21.567	0.000	1.38	0.00	4.40	1.6	1.030
21.583	0.000	1.38	0.00	4.40	1.6	1.029
21.600	0.000	1.37	0.00	4.39	1.6	1.029
21.617	0.000	1.37	0.00	4.39	1.6	1.029
21.633	0.000	1.37	0.00	4.39	1.6	1.028
21.650	0.000	1.37	0.00	4.39	1.6	1.028
21.667	0.000	1.36	0.00	4.39	1.6	1.028
21.683	0.000	1.36	0.00	4.39	1.6	1.027
21.700	0.000	1.36	0.00	4.39	1.6	1.027
21.717	0.000	1.36	0.00	4.39	1.6	1.027
21.733	0.000	1.36	0.00	4.39	1.6	1.026
21.750	0.000	1.35	0.00	4.38	1.6	1.026
21.767	0.000	1.35	0.00	4.38	1.6	1.026
21.783	0.000	1.35	0.00	4.38	1.6	1.025
21.800	0.000	1.35	0.00	4.38	1.6	1.025
21.817	0.000	1.34	0.00	4.38	1.6	1.025
21.833	0.000	1.34	0.00	4.38	1.6	1.024
21.850	0.000	1.34	0.00	4.38	1.6	1.024
21.867	0.000	1.34	0.00	4.38	1.6	1.024
21.883	0.000	1.33	0.00	4.38	1.6	1.023
21.900	0.000	1.33	0.00	4.38	1.6	1.023
21.917	0.000	1.33	0.00	4.37	1.6	1.023
21.933	0.000	1.33	0.00	4.37	1.6	1.022
21.950	0.000	1.33	0.00	4.37	1.5	1.022
21.967	0.000	1.32	0.00	4.37	1.5	1.022
21.983	0.000	1.32	0.00	4.37	1.5	1.022
22.000	0.000	1.32	0.00	4.37	1.5	1.021
22.017	0.000	1.32	0.00	4.37	1.5	1.021
22.033	0.000	1.32	0.00	4.37	1.5	1.021
22.050	0.000	1.31	0.00	4.37	1.5	1.020
22.067	0.000	1.31	0.00	4.37	1.5	1.020
22.083	0.000	1.31	0.00	4.37	1.5	1.020
22.100	0.000	1.31	0.00	4.36	1.5	1.019

22.117	0.000	1.30	0.00	4.36	1.5	1.019
22.133	0.000	1.30	0.00	4.36	1.5	1.019
22.150	0.000	1.30	0.00	4.36	1.5	1.019
22.167	0.000	1.30	0.00	4.36	1.5	1.018
22.183	0.000	1.30	0.00	4.36	1.5	1.018
22.200	0.000	1.29	0.00	4.36	1.5	1.018
22.216	0.000	1.29	0.00	4.36	1.5	1.017
22.233	0.000	1.29	0.00	4.36	1.5	1.017
22.250	0.000	1.29	0.00	4.36	1.5	1.017
22.266	0.000	1.29	0.00	4.36	1.5	1.017
22.283	0.000	1.28	0.00	4.35	1.5	1.016
22.300	0.000	1.28	0.00	4.35	1.5	1.016
22.316	0.000	1.28	0.00	4.35	1.5	1.016
22.333	0.000	1.28	0.00	4.35	1.5	1.016
22.350	0.000	1.28	0.00	4.35	1.5	1.015
22.366	0.000	1.27	0.00	4.35	1.5	1.015
22.383	0.000	1.27	0.00	4.35	1.5	1.015
22.400	0.000	1.27	0.00	4.35	1.5	1.014
22.416	0.000	1.27	0.00	4.35	1.5	1.014
22.433	0.000	1.27	0.00	4.35	1.5	1.014
22.450	0.000	1.27	0.00	4.35	1.5	1.014
22.466	0.000	1.26	0.00	4.35	1.5	1.013
22.483	0.000	1.26	0.00	4.34	1.4	1.013
22.500	0.000	1.26	0.00	4.34	1.4	1.013
22.516	0.000	1.26	0.00	4.34	1.4	1.013
22.533	0.000	1.26	0.00	4.34	1.4	1.012
22.550	0.000	1.25	0.00	4.34	1.4	1.012
22.566	0.000	1.25	0.00	4.34	1.4	1.012
22.583	0.000	1.25	0.00	4.34	1.4	1.012
22.600	0.000	1.25	0.00	4.34	1.4	1.011
22.616	0.000	1.25	0.00	4.34	1.4	1.011
22.633	0.000	1.24	0.00	4.34	1.4	1.011
22.650	0.000	1.24	0.00	4.34	1.4	1.011
22.666	0.000	1.24	0.00	4.34	1.4	1.010
22.683	0.000	1.24	0.00	4.33	1.4	1.010
22.700	0.000	1.24	0.00	4.33	1.4	1.010
22.716	0.000	1.24	0.00	4.33	1.4	1.010
22.733	0.000	1.23	0.00	4.33	1.4	1.009
22.750	0.000	1.23	0.00	4.33	1.4	1.009
22.766	0.000	1.23	0.00	4.33	1.4	1.009
22.783	0.000	1.23	0.00	4.33	1.4	1.009
22.800	0.000	1.23	0.00	4.33	1.4	1.009
22.816	0.000	1.22	0.00	4.33	1.4	1.008
22.833	0.000	1.22	0.00	4.33	1.4	1.008
22.850	0.000	1.22	0.00	4.33	1.4	1.008
22.866	0.000	1.22	0.00	4.33	1.4	1.008
22.883	0.000	1.22	0.00	4.33	1.4	1.007
22.900	0.000	1.22	0.00	4.33	1.4	1.007
22.916	0.000	1.21	0.00	4.32	1.4	1.007
22.933	0.000	1.21	0.00	4.32	1.4	1.007
22.950	0.000	1.21	0.00	4.32	1.4	1.006
22.966	0.000	1.21	0.00	4.32	1.4	1.006
22.983	0.000	1.21	0.00	4.32	1.4	1.006
23.000	0.000	1.21	0.00	4.32	1.4	1.006
23.016	0.000	1.20	0.00	4.32	1.4	1.006

23.033	0.000	1.20	0.00	4.32	1.4	1.005
23.050	0.000	1.20	0.00	4.32	1.4	1.005
23.066	0.000	1.20	0.00	4.32	1.4	1.005
23.083	0.000	1.20	0.00	4.32	1.4	1.005
23.100	0.000	1.20	0.00	4.32	1.3	1.005
23.116	0.000	1.19	0.00	4.32	1.3	1.004
23.133	0.000	1.19	0.00	4.32	1.3	1.004
23.150	0.000	1.19	0.00	4.32	1.3	1.004
23.166	0.000	1.19	0.00	4.31	1.3	1.004
23.183	0.000	1.19	0.00	4.31	1.3	1.004
23.200	0.000	1.19	0.00	4.31	1.3	1.003
23.216	0.000	1.18	0.00	4.31	1.3	1.003
23.233	0.000	1.18	0.00	4.31	1.3	1.003
23.250	0.000	1.18	0.00	4.31	1.3	1.003
23.266	0.000	1.18	0.00	4.31	1.3	1.002
23.283	0.000	1.18	0.00	4.31	1.3	1.002
23.300	0.000	1.18	0.00	4.31	1.3	1.002
23.316	0.000	1.18	0.00	4.31	1.3	1.002
23.333	0.000	1.17	0.00	4.31	1.3	1.002
23.350	0.000	1.17	0.00	4.31	1.3	1.001
23.366	0.000	1.17	0.00	4.31	1.3	1.001
23.383	0.000	1.17	0.00	4.31	1.3	1.001
23.400	0.000	1.17	0.00	4.31	1.3	1.001
23.416	0.000	1.17	0.00	4.31	1.3	1.001
23.433	0.000	1.16	0.00	4.30	1.3	1.001
23.450	0.000	1.16	0.00	4.30	1.3	1.000
23.466	0.000	1.16	0.00	4.30	1.3	1.000
23.483	0.000	1.16	0.00	4.30	1.3	1.000
23.500	0.000	1.16	0.00	4.30	1.3	1.000
23.516	0.000	1.16	0.00	4.30	1.3	1.000
23.533	0.000	1.16	0.00	4.30	1.3	0.999
23.550	0.000	1.15	0.00	4.30	1.3	0.999
23.566	0.000	1.15	0.00	4.30	1.3	0.999
23.583	0.000	1.15	0.00	4.30	1.3	0.999
23.600	0.000	1.15	0.00	4.30	1.3	0.999
23.616	0.000	1.15	0.00	4.30	1.3	0.998
23.633	0.000	1.15	0.00	4.30	1.3	0.998
23.650	0.000	1.15	0.00	4.30	1.3	0.998
23.666	0.000	1.14	0.00	4.30	1.3	0.998
23.683	0.000	1.14	0.00	4.30	1.3	0.998
23.700	0.000	1.14	0.00	4.30	1.3	0.998
23.716	0.000	1.14	0.00	4.29	1.3	0.997
23.733	0.000	1.14	0.00	4.29	1.3	0.997
23.750	0.000	1.14	0.00	4.29	1.3	0.997
23.766	0.000	1.14	0.00	4.29	1.3	0.997
23.783	0.000	1.13	0.00	4.29	1.3	0.997
23.800	0.000	1.13	0.00	4.29	1.3	0.997
23.816	0.000	1.13	0.00	4.29	1.3	0.996
23.833	0.000	1.13	0.00	4.29	1.3	0.996
23.850	0.000	1.13	0.00	4.29	1.3	0.996
23.866	0.000	1.13	0.00	4.29	1.3	0.996
23.883	0.000	1.13	0.00	4.29	1.2	0.996
23.900	0.000	1.12	0.00	4.29	1.2	0.995
23.916	0.000	1.12	0.00	4.29	1.2	0.995
23.933	0.000	1.12	0.00	4.29	1.2	0.995

23.950	0.000	1.12	0.00	4.29	1.2	0.995
23.966	0.000	1.12	0.00	4.29	1.2	0.995
23.983	0.000	1.12	0.00	4.29	1.2	0.995
24.000	0.000	1.12	0.00	4.29	1.2	0.994

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 5.181 AF
 BASIN STORAGE = 0.027 AF (WITH 0.000 AF INITIALLY FILLED)
 OUTFLOW VOLUME = 5.155 AF
 LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 201.00 TO NODE 202.00 IS CODE = 4

>>>>MODEL PIPEFLOW ROUTING OF STREAM #2<<<<<

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MODEL PIPEFLOW ROUTING OF STREAM 2 WHERE
 STORAGE EFFECTS ARE NEGLECTED WITHIN THE PIPE, FLOW
 VELOCITIES ARE ESTIMATED BY ASSUMING STEADY FLOW FOR
 EACH UNIT INTERVAL(NORMAL DEPTH, Dn), AND FLOWS IN EXCESS
 OF (.82)(DIAMETER) ARE PONDED AT THE UPSTREAM INLET:
 UNIT INTERVAL FLOW VELOCITY COMPUTED USING Dn UP TO
 (0.938)(DIAMETER):

PIPELENGTH(FT) = 243.00 MANNINGS FACTOR = 0.013
 UPSTREAM ELEVATION(FT) = 1247.00
 DOWNSTREAM ELEVATION(FT) = 1245.00
 PIPE DIAMETER(FT) = 2.00

NORMAL DEPTH VELOCITY PIPE ROUTING RESULTS:

TIME (HRS)	INFLOW (CFS)	VELOCITY (FPS)	OUTFLOW (CFS)	UPSTREAM PONDING(AF)
10.000	1.11	3.46	1.10	0.000
10.017	1.13	3.47	1.12	0.000
10.033	1.14	3.48	1.13	0.000
10.050	1.15	3.48	1.14	0.000
10.067	1.16	3.49	1.15	0.000
10.083	1.17	3.50	1.16	0.000
10.100	1.18	3.51	1.17	0.000
10.117	1.19	3.52	1.19	0.000
10.133	1.21	3.52	1.20	0.000
10.150	1.22	3.53	1.21	0.000
10.167	1.23	3.54	1.22	0.000
10.183	1.24	3.55	1.23	0.000
10.200	1.25	3.55	1.24	0.000
10.217	1.26	3.56	1.25	0.000
10.233	1.27	3.57	1.26	0.000
10.250	1.28	3.57	1.27	0.000

10.267	1.29	3.58	1.28	0.000
10.283	1.30	3.59	1.29	0.000
10.300	1.31	3.60	1.30	0.000
10.317	1.32	3.60	1.31	0.000
10.333	1.33	3.61	1.32	0.000
10.350	1.34	3.62	1.33	0.000
10.367	1.35	3.62	1.34	0.000
10.383	1.36	3.63	1.35	0.000
10.400	1.37	3.63	1.36	0.000
10.417	1.37	3.64	1.37	0.000
10.433	1.38	3.65	1.38	0.000
10.450	1.39	3.65	1.38	0.000
10.467	1.40	3.66	1.39	0.000
10.483	1.41	3.67	1.40	0.000
10.500	1.42	3.67	1.41	0.000
10.517	1.43	3.68	1.42	0.000
10.533	1.44	3.68	1.43	0.000
10.550	1.44	3.69	1.44	0.000
10.567	1.45	3.70	1.45	0.000
10.583	1.46	3.70	1.45	0.000
10.600	1.47	3.71	1.46	0.000
10.617	1.48	3.71	1.47	0.000
10.633	1.48	3.72	1.48	0.000
10.650	1.49	3.72	1.49	0.000
10.667	1.50	3.73	1.49	0.000
10.683	1.51	3.74	1.50	0.000
10.700	1.52	3.74	1.51	0.000
10.717	1.52	3.75	1.52	0.000
10.733	1.53	3.75	1.53	0.000
10.750	1.54	3.76	1.53	0.000
10.767	1.55	3.76	1.54	0.000
10.783	1.55	3.77	1.55	0.000
10.800	1.56	3.77	1.56	0.000
10.817	1.57	3.78	1.56	0.000
10.833	1.58	3.78	1.57	0.000
10.850	1.58	3.79	1.58	0.000
10.867	1.59	3.79	1.59	0.000
10.883	1.60	3.80	1.59	0.000
10.900	1.60	3.80	1.60	0.000
10.917	1.61	3.81	1.61	0.000
10.933	1.62	3.81	1.61	0.000
10.950	1.62	3.82	1.62	0.000
10.967	1.63	3.82	1.63	0.000
10.983	1.64	3.83	1.63	0.000
11.000	1.65	3.83	1.64	0.000
11.017	1.65	3.84	1.65	0.000
11.033	1.66	3.84	1.65	0.000
11.050	1.67	3.84	1.66	0.000
11.067	1.67	3.85	1.67	0.000
11.083	1.68	3.85	1.67	0.000
11.100	1.69	3.86	1.68	0.000
11.117	1.69	3.86	1.69	0.000
11.133	1.70	3.87	1.69	0.000
11.150	1.70	3.87	1.70	0.000
11.167	1.71	3.88	1.71	0.000

11.183	1.72	3.88	1.71	0.000
11.200	1.72	3.89	1.72	0.000
11.217	1.73	3.89	1.73	0.000
11.233	1.74	3.89	1.73	0.000
11.250	1.74	3.90	1.74	0.000
11.267	1.75	3.90	1.74	0.000
11.283	1.75	3.91	1.75	0.000
11.300	1.76	3.91	1.76	0.000
11.317	1.77	3.92	1.76	0.000
11.333	1.77	3.92	1.77	0.000
11.350	1.78	3.92	1.77	0.000
11.367	1.78	3.93	1.78	0.000
11.383	1.79	3.93	1.79	0.000
11.400	1.80	3.94	1.79	0.000
11.417	1.80	3.94	1.80	0.000
11.433	1.81	3.94	1.80	0.000
11.450	1.81	3.95	1.81	0.000
11.467	1.82	3.95	1.81	0.000
11.483	1.82	3.96	1.82	0.000
11.500	1.83	3.96	1.83	0.000
11.517	1.84	3.96	1.83	0.000
11.533	1.84	3.97	1.84	0.000
11.550	1.85	3.97	1.84	0.000
11.567	1.85	3.98	1.85	0.000
11.583	1.86	3.98	1.85	0.000
11.600	1.86	3.98	1.86	0.000
11.617	1.87	3.99	1.87	0.000
11.633	1.88	3.99	1.87	0.000
11.650	1.88	4.00	1.88	0.000
11.667	1.89	4.00	1.88	0.000
11.683	1.89	4.00	1.89	0.000
11.700	1.90	4.01	1.89	0.000
11.717	1.90	4.01	1.90	0.000
11.733	1.91	4.02	1.91	0.000
11.750	1.91	4.02	1.91	0.000
11.767	1.92	4.02	1.92	0.000
11.783	1.93	4.03	1.92	0.000
11.800	1.93	4.03	1.93	0.000
11.817	1.94	4.03	1.93	0.000
11.833	1.94	4.04	1.94	0.000
11.850	1.95	4.04	1.94	0.000
11.867	1.95	4.05	1.95	0.000
11.883	1.96	4.05	1.95	0.000
11.900	1.96	4.05	1.96	0.000
11.917	1.97	4.06	1.96	0.000
11.933	1.97	4.06	1.97	0.000
11.950	1.98	4.06	1.98	0.000
11.967	1.98	4.07	1.98	0.000
11.983	1.99	4.07	1.99	0.000
12.000	2.00	4.08	1.99	0.000
12.017	2.00	4.08	2.00	0.000
12.033	2.01	4.08	2.00	0.000
12.050	2.01	4.09	2.01	0.000
12.067	2.02	4.09	2.01	0.000
12.083	2.02	4.10	2.02	0.000

12.100	2.03	4.10	2.03	0.000
12.117	2.04	4.10	2.03	0.000
12.133	2.04	4.11	2.04	0.000
12.150	2.05	4.11	2.04	0.000
12.167	2.05	4.12	2.05	0.000
12.183	2.06	4.12	2.06	0.000
12.200	2.07	4.12	2.06	0.000
12.217	2.07	4.13	2.07	0.000
12.233	2.08	4.13	2.07	0.000
12.250	2.08	4.13	2.08	0.000
12.267	2.09	4.14	2.09	0.000
12.283	2.10	4.14	2.09	0.000
12.300	2.10	4.14	2.10	0.000
12.317	2.11	4.15	2.11	0.000
12.333	2.12	4.15	2.11	0.000
12.350	2.12	4.15	2.12	0.000
12.367	2.13	4.16	2.13	0.000
12.383	2.14	4.16	2.13	0.000
12.400	2.14	4.17	2.14	0.000
12.417	2.15	4.17	2.15	0.000
12.433	2.16	4.17	2.15	0.000
12.450	2.17	4.18	2.16	0.000
12.467	2.17	4.18	2.17	0.000
12.483	2.18	4.19	2.18	0.000
12.500	2.19	4.19	2.18	0.000
12.517	2.20	4.19	2.19	0.000
12.533	2.20	4.20	2.20	0.000
12.550	2.21	4.20	2.20	0.000
12.567	2.22	4.20	2.21	0.000
12.583	2.22	4.21	2.22	0.000
12.600	2.23	4.21	2.23	0.000
12.617	2.24	4.22	2.23	0.000
12.633	2.25	4.22	2.24	0.000
12.650	2.25	4.22	2.25	0.000
12.667	2.26	4.23	2.25	0.000
12.683	2.27	4.23	2.26	0.000
12.700	2.27	4.24	2.27	0.000
12.717	2.28	4.24	2.28	0.000
12.733	2.29	4.24	2.28	0.000
12.750	2.29	4.25	2.29	0.000
12.767	2.30	4.25	2.30	0.000
12.783	2.31	4.25	2.30	0.000
12.800	2.31	4.26	2.31	0.000
12.817	2.32	4.26	2.32	0.000
12.833	2.33	4.27	2.32	0.000
12.850	2.34	4.27	2.33	0.000
12.867	2.34	4.27	2.34	0.000
12.883	2.35	4.28	2.35	0.000
12.900	2.36	4.28	2.35	0.000
12.917	2.36	4.28	2.36	0.000
12.933	2.37	4.29	2.37	0.000
12.950	2.38	4.29	2.37	0.000
12.967	2.39	4.30	2.38	0.000
12.983	2.39	4.30	2.39	0.000
13.000	2.40	4.30	2.40	0.000

13.017	2.41	4.31	2.40	0.000
13.033	2.42	4.31	2.41	0.000
13.050	2.42	4.32	2.42	0.000
13.067	2.43	4.32	2.43	0.000
13.083	2.44	4.32	2.43	0.000
13.100	2.45	4.33	2.44	0.000
13.117	2.45	4.33	2.45	0.000
13.133	2.46	4.34	2.46	0.000
13.150	2.47	4.34	2.46	0.000
13.167	2.47	4.34	2.47	0.000
13.183	2.48	4.35	2.48	0.000
13.200	2.49	4.35	2.48	0.000
13.217	2.50	4.36	2.49	0.000
13.233	2.50	4.36	2.50	0.000
13.250	2.51	4.36	2.51	0.000
13.267	2.52	4.37	2.51	0.000
13.283	2.52	4.37	2.52	0.000
13.300	2.53	4.38	2.53	0.000
13.317	2.54	4.38	2.54	0.000
13.333	2.55	4.38	2.54	0.000
13.350	2.56	4.39	2.55	0.000
13.367	2.56	4.39	2.56	0.000
13.383	2.57	4.40	2.57	0.000
13.400	2.58	4.40	2.57	0.000
13.417	2.59	4.41	2.58	0.000
13.433	2.60	4.41	2.59	0.000
13.450	2.60	4.41	2.60	0.000
13.467	2.61	4.42	2.61	0.000
13.483	2.62	4.42	2.61	0.000
13.500	2.63	4.43	2.62	0.000
13.517	2.64	4.43	2.63	0.000
13.533	2.64	4.44	2.64	0.000
13.550	2.65	4.44	2.65	0.000
13.567	2.66	4.44	2.66	0.000
13.583	2.67	4.45	2.66	0.000
13.600	2.68	4.45	2.67	0.000
13.617	2.68	4.46	2.68	0.000
13.633	2.69	4.46	2.69	0.000
13.650	2.70	4.47	2.70	0.000
13.667	2.71	4.47	2.70	0.000
13.683	2.72	4.48	2.71	0.000
13.700	2.73	4.48	2.72	0.000
13.717	2.73	4.48	2.73	0.000
13.733	2.74	4.49	2.74	0.000
13.750	2.75	4.49	2.75	0.000
13.767	2.76	4.50	2.75	0.000
13.783	2.77	4.50	2.76	0.000
13.800	2.78	4.51	2.77	0.000
13.817	2.79	4.51	2.78	0.000
13.833	2.79	4.52	2.79	0.000
13.850	2.80	4.52	2.80	0.000
13.867	2.81	4.53	2.81	0.000
13.883	2.82	4.53	2.82	0.000
13.900	2.83	4.54	2.83	0.000
13.917	2.84	4.54	2.84	0.000

13.933	2.85	4.55	2.85	0.000
13.950	2.86	4.55	2.86	0.000
13.967	2.87	4.56	2.87	0.000
13.983	2.88	4.56	2.88	0.000
14.000	2.89	4.57	2.89	0.000
14.017	2.90	4.57	2.89	0.000
14.033	2.91	4.58	2.90	0.000
14.050	2.92	4.59	2.91	0.000
14.067	2.93	4.59	2.92	0.000
14.083	2.94	4.60	2.93	0.000
14.100	2.95	4.60	2.94	0.000
14.117	2.96	4.61	2.95	0.000
14.133	2.97	4.61	2.96	0.000
14.150	2.98	4.62	2.97	0.000
14.167	2.99	4.62	2.98	0.000
14.183	3.00	4.63	2.99	0.000
14.200	3.01	4.63	3.00	0.000
14.217	3.02	4.64	3.01	0.000
14.233	3.03	4.64	3.02	0.000
14.250	3.04	4.65	3.03	0.000
14.267	3.05	4.66	3.05	0.000
14.283	3.06	4.66	3.06	0.000
14.300	3.07	4.67	3.07	0.000
14.317	3.09	4.67	3.08	0.000
14.333	3.10	4.68	3.09	0.000
14.350	3.11	4.68	3.10	0.000
14.367	3.12	4.69	3.11	0.000
14.383	3.13	4.69	3.13	0.000
14.400	3.15	4.70	3.14	0.000
14.417	3.16	4.70	3.15	0.000
14.433	3.17	4.71	3.16	0.000
14.450	3.18	4.71	3.17	0.000
14.467	3.19	4.72	3.19	0.000
14.483	3.21	4.72	3.20	0.000
14.500	3.22	4.73	3.21	0.000
14.517	3.23	4.73	3.22	0.000
14.533	3.24	4.74	3.24	0.000
14.550	3.26	4.74	3.25	0.000
14.567	3.27	4.75	3.26	0.000
14.583	3.28	4.75	3.27	0.000
14.600	3.29	4.76	3.29	0.000
14.617	3.31	4.77	3.30	0.000
14.633	3.32	4.77	3.31	0.000
14.650	3.33	4.78	3.32	0.000
14.667	3.35	4.78	3.34	0.000
14.683	3.36	4.79	3.35	0.000
14.700	3.37	4.79	3.37	0.000
14.717	3.39	4.80	3.38	0.000
14.733	3.40	4.81	3.39	0.000
14.750	3.42	4.81	3.41	0.000
14.767	3.43	4.82	3.43	0.000
14.783	3.45	4.83	3.44	0.000
14.800	3.47	4.83	3.46	0.000
14.817	3.48	4.84	3.47	0.000
14.833	3.50	4.85	3.49	0.000

14.850	3.52	4.85	3.51	0.000
14.867	3.53	4.86	3.52	0.000
14.883	3.55	4.87	3.54	0.000
14.900	3.57	4.87	3.56	0.000
14.917	3.59	4.88	3.58	0.000
14.933	3.60	4.89	3.59	0.000
14.950	3.62	4.90	3.61	0.000
14.967	3.64	4.90	3.63	0.000
14.983	3.66	4.91	3.65	0.000
15.000	3.68	4.92	3.66	0.000
15.017	3.69	4.93	3.68	0.000
15.033	3.71	4.93	3.70	0.000
15.050	3.73	4.94	3.72	0.000
15.067	3.75	4.95	3.74	0.000
15.083	3.77	4.96	3.76	0.000
15.100	3.78	4.96	3.77	0.000
15.117	3.83	4.98	3.81	0.000
15.133	3.92	5.02	3.87	0.000
15.150	4.02	5.06	3.97	0.000
15.167	4.12	5.10	4.07	0.000
15.183	4.21	5.13	4.16	0.000
15.200	4.30	5.16	4.25	0.000
15.217	4.39	5.19	4.34	0.000
15.233	4.48	5.22	4.43	0.000
15.250	4.56	5.25	4.52	0.000
15.267	4.65	5.28	4.60	0.000
15.283	4.73	5.30	4.69	0.000
15.300	4.81	5.33	4.77	0.000
15.317	4.89	5.36	4.85	0.000
15.333	4.97	5.38	4.93	0.000
15.350	5.05	5.41	5.01	0.000
15.367	5.13	5.43	5.09	0.000
15.383	5.20	5.46	5.16	0.000
15.400	5.28	5.48	5.24	0.000
15.417	5.36	5.50	5.32	0.000
15.433	5.43	5.53	5.39	0.000
15.450	5.51	5.55	5.47	0.000
15.467	5.58	5.57	5.55	0.000
15.483	5.66	5.60	5.62	0.000
15.500	5.73	5.62	5.70	0.000
15.517	5.81	5.64	5.77	0.000
15.533	5.88	5.66	5.84	0.000
15.550	5.96	5.69	5.92	0.000
15.567	6.05	5.71	6.00	0.000
15.583	6.15	5.75	6.10	0.000
15.600	6.26	5.77	6.20	0.000
15.617	6.38	5.79	6.31	0.000
15.633	6.51	5.82	6.44	0.000
15.650	6.65	5.85	6.58	0.000
15.667	6.80	5.88	6.72	0.000
15.683	6.96	5.91	6.87	0.000
15.700	7.12	5.95	7.04	0.000
15.717	7.29	5.98	7.20	0.000
15.733	7.47	6.02	7.38	0.000
15.750	7.65	6.06	7.56	0.000

15.767	7.84	6.10	7.74	0.000
15.783	8.03	6.14	7.93	0.000
15.800	8.23	6.18	8.13	0.000
15.817	8.43	6.21	8.32	0.000
15.833	8.64	6.24	8.53	0.000
15.850	8.85	6.28	8.74	0.000
15.867	9.07	6.31	8.96	0.000
15.883	9.29	6.35	9.19	0.000
15.900	9.52	6.39	9.42	0.000
15.917	9.75	6.44	9.65	0.000
15.933	9.98	6.48	9.88	0.000
15.950	10.22	6.53	10.12	0.000
15.967	10.46	6.56	10.35	0.000
15.983	10.70	6.60	10.59	0.000
16.000	10.95	6.64	10.84	0.000
16.017	11.22	6.69	11.10	0.000
16.033	11.56	6.73	11.40	0.000
16.050	12.00	6.79	11.80	0.000
16.067	12.53	6.85	12.28	0.000
16.083	13.13	6.90	12.84	0.000
16.100	13.80	6.98	13.50	0.000
16.117	14.55	7.07	14.22	0.000
16.133	15.35	7.15	14.99	0.000
16.150	16.22	7.23	15.83	0.000
16.167	17.13	7.30	16.70	0.000
16.183	18.10	7.36	17.64	0.000
16.200	19.10	7.41	18.62	0.000
16.217	20.16	7.44	19.63	0.000
16.233	21.27	7.45	20.34	0.001
16.250	22.36	7.45	20.52	0.004
16.267	23.25	7.45	20.52	0.007
16.283	23.92	7.45	20.52	0.012
16.300	24.35	7.45	20.52	0.017
16.317	24.57	7.45	20.52	0.023
16.333	24.66	7.45	20.52	0.029
16.350	24.63	7.45	20.52	0.034
16.367	24.48	7.45	20.52	0.040
16.383	24.21	7.45	20.52	0.045
16.400	23.78	7.45	20.52	0.049
16.417	23.20	7.45	20.52	0.053
16.433	22.52	7.45	20.52	0.056
16.450	21.75	7.45	20.52	0.057
16.467	20.88	7.45	20.52	0.058
16.483	19.96	7.45	20.52	0.057
16.500	19.06	7.45	20.52	0.055
16.517	18.21	7.45	20.52	0.052
16.533	17.41	7.45	20.52	0.048
16.550	16.65	7.45	20.52	0.042
16.567	15.94	7.45	20.52	0.036
16.583	15.26	7.45	20.52	0.029
16.600	14.62	7.45	20.52	0.021
16.617	14.01	7.45	20.52	0.012
16.633	13.42	7.45	20.52	0.002
16.650	12.87	7.03	17.15	0.000
16.667	12.34	6.83	13.17	0.000

16.683	11.83	6.77	12.06	0.000
16.700	11.34	6.70	11.57	0.000
16.717	10.88	6.63	11.09	0.000
16.733	10.45	6.56	10.64	0.000
16.750	10.04	6.49	10.22	0.000
16.767	9.66	6.42	9.83	0.000
16.783	9.30	6.35	9.46	0.000
16.800	8.96	6.29	9.13	0.000
16.817	8.65	6.24	8.81	0.000
16.833	8.35	6.20	8.50	0.000
16.850	8.07	6.15	8.21	0.000
16.867	7.81	6.09	7.94	0.000
16.883	7.56	6.04	7.68	0.000
16.900	7.33	5.99	7.45	0.000
16.917	7.11	5.94	7.22	0.000
16.933	6.90	5.90	7.01	0.000
16.950	6.70	5.86	6.80	0.000
16.967	6.51	5.82	6.61	0.000
16.983	6.34	5.79	6.43	0.000
17.000	6.17	5.75	6.26	0.000
17.017	6.02	5.71	6.09	0.000
17.033	5.87	5.66	5.94	0.000
17.050	5.73	5.62	5.80	0.000
17.067	5.60	5.58	5.66	0.000
17.083	5.47	5.54	5.54	0.000
17.100	5.36	5.50	5.42	0.000
17.117	5.24	5.47	5.30	0.000
17.133	5.14	5.44	5.19	0.000
17.150	5.03	5.40	5.09	0.000
17.167	4.94	5.37	4.99	0.000
17.183	4.84	5.34	4.89	0.000
17.200	4.76	5.31	4.80	0.000
17.217	4.67	5.28	4.72	0.000
17.233	4.59	5.26	4.64	0.000
17.250	4.52	5.23	4.56	0.000
17.267	4.45	5.21	4.49	0.000
17.283	4.38	5.19	4.42	0.000
17.300	4.31	5.16	4.35	0.000
17.317	4.25	5.14	4.29	0.000
17.333	4.19	5.12	4.22	0.000
17.350	4.13	5.10	4.17	0.000
17.367	4.08	5.08	4.11	0.000
17.383	4.02	5.06	4.05	0.000
17.400	3.97	5.04	4.00	0.000
17.417	3.92	5.02	3.95	0.000
17.433	3.88	5.00	3.90	0.000
17.450	3.83	4.98	3.86	0.000
17.467	3.80	4.97	3.82	0.000
17.483	3.79	4.97	3.80	0.000
17.500	3.78	4.96	3.79	0.000
17.517	3.77	4.96	3.78	0.000
17.533	3.76	4.95	3.77	0.000
17.550	3.75	4.95	3.76	0.000
17.567	3.74	4.95	3.75	0.000
17.583	3.73	4.94	3.74	0.000

17.600	3.72	4.94	3.73	0.000
17.617	3.71	4.93	3.72	0.000
17.633	3.70	4.93	3.71	0.000
17.650	3.69	4.93	3.70	0.000
17.667	3.68	4.92	3.69	0.000
17.683	3.67	4.92	3.68	0.000
17.700	3.66	4.91	3.67	0.000
17.717	3.65	4.91	3.66	0.000
17.733	3.64	4.90	3.65	0.000
17.750	3.63	4.90	3.64	0.000
17.767	3.62	4.89	3.62	0.000
17.783	3.61	4.89	3.61	0.000
17.800	3.60	4.89	3.60	0.000
17.817	3.58	4.88	3.59	0.000
17.833	3.57	4.88	3.58	0.000
17.850	3.56	4.87	3.57	0.000
17.867	3.55	4.87	3.56	0.000
17.883	3.54	4.86	3.54	0.000
17.900	3.53	4.86	3.53	0.000
17.917	3.51	4.85	3.52	0.000
17.933	3.50	4.85	3.51	0.000
17.950	3.49	4.84	3.50	0.000
17.967	3.48	4.84	3.49	0.000
17.983	3.47	4.83	3.47	0.000
18.000	3.46	4.83	3.46	0.000
18.017	3.44	4.82	3.45	0.000
18.033	3.43	4.82	3.44	0.000
18.050	3.42	4.81	3.43	0.000
18.067	3.41	4.81	3.41	0.000
18.083	3.40	4.80	3.40	0.000
18.100	3.38	4.80	3.39	0.000
18.117	3.37	4.79	3.38	0.000
18.133	3.36	4.79	3.37	0.000
18.150	3.35	4.78	3.35	0.000
18.167	3.33	4.78	3.34	0.000
18.183	3.32	4.77	3.33	0.000
18.200	3.31	4.77	3.32	0.000
18.217	3.30	4.76	3.30	0.000
18.233	3.28	4.76	3.29	0.000
18.250	3.27	4.75	3.28	0.000
18.267	3.26	4.75	3.27	0.000
18.283	3.24	4.74	3.25	0.000
18.300	3.23	4.73	3.24	0.000
18.317	3.22	4.73	3.23	0.000
18.333	3.20	4.72	3.21	0.000
18.350	3.19	4.72	3.20	0.000
18.367	3.18	4.71	3.19	0.000
18.383	3.16	4.71	3.17	0.000
18.400	3.15	4.70	3.16	0.000
18.417	3.14	4.69	3.14	0.000
18.433	3.12	4.69	3.13	0.000
18.450	3.11	4.68	3.12	0.000
18.467	3.10	4.68	3.10	0.000
18.483	3.08	4.67	3.09	0.000
18.500	3.07	4.67	3.08	0.000

18.517	3.06	4.66	3.06	0.000
18.533	3.04	4.65	3.05	0.000
18.550	3.03	4.65	3.04	0.000
18.567	3.02	4.64	3.02	0.000
18.583	3.00	4.63	3.01	0.000
18.600	2.99	4.62	3.00	0.000
18.617	2.98	4.62	2.99	0.000
18.633	2.97	4.61	2.97	0.000
18.650	2.95	4.60	2.96	0.000
18.667	2.94	4.60	2.95	0.000
18.683	2.93	4.59	2.94	0.000
18.700	2.92	4.58	2.92	0.000
18.717	2.90	4.58	2.91	0.000
18.733	2.89	4.57	2.90	0.000
18.750	2.88	4.56	2.89	0.000
18.767	2.87	4.56	2.88	0.000
18.783	2.86	4.55	2.86	0.000
18.800	2.84	4.54	2.85	0.000
18.817	2.83	4.54	2.84	0.000
18.833	2.82	4.53	2.83	0.000
18.850	2.81	4.52	2.82	0.000
18.867	2.80	4.52	2.80	0.000
18.883	2.79	4.51	2.79	0.000
18.900	2.77	4.51	2.78	0.000
18.917	2.76	4.50	2.77	0.000
18.933	2.75	4.49	2.76	0.000
18.950	2.74	4.49	2.75	0.000
18.967	2.73	4.48	2.73	0.000
18.983	2.72	4.48	2.72	0.000
19.000	2.71	4.47	2.71	0.000
19.017	2.69	4.46	2.70	0.000
19.033	2.68	4.46	2.69	0.000
19.050	2.67	4.45	2.68	0.000
19.067	2.66	4.45	2.67	0.000
19.083	2.65	4.44	2.66	0.000
19.100	2.64	4.43	2.65	0.000
19.117	2.63	4.43	2.64	0.000
19.133	2.62	4.42	2.63	0.000
19.150	2.61	4.42	2.61	0.000
19.167	2.60	4.41	2.60	0.000
19.183	2.59	4.41	2.59	0.000
19.200	2.58	4.40	2.58	0.000
19.217	2.57	4.39	2.57	0.000
19.233	2.56	4.39	2.56	0.000
19.250	2.55	4.38	2.55	0.000
19.267	2.54	4.38	2.54	0.000
19.283	2.53	4.37	2.53	0.000
19.300	2.52	4.37	2.52	0.000
19.317	2.51	4.36	2.51	0.000
19.333	2.50	4.36	2.50	0.000
19.350	2.49	4.35	2.49	0.000
19.367	2.48	4.35	2.48	0.000
19.383	2.47	4.34	2.47	0.000
19.400	2.46	4.34	2.46	0.000
19.417	2.45	4.33	2.45	0.000

19.433	2.44	4.33	2.45	0.000
19.450	2.43	4.32	2.44	0.000
19.467	2.42	4.31	2.43	0.000
19.483	2.41	4.31	2.42	0.000
19.500	2.40	4.31	2.41	0.000
19.517	2.39	4.30	2.40	0.000
19.533	2.38	4.30	2.39	0.000
19.550	2.37	4.29	2.38	0.000
19.567	2.37	4.29	2.37	0.000
19.583	2.36	4.28	2.36	0.000
19.600	2.35	4.28	2.35	0.000
19.617	2.34	4.27	2.35	0.000
19.633	2.33	4.27	2.34	0.000
19.650	2.32	4.26	2.33	0.000
19.667	2.31	4.26	2.32	0.000
19.683	2.31	4.25	2.31	0.000
19.700	2.30	4.25	2.30	0.000
19.717	2.29	4.24	2.29	0.000
19.733	2.28	4.24	2.29	0.000
19.750	2.27	4.23	2.28	0.000
19.767	2.26	4.23	2.27	0.000
19.783	2.26	4.23	2.26	0.000
19.800	2.25	4.22	2.25	0.000
19.817	2.24	4.22	2.24	0.000
19.833	2.23	4.21	2.24	0.000
19.850	2.22	4.21	2.23	0.000
19.867	2.22	4.20	2.22	0.000
19.883	2.21	4.20	2.21	0.000
19.900	2.20	4.20	2.20	0.000
19.917	2.19	4.19	2.20	0.000
19.933	2.18	4.19	2.19	0.000
19.950	2.18	4.18	2.18	0.000
19.967	2.17	4.18	2.17	0.000
19.983	2.16	4.17	2.17	0.000
20.000	2.15	4.17	2.16	0.000
20.017	2.15	4.17	2.15	0.000
20.033	2.14	4.16	2.14	0.000
20.050	2.13	4.16	2.14	0.000
20.067	2.12	4.15	2.13	0.000
20.083	2.12	4.15	2.12	0.000
20.100	2.11	4.15	2.12	0.000
20.117	2.10	4.14	2.11	0.000
20.133	2.10	4.14	2.10	0.000
20.150	2.09	4.14	2.09	0.000
20.167	2.08	4.13	2.09	0.000
20.183	2.08	4.13	2.08	0.000
20.200	2.07	4.12	2.07	0.000
20.217	2.06	4.12	2.07	0.000
20.233	2.05	4.12	2.06	0.000
20.250	2.05	4.11	2.05	0.000
20.267	2.04	4.11	2.05	0.000
20.283	2.03	4.10	2.04	0.000
20.300	2.03	4.10	2.03	0.000
20.317	2.02	4.09	2.03	0.000
20.333	2.01	4.09	2.02	0.000

20.350	2.01	4.08	2.01	0.000
20.367	2.00	4.08	2.01	0.000
20.383	2.00	4.08	2.00	0.000
20.400	1.99	4.07	1.99	0.000
20.417	1.98	4.07	1.99	0.000
20.433	1.98	4.06	1.98	0.000
20.450	1.97	4.06	1.97	0.000
20.467	1.96	4.05	1.97	0.000
20.483	1.96	4.05	1.96	0.000
20.500	1.95	4.05	1.96	0.000
20.517	1.95	4.04	1.95	0.000
20.533	1.94	4.04	1.94	0.000
20.550	1.93	4.03	1.94	0.000
20.567	1.93	4.03	1.93	0.000
20.583	1.92	4.02	1.93	0.000
20.600	1.92	4.02	1.92	0.000
20.617	1.91	4.02	1.91	0.000
20.633	1.90	4.01	1.91	0.000
20.650	1.90	4.01	1.90	0.000
20.667	1.89	4.00	1.90	0.000
20.683	1.89	4.00	1.89	0.000
20.700	1.88	4.00	1.89	0.000
20.717	1.88	3.99	1.88	0.000
20.733	1.87	3.99	1.87	0.000
20.750	1.87	3.98	1.87	0.000
20.767	1.86	3.98	1.86	0.000
20.783	1.85	3.98	1.86	0.000
20.800	1.85	3.97	1.85	0.000
20.817	1.84	3.97	1.85	0.000
20.833	1.84	3.97	1.84	0.000
20.850	1.83	3.96	1.84	0.000
20.867	1.83	3.96	1.83	0.000
20.883	1.82	3.95	1.83	0.000
20.900	1.82	3.95	1.82	0.000
20.917	1.81	3.95	1.82	0.000
20.933	1.81	3.94	1.81	0.000
20.950	1.80	3.94	1.81	0.000
20.967	1.80	3.94	1.80	0.000
20.983	1.79	3.93	1.80	0.000
21.000	1.79	3.93	1.79	0.000
21.017	1.78	3.93	1.79	0.000
21.033	1.78	3.92	1.78	0.000
21.050	1.77	3.92	1.78	0.000
21.067	1.77	3.92	1.77	0.000
21.083	1.76	3.91	1.77	0.000
21.100	1.76	3.91	1.76	0.000
21.117	1.75	3.91	1.76	0.000
21.133	1.75	3.90	1.75	0.000
21.150	1.74	3.90	1.75	0.000
21.167	1.74	3.90	1.74	0.000
21.183	1.73	3.89	1.74	0.000
21.200	1.73	3.89	1.73	0.000
21.217	1.73	3.89	1.73	0.000
21.233	1.72	3.88	1.72	0.000
21.250	1.72	3.88	1.72	0.000

21.267	1.71	3.88	1.71	0.000
21.283	1.71	3.87	1.71	0.000
21.300	1.70	3.87	1.71	0.000
21.317	1.70	3.87	1.70	0.000
21.333	1.69	3.86	1.70	0.000
21.350	1.69	3.86	1.69	0.000
21.367	1.69	3.86	1.69	0.000
21.383	1.68	3.86	1.68	0.000
21.400	1.68	3.85	1.68	0.000
21.417	1.67	3.85	1.68	0.000
21.433	1.67	3.85	1.67	0.000
21.450	1.66	3.84	1.67	0.000
21.467	1.66	3.84	1.66	0.000
21.483	1.66	3.84	1.66	0.000
21.500	1.65	3.84	1.65	0.000
21.517	1.65	3.83	1.65	0.000
21.533	1.64	3.83	1.65	0.000
21.550	1.64	3.83	1.64	0.000
21.567	1.64	3.82	1.64	0.000
21.583	1.63	3.82	1.63	0.000
21.600	1.63	3.82	1.63	0.000
21.617	1.62	3.82	1.63	0.000
21.633	1.62	3.81	1.62	0.000
21.650	1.62	3.81	1.62	0.000
21.667	1.61	3.81	1.61	0.000
21.683	1.61	3.80	1.61	0.000
21.700	1.60	3.80	1.61	0.000
21.717	1.60	3.80	1.60	0.000
21.733	1.60	3.80	1.60	0.000
21.750	1.59	3.79	1.60	0.000
21.767	1.59	3.79	1.59	0.000
21.783	1.59	3.79	1.59	0.000
21.800	1.58	3.79	1.58	0.000
21.817	1.58	3.78	1.58	0.000
21.833	1.57	3.78	1.58	0.000
21.850	1.57	3.78	1.57	0.000
21.867	1.57	3.78	1.57	0.000
21.883	1.56	3.77	1.57	0.000
21.900	1.56	3.77	1.56	0.000
21.917	1.56	3.77	1.56	0.000
21.933	1.55	3.77	1.56	0.000
21.950	1.55	3.76	1.55	0.000
21.967	1.55	3.76	1.55	0.000
21.983	1.54	3.76	1.55	0.000
22.000	1.54	3.76	1.54	0.000
22.017	1.54	3.75	1.54	0.000
22.033	1.53	3.75	1.53	0.000
22.050	1.53	3.75	1.53	0.000
22.067	1.53	3.75	1.53	0.000
22.083	1.52	3.74	1.52	0.000
22.100	1.52	3.74	1.52	0.000
22.117	1.52	3.74	1.52	0.000
22.133	1.51	3.74	1.51	0.000
22.150	1.51	3.74	1.51	0.000
22.167	1.51	3.73	1.51	0.000

22.183	1.50	3.73	1.51	0.000
22.200	1.50	3.73	1.50	0.000
22.217	1.50	3.73	1.50	0.000
22.233	1.49	3.72	1.50	0.000
22.250	1.49	3.72	1.49	0.000
22.267	1.49	3.72	1.49	0.000
22.283	1.48	3.72	1.49	0.000
22.300	1.48	3.72	1.48	0.000
22.317	1.48	3.71	1.48	0.000
22.333	1.47	3.71	1.48	0.000
22.350	1.47	3.71	1.47	0.000
22.367	1.47	3.71	1.47	0.000
22.383	1.47	3.70	1.47	0.000
22.400	1.46	3.70	1.46	0.000
22.417	1.46	3.70	1.46	0.000
22.433	1.46	3.70	1.46	0.000
22.450	1.45	3.70	1.46	0.000
22.467	1.45	3.69	1.45	0.000
22.483	1.45	3.69	1.45	0.000
22.500	1.44	3.69	1.45	0.000
22.517	1.44	3.69	1.44	0.000
22.533	1.44	3.69	1.44	0.000
22.550	1.44	3.68	1.44	0.000
22.567	1.43	3.68	1.44	0.000
22.583	1.43	3.68	1.43	0.000
22.600	1.43	3.68	1.43	0.000
22.617	1.42	3.68	1.43	0.000
22.633	1.42	3.67	1.42	0.000
22.650	1.42	3.67	1.42	0.000
22.667	1.42	3.67	1.42	0.000
22.683	1.41	3.67	1.42	0.000
22.700	1.41	3.67	1.41	0.000
22.717	1.41	3.66	1.41	0.000
22.733	1.41	3.66	1.41	0.000
22.750	1.40	3.66	1.41	0.000
22.767	1.40	3.66	1.40	0.000
22.783	1.40	3.66	1.40	0.000
22.800	1.40	3.66	1.40	0.000
22.817	1.39	3.65	1.39	0.000
22.833	1.39	3.65	1.39	0.000
22.850	1.39	3.65	1.39	0.000
22.867	1.38	3.65	1.39	0.000
22.883	1.38	3.65	1.38	0.000
22.900	1.38	3.64	1.38	0.000
22.917	1.38	3.64	1.38	0.000
22.933	1.37	3.64	1.38	0.000
22.950	1.37	3.64	1.37	0.000
22.967	1.37	3.64	1.37	0.000
22.983	1.37	3.64	1.37	0.000
23.000	1.36	3.63	1.37	0.000
23.017	1.36	3.63	1.36	0.000
23.033	1.36	3.63	1.36	0.000
23.050	1.36	3.63	1.36	0.000
23.067	1.35	3.63	1.36	0.000
23.083	1.35	3.63	1.35	0.000

23.100	1.35	3.62	1.35	0.000
23.117	1.35	3.62	1.35	0.000
23.133	1.35	3.62	1.35	0.000
23.150	1.34	3.62	1.34	0.000
23.167	1.34	3.62	1.34	0.000
23.183	1.34	3.62	1.34	0.000
23.200	1.34	3.61	1.34	0.000
23.217	1.33	3.61	1.34	0.000
23.233	1.33	3.61	1.33	0.000
23.250	1.33	3.61	1.33	0.000
23.267	1.33	3.61	1.33	0.000
23.283	1.32	3.61	1.33	0.000
23.300	1.32	3.60	1.32	0.000
23.317	1.32	3.60	1.32	0.000
23.333	1.32	3.60	1.32	0.000
23.350	1.32	3.60	1.32	0.000
23.367	1.31	3.60	1.31	0.000
23.383	1.31	3.60	1.31	0.000
23.400	1.31	3.59	1.31	0.000
23.417	1.31	3.59	1.31	0.000
23.433	1.30	3.59	1.31	0.000
23.450	1.30	3.59	1.30	0.000
23.467	1.30	3.59	1.30	0.000
23.483	1.30	3.59	1.30	0.000
23.500	1.30	3.59	1.30	0.000
23.517	1.29	3.58	1.30	0.000
23.533	1.29	3.58	1.29	0.000
23.550	1.29	3.58	1.29	0.000
23.567	1.29	3.58	1.29	0.000
23.583	1.28	3.58	1.29	0.000
23.600	1.28	3.58	1.28	0.000
23.617	1.28	3.58	1.28	0.000
23.633	1.28	3.57	1.28	0.000
23.650	1.28	3.57	1.28	0.000
23.667	1.27	3.57	1.28	0.000
23.683	1.27	3.57	1.27	0.000
23.700	1.27	3.57	1.27	0.000
23.717	1.27	3.57	1.27	0.000
23.733	1.27	3.57	1.27	0.000
23.750	1.26	3.56	1.27	0.000
23.767	1.26	3.56	1.26	0.000
23.783	1.26	3.56	1.26	0.000
23.800	1.26	3.56	1.26	0.000
23.817	1.26	3.56	1.26	0.000
23.833	1.25	3.56	1.26	0.000
23.850	1.25	3.56	1.25	0.000
23.867	1.25	3.55	1.25	0.000
23.883	1.25	3.55	1.25	0.000
23.900	1.25	3.55	1.25	0.000
23.917	1.25	3.55	1.25	0.000
23.933	1.24	3.55	1.24	0.000
23.950	1.24	3.55	1.24	0.000
23.967	1.24	3.55	1.24	0.000
23.983	1.24	3.55	1.24	0.000
24.000	1.24	3.54	1.24	0.000

FLOW PROCESS FROM NODE 202.00 TO NODE 102.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

FLOW PROCESS FROM NODE 300.00 TO NODE 301.00 IS CODE = 1.2

>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<

(SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #3)

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
 TOTAL CATCHMENT AREA(ACRES) = 42.62
 SOIL-LOSS RATE, Fm,(INCH/HR) = 0.228
 LOW LOSS FRACTION = 0.289
 TIME OF CONCENTRATION(MIN.) = 16.07
 SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
 USER SPECIFIED RAINFALL VALUES ARE USED:
 RETURN FREQUENCY(YEARS) = 100
 5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.32
 30-MINUTE POINT RAINFALL VALUE(INCHES) = 0.83
 1-HOUR POINT RAINFALL VALUE(INCHES) = 1.20
 3-HOUR POINT RAINFALL VALUE(INCHES) = 1.98
 6-HOUR POINT RAINFALL VALUE(INCHES) = 2.72
 24-HOUR POINT RAINFALL VALUE(INCHES) = 4.97

 TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 11.62
 TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 6.03

↑

2 4 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)

(Notes: Time indicated is at END of Each Unit Intervals.
 Peak 5-minute rainfall intensity is modeled as
 a constant value for entire 5-minute period.)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	19.1	38.3	57.4	76.5
0.017	0.0001	0.10	Q	.	.	.	.
0.033	0.0006	0.31	Q	.	.	.	.
0.050	0.0013	0.51	Q	.	.	.	.
0.067	0.0023	0.71	Q	.	.	.	.

0.083	0.0035	0.92	Q	.	.	.	.
0.100	0.0051	1.12	Q	.	.	.	.
0.117	0.0069	1.33	Q	.	.	.	.
0.133	0.0090	1.53	Q	.	.	.	.
0.150	0.0114	1.74	Q	.	.	.	.
0.167	0.0141	1.94	VQ	.	.	.	.
0.183	0.0170	2.14	VQ	.	.	.	.
0.200	0.0203	2.35	VQ	.	.	.	.
0.217	0.0236	2.46	VQ	.	.	.	.
0.233	0.0270	2.46	VQ	.	.	.	.
0.250	0.0304	2.46	VQ	.	.	.	.
0.267	0.0338	2.46	VQ	.	.	.	.
0.283	0.0372	2.46	VQ	.	.	.	.
0.300	0.0406	2.46	VQ	.	.	.	.
0.317	0.0440	2.47	VQ	.	.	.	.
0.333	0.0474	2.47	VQ	.	.	.	.
0.350	0.0508	2.47	VQ	.	.	.	.
0.367	0.0542	2.47	VQ	.	.	.	.
0.383	0.0576	2.47	VQ	.	.	.	.
0.400	0.0610	2.47	VQ	.	.	.	.
0.417	0.0644	2.47	VQ	.	.	.	.
0.433	0.0678	2.47	VQ	.	.	.	.
0.450	0.0712	2.47	VQ	.	.	.	.
0.467	0.0746	2.47	VQ	.	.	.	.
0.483	0.0780	2.47	VQ	.	.	.	.
0.500	0.0814	2.48	VQ	.	.	.	.
0.517	0.0849	2.48	VQ	.	.	.	.
0.533	0.0883	2.48	VQ	.	.	.	.
0.550	0.0917	2.48	VQ	.	.	.	.
0.567	0.0951	2.48	VQ	.	.	.	.
0.583	0.0985	2.49	VQ	.	.	.	.
0.600	0.1020	2.49	VQ	.	.	.	.
0.617	0.1054	2.49	VQ	.	.	.	.
0.633	0.1088	2.49	VQ	.	.	.	.
0.650	0.1123	2.49	VQ	.	.	.	.
0.667	0.1157	2.50	VQ	.	.	.	.
0.683	0.1191	2.50	VQ	.	.	.	.
0.700	0.1226	2.50	VQ	.	.	.	.
0.717	0.1260	2.50	VQ	.	.	.	.
0.733	0.1295	2.50	VQ	.	.	.	.
0.750	0.1329	2.51	VQ	.	.	.	.
0.767	0.1364	2.51	VQ	.	.	.	.
0.783	0.1398	2.51	VQ	.	.	.	.
0.800	0.1433	2.51	VQ	.	.	.	.
0.817	0.1468	2.51	VQ	.	.	.	.
0.833	0.1502	2.51	VQ	.	.	.	.
0.850	0.1537	2.51	VQ	.	.	.	.
0.867	0.1571	2.51	VQ	.	.	.	.
0.883	0.1606	2.51	VQ	.	.	.	.
0.900	0.1641	2.52	VQ	.	.	.	.
0.917	0.1675	2.52	VQ	.	.	.	.
0.933	0.1710	2.52	VQ	.	.	.	.
0.950	0.1745	2.52	VQ	.	.	.	.
0.967	0.1779	2.52	VQ	.	.	.	.
0.983	0.1814	2.52	VQ	.	.	.	.

1.000	0.1849	2.52	VQ	.	.	.	.
1.017	0.1884	2.52	VQ	.	.	.	.
1.033	0.1918	2.52	VQ	.	.	.	.
1.050	0.1953	2.53	VQ	.	.	.	.
1.067	0.1988	2.53	VQ	.	.	.	.
1.083	0.2023	2.53	VQ	.	.	.	.
1.100	0.2058	2.53	VQ	.	.	.	.
1.117	0.2093	2.54	VQ	.	.	.	.
1.133	0.2128	2.54	VQ	.	.	.	.
1.150	0.2163	2.54	VQ	.	.	.	.
1.167	0.2198	2.54	VQ	.	.	.	.
1.183	0.2233	2.54	VQ	.	.	.	.
1.200	0.2268	2.55	VQ	.	.	.	.
1.217	0.2303	2.55	VQ	.	.	.	.
1.233	0.2338	2.55	VQ	.	.	.	.
1.250	0.2373	2.55	VQ	.	.	.	.
1.267	0.2408	2.55	VQ	.	.	.	.
1.283	0.2443	2.56	VQ	.	.	.	.
1.300	0.2479	2.56	VQ	.	.	.	.
1.317	0.2514	2.56	VQ	.	.	.	.
1.333	0.2549	2.56	VQ	.	.	.	.
1.350	0.2584	2.56	VQ	.	.	.	.
1.367	0.2620	2.56	VQ	.	.	.	.
1.383	0.2655	2.56	VQ	.	.	.	.
1.400	0.2690	2.56	VQ	.	.	.	.
1.417	0.2726	2.56	VQ	.	.	.	.
1.433	0.2761	2.57	VQ	.	.	.	.
1.450	0.2796	2.57	VQ	.	.	.	.
1.467	0.2832	2.57	VQ	.	.	.	.
1.483	0.2867	2.57	VQ	.	.	.	.
1.500	0.2902	2.57	VQ	.	.	.	.
1.517	0.2938	2.57	.Q	.	.	.	.
1.533	0.2973	2.57	.Q	.	.	.	.
1.550	0.3009	2.57	.Q	.	.	.	.
1.567	0.3044	2.58	.Q	.	.	.	.
1.583	0.3080	2.58	.Q	.	.	.	.
1.600	0.3115	2.58	.Q	.	.	.	.
1.617	0.3151	2.58	.Q	.	.	.	.
1.633	0.3186	2.58	.Q	.	.	.	.
1.650	0.3222	2.59	.Q	.	.	.	.
1.667	0.3258	2.59	.Q	.	.	.	.
1.683	0.3293	2.59	.Q	.	.	.	.
1.700	0.3329	2.59	.Q	.	.	.	.
1.717	0.3365	2.60	.Q	.	.	.	.
1.733	0.3401	2.60	.Q	.	.	.	.
1.750	0.3437	2.60	.Q	.	.	.	.
1.767	0.3472	2.60	.Q	.	.	.	.
1.783	0.3508	2.60	.Q	.	.	.	.
1.800	0.3544	2.61	.Q	.	.	.	.
1.817	0.3580	2.61	.Q	.	.	.	.
1.833	0.3616	2.61	.Q	.	.	.	.
1.850	0.3652	2.61	.Q	.	.	.	.
1.867	0.3688	2.61	.Q	.	.	.	.
1.883	0.3724	2.61	.Q	.	.	.	.
1.900	0.3760	2.62	.Q	.	.	.	.

1.917	0.3796	2.62	.Q	.	.	.	.
1.933	0.3832	2.62	.Q	.	.	.	.
1.950	0.3868	2.62	.Q	.	.	.	.
1.967	0.3904	2.62	.Q	.	.	.	.
1.983	0.3940	2.62	.Q	.	.	.	.
2.000	0.3977	2.62	.Q	.	.	.	.
2.017	0.4013	2.62	.Q	.	.	.	.
2.033	0.4049	2.62	.Q	.	.	.	.
2.050	0.4085	2.63	.Q	.	.	.	.
2.067	0.4121	2.63	.Q	.	.	.	.
2.083	0.4157	2.63	.Q	.	.	.	.
2.100	0.4194	2.63	.Q	.	.	.	.
2.117	0.4230	2.63	.Q	.	.	.	.
2.133	0.4266	2.63	.Q	.	.	.	.
2.150	0.4303	2.64	.Q	.	.	.	.
2.167	0.4339	2.64	.Q	.	.	.	.
2.183	0.4375	2.64	.Q	.	.	.	.
2.200	0.4412	2.64	.Q	.	.	.	.
2.217	0.4448	2.65	.Q	.	.	.	.
2.233	0.4485	2.65	.Q	.	.	.	.
2.250	0.4521	2.65	.Q	.	.	.	.
2.267	0.4558	2.65	.Q	.	.	.	.
2.283	0.4594	2.66	.Q	.	.	.	.
2.300	0.4631	2.66	.Q	.	.	.	.
2.317	0.4668	2.66	.Q	.	.	.	.
2.333	0.4704	2.66	.Q	.	.	.	.
2.350	0.4741	2.67	.Q	.	.	.	.
2.367	0.4778	2.67	.Q	.	.	.	.
2.383	0.4814	2.67	.Q	.	.	.	.
2.400	0.4851	2.67	.Q	.	.	.	.
2.417	0.4888	2.67	.Q	.	.	.	.
2.433	0.4925	2.67	.Q	.	.	.	.
2.450	0.4962	2.67	.Q	.	.	.	.
2.467	0.4999	2.67	.Q	.	.	.	.
2.483	0.5035	2.68	.Q	.	.	.	.
2.500	0.5072	2.68	.Q	.	.	.	.
2.517	0.5109	2.68	.Q	.	.	.	.
2.533	0.5146	2.68	.Q	.	.	.	.
2.550	0.5183	2.68	.Q	.	.	.	.
2.567	0.5220	2.68	.Q	.	.	.	.
2.583	0.5257	2.68	.Q	.	.	.	.
2.600	0.5294	2.68	.Q	.	.	.	.
2.617	0.5331	2.69	.Q	.	.	.	.
2.633	0.5368	2.69	.Q	.	.	.	.
2.650	0.5405	2.69	.Q	.	.	.	.
2.667	0.5442	2.69	.Q	.	.	.	.
2.683	0.5479	2.70	.Q	.	.	.	.
2.700	0.5516	2.70	.Q	.	.	.	.
2.717	0.5553	2.70	.Q	.	.	.	.
2.733	0.5591	2.70	.Q	.	.	.	.
2.750	0.5628	2.71	.Q	.	.	.	.
2.767	0.5665	2.71	.Q	.	.	.	.
2.783	0.5703	2.71	.Q	.	.	.	.
2.800	0.5740	2.71	.Q	.	.	.	.
2.817	0.5777	2.72	.Q	.	.	.	.

2.833	0.5815	2.72	.QV	.	.	.	.
2.850	0.5852	2.72	.QV	.	.	.	.
2.867	0.5890	2.72	.QV	.	.	.	.
2.883	0.5927	2.73	.QV	.	.	.	.
2.900	0.5965	2.73	.QV	.	.	.	.
2.917	0.6002	2.73	.QV	.	.	.	.
2.933	0.6040	2.73	.QV	.	.	.	.
2.950	0.6078	2.73	.QV	.	.	.	.
2.967	0.6115	2.73	.QV	.	.	.	.
2.983	0.6153	2.73	.QV	.	.	.	.
3.000	0.6191	2.73	.QV	.	.	.	.
3.017	0.6228	2.74	.QV	.	.	.	.
3.033	0.6266	2.74	.QV	.	.	.	.
3.050	0.6304	2.74	.QV	.	.	.	.
3.067	0.6342	2.74	.QV	.	.	.	.
3.083	0.6379	2.74	.QV	.	.	.	.
3.100	0.6417	2.74	.QV	.	.	.	.
3.117	0.6455	2.74	.QV	.	.	.	.
3.133	0.6493	2.75	.QV	.	.	.	.
3.150	0.6531	2.75	.QV	.	.	.	.
3.167	0.6568	2.75	.QV	.	.	.	.
3.183	0.6606	2.75	.QV	.	.	.	.
3.200	0.6644	2.75	.QV	.	.	.	.
3.217	0.6682	2.76	.QV	.	.	.	.
3.233	0.6720	2.76	.QV	.	.	.	.
3.250	0.6758	2.76	.QV	.	.	.	.
3.267	0.6796	2.77	.QV	.	.	.	.
3.283	0.6834	2.77	.QV	.	.	.	.
3.300	0.6873	2.77	.QV	.	.	.	.
3.317	0.6911	2.77	.QV	.	.	.	.
3.333	0.6949	2.78	.QV	.	.	.	.
3.350	0.6987	2.78	.QV	.	.	.	.
3.367	0.7026	2.78	.QV	.	.	.	.
3.383	0.7064	2.78	.QV	.	.	.	.
3.400	0.7102	2.79	.QV	.	.	.	.
3.417	0.7141	2.79	.QV	.	.	.	.
3.433	0.7179	2.79	.QV	.	.	.	.
3.450	0.7218	2.79	.QV	.	.	.	.
3.467	0.7256	2.79	.QV	.	.	.	.
3.483	0.7295	2.80	.QV	.	.	.	.
3.500	0.7333	2.80	.QV	.	.	.	.
3.517	0.7372	2.80	.QV	.	.	.	.
3.533	0.7410	2.80	.QV	.	.	.	.
3.550	0.7449	2.80	.QV	.	.	.	.
3.567	0.7487	2.80	.QV	.	.	.	.
3.583	0.7526	2.80	.QV	.	.	.	.
3.600	0.7565	2.80	.QV	.	.	.	.
3.617	0.7603	2.81	.QV	.	.	.	.
3.633	0.7642	2.81	.QV	.	.	.	.
3.650	0.7681	2.81	.QV	.	.	.	.
3.667	0.7719	2.81	.QV	.	.	.	.
3.683	0.7758	2.81	.QV	.	.	.	.
3.700	0.7797	2.81	.QV	.	.	.	.
3.717	0.7836	2.82	.QV	.	.	.	.
3.733	0.7875	2.82	.QV	.	.	.	.

3.750	0.7913	2.82	.QV	.	.	.	.
3.767	0.7952	2.83	.QV	.	.	.	.
3.783	0.7991	2.83	.QV	.	.	.	.
3.800	0.8030	2.83	.QV	.	.	.	.
3.817	0.8069	2.83	.QV	.	.	.	.
3.833	0.8108	2.84	.QV	.	.	.	.
3.850	0.8148	2.84	.QV	.	.	.	.
3.867	0.8187	2.84	.QV	.	.	.	.
3.883	0.8226	2.85	.QV	.	.	.	.
3.900	0.8265	2.85	.QV	.	.	.	.
3.917	0.8304	2.85	.QV	.	.	.	.
3.933	0.8344	2.85	.QV	.	.	.	.
3.950	0.8383	2.86	.QV	.	.	.	.
3.967	0.8423	2.86	.QV	.	.	.	.
3.983	0.8462	2.86	.QV	.	.	.	.
4.000	0.8501	2.86	.QV	.	.	.	.
4.017	0.8541	2.86	.QV	.	.	.	.
4.033	0.8580	2.87	.QV	.	.	.	.
4.050	0.8620	2.87	.QV	.	.	.	.
4.067	0.8659	2.87	.QV	.	.	.	.
4.083	0.8699	2.87	.QV	.	.	.	.
4.100	0.8738	2.87	.Q V	.	.	.	.
4.117	0.8778	2.87	.Q V	.	.	.	.
4.133	0.8818	2.87	.Q V	.	.	.	.
4.150	0.8857	2.88	.Q V	.	.	.	.
4.167	0.8897	2.88	.Q V	.	.	.	.
4.183	0.8936	2.88	.Q V	.	.	.	.
4.200	0.8976	2.88	.Q V	.	.	.	.
4.217	0.9016	2.88	.Q V	.	.	.	.
4.233	0.9055	2.88	.Q V	.	.	.	.
4.250	0.9095	2.89	.Q V	.	.	.	.
4.267	0.9135	2.89	.Q V	.	.	.	.
4.283	0.9175	2.89	.Q V	.	.	.	.
4.300	0.9215	2.90	.Q V	.	.	.	.
4.317	0.9255	2.90	.Q V	.	.	.	.
4.333	0.9295	2.90	.Q V	.	.	.	.
4.350	0.9335	2.91	.Q V	.	.	.	.
4.367	0.9375	2.91	.Q V	.	.	.	.
4.383	0.9415	2.91	.Q V	.	.	.	.
4.400	0.9455	2.91	.Q V	.	.	.	.
4.417	0.9495	2.92	.Q V	.	.	.	.
4.433	0.9535	2.92	.Q V	.	.	.	.
4.450	0.9576	2.92	.Q V	.	.	.	.
4.467	0.9616	2.93	.Q V	.	.	.	.
4.483	0.9656	2.93	.Q V	.	.	.	.
4.500	0.9697	2.93	.Q V	.	.	.	.
4.517	0.9737	2.93	.Q V	.	.	.	.
4.533	0.9778	2.94	.Q V	.	.	.	.
4.550	0.9818	2.94	.Q V	.	.	.	.
4.567	0.9859	2.94	.Q V	.	.	.	.
4.583	0.9899	2.94	.Q V	.	.	.	.
4.600	0.9940	2.94	.Q V	.	.	.	.
4.617	0.9980	2.94	.Q V	.	.	.	.
4.633	1.0021	2.95	.Q V	.	.	.	.
4.650	1.0061	2.95	.Q V	.	.	.	.

4.667	1.0102	2.95	.Q V	.	.	.	.
4.683	1.0143	2.95	.Q V	.	.	.	.
4.700	1.0183	2.95	.Q V	.	.	.	.
4.717	1.0224	2.95	.Q V	.	.	.	.
4.733	1.0265	2.95	.Q V	.	.	.	.
4.750	1.0305	2.96	.Q V	.	.	.	.
4.767	1.0346	2.96	.Q V	.	.	.	.
4.783	1.0387	2.96	.Q V	.	.	.	.
4.800	1.0428	2.97	.Q V	.	.	.	.
4.817	1.0469	2.97	.Q V	.	.	.	.
4.833	1.0510	2.97	.Q V	.	.	.	.
4.850	1.0551	2.98	.Q V	.	.	.	.
4.867	1.0592	2.98	.Q V	.	.	.	.
4.883	1.0633	2.98	.Q V	.	.	.	.
4.900	1.0674	2.99	.Q V	.	.	.	.
4.917	1.0715	2.99	.Q V	.	.	.	.
4.933	1.0756	2.99	.Q V	.	.	.	.
4.950	1.0797	2.99	.Q V	.	.	.	.
4.967	1.0839	3.00	.Q V	.	.	.	.
4.983	1.0880	3.00	.Q V	.	.	.	.
5.000	1.0921	3.00	.Q V	.	.	.	.
5.017	1.0963	3.01	.Q V	.	.	.	.
5.033	1.1004	3.01	.Q V	.	.	.	.
5.050	1.1046	3.01	.Q V	.	.	.	.
5.067	1.1087	3.01	.Q V	.	.	.	.
5.083	1.1129	3.02	.Q V	.	.	.	.
5.100	1.1170	3.02	.Q V	.	.	.	.
5.117	1.1212	3.02	.Q V	.	.	.	.
5.133	1.1254	3.02	.Q V	.	.	.	.
5.150	1.1295	3.02	.Q V	.	.	.	.
5.167	1.1337	3.02	.Q V	.	.	.	.
5.183	1.1379	3.03	.Q V	.	.	.	.
5.200	1.1420	3.03	.Q V	.	.	.	.
5.217	1.1462	3.03	.Q V	.	.	.	.
5.233	1.1504	3.03	.Q V	.	.	.	.
5.250	1.1546	3.03	.Q V	.	.	.	.
5.267	1.1587	3.04	.Q V	.	.	.	.
5.283	1.1629	3.04	.Q V	.	.	.	.
5.300	1.1671	3.04	.Q V	.	.	.	.
5.317	1.1713	3.04	.Q V	.	.	.	.
5.333	1.1755	3.05	.Q V	.	.	.	.
5.350	1.1797	3.05	.Q V	.	.	.	.
5.367	1.1839	3.05	.Q V	.	.	.	.
5.383	1.1881	3.06	.Q V	.	.	.	.
5.400	1.1923	3.06	.Q V	.	.	.	.
5.417	1.1966	3.06	.Q V	.	.	.	.
5.433	1.2008	3.07	.Q V	.	.	.	.
5.450	1.2050	3.07	.Q V	.	.	.	.
5.467	1.2092	3.07	.Q V	.	.	.	.
5.483	1.2135	3.08	.Q V	.	.	.	.
5.500	1.2177	3.08	.Q V	.	.	.	.
5.517	1.2220	3.09	.Q V	.	.	.	.
5.533	1.2262	3.09	.Q V	.	.	.	.
5.550	1.2305	3.09	.Q V	.	.	.	.
5.567	1.2348	3.10	.Q V	.	.	.	.

5.583	1.2390	3.10	.Q	V	.	.	.	.
5.600	1.2433	3.10	.Q	V	.	.	.	.
5.617	1.2476	3.10	.Q	V	.	.	.	.
5.633	1.2518	3.10	.Q	V	.	.	.	.
5.650	1.2561	3.11	.Q	V	.	.	.	.
5.667	1.2604	3.11	.Q	V	.	.	.	.
5.683	1.2647	3.11	.Q	V	.	.	.	.
5.700	1.2690	3.11	.Q	V	.	.	.	.
5.717	1.2732	3.11	.Q	V	.	.	.	.
5.733	1.2775	3.11	.Q	V	.	.	.	.
5.750	1.2818	3.12	.Q	V	.	.	.	.
5.767	1.2861	3.12	.Q	V	.	.	.	.
5.783	1.2904	3.12	.Q	V	.	.	.	.
5.800	1.2947	3.12	.Q	V	.	.	.	.
5.817	1.2990	3.12	.Q	V	.	.	.	.
5.833	1.3033	3.13	.Q	V	.	.	.	.
5.850	1.3076	3.13	.Q	V	.	.	.	.
5.867	1.3120	3.13	.Q	V	.	.	.	.
5.883	1.3163	3.14	.Q	V	.	.	.	.
5.900	1.3206	3.14	.Q	V	.	.	.	.
5.917	1.3249	3.14	.Q	V	.	.	.	.
5.933	1.3293	3.15	.Q	V	.	.	.	.
5.950	1.3336	3.15	.Q	V	.	.	.	.
5.967	1.3380	3.16	.Q	V	.	.	.	.
5.983	1.3423	3.16	.Q	V	.	.	.	.
6.000	1.3467	3.16	.Q	V	.	.	.	.
6.017	1.3510	3.17	.Q	V	.	.	.	.
6.033	1.3554	3.17	.Q	V	.	.	.	.
6.050	1.3598	3.18	.Q	V	.	.	.	.
6.067	1.3642	3.18	.Q	V	.	.	.	.
6.083	1.3685	3.18	.Q	V	.	.	.	.
6.100	1.3729	3.19	.Q	V	.	.	.	.
6.117	1.3773	3.19	.Q	V	.	.	.	.
6.133	1.3817	3.19	.Q	V	.	.	.	.
6.150	1.3861	3.19	.Q	V	.	.	.	.
6.167	1.3905	3.20	.Q	V	.	.	.	.
6.183	1.3949	3.20	.Q	V	.	.	.	.
6.200	1.3993	3.20	.Q	V	.	.	.	.
6.217	1.4037	3.20	.Q	V	.	.	.	.
6.233	1.4082	3.20	.Q	V	.	.	.	.
6.250	1.4126	3.21	.Q	V	.	.	.	.
6.267	1.4170	3.21	.Q	V	.	.	.	.
6.283	1.4214	3.21	.Q	V	.	.	.	.
6.300	1.4258	3.21	.Q	V	.	.	.	.
6.317	1.4303	3.21	.Q	V	.	.	.	.
6.333	1.4347	3.22	.Q	V	.	.	.	.
6.350	1.4391	3.22	.Q	V	.	.	.	.
6.367	1.4436	3.22	.Q	V	.	.	.	.
6.383	1.4480	3.22	.Q	V	.	.	.	.
6.400	1.4524	3.23	.Q	V	.	.	.	.
6.417	1.4569	3.23	.Q	V	.	.	.	.
6.433	1.4613	3.24	.Q	V	.	.	.	.
6.450	1.4658	3.24	.Q	V	.	.	.	.
6.467	1.4703	3.24	.Q	V	.	.	.	.
6.483	1.4748	3.25	.Q	V	.	.	.	.

6.500	1.4792	3.25	.Q	V	.	.	.	.
6.517	1.4837	3.26	.Q	V	.	.	.	.
6.533	1.4882	3.26	.Q	V	.	.	.	.
6.550	1.4927	3.27	.Q	V	.	.	.	.
6.567	1.4972	3.27	.Q	V	.	.	.	.
6.583	1.5017	3.27	.Q	V	.	.	.	.
6.600	1.5062	3.28	.Q	V	.	.	.	.
6.617	1.5108	3.28	.Q	V	.	.	.	.
6.633	1.5153	3.29	.Q	V	.	.	.	.
6.650	1.5198	3.29	.Q	V	.	.	.	.
6.667	1.5244	3.29	.Q	V	.	.	.	.
6.683	1.5289	3.29	.Q	V	.	.	.	.
6.700	1.5334	3.30	.Q	V	.	.	.	.
6.717	1.5380	3.30	.Q	V	.	.	.	.
6.733	1.5425	3.30	.Q	V	.	.	.	.
6.750	1.5471	3.30	.Q	V	.	.	.	.
6.767	1.5516	3.30	.Q	V	.	.	.	.
6.783	1.5562	3.31	.Q	V	.	.	.	.
6.800	1.5607	3.31	.Q	V	.	.	.	.
6.817	1.5653	3.31	.Q	V	.	.	.	.
6.833	1.5699	3.31	.Q	V	.	.	.	.
6.850	1.5744	3.32	.Q	V	.	.	.	.
6.867	1.5790	3.32	.Q	V	.	.	.	.
6.883	1.5836	3.32	.Q	V	.	.	.	.
6.900	1.5881	3.32	.Q	V	.	.	.	.
6.917	1.5927	3.33	.Q	V	.	.	.	.
6.933	1.5973	3.33	.Q	V	.	.	.	.
6.950	1.6019	3.34	.Q	V	.	.	.	.
6.967	1.6065	3.34	.Q	V	.	.	.	.
6.983	1.6111	3.34	.Q	V	.	.	.	.
7.000	1.6157	3.35	.Q	V	.	.	.	.
7.017	1.6203	3.35	.Q	V	.	.	.	.
7.033	1.6250	3.36	.Q	V	.	.	.	.
7.050	1.6296	3.36	.Q	V	.	.	.	.
7.067	1.6342	3.37	.Q	V	.	.	.	.
7.083	1.6389	3.37	.Q	V	.	.	.	.
7.100	1.6435	3.38	.Q	V	.	.	.	.
7.117	1.6482	3.38	.Q	V	.	.	.	.
7.133	1.6529	3.39	.Q	V	.	.	.	.
7.150	1.6575	3.39	.Q	V	.	.	.	.
7.167	1.6622	3.39	.Q	V	.	.	.	.
7.183	1.6669	3.40	.Q	V	.	.	.	.
7.200	1.6716	3.40	.Q	V	.	.	.	.
7.217	1.6762	3.40	.Q	V	.	.	.	.
7.233	1.6809	3.41	.Q	V	.	.	.	.
7.250	1.6856	3.41	.Q	V	.	.	.	.
7.267	1.6903	3.41	.Q	V	.	.	.	.
7.283	1.6950	3.41	.Q	V	.	.	.	.
7.300	1.6997	3.41	.Q	V	.	.	.	.
7.317	1.7044	3.42	.Q	V	.	.	.	.
7.333	1.7092	3.42	.Q	V	.	.	.	.
7.350	1.7139	3.42	.Q	V	.	.	.	.
7.367	1.7186	3.42	.Q	V	.	.	.	.
7.383	1.7233	3.43	.Q	V	.	.	.	.
7.400	1.7280	3.43	.Q	V	.	.	.	.

7.417	1.7328	3.43	.Q	V	.	.	.	.
7.433	1.7375	3.43	.Q	V	.	.	.	.
7.450	1.7422	3.44	.Q	V	.	.	.	.
7.467	1.7470	3.44	.Q	V	.	.	.	.
7.483	1.7517	3.45	.Q	V	.	.	.	.
7.500	1.7565	3.45	.Q	V	.	.	.	.
7.517	1.7612	3.46	.Q	V	.	.	.	.
7.533	1.7660	3.46	.Q	V	.	.	.	.
7.550	1.7708	3.47	.Q	V	.	.	.	.
7.567	1.7756	3.47	.Q	V	.	.	.	.
7.583	1.7804	3.48	.Q	V	.	.	.	.
7.600	1.7852	3.48	.Q	V	.	.	.	.
7.617	1.7900	3.49	.Q	V	.	.	.	.
7.633	1.7948	3.49	.Q	V	.	.	.	.
7.650	1.7996	3.50	.Q	V	.	.	.	.
7.667	1.8044	3.50	.Q	V	.	.	.	.
7.683	1.8092	3.51	.Q	V	.	.	.	.
7.700	1.8141	3.51	.Q	V	.	.	.	.
7.717	1.8189	3.52	.Q	V	.	.	.	.
7.733	1.8238	3.52	.Q	V	.	.	.	.
7.750	1.8286	3.52	.Q	V	.	.	.	.
7.767	1.8335	3.53	.Q	V	.	.	.	.
7.783	1.8383	3.53	.Q	V	.	.	.	.
7.800	1.8432	3.53	.Q	V	.	.	.	.
7.817	1.8481	3.53	.Q	V	.	.	.	.
7.833	1.8529	3.54	.Q	V	.	.	.	.
7.850	1.8578	3.54	.Q	V	.	.	.	.
7.867	1.8627	3.54	.Q	V	.	.	.	.
7.883	1.8676	3.54	.Q	V	.	.	.	.
7.900	1.8725	3.55	.Q	V	.	.	.	.
7.917	1.8774	3.55	.Q	V	.	.	.	.
7.933	1.8822	3.55	.Q	V	.	.	.	.
7.950	1.8871	3.55	.Q	V	.	.	.	.
7.967	1.8920	3.56	.Q	V	.	.	.	.
7.983	1.8969	3.56	.Q	V	.	.	.	.
8.000	1.9019	3.57	.Q	V	.	.	.	.
8.017	1.9068	3.57	.Q	V	.	.	.	.
8.033	1.9117	3.58	.Q	V	.	.	.	.
8.050	1.9166	3.58	.Q	V	.	.	.	.
8.067	1.9216	3.59	.Q	V	.	.	.	.
8.083	1.9265	3.59	.Q	V	.	.	.	.
8.100	1.9315	3.60	.Q	V	.	.	.	.
8.117	1.9365	3.61	.Q	V	.	.	.	.
8.133	1.9414	3.61	.Q	V	.	.	.	.
8.150	1.9464	3.62	.Q	V	.	.	.	.
8.167	1.9514	3.62	.Q	V	.	.	.	.
8.183	1.9564	3.63	.Q	V	.	.	.	.
8.200	1.9614	3.63	.Q	V	.	.	.	.
8.217	1.9664	3.64	.Q	V	.	.	.	.
8.233	1.9714	3.64	.Q	V	.	.	.	.
8.250	1.9765	3.65	.Q	V	.	.	.	.
8.267	1.9815	3.65	.Q	V	.	.	.	.
8.283	1.9865	3.66	.Q	V	.	.	.	.
8.300	1.9916	3.66	.Q	V	.	.	.	.
8.317	1.9966	3.66	.Q	V	.	.	.	.

8.333	2.0017	3.66	.Q	V	.	.	.	.
8.350	2.0067	3.67	.Q	V	.	.	.	.
8.367	2.0118	3.67	.Q	V	.	.	.	.
8.383	2.0168	3.67	.Q	V	.	.	.	.
8.400	2.0219	3.68	.Q	V	.	.	.	.
8.417	2.0270	3.68	.Q	V	.	.	.	.
8.433	2.0320	3.68	.Q	V	.	.	.	.
8.450	2.0371	3.68	.Q	V	.	.	.	.
8.467	2.0422	3.69	.Q	V	.	.	.	.
8.483	2.0473	3.69	.Q	V	.	.	.	.
8.500	2.0524	3.69	.Q	V	.	.	.	.
8.517	2.0574	3.70	.Q	V	.	.	.	.
8.533	2.0625	3.70	.Q	V	.	.	.	.
8.550	2.0677	3.71	.Q	V	.	.	.	.
8.567	2.0728	3.72	.Q	V	.	.	.	.
8.583	2.0779	3.72	.Q	V	.	.	.	.
8.600	2.0830	3.73	.Q	V	.	.	.	.
8.617	2.0882	3.73	.Q	V	.	.	.	.
8.633	2.0933	3.74	.Q	V	.	.	.	.
8.650	2.0985	3.75	.Q	V	.	.	.	.
8.667	2.1037	3.75	.Q	V	.	.	.	.
8.683	2.1088	3.76	.Q	V	.	.	.	.
8.700	2.1140	3.77	.Q	V	.	.	.	.
8.717	2.1192	3.77	.Q	V	.	.	.	.
8.733	2.1244	3.78	.Q	V	.	.	.	.
8.750	2.1296	3.78	.Q	V	.	.	.	.
8.767	2.1349	3.79	.Q	V	.	.	.	.
8.783	2.1401	3.80	.Q	V	.	.	.	.
8.800	2.1453	3.80	.Q	V	.	.	.	.
8.817	2.1506	3.80	.Q	V	.	.	.	.
8.833	2.1558	3.81	.Q	V	.	.	.	.
8.850	2.1611	3.81	.Q	V	.	.	.	.
8.867	2.1663	3.81	.Q	V	.	.	.	.
8.883	2.1716	3.82	.Q	V	.	.	.	.
8.900	2.1768	3.82	.Q	V	.	.	.	.
8.917	2.1821	3.82	.Q	V	.	.	.	.
8.933	2.1874	3.83	.Q	V	.	.	.	.
8.950	2.1926	3.83	.Q	V	.	.	.	.
8.967	2.1979	3.83	.Q	V	.	.	.	.
8.983	2.2032	3.84	.Q	V	.	.	.	.
9.000	2.2085	3.84	.Q	V	.	.	.	.
9.017	2.2138	3.84	.Q	V	.	.	.	.
9.033	2.2191	3.84	.Q	V	.	.	.	.
9.050	2.2244	3.85	.Q	V	.	.	.	.
9.067	2.2297	3.86	.Q	V	.	.	.	.
9.083	2.2350	3.86	.Q	V	.	.	.	.
9.100	2.2403	3.87	.Q	V	.	.	.	.
9.117	2.2457	3.88	.Q	V	.	.	.	.
9.133	2.2510	3.88	.Q	V	.	.	.	.
9.150	2.2564	3.89	.Q	V	.	.	.	.
9.167	2.2617	3.90	.Q	V	.	.	.	.
9.183	2.2671	3.90	.Q	V	.	.	.	.
9.200	2.2725	3.91	.Q	V	.	.	.	.
9.217	2.2779	3.92	.Q	V	.	.	.	.
9.233	2.2833	3.93	.Q	V	.	.	.	.

9.250	2.2887	3.93	. Q	V .	.	.	.
9.267	2.2942	3.94	. Q	V .	.	.	.
9.283	2.2996	3.95	. Q	V .	.	.	.
9.300	2.3050	3.95	. Q	V .	.	.	.
9.317	2.3105	3.96	. Q	V .	.	.	.
9.333	2.3159	3.96	. Q	V .	.	.	.
9.350	2.3214	3.97	. Q	V .	.	.	.
9.367	2.3269	3.97	. Q	V .	.	.	.
9.383	2.3324	3.97	. Q	V .	.	.	.
9.400	2.3378	3.98	. Q	V .	.	.	.
9.417	2.3433	3.98	. Q	V .	.	.	.
9.433	2.3488	3.99	. Q	V .	.	.	.
9.450	2.3543	3.99	. Q	V .	.	.	.
9.467	2.3598	3.99	. Q	V .	.	.	.
9.483	2.3653	4.00	. Q	V .	.	.	.
9.500	2.3708	4.00	. Q	V .	.	.	.
9.517	2.3763	4.00	. Q	V .	.	.	.
9.533	2.3819	4.01	. Q	V .	.	.	.
9.550	2.3874	4.01	. Q	V .	.	.	.
9.567	2.3929	4.02	. Q	V .	.	.	.
9.583	2.3984	4.02	. Q	V .	.	.	.
9.600	2.4040	4.03	. Q	V .	.	.	.
9.617	2.4096	4.03	. Q	V .	.	.	.
9.633	2.4151	4.04	. Q	V .	.	.	.
9.650	2.4207	4.05	. Q	V .	.	.	.
9.667	2.4263	4.06	. Q	V .	.	.	.
9.683	2.4319	4.07	. Q	V .	.	.	.
9.700	2.4375	4.07	. Q	V .	.	.	.
9.717	2.4431	4.08	. Q	V .	.	.	.
9.733	2.4488	4.09	. Q	V .	.	.	.
9.750	2.4544	4.10	. Q	V .	.	.	.
9.767	2.4601	4.11	. Q	V .	.	.	.
9.783	2.4657	4.11	. Q	V .	.	.	.
9.800	2.4714	4.12	. Q	V .	.	.	.
9.817	2.4771	4.13	. Q	V .	.	.	.
9.833	2.4828	4.14	. Q	V .	.	.	.
9.850	2.4885	4.14	. Q	V .	.	.	.
9.867	2.4942	4.15	. Q	V .	.	.	.
9.883	2.4999	4.15	. Q	V .	.	.	.
9.900	2.5057	4.16	. Q	V .	.	.	.
9.917	2.5114	4.16	. Q	V .	.	.	.
9.933	2.5171	4.17	. Q	V .	.	.	.
9.950	2.5229	4.17	. Q	V .	.	.	.
9.967	2.5286	4.17	. Q	V .	.	.	.
9.983	2.5344	4.18	. Q	V .	.	.	.
10.000	2.5401	4.18	. Q	V .	.	.	.
10.017	2.5459	4.19	. Q	V .	.	.	.
10.033	2.5517	4.19	. Q	V .	.	.	.
10.050	2.5575	4.20	. Q	V .	.	.	.
10.067	2.5632	4.20	. Q	V .	.	.	.
10.083	2.5690	4.20	. Q	V .	.	.	.
10.100	2.5748	4.21	. Q	V .	.	.	.
10.117	2.5806	4.21	. Q	V .	.	.	.
10.133	2.5865	4.22	. Q	V .	.	.	.
10.150	2.5923	4.23	. Q	V .	.	.	.

10.167	2.5981	4.24	. Q	V .	.	.	.
10.183	2.6040	4.25	. Q	V .	.	.	.
10.200	2.6098	4.26	. Q	V .	.	.	.
10.217	2.6157	4.27	. Q	V.	.	.	.
10.233	2.6216	4.28	. Q	V.	.	.	.
10.250	2.6275	4.28	. Q	V.	.	.	.
10.267	2.6334	4.29	. Q	V.	.	.	.
10.283	2.6393	4.30	. Q	V.	.	.	.
10.300	2.6453	4.31	. Q	V.	.	.	.
10.317	2.6512	4.32	. Q	V.	.	.	.
10.333	2.6572	4.33	. Q	V.	.	.	.
10.350	2.6632	4.34	. Q	V.	.	.	.
10.367	2.6692	4.35	. Q	V.	.	.	.
10.383	2.6752	4.36	. Q	V.	.	.	.
10.400	2.6812	4.36	. Q	V.	.	.	.
10.417	2.6872	4.37	. Q	V.	.	.	.
10.433	2.6932	4.37	. Q	V.	.	.	.
10.450	2.6992	4.38	. Q	V.	.	.	.
10.467	2.7053	4.38	. Q	V.	.	.	.
10.483	2.7113	4.39	. Q	V.	.	.	.
10.500	2.7173	4.39	. Q	V.	.	.	.
10.517	2.7234	4.40	. Q	V.	.	.	.
10.533	2.7295	4.40	. Q	V.	.	.	.
10.550	2.7355	4.40	. Q	V.	.	.	.
10.567	2.7416	4.41	. Q	V.	.	.	.
10.583	2.7477	4.41	. Q	V.	.	.	.
10.600	2.7538	4.42	. Q	V.	.	.	.
10.617	2.7599	4.42	. Q	V.	.	.	.
10.633	2.7660	4.43	. Q	V.	.	.	.
10.650	2.7721	4.43	. Q	V.	.	.	.
10.667	2.7782	4.44	. Q	V.	.	.	.
10.683	2.7843	4.45	. Q	V.	.	.	.
10.700	2.7905	4.46	. Q	V.	.	.	.
10.717	2.7966	4.47	. Q	V.	.	.	.
10.733	2.8028	4.49	. Q	V.	.	.	.
10.750	2.8090	4.50	. Q	V.	.	.	.
10.767	2.8152	4.51	. Q	V.	.	.	.
10.783	2.8214	4.52	. Q	V.	.	.	.
10.800	2.8277	4.53	. Q	V.	.	.	.
10.817	2.8339	4.54	. Q	V.	.	.	.
10.833	2.8402	4.55	. Q	V.	.	.	.
10.850	2.8465	4.56	. Q	V.	.	.	.
10.867	2.8528	4.57	. Q	V.	.	.	.
10.883	2.8591	4.58	. Q	V.	.	.	.
10.900	2.8654	4.59	. Q	V.	.	.	.
10.917	2.8717	4.60	. Q	V.	.	.	.
10.933	2.8781	4.61	. Q	V.	.	.	.
10.950	2.8844	4.61	. Q	V.	.	.	.
10.967	2.8908	4.62	. Q	V.	.	.	.
10.983	2.8971	4.62	. Q	V.	.	.	.
11.000	2.9035	4.63	. Q	V.	.	.	.
11.017	2.9099	4.63	. Q	V	.	.	.
11.033	2.9163	4.64	. Q	V	.	.	.
11.050	2.9227	4.65	. Q	V	.	.	.
11.067	2.9291	4.65	. Q	V	.	.	.

11.083	2.9355	4.66	. Q	V	.	.	.
11.100	2.9419	4.66	. Q	V	.	.	.
11.117	2.9484	4.67	. Q	V	.	.	.
11.133	2.9548	4.67	. Q	V	.	.	.
11.150	2.9613	4.68	. Q	V	.	.	.
11.167	2.9677	4.69	. Q	V	.	.	.
11.183	2.9742	4.69	. Q	V	.	.	.
11.200	2.9806	4.70	. Q	V	.	.	.
11.217	2.9871	4.71	. Q	V	.	.	.
11.233	2.9936	4.73	. Q	V	.	.	.
11.250	3.0002	4.74	. Q	V	.	.	.
11.267	3.0067	4.75	. Q	V	.	.	.
11.283	3.0133	4.76	. Q	V	.	.	.
11.300	3.0199	4.77	. Q	V	.	.	.
11.317	3.0264	4.79	. Q	V	.	.	.
11.333	3.0331	4.80	. Q	V	.	.	.
11.350	3.0397	4.81	. Q	V	.	.	.
11.367	3.0463	4.82	. Q	V	.	.	.
11.383	3.0530	4.84	. Q	V	.	.	.
11.400	3.0597	4.85	. Q	V	.	.	.
11.417	3.0664	4.86	. Q	V	.	.	.
11.433	3.0731	4.87	. Q	V	.	.	.
11.450	3.0798	4.89	. Q	V	.	.	.
11.467	3.0865	4.89	. Q	V	.	.	.
11.483	3.0933	4.90	. Q	V	.	.	.
11.500	3.1001	4.91	. Q	V	.	.	.
11.517	3.1068	4.91	. Q	V	.	.	.
11.533	3.1136	4.92	. Q	V	.	.	.
11.550	3.1204	4.93	. Q	V	.	.	.
11.567	3.1272	4.93	. Q	V	.	.	.
11.583	3.1340	4.94	. Q	V	.	.	.
11.600	3.1408	4.95	. Q	V	.	.	.
11.617	3.1476	4.95	. Q	V	.	.	.
11.633	3.1545	4.96	. Q	V	.	.	.
11.650	3.1613	4.97	. Q	V	.	.	.
11.667	3.1682	4.97	. Q	V	.	.	.
11.683	3.1750	4.98	. Q	V	.	.	.
11.700	3.1819	4.99	. Q	V	.	.	.
11.717	3.1888	4.99	. Q	V	.	.	.
11.733	3.1957	5.01	. Q	.V	.	.	.
11.750	3.2026	5.02	. Q	.V	.	.	.
11.767	3.2095	5.03	. Q	.V	.	.	.
11.783	3.2165	5.05	. Q	.V	.	.	.
11.800	3.2234	5.06	. Q	.V	.	.	.
11.817	3.2304	5.08	. Q	.V	.	.	.
11.833	3.2375	5.09	. Q	.V	.	.	.
11.850	3.2445	5.11	. Q	.V	.	.	.
11.867	3.2516	5.12	. Q	.V	.	.	.
11.883	3.2586	5.14	. Q	.V	.	.	.
11.900	3.2657	5.15	. Q	.V	.	.	.
11.917	3.2728	5.17	. Q	.V	.	.	.
11.933	3.2800	5.18	. Q	.V	.	.	.
11.950	3.2871	5.20	. Q	.V	.	.	.
11.967	3.2943	5.21	. Q	.V	.	.	.
11.983	3.3015	5.23	. Q	.V	.	.	.

12.000	3.3087	5.24	. Q	.V	.	.	.
12.017	3.3160	5.26	. Q	.V	.	.	.
12.033	3.3232	5.27	. Q	.V	.	.	.
12.050	3.3305	5.29	. Q	.V	.	.	.
12.067	3.3378	5.30	. Q	.V	.	.	.
12.083	3.3451	5.32	. Q	.V	.	.	.
12.100	3.3525	5.33	. Q	.V	.	.	.
12.117	3.3599	5.35	. Q	.V	.	.	.
12.133	3.3673	5.36	. Q	.V	.	.	.
12.150	3.3747	5.38	. Q	.V	.	.	.
12.167	3.3821	5.40	. Q	.V	.	.	.
12.183	3.3895	5.41	. Q	.V	.	.	.
12.200	3.3970	5.43	. Q	.V	.	.	.
12.217	3.4045	5.44	. Q	.V	.	.	.
12.233	3.4120	5.46	. Q	.V	.	.	.
12.250	3.4196	5.47	. Q	.V	.	.	.
12.267	3.4271	5.49	. Q	.V	.	.	.
12.283	3.4347	5.52	. Q	.V	.	.	.
12.300	3.4424	5.55	. Q	.V	.	.	.
12.317	3.4501	5.58	. Q	.V	.	.	.
12.333	3.4578	5.61	. Q	.V	.	.	.
12.350	3.4656	5.64	. Q	.V	.	.	.
12.367	3.4734	5.67	. Q	.V	.	.	.
12.383	3.4812	5.70	. Q	.V	.	.	.
12.400	3.4891	5.72	. Q	. V	.	.	.
12.417	3.4970	5.75	. Q	. V	.	.	.
12.433	3.5050	5.78	. Q	. V	.	.	.
12.450	3.5130	5.81	. Q	. V	.	.	.
12.467	3.5210	5.84	. Q	. V	.	.	.
12.483	3.5291	5.87	. Q	. V	.	.	.
12.500	3.5372	5.90	. Q	. V	.	.	.
12.517	3.5454	5.93	. Q	. V	.	.	.
12.533	3.5536	5.95	. Q	. V	.	.	.
12.550	3.5618	5.96	. Q	. V	.	.	.
12.567	3.5700	5.97	. Q	. V	.	.	.
12.583	3.5782	5.98	. Q	. V	.	.	.
12.600	3.5865	5.99	. Q	. V	.	.	.
12.617	3.5948	6.00	. Q	. V	.	.	.
12.633	3.6030	6.01	. Q	. V	.	.	.
12.650	3.6113	6.02	. Q	. V	.	.	.
12.667	3.6196	6.03	. Q	. V	.	.	.
12.683	3.6279	6.04	. Q	. V	.	.	.
12.700	3.6363	6.05	. Q	. V	.	.	.
12.717	3.6446	6.06	. Q	. V	.	.	.
12.733	3.6530	6.07	. Q	. V	.	.	.
12.750	3.6614	6.08	. Q	. V	.	.	.
12.767	3.6698	6.09	. Q	. V	.	.	.
12.783	3.6782	6.10	. Q	. V	.	.	.
12.800	3.6866	6.11	. Q	. V	.	.	.
12.817	3.6950	6.14	. Q	. V	.	.	.
12.833	3.7035	6.16	. Q	. V	.	.	.
12.850	3.7120	6.18	. Q	. V	.	.	.
12.867	3.7206	6.21	. Q	. V	.	.	.
12.883	3.7292	6.23	. Q	. V	.	.	.
12.900	3.7378	6.25	. Q	. V	.	.	.

12.917	3.7464	6.27	.	Q	.	V	.	.	.
12.933	3.7551	6.30	.	Q	.	V	.	.	.
12.950	3.7638	6.32	.	Q	.	V	.	.	.
12.967	3.7725	6.34	.	Q	.	V	.	.	.
12.983	3.7813	6.37	.	Q	.	V	.	.	.
13.000	3.7901	6.39	.	Q	.	V	.	.	.
13.017	3.7989	6.41	.	Q	.	V	.	.	.
13.033	3.8078	6.44	.	Q	.	V	.	.	.
13.050	3.8167	6.46	.	Q	.	V	.	.	.
13.067	3.8256	6.48	.	Q	.	V	.	.	.
13.083	3.8346	6.49	.	Q	.	V	.	.	.
13.100	3.8435	6.51	.	Q	.	V	.	.	.
13.117	3.8525	6.52	.	Q	.	V	.	.	.
13.133	3.8615	6.53	.	Q	.	V	.	.	.
13.150	3.8705	6.54	.	Q	.	V	.	.	.
13.167	3.8795	6.56	.	Q	.	V	.	.	.
13.183	3.8886	6.57	.	Q	.	V	.	.	.
13.200	3.8977	6.58	.	Q	.	V	.	.	.
13.217	3.9068	6.60	.	Q	.	V	.	.	.
13.233	3.9159	6.61	.	Q	.	V	.	.	.
13.250	3.9250	6.62	.	Q	.	V	.	.	.
13.267	3.9341	6.64	.	Q	.	V	.	.	.
13.283	3.9433	6.65	.	Q	.	V	.	.	.
13.300	3.9525	6.66	.	Q	.	V	.	.	.
13.317	3.9617	6.68	.	Q	.	V	.	.	.
13.333	3.9709	6.69	.	Q	.	V	.	.	.
13.350	3.9801	6.72	.	Q	.	V	.	.	.
13.367	3.9894	6.75	.	Q	.	V	.	.	.
13.383	3.9988	6.78	.	Q	.	V	.	.	.
13.400	4.0082	6.81	.	Q	.	V	.	.	.
13.417	4.0176	6.84	.	Q	.	V	.	.	.
13.433	4.0270	6.87	.	Q	.	V	.	.	.
13.450	4.0366	6.90	.	Q	.	V	.	.	.
13.467	4.0461	6.93	.	Q	.	V	.	.	.
13.483	4.0557	6.96	.	Q	.	V	.	.	.
13.500	4.0653	6.99	.	Q	.	V	.	.	.
13.517	4.0750	7.02	.	Q	.	V	.	.	.
13.533	4.0847	7.05	.	Q	.	V	.	.	.
13.550	4.0945	7.08	.	Q	.	V	.	.	.
13.567	4.1043	7.11	.	Q	.	V	.	.	.
13.583	4.1141	7.14	.	Q	.	V	.	.	.
13.600	4.1240	7.17	.	Q	.	V	.	.	.
13.617	4.1339	7.19	.	Q	.	V	.	.	.
13.633	4.1438	7.21	.	Q	.	V	.	.	.
13.650	4.1538	7.23	.	Q	.	V	.	.	.
13.667	4.1638	7.24	.	Q	.	V	.	.	.
13.683	4.1738	7.26	.	Q	.	V	.	.	.
13.700	4.1838	7.28	.	Q	.	V	.	.	.
13.717	4.1938	7.30	.	Q	.	V	.	.	.
13.733	4.2039	7.31	.	Q	.	V	.	.	.
13.750	4.2140	7.33	.	Q	.	V	.	.	.
13.767	4.2241	7.35	.	Q	.	V	.	.	.
13.783	4.2343	7.37	.	Q	.	V	.	.	.
13.800	4.2444	7.38	.	Q	.	V	.	.	.
13.817	4.2546	7.40	.	Q	.	V	.	.	.

13.833	4.2649	7.42	.	Q	.	V	.	.	.
13.850	4.2751	7.44	.	Q	.	V	.	.	.
13.867	4.2854	7.46	.	Q	.	V	.	.	.
13.883	4.2957	7.50	.	Q	.	V	.	.	.
13.900	4.3061	7.54	.	Q	.	V	.	.	.
13.917	4.3165	7.58	.	Q	.	V	.	.	.
13.933	4.3270	7.62	.	Q	.	V	.	.	.
13.950	4.3376	7.66	.	Q	.	V	.	.	.
13.967	4.3482	7.71	.	Q	.	V	.	.	.
13.983	4.3589	7.75	.	Q	.	V	.	.	.
14.000	4.3696	7.79	.	Q	.	V	.	.	.
14.017	4.3804	7.83	.	Q	.	V	.	.	.
14.033	4.3912	7.87	.	Q	.	V	.	.	.
14.050	4.4021	7.91	.	Q	.	V	.	.	.
14.067	4.4131	7.96	.	Q	.	V	.	.	.
14.083	4.4241	8.00	.	Q	.	V	.	.	.
14.100	4.4352	8.04	.	Q	.	V	.	.	.
14.117	4.4463	8.08	.	Q	.	V	.	.	.
14.133	4.4575	8.12	.	Q	.	V	.	.	.
14.150	4.4687	8.15	.	Q	.	V	.	.	.
14.167	4.4800	8.17	.	Q	.	V	.	.	.
14.183	4.4913	8.19	.	Q	.	V	.	.	.
14.200	4.5026	8.22	.	Q	.	V	.	.	.
14.217	4.5139	8.24	.	Q	.	V	.	.	.
14.233	4.5253	8.26	.	Q	.	V	.	.	.
14.250	4.5367	8.29	.	Q	.	V	.	.	.
14.267	4.5482	8.31	.	Q	.	V	.	.	.
14.283	4.5597	8.33	.	Q	.	V	.	.	.
14.300	4.5712	8.36	.	Q	.	V	.	.	.
14.317	4.5827	8.38	.	Q	.	V	.	.	.
14.333	4.5943	8.41	.	Q	.	V	.	.	.
14.350	4.6059	8.43	.	Q	.	V	.	.	.
14.367	4.6175	8.45	.	Q	.	V	.	.	.
14.383	4.6292	8.48	.	Q	.	V	.	.	.
14.400	4.6409	8.50	.	Q	.	V	.	.	.
14.417	4.6527	8.56	.	Q	.	V	.	.	.
14.433	4.6646	8.62	.	Q	.	V	.	.	.
14.450	4.6766	8.69	.	Q	.	V	.	.	.
14.467	4.6886	8.75	.	Q	.	V	.	.	.
14.483	4.7008	8.82	.	Q	.	V	.	.	.
14.500	4.7130	8.88	.	Q	.	V	.	.	.
14.517	4.7253	8.95	.	Q	.	V	.	.	.
14.533	4.7378	9.01	.	Q	.	V	.	.	.
14.550	4.7503	9.08	.	Q	.	V	.	.	.
14.567	4.7628	9.14	.	Q	.	V	.	.	.
14.583	4.7755	9.21	.	Q	.	V	.	.	.
14.600	4.7883	9.27	.	Q	.	V	.	.	.
14.617	4.8012	9.34	.	Q	.	V	.	.	.
14.633	4.8141	9.40	.	Q	.	V	.	.	.
14.650	4.8271	9.46	.	Q	.	V	.	.	.
14.667	4.8403	9.53	.	Q	.	V	.	.	.
14.683	4.8535	9.57	.	Q	.	V	.	.	.
14.700	4.8667	9.62	.	Q	.	V	.	.	.
14.717	4.8800	9.66	.	Q	.	V	.	.	.
14.733	4.8934	9.70	.	Q	.	V	.	.	.

14.750	4.9068	9.74	.	Q	.	V	.	.	.
14.767	4.9203	9.78	.	Q	.	V	.	.	.
14.783	4.9338	9.83	.	Q	.	V	.	.	.
14.800	4.9474	9.87	.	Q	.	V	.	.	.
14.817	4.9610	9.91	.	Q	.	V	.	.	.
14.833	4.9747	9.95	.	Q	.	V	.	.	.
14.850	4.9885	9.99	.	Q	.	V	.	.	.
14.867	5.0023	10.04	.	Q	.	V	.	.	.
14.883	5.0162	10.08	.	Q	.	V	.	.	.
14.900	5.0302	10.12	.	Q	.	V	.	.	.
14.917	5.0442	10.16	.	Q	.	V	.	.	.
14.933	5.0582	10.21	.	Q	.	V	.	.	.
14.950	5.0724	10.30	.	Q	.	V	.	.	.
14.967	5.0868	10.42	.	Q	.	V	.	.	.
14.983	5.1013	10.54	.	Q	.	V	.	.	.
15.000	5.1160	10.66	.	Q	.	V	.	.	.
15.017	5.1308	10.77	.	Q	.	V	.	.	.
15.033	5.1458	10.89	.	Q	.	V	.	.	.
15.050	5.1610	11.01	.	Q	.	V	.	.	.
15.067	5.1763	11.12	.	Q	.	V	.	.	.
15.083	5.1918	11.24	.	Q	.	V	.	.	.
15.100	5.2074	11.36	.	Q	.	V	.	.	.
15.117	5.2232	11.48	.	Q	.	V	.	.	.
15.133	5.2392	11.59	.	Q	.	V	.	.	.
15.150	5.2553	11.71	.	Q	.	V	.	.	.
15.167	5.2716	11.83	.	Q	.	V	.	.	.
15.183	5.2881	11.95	.	Q	.	V	.	.	.
15.200	5.3047	12.06	.	Q	.	V	.	.	.
15.217	5.3214	12.16	.	Q	.	V	.	.	.
15.233	5.3383	12.25	.	Q	.	V	.	.	.
15.250	5.3553	12.33	.	Q	.	V	.	.	.
15.267	5.3724	12.42	.	Q	.	V	.	.	.
15.283	5.3896	12.51	.	Q	.	V	.	.	.
15.300	5.4070	12.60	.	Q	.	V	.	.	.
15.317	5.4244	12.68	.	Q	.	V	.	.	.
15.333	5.4420	12.77	.	Q	.	V	.	.	.
15.350	5.4597	12.86	.	Q	.	V	.	.	.
15.367	5.4776	12.95	.	Q	.	V	.	.	.
15.383	5.4955	13.03	.	Q	.	V	.	.	.
15.400	5.5136	13.12	.	Q	.	V	.	.	.
15.417	5.5318	13.21	.	Q	.	V	.	.	.
15.433	5.5501	13.29	.	Q	.	V	.	.	.
15.450	5.5685	13.38	.	Q	.	V	.	.	.
15.467	5.5871	13.47	.	Q	.	V	.	.	.
15.483	5.6061	13.80	.	Q	.	V	.	.	.
15.500	5.6258	14.27	.	Q	.	V	.	.	.
15.517	5.6461	14.75	.	Q	.	V	.	.	.
15.533	5.6670	15.22	.	Q	.	V	.	.	.
15.550	5.6887	15.69	.	Q	.	V	.	.	.
15.567	5.7109	16.17	.	Q	.	V	.	.	.
15.583	5.7338	16.64	.	Q	.	V	.	.	.
15.600	5.7574	17.11	.	Q	.	V	.	.	.
15.617	5.7816	17.59	.	Q	.	V	.	.	.
15.633	5.8065	18.06	.	Q	.	V	.	.	.
15.650	5.8320	18.53	.	Q	.	V	.	.	.

15.667	5.8582	19.00	.	Q.	V	.	.
15.683	5.8850	19.48	.	Q	V	.	.
15.700	5.9125	19.95	.	Q	V	.	.
15.717	5.9406	20.42	.	Q	V	.	.
15.733	5.9694	20.90	.	Q	V	.	.
15.750	5.9989	21.39	.	.Q	V	.	.
15.767	6.0291	21.90	.	.Q	V	.	.
15.783	6.0599	22.41	.	.Q	V	.	.
15.800	6.0915	22.92	.	.Q	V	.	.
15.817	6.1238	23.43	.	.Q	.V	.	.
15.833	6.1567	23.94	.	.Q	.V	.	.
15.850	6.1904	24.44	.	.Q	.V	.	.
15.867	6.2248	24.95	.	.Q	.V	.	.
15.883	6.2598	25.46	.	.Q	.V	.	.
15.900	6.2956	25.97	.	.Q	.V	.	.
15.917	6.3321	26.48	.	.Q	.V	.	.
15.933	6.3693	26.99	.	.Q	.V	.	.
15.950	6.4071	27.50	.	.Q	.V	.	.
15.967	6.4457	28.01	.	.Q	.V	.	.
15.983	6.4850	28.52	.	.Q	.V	.	.
16.000	6.5250	29.03	.	.Q	.V	.	.
16.017	6.5673	30.75	.	.Q	.V	.	.
16.033	6.6138	33.69	.	.Q	.V	.	.
16.050	6.6642	36.64	.	.Q	.V	.	.
16.067	6.7187	39.58	.	.Q	V	.	.
16.083	6.7773	42.52	.	.	.QV	.	.
16.100	6.8399	45.46	.	.	.Q	.	.
16.117	6.9066	48.40	.	.	.V Q	.	.
16.133	6.9773	51.34	.	.	.V Q	.	.
16.150	7.0521	54.28	.	.	.V Q	.	.
16.167	7.1309	57.23	.	.	.V Q.	.	.
16.183	7.2138	60.17	.	.	.V .Q	.	.
16.200	7.3007	63.11	.	.	.V .Q	.	.
16.217	7.3917	66.05	.	.	.V .Q	.	.
16.233	7.4867	68.99	.	.	.V .Q	.	.
16.250	7.5858	71.93	.	.	.V .Q	.	.
16.267	7.6889	74.88	.	.	.V .Q	.	.
16.283	7.7944	76.54	.	.	.V .Q	.	.
16.300	7.8925	71.26	.	.	.V .Q	.	.
16.317	7.9856	67.58	.	.	.V .Q	.	.
16.333	8.0736	63.89	.	.	.V .Q	.	.
16.350	8.1565	60.20	.	.	.V .Q	.	.
16.367	8.2344	56.52	.	.	.VQ.	.	.
16.383	8.3072	52.83	.	.	.QV	.	.
16.400	8.3749	49.15	.	.	.Q V	.	.
16.417	8.4375	45.46	.	.	.Q V.	.	.
16.433	8.4950	41.78	.	.	.Q V.	.	.
16.450	8.5475	38.09	.	.	.Q V.	.	.
16.467	8.5949	34.40	.	.	.Q V.	.	.
16.483	8.6372	30.72	.	.	.Q V.	.	.
16.500	8.6744	27.03	.	.	.Q V.	.	.
16.517	8.7066	23.35	.	.Q	.V.	.	.
16.533	8.7337	19.66	.	.Q	.V	.	.
16.550	8.7574	17.21	.	.Q	.V	.	.
16.567	8.7805	16.79	.	.Q	.V	.	.

16.583	8.8031	16.40	.	Q	.	.	V	.
16.600	8.8251	16.01	.	Q	.	.	V	.
16.617	8.8466	15.62	.	Q	.	.	V	.
16.633	8.8676	15.23	.	Q	.	.	V	.
16.650	8.8880	14.84	.	Q	.	.	V	.
16.667	8.9079	14.44	.	Q	.	.	V	.
16.683	8.9273	14.05	.	Q	.	.	V	.
16.700	8.9461	13.66	.	Q	.	.	V	.
16.717	8.9644	13.27	.	Q	.	.	V	.
16.733	8.9821	12.88	.	Q	.	.	V	.
16.750	8.9993	12.49	.	Q	.	.	V	.
16.767	9.0160	12.10	.	Q	.	.	.V	.
16.783	9.0321	11.71	.	Q	.	.	.V	.
16.800	9.0477	11.32	.	Q	.	.	.V	.
16.817	9.0629	11.01	.	Q	.	.	.V	.
16.833	9.0779	10.88	.	Q	.	.	.V	.
16.850	9.0927	10.75	.	Q	.	.	.V	.
16.867	9.1073	10.62	.	Q	.	.	.V	.
16.883	9.1218	10.49	.	Q	.	.	.V	.
16.900	9.1360	10.36	.	Q	.	.	.V	.
16.917	9.1501	10.23	.	Q	.	.	.V	.
16.933	9.1640	10.11	.	Q	.	.	.V	.
16.950	9.1778	9.98	.	Q	.	.	.V	.
16.967	9.1913	9.85	.	Q	.	.	.V	.
16.983	9.2047	9.72	.	Q	.	.	.V	.
17.000	9.2179	9.59	.	Q	.	.	.V	.
17.017	9.2310	9.46	.	Q	.	.	.V	.
17.033	9.2438	9.33	.	Q	.	.	.V	.
17.050	9.2565	9.21	.	Q	.	.	.V	.
17.067	9.2690	9.08	.	Q	.	.	.V	.
17.083	9.2814	8.96	.	Q	.	.	.V	.
17.100	9.2936	8.89	.	Q	.	.	.V	.
17.117	9.3057	8.81	.	Q	.	.	.V	.
17.133	9.3178	8.74	.	Q	.	.	.V	.
17.150	9.3297	8.66	.	Q	.	.	.V	.
17.167	9.3415	8.59	.	Q	.	.	.V	.
17.183	9.3533	8.51	.	Q	.	.	.V	.
17.200	9.3649	8.44	.	Q	.	.	.V	.
17.217	9.3764	8.36	.	Q	.	.	.V	.
17.233	9.3878	8.29	.	Q	.	.	.V	.
17.250	9.3991	8.21	.	Q	.	.	.V	.
17.267	9.4103	8.14	.	Q	.	.	.V	.
17.283	9.4214	8.06	.	Q	.	.	.V	.
17.300	9.4324	7.99	.	Q	.	.	.V	.
17.317	9.4433	7.91	.	Q	.	.	.V	.
17.333	9.4541	7.84	.	Q	.	.	.V	.
17.350	9.4648	7.76	.	Q	.	.	.V	.
17.367	9.4754	7.71	.	Q	.	.	.V	.
17.383	9.4860	7.66	.	Q	.	.	.V	.
17.400	9.4964	7.60	.	Q	.	.	.V	.
17.417	9.5068	7.55	.	Q	.	.	.V	.
17.433	9.5172	7.50	.	Q	.	.	.V	.
17.450	9.5274	7.44	.	Q	.	.	.V	.
17.467	9.5376	7.39	.	Q	.	.	.V	.
17.483	9.5477	7.34	.	Q	.	.	.V	.

17.500	9.5577	7.28	.	Q	.	.	.	V	.
17.517	9.5677	7.23	.	Q	.	.	.	V	.
17.533	9.5776	7.18	.	Q	.	.	.	V	.
17.550	9.5874	7.12	.	Q	.	.	.	V	.
17.567	9.5971	7.07	.	Q	.	.	.	V	.
17.583	9.6068	7.02	.	Q	.	.	.	V	.
17.600	9.6164	6.96	.	Q	.	.	.	V	.
17.617	9.6259	6.91	.	Q	.	.	.	V	.
17.633	9.6354	6.87	.	Q	.	.	.	V	.
17.650	9.6448	6.83	.	Q	.	.	.	V	.
17.667	9.6542	6.79	.	Q	.	.	.	V	.
17.683	9.6635	6.76	.	Q	.	.	.	V	.
17.700	9.6727	6.72	.	Q	.	.	.	V	.
17.717	9.6819	6.68	.	Q	.	.	.	V	.
17.733	9.6911	6.64	.	Q	.	.	.	V	.
17.750	9.7001	6.60	.	Q	.	.	.	V	.
17.767	9.7092	6.56	.	Q	.	.	.	V	.
17.783	9.7182	6.52	.	Q	.	.	.	V	.
17.800	9.7271	6.48	.	Q	.	.	.	V	.
17.817	9.7360	6.44	.	Q	.	.	.	V	.
17.833	9.7448	6.40	.	Q	.	.	.	V	.
17.850	9.7535	6.36	.	Q	.	.	.	V	.
17.867	9.7622	6.32	.	Q	.	.	.	V	.
17.883	9.7709	6.28	.	Q	.	.	.	V	.
17.900	9.7795	6.25	.	Q	.	.	.	V	.
17.917	9.7881	6.22	.	Q	.	.	.	V	.
17.933	9.7966	6.19	.	Q	.	.	.	V	.
17.950	9.8051	6.16	.	Q	.	.	.	V	.
17.967	9.8135	6.13	.	Q	.	.	.	V	.
17.983	9.8219	6.10	.	Q	.	.	.	V	.
18.000	9.8303	6.07	.	Q	.	.	.	V	.
18.017	9.8386	6.04	.	Q	.	.	.	V	.
18.033	9.8469	6.01	.	Q	.	.	.	V	.
18.050	9.8551	5.98	.	Q	.	.	.	V	.
18.067	9.8633	5.95	.	Q	.	.	.	V	.
18.083	9.8715	5.92	.	Q	.	.	.	V	.
18.100	9.8796	5.89	.	Q	.	.	.	V	.
18.117	9.8876	5.85	.	Q	.	.	.	V	.
18.133	9.8957	5.82	.	Q	.	.	.	V	.
18.150	9.9036	5.79	.	Q	.	.	.	V	.
18.167	9.9116	5.75	.	Q	.	.	.	V	.
18.183	9.9194	5.71	.	Q	.	.	.	V	.
18.200	9.9272	5.67	.	Q	.	.	.	V	.
18.217	9.9350	5.62	.	Q	.	.	.	V	.
18.233	9.9427	5.58	.	Q	.	.	.	V	.
18.250	9.9503	5.54	.	Q	.	.	.	V	.
18.267	9.9579	5.50	.	Q	.	.	.	V	.
18.283	9.9654	5.45	.	Q	.	.	.	V	.
18.300	9.9728	5.41	.	Q	.	.	.	V	.
18.317	9.9802	5.37	.	Q	.	.	.	V	.
18.333	9.9876	5.33	.	Q	.	.	.	V	.
18.350	9.9948	5.29	.	Q	.	.	.	V	.
18.367	10.0021	5.24	.	Q	.	.	.	V	.
18.383	10.0092	5.20	.	Q	.	.	.	V	.
18.400	10.0163	5.16	.	Q	.	.	.	V	.

18.417	10.0234	5.12	. Q	.	.	.	V	.
18.433	10.0304	5.09	. Q	.	.	.	V	.
18.450	10.0374	5.07	. Q	.	.	.	V	.
18.467	10.0444	5.05	. Q	.	.	.	V	.
18.483	10.0513	5.03	. Q	.	.	.	V	.
18.500	10.0582	5.01	. Q	.	.	.	V	.
18.517	10.0651	4.99	. Q	.	.	.	V	.
18.533	10.0719	4.97	. Q	.	.	.	V	.
18.550	10.0787	4.95	. Q	.	.	.	V	.
18.567	10.0855	4.93	. Q	.	.	.	V	.
18.583	10.0923	4.91	. Q	.	.	.	V	.
18.600	10.0990	4.89	. Q	.	.	.	V	.
18.617	10.1057	4.87	. Q	.	.	.	V	.
18.633	10.1124	4.85	. Q	.	.	.	V	.
18.650	10.1191	4.83	. Q	.	.	.	V	.
18.667	10.1257	4.81	. Q	.	.	.	V	.
18.683	10.1323	4.79	. Q	.	.	.	V	.
18.700	10.1389	4.77	. Q	.	.	.	V	.
18.717	10.1454	4.76	. Q	.	.	.	V	.
18.733	10.1520	4.74	. Q	.	.	.	V	.
18.750	10.1585	4.72	. Q	.	.	.	V	.
18.767	10.1650	4.71	. Q	.	.	.	V	.
18.783	10.1714	4.69	. Q	.	.	.	V	.
18.800	10.1779	4.67	. Q	.	.	.	V	.
18.817	10.1843	4.66	. Q	.	.	.	V	.
18.833	10.1907	4.64	. Q	.	.	.	V	.
18.850	10.1970	4.62	. Q	.	.	.	V	.
18.867	10.2034	4.60	. Q	.	.	.	V	.
18.883	10.2097	4.59	. Q	.	.	.	V	.
18.900	10.2160	4.57	. Q	.	.	.	V	.
18.917	10.2223	4.55	. Q	.	.	.	V	.
18.933	10.2285	4.54	. Q	.	.	.	V	.
18.950	10.2347	4.52	. Q	.	.	.	V	.
18.967	10.2409	4.51	. Q	.	.	.	V	.
18.983	10.2471	4.49	. Q	.	.	.	V	.
19.000	10.2533	4.48	. Q	.	.	.	V	.
19.017	10.2594	4.46	. Q	.	.	.	V	.
19.033	10.2656	4.45	. Q	.	.	.	V	.
19.050	10.2717	4.43	. Q	.	.	.	V	.
19.067	10.2778	4.42	. Q	.	.	.	V	.
19.083	10.2838	4.40	. Q	.	.	.	V	.
19.100	10.2899	4.39	. Q	.	.	.	V	.
19.117	10.2959	4.37	. Q	.	.	.	V	.
19.133	10.3019	4.36	. Q	.	.	.	V	.
19.150	10.3079	4.35	. Q	.	.	.	V	.
19.167	10.3138	4.33	. Q	.	.	.	V	.
19.183	10.3198	4.32	. Q	.	.	.	V	.
19.200	10.3257	4.30	. Q	.	.	.	V	.
19.217	10.3316	4.29	. Q	.	.	.	V	.
19.233	10.3375	4.27	. Q	.	.	.	V	.
19.250	10.3434	4.26	. Q	.	.	.	V	.
19.267	10.3492	4.25	. Q	.	.	.	V	.
19.283	10.3551	4.24	. Q	.	.	.	V	.
19.300	10.3609	4.22	. Q	.	.	.	V	.
19.317	10.3667	4.21	. Q	.	.	.	V	.

19.333	10.3725	4.20	. Q	.	.	.	V	.
19.350	10.3782	4.19	. Q	.	.	.	V	.
19.367	10.3840	4.17	. Q	.	.	.	V	.
19.383	10.3897	4.16	. Q	.	.	.	V	.
19.400	10.3954	4.15	. Q	.	.	.	V	.
19.417	10.4011	4.14	. Q	.	.	.	V	.
19.433	10.4068	4.12	. Q	.	.	.	V	.
19.450	10.4125	4.11	. Q	.	.	.	V	.
19.467	10.4181	4.10	. Q	.	.	.	V	.
19.483	10.4237	4.08	. Q	.	.	.	V	.
19.500	10.4293	4.07	. Q	.	.	.	V	.
19.517	10.4349	4.06	. Q	.	.	.	V	.
19.533	10.4405	4.05	. Q	.	.	.	V	.
19.550	10.4461	4.04	. Q	.	.	.	V	.
19.567	10.4516	4.03	. Q	.	.	.	V	.
19.583	10.4572	4.02	. Q	.	.	.	V	.
19.600	10.4627	4.01	. Q	.	.	.	V	.
19.617	10.4682	4.00	. Q	.	.	.	V	.
19.633	10.4737	3.98	. Q	.	.	.	V	.
19.650	10.4792	3.97	. Q	.	.	.	V	.
19.667	10.4846	3.96	. Q	.	.	.	V	.
19.683	10.4901	3.95	. Q	.	.	.	V	.
19.700	10.4955	3.94	. Q	.	.	.	V	.
19.717	10.5009	3.93	. Q	.	.	.	V	.
19.733	10.5063	3.92	. Q	.	.	.	V	.
19.750	10.5117	3.91	. Q	.	.	.	V	.
19.767	10.5170	3.90	. Q	.	.	.	V	.
19.783	10.5224	3.89	. Q	.	.	.	V	.
19.800	10.5277	3.88	. Q	.	.	.	V	.
19.817	10.5331	3.87	. Q	.	.	.	V	.
19.833	10.5384	3.86	. Q	.	.	.	V	.
19.850	10.5437	3.85	. Q	.	.	.	V	.
19.867	10.5490	3.84	. Q	.	.	.	V	.
19.883	10.5542	3.83	. Q	.	.	.	V	.
19.900	10.5595	3.82	. Q	.	.	.	V	.
19.917	10.5647	3.81	. Q	.	.	.	V	.
19.933	10.5700	3.80	. Q	.	.	.	V	.
19.950	10.5752	3.79	. Q	.	.	.	V	.
19.967	10.5804	3.78	. Q	.	.	.	V	.
19.983	10.5856	3.77	. Q	.	.	.	V	.
20.000	10.5908	3.76	. Q	.	.	.	V	.
20.017	10.5959	3.75	. Q	.	.	.	V	.
20.033	10.6011	3.74	. Q	.	.	.	V	.
20.050	10.6062	3.73	. Q	.	.	.	V	.
20.067	10.6113	3.72	. Q	.	.	.	V	.
20.083	10.6164	3.71	. Q	.	.	.	V	.
20.100	10.6216	3.70	. Q	.	.	.	V	.
20.117	10.6266	3.70	. Q	.	.	.	V	.
20.133	10.6317	3.69	. Q	.	.	.	V	.
20.150	10.6368	3.68	. Q	.	.	.	V	.
20.167	10.6418	3.67	. Q	.	.	.	V	.
20.183	10.6469	3.66	. Q	.	.	.	V	.
20.200	10.6519	3.65	. Q	.	.	.	V	.
20.217	10.6569	3.64	. Q	.	.	.	V	.
20.233	10.6619	3.63	. Q	.	.	.	V	.

20.250	10.6669	3.63	.Q	.	.	.	V	.
20.267	10.6719	3.62	.Q	.	.	.	V	.
20.283	10.6769	3.61	.Q	.	.	.	V	.
20.300	10.6818	3.60	.Q	.	.	.	V	.
20.317	10.6868	3.59	.Q	.	.	.	V	.
20.333	10.6917	3.58	.Q	.	.	.	V	.
20.350	10.6966	3.58	.Q	.	.	.	V	.
20.367	10.7016	3.57	.Q	.	.	.	V	.
20.383	10.7065	3.56	.Q	.	.	.	V	.
20.400	10.7113	3.55	.Q	.	.	.	V	.
20.417	10.7162	3.54	.Q	.	.	.	V	.
20.433	10.7211	3.54	.Q	.	.	.	V	.
20.450	10.7260	3.53	.Q	.	.	.	V	.
20.467	10.7308	3.52	.Q	.	.	.	V	.
20.483	10.7356	3.51	.Q	.	.	.	V	.
20.500	10.7405	3.50	.Q	.	.	.	V	.
20.517	10.7453	3.50	.Q	.	.	.	V	.
20.533	10.7501	3.49	.Q	.	.	.	V	.
20.550	10.7549	3.48	.Q	.	.	.	V	.
20.567	10.7597	3.47	.Q	.	.	.	V	.
20.583	10.7644	3.46	.Q	.	.	.	V	.
20.600	10.7692	3.46	.Q	.	.	.	V	.
20.617	10.7739	3.45	.Q	.	.	.	V	.
20.633	10.7787	3.44	.Q	.	.	.	V	.
20.650	10.7834	3.44	.Q	.	.	.	V	.
20.667	10.7881	3.43	.Q	.	.	.	V	.
20.683	10.7929	3.42	.Q	.	.	.	V	.
20.700	10.7976	3.41	.Q	.	.	.	V	.
20.717	10.8023	3.41	.Q	.	.	.	V	.
20.733	10.8069	3.40	.Q	.	.	.	V	.
20.750	10.8116	3.39	.Q	.	.	.	V	.
20.767	10.8163	3.39	.Q	.	.	.	V	.
20.783	10.8209	3.38	.Q	.	.	.	V	.
20.800	10.8256	3.37	.Q	.	.	.	V	.
20.817	10.8302	3.36	.Q	.	.	.	V	.
20.833	10.8348	3.36	.Q	.	.	.	V	.
20.850	10.8394	3.35	.Q	.	.	.	V	.
20.867	10.8440	3.34	.Q	.	.	.	V	.
20.883	10.8486	3.34	.Q	.	.	.	V	.
20.900	10.8532	3.33	.Q	.	.	.	V	.
20.917	10.8578	3.32	.Q	.	.	.	V	.
20.933	10.8624	3.32	.Q	.	.	.	V	.
20.950	10.8669	3.31	.Q	.	.	.	V	.
20.967	10.8715	3.30	.Q	.	.	.	V	.
20.983	10.8760	3.30	.Q	.	.	.	V	.
21.000	10.8806	3.29	.Q	.	.	.	V	.
21.017	10.8851	3.28	.Q	.	.	.	V	.
21.033	10.8896	3.28	.Q	.	.	.	V	.
21.050	10.8941	3.27	.Q	.	.	.	V	.
21.067	10.8986	3.26	.Q	.	.	.	V	.
21.083	10.9031	3.26	.Q	.	.	.	V	.
21.100	10.9076	3.25	.Q	.	.	.	V	.
21.117	10.9120	3.25	.Q	.	.	.	V	.
21.133	10.9165	3.24	.Q	.	.	.	V	.
21.150	10.9210	3.23	.Q	.	.	.	V	.

21.167	10.9254	3.23	.Q	.	.	.	V	.
21.183	10.9298	3.22	.Q	.	.	.	V	.
21.200	10.9343	3.22	.Q	.	.	.	V	.
21.217	10.9387	3.21	.Q	.	.	.	V	.
21.233	10.9431	3.20	.Q	.	.	.	V	.
21.250	10.9475	3.20	.Q	.	.	.	V	.
21.267	10.9519	3.19	.Q	.	.	.	V	.
21.283	10.9563	3.19	.Q	.	.	.	V	.
21.300	10.9607	3.18	.Q	.	.	.	V	.
21.317	10.9650	3.17	.Q	.	.	.	V	.
21.333	10.9694	3.17	.Q	.	.	.	V	.
21.350	10.9738	3.16	.Q	.	.	.	V	.
21.367	10.9781	3.16	.Q	.	.	.	V	.
21.383	10.9824	3.15	.Q	.	.	.	V	.
21.400	10.9868	3.14	.Q	.	.	.	V	.
21.417	10.9911	3.14	.Q	.	.	.	V	.
21.433	10.9954	3.13	.Q	.	.	.	V	.
21.450	10.9997	3.13	.Q	.	.	.	V	.
21.467	11.0040	3.12	.Q	.	.	.	V	.
21.483	11.0083	3.12	.Q	.	.	.	V	.
21.500	11.0126	3.11	.Q	.	.	.	V	.
21.517	11.0169	3.10	.Q	.	.	.	V	.
21.533	11.0211	3.10	.Q	.	.	.	V	.
21.550	11.0254	3.09	.Q	.	.	.	V	.
21.567	11.0297	3.09	.Q	.	.	.	V	.
21.583	11.0339	3.08	.Q	.	.	.	V	.
21.600	11.0381	3.08	.Q	.	.	.	V	.
21.617	11.0424	3.07	.Q	.	.	.	V	.
21.633	11.0466	3.07	.Q	.	.	.	V	.
21.650	11.0508	3.06	.Q	.	.	.	V	.
21.667	11.0550	3.06	.Q	.	.	.	V	.
21.683	11.0592	3.05	.Q	.	.	.	V	.
21.700	11.0634	3.05	.Q	.	.	.	V	.
21.717	11.0676	3.04	.Q	.	.	.	V	.
21.733	11.0718	3.04	.Q	.	.	.	V	.
21.750	11.0760	3.03	.Q	.	.	.	V	.
21.767	11.0801	3.02	.Q	.	.	.	V	.
21.783	11.0843	3.02	.Q	.	.	.	V	.
21.800	11.0884	3.01	.Q	.	.	.	V	.
21.817	11.0926	3.01	.Q	.	.	.	V	.
21.833	11.0967	3.00	.Q	.	.	.	V	.
21.850	11.1009	3.00	.Q	.	.	.	V	.
21.867	11.1050	2.99	.Q	.	.	.	V	.
21.883	11.1091	2.99	.Q	.	.	.	V	.
21.900	11.1132	2.98	.Q	.	.	.	V	.
21.917	11.1173	2.98	.Q	.	.	.	V	.
21.933	11.1214	2.97	.Q	.	.	.	V	.
21.950	11.1255	2.97	.Q	.	.	.	V	.
21.967	11.1296	2.96	.Q	.	.	.	V	.
21.983	11.1337	2.96	.Q	.	.	.	V	.
22.000	11.1377	2.95	.Q	.	.	.	V	.
22.017	11.1418	2.95	.Q	.	.	.	V	.
22.033	11.1458	2.95	.Q	.	.	.	V	.
22.050	11.1499	2.94	.Q	.	.	.	V	.
22.067	11.1539	2.94	.Q	.	.	.	V	.

22.083	11.1580	2.93	.Q	.	.	.	V .
22.100	11.1620	2.93	.Q	.	.	.	V .
22.117	11.1660	2.92	.Q	.	.	.	V .
22.133	11.1700	2.92	.Q	.	.	.	V .
22.150	11.1741	2.91	.Q	.	.	.	V .
22.167	11.1781	2.91	.Q	.	.	.	V .
22.183	11.1821	2.90	.Q	.	.	.	V .
22.200	11.1861	2.90	.Q	.	.	.	V .
22.217	11.1900	2.89	.Q	.	.	.	V .
22.233	11.1940	2.89	.Q	.	.	.	V .
22.250	11.1980	2.88	.Q	.	.	.	V .
22.267	11.2020	2.88	.Q	.	.	.	V .
22.283	11.2059	2.88	.Q	.	.	.	V .
22.300	11.2099	2.87	.Q	.	.	.	V .
22.317	11.2138	2.87	.Q	.	.	.	V .
22.333	11.2178	2.86	.Q	.	.	.	V .
22.350	11.2217	2.86	.Q	.	.	.	V .
22.367	11.2256	2.85	.Q	.	.	.	V .
22.383	11.2296	2.85	.Q	.	.	.	V .
22.400	11.2335	2.84	.Q	.	.	.	V .
22.417	11.2374	2.84	.Q	.	.	.	V .
22.433	11.2413	2.84	.Q	.	.	.	V .
22.450	11.2452	2.83	.Q	.	.	.	V .
22.467	11.2491	2.83	.Q	.	.	.	V .
22.483	11.2530	2.82	.Q	.	.	.	V .
22.500	11.2569	2.82	.Q	.	.	.	V .
22.517	11.2607	2.82	.Q	.	.	.	V .
22.533	11.2646	2.81	.Q	.	.	.	V .
22.550	11.2685	2.81	.Q	.	.	.	V .
22.567	11.2723	2.80	.Q	.	.	.	V .
22.583	11.2762	2.80	.Q	.	.	.	V .
22.600	11.2800	2.79	.Q	.	.	.	V .
22.617	11.2839	2.79	.Q	.	.	.	V .
22.633	11.2877	2.79	.Q	.	.	.	V .
22.650	11.2916	2.78	.Q	.	.	.	V .
22.667	11.2954	2.78	.Q	.	.	.	V .
22.683	11.2992	2.77	.Q	.	.	.	V .
22.700	11.3030	2.77	.Q	.	.	.	V .
22.717	11.3068	2.77	.Q	.	.	.	V .
22.733	11.3106	2.76	.Q	.	.	.	V .
22.750	11.3144	2.76	.Q	.	.	.	V .
22.767	11.3182	2.75	.Q	.	.	.	V .
22.783	11.3220	2.75	.Q	.	.	.	V .
22.800	11.3258	2.75	.Q	.	.	.	V .
22.817	11.3296	2.74	.Q	.	.	.	V .
22.833	11.3333	2.74	.Q	.	.	.	V .
22.850	11.3371	2.73	.Q	.	.	.	V .
22.867	11.3409	2.73	.Q	.	.	.	V .
22.883	11.3446	2.73	.Q	.	.	.	V .
22.900	11.3484	2.72	.Q	.	.	.	V .
22.917	11.3521	2.72	.Q	.	.	.	V .
22.933	11.3559	2.71	.Q	.	.	.	V .
22.950	11.3596	2.71	.Q	.	.	.	V .
22.967	11.3633	2.71	.Q	.	.	.	V .
22.983	11.3670	2.70	.Q	.	.	.	V .

23.000	11.3708	2.70	.Q	.	.	.	V.
23.017	11.3745	2.70	.Q	.	.	.	V.
23.033	11.3782	2.69	.Q	.	.	.	V.
23.050	11.3819	2.69	.Q	.	.	.	V.
23.067	11.3856	2.68	.Q	.	.	.	V.
23.083	11.3893	2.68	.Q	.	.	.	V.
23.100	11.3930	2.68	.Q	.	.	.	V.
23.117	11.3966	2.67	.Q	.	.	.	V.
23.133	11.4003	2.67	.Q	.	.	.	V.
23.150	11.4040	2.67	.Q	.	.	.	V.
23.167	11.4077	2.66	.Q	.	.	.	V.
23.183	11.4113	2.66	.Q	.	.	.	V.
23.200	11.4150	2.66	.Q	.	.	.	V.
23.217	11.4186	2.65	.Q	.	.	.	V.
23.233	11.4223	2.65	.Q	.	.	.	V.
23.250	11.4259	2.64	.Q	.	.	.	V.
23.267	11.4296	2.64	.Q	.	.	.	V.
23.283	11.4332	2.64	.Q	.	.	.	V.
23.300	11.4368	2.63	.Q	.	.	.	V.
23.317	11.4404	2.63	.Q	.	.	.	V.
23.333	11.4441	2.63	.Q	.	.	.	V.
23.350	11.4477	2.62	.Q	.	.	.	V.
23.367	11.4513	2.62	.Q	.	.	.	V.
23.383	11.4549	2.62	.Q	.	.	.	V.
23.400	11.4585	2.61	.Q	.	.	.	V.
23.417	11.4621	2.61	.Q	.	.	.	V.
23.433	11.4657	2.61	.Q	.	.	.	V.
23.450	11.4692	2.60	.Q	.	.	.	V.
23.467	11.4728	2.60	.Q	.	.	.	V.
23.483	11.4764	2.60	.Q	.	.	.	V.
23.500	11.4800	2.59	.Q	.	.	.	V.
23.517	11.4835	2.59	.Q	.	.	.	V.
23.533	11.4871	2.59	.Q	.	.	.	V.
23.550	11.4907	2.58	.Q	.	.	.	V.
23.567	11.4942	2.58	.Q	.	.	.	V.
23.583	11.4978	2.58	.Q	.	.	.	V.
23.600	11.5013	2.57	.Q	.	.	.	V.
23.617	11.5048	2.57	.Q	.	.	.	V.
23.633	11.5084	2.57	.Q	.	.	.	V.
23.650	11.5119	2.56	.Q	.	.	.	V.
23.667	11.5154	2.56	.Q	.	.	.	V.
23.683	11.5190	2.56	.Q	.	.	.	V.
23.700	11.5225	2.55	.Q	.	.	.	V.
23.717	11.5260	2.55	.Q	.	.	.	V.
23.733	11.5295	2.55	.Q	.	.	.	V.
23.750	11.5330	2.54	.Q	.	.	.	V.
23.767	11.5365	2.54	.Q	.	.	.	V.
23.783	11.5400	2.54	.Q	.	.	.	V.
23.800	11.5435	2.53	.Q	.	.	.	V.
23.817	11.5470	2.53	.Q	.	.	.	V.
23.833	11.5505	2.53	.Q	.	.	.	V.
23.850	11.5539	2.52	.Q	.	.	.	V.
23.867	11.5574	2.52	.Q	.	.	.	V.
23.883	11.5609	2.52	.Q	.	.	.	V.
23.900	11.5643	2.52	.Q	.	.	.	V.

23.917	11.5678	2.51	.Q	.	.	.	V.
23.933	11.5713	2.51	.Q	.	.	.	V.
23.950	11.5747	2.51	.Q	.	.	.	V.
23.967	11.5782	2.50	.Q	.	.	.	V.
23.983	11.5816	2.50	.Q	.	.	.	V.
24.000	11.5850	2.50	.Q	.	.	.	V.
24.017	11.5885	2.49	.Q	.	.	.	V.
24.033	11.5919	2.49	.Q	.	.	.	V.
24.050	11.5952	2.41	.Q	.	.	.	V.
24.067	11.5983	2.26	.Q	.	.	.	V.
24.083	11.6012	2.10	.Q	.	.	.	V.
24.100	11.6039	1.95	.Q	.	.	.	V.
24.117	11.6064	1.79	Q	.	.	.	V.
24.133	11.6087	1.64	Q	.	.	.	V.
24.150	11.6107	1.48	Q	.	.	.	V.
24.167	11.6125	1.33	Q	.	.	.	V.
24.183	11.6141	1.17	Q	.	.	.	V.
24.200	11.6155	1.02	Q	.	.	.	V.
24.217	11.6167	0.86	Q	.	.	.	V.
24.233	11.6177	0.71	Q	.	.	.	V.
24.250	11.6185	0.55	Q	.	.	.	V.
24.267	11.6190	0.40	Q	.	.	.	V.
24.283	11.6194	0.24	Q	.	.	.	V.
24.300	11.6195	0.09	Q	.	.	.	V

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1458.0
10%	1035.0
20%	325.0
30%	215.0
40%	145.0
50%	115.0
60%	90.0
70%	70.0
80%	45.0
90%	25.0

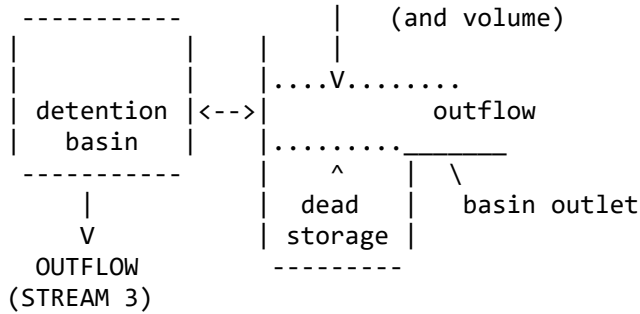
FLOW PROCESS FROM NODE 301.00 TO NODE 301.00 IS CODE = 3.2

 >>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
 =====

INFLOW
(STREAM 3)

|
|
V

__effective depth



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
 THROUGH A FLOW-THROUGH DETENTION BASIN
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE(AF) = 0.000
 SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
 SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
 DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	4.00	0.42	1.783
3	5.00	4.03	2.366
4	6.00	32.05	3.000
5	7.00	55.41	3.708
6	8.00	82.68	4.466

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MODIFIED-PULS BASIN ROUTING MODEL RESULTS(1-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
 MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH(FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME(AF)
10.000	0.000	4.18	0.00	4.61	2.6	2.140
10.017	0.000	4.19	0.00	4.62	2.6	2.142
10.033	0.000	4.19	0.00	4.62	2.7	2.144
10.050	0.000	4.20	0.00	4.62	2.7	2.147
10.067	0.000	4.20	0.00	4.63	2.7	2.149
10.083	0.000	4.20	0.00	4.63	2.7	2.151
10.100	0.000	4.21	0.00	4.63	2.7	2.153
10.117	0.000	4.21	0.00	4.64	2.7	2.155
10.133	0.000	4.22	0.00	4.64	2.7	2.157
10.150	0.000	4.23	0.00	4.64	2.7	2.159
10.167	0.000	4.24	0.00	4.65	2.8	2.161
10.183	0.000	4.25	0.00	4.65	2.8	2.163

10.200	0.000	4.26	0.00	4.66	2.8	2.165
10.217	0.000	4.27	0.00	4.66	2.8	2.167
10.233	0.000	4.28	0.00	4.66	2.8	2.169
10.250	0.000	4.28	0.00	4.67	2.8	2.171
10.267	0.000	4.29	0.00	4.67	2.8	2.173
10.283	0.000	4.30	0.00	4.67	2.8	2.175
10.300	0.000	4.31	0.00	4.68	2.9	2.177
10.317	0.000	4.32	0.00	4.68	2.9	2.179
10.333	0.000	4.33	0.00	4.68	2.9	2.181
10.350	0.000	4.34	0.00	4.69	2.9	2.183
10.367	0.000	4.35	0.00	4.69	2.9	2.185
10.383	0.000	4.36	0.00	4.69	2.9	2.187
10.400	0.000	4.36	0.00	4.70	2.9	2.189
10.417	0.000	4.37	0.00	4.70	2.9	2.191
10.433	0.000	4.37	0.00	4.70	3.0	2.193
10.450	0.000	4.38	0.00	4.71	3.0	2.195
10.467	0.000	4.38	0.00	4.71	3.0	2.197
10.483	0.000	4.39	0.00	4.71	3.0	2.199
10.500	0.000	4.39	0.00	4.72	3.0	2.201
10.517	0.000	4.40	0.00	4.72	3.0	2.203
10.533	0.000	4.40	0.00	4.72	3.0	2.205
10.550	0.000	4.40	0.00	4.73	3.0	2.206
10.567	0.000	4.41	0.00	4.73	3.0	2.208
10.583	0.000	4.41	0.00	4.73	3.1	2.210
10.600	0.000	4.42	0.00	4.74	3.1	2.212
10.617	0.000	4.42	0.00	4.74	3.1	2.214
10.633	0.000	4.43	0.00	4.74	3.1	2.216
10.650	0.000	4.43	0.00	4.75	3.1	2.218
10.667	0.000	4.44	0.00	4.75	3.1	2.219
10.683	0.000	4.45	0.00	4.75	3.1	2.221
10.700	0.000	4.46	0.00	4.75	3.1	2.223
10.717	0.000	4.47	0.00	4.76	3.2	2.225
10.733	0.000	4.49	0.00	4.76	3.2	2.227
10.750	0.000	4.50	0.00	4.76	3.2	2.229
10.767	0.000	4.51	0.00	4.77	3.2	2.230
10.783	0.000	4.52	0.00	4.77	3.2	2.232
10.800	0.000	4.53	0.00	4.77	3.2	2.234
10.817	0.000	4.54	0.00	4.78	3.2	2.236
10.833	0.000	4.55	0.00	4.78	3.2	2.238
10.850	0.000	4.56	0.00	4.78	3.2	2.239
10.867	0.000	4.57	0.00	4.79	3.3	2.241
10.883	0.000	4.58	0.00	4.79	3.3	2.243
10.900	0.000	4.59	0.00	4.79	3.3	2.245
10.917	0.000	4.60	0.00	4.80	3.3	2.247
10.933	0.000	4.61	0.00	4.80	3.3	2.248
10.950	0.000	4.61	0.00	4.80	3.3	2.250
10.967	0.000	4.62	0.00	4.80	3.3	2.252
10.983	0.000	4.62	0.00	4.81	3.3	2.254
11.000	0.000	4.63	0.00	4.81	3.3	2.256
11.017	0.000	4.63	0.00	4.81	3.4	2.257
11.033	0.000	4.64	0.00	4.82	3.4	2.259
11.050	0.000	4.65	0.00	4.82	3.4	2.261
11.067	0.000	4.65	0.00	4.82	3.4	2.263
11.083	0.000	4.66	0.00	4.83	3.4	2.264
11.100	0.000	4.66	0.00	4.83	3.4	2.266

11.117	0.000	4.67	0.00	4.83	3.4	2.268
11.133	0.000	4.67	0.00	4.83	3.4	2.270
11.150	0.000	4.68	0.00	4.84	3.4	2.271
11.167	0.000	4.69	0.00	4.84	3.4	2.273
11.183	0.000	4.69	0.00	4.84	3.5	2.275
11.200	0.000	4.70	0.00	4.85	3.5	2.276
11.217	0.000	4.71	0.00	4.85	3.5	2.278
11.233	0.000	4.73	0.00	4.85	3.5	2.280
11.250	0.000	4.74	0.00	4.85	3.5	2.281
11.267	0.000	4.75	0.00	4.86	3.5	2.283
11.283	0.000	4.76	0.00	4.86	3.5	2.285
11.300	0.000	4.77	0.00	4.86	3.5	2.287
11.317	0.000	4.79	0.00	4.87	3.5	2.288
11.333	0.000	4.80	0.00	4.87	3.6	2.290
11.350	0.000	4.81	0.00	4.87	3.6	2.292
11.367	0.000	4.82	0.00	4.88	3.6	2.293
11.383	0.000	4.84	0.00	4.88	3.6	2.295
11.400	0.000	4.85	0.00	4.88	3.6	2.297
11.417	0.000	4.86	0.00	4.88	3.6	2.299
11.433	0.000	4.87	0.00	4.89	3.6	2.300
11.450	0.000	4.89	0.00	4.89	3.6	2.302
11.467	0.000	4.89	0.00	4.89	3.6	2.304
11.483	0.000	4.90	0.00	4.90	3.7	2.306
11.500	0.000	4.91	0.00	4.90	3.7	2.307
11.517	0.000	4.91	0.00	4.90	3.7	2.309
11.533	0.000	4.92	0.00	4.91	3.7	2.311
11.550	0.000	4.93	0.00	4.91	3.7	2.312
11.567	0.000	4.93	0.00	4.91	3.7	2.314
11.583	0.000	4.94	0.00	4.91	3.7	2.316
11.600	0.000	4.95	0.00	4.92	3.7	2.317
11.617	0.000	4.95	0.00	4.92	3.7	2.319
11.633	0.000	4.96	0.00	4.92	3.7	2.321
11.650	0.000	4.97	0.00	4.93	3.8	2.322
11.667	0.000	4.97	0.00	4.93	3.8	2.324
11.683	0.000	4.98	0.00	4.93	3.8	2.326
11.700	0.000	4.99	0.00	4.93	3.8	2.327
11.717	0.000	4.99	0.00	4.94	3.8	2.329
11.733	0.000	5.01	0.00	4.94	3.8	2.331
11.750	0.000	5.02	0.00	4.94	3.8	2.332
11.767	0.000	5.03	0.00	4.95	3.8	2.334
11.783	0.000	5.05	0.00	4.95	3.8	2.336
11.800	0.000	5.06	0.00	4.95	3.8	2.337
11.817	0.000	5.08	0.00	4.95	3.9	2.339
11.833	0.000	5.09	0.00	4.96	3.9	2.341
11.850	0.000	5.11	0.00	4.96	3.9	2.342
11.867	0.000	5.12	0.00	4.96	3.9	2.344
11.883	0.000	5.14	0.00	4.97	3.9	2.346
11.900	0.000	5.15	0.00	4.97	3.9	2.348
11.917	0.000	5.17	0.00	4.97	3.9	2.349
11.933	0.000	5.18	0.00	4.97	3.9	2.351
11.950	0.000	5.20	0.00	4.98	3.9	2.353
11.967	0.000	5.21	0.00	4.98	4.0	2.354
11.983	0.000	5.23	0.00	4.98	4.0	2.356
12.000	0.000	5.24	0.00	4.99	4.0	2.358
12.017	0.000	5.26	0.00	4.99	4.0	2.360

12.033	0.000	5.27	0.00	4.99	4.0	2.361
12.050	0.000	5.29	0.00	5.00	4.0	2.363
12.067	0.000	5.30	0.00	5.00	4.0	2.365
12.083	0.000	5.32	0.00	5.00	4.0	2.367
12.100	0.000	5.33	0.00	5.00	4.1	2.368
12.117	0.000	5.35	0.00	5.01	4.2	2.370
12.133	0.000	5.36	0.00	5.01	4.2	2.372
12.150	0.000	5.38	0.00	5.01	4.3	2.373
12.167	0.000	5.40	0.00	5.01	4.4	2.375
12.183	0.000	5.41	0.00	5.02	4.4	2.376
12.200	0.000	5.43	0.00	5.02	4.5	2.377
12.217	0.000	5.44	0.00	5.02	4.5	2.378
12.233	0.000	5.46	0.00	5.02	4.6	2.380
12.250	0.000	5.47	0.00	5.02	4.7	2.381
12.267	0.000	5.49	0.00	5.02	4.7	2.382
12.283	0.000	5.52	0.00	5.03	4.7	2.383
12.300	0.000	5.55	0.00	5.03	4.8	2.384
12.317	0.000	5.58	0.00	5.03	4.8	2.385
12.333	0.000	5.61	0.00	5.03	4.9	2.386
12.350	0.000	5.64	0.00	5.03	4.9	2.387
12.367	0.000	5.67	0.00	5.03	5.0	2.388
12.383	0.000	5.70	0.00	5.04	5.0	2.389
12.400	0.000	5.72	0.00	5.04	5.1	2.390
12.417	0.000	5.75	0.00	5.04	5.1	2.391
12.433	0.000	5.78	0.00	5.04	5.1	2.391
12.450	0.000	5.81	0.00	5.04	5.2	2.392
12.467	0.000	5.84	0.00	5.04	5.2	2.393
12.483	0.000	5.87	0.00	5.04	5.3	2.394
12.500	0.000	5.90	0.00	5.05	5.3	2.395
12.517	0.000	5.93	0.00	5.05	5.3	2.396
12.533	0.000	5.95	0.00	5.05	5.4	2.397
12.550	0.000	5.96	0.00	5.05	5.4	2.397
12.567	0.000	5.97	0.00	5.05	5.4	2.398
12.583	0.000	5.98	0.00	5.05	5.5	2.399
12.600	0.000	5.99	0.00	5.05	5.5	2.399
12.617	0.000	6.00	0.00	5.05	5.5	2.400
12.633	0.000	6.01	0.00	5.05	5.6	2.401
12.650	0.000	6.02	0.00	5.06	5.6	2.401
12.667	0.000	6.03	0.00	5.06	5.6	2.402
12.683	0.000	6.04	0.00	5.06	5.6	2.402
12.700	0.000	6.05	0.00	5.06	5.7	2.403
12.717	0.000	6.06	0.00	5.06	5.7	2.404
12.733	0.000	6.07	0.00	5.06	5.7	2.404
12.750	0.000	6.08	0.00	5.06	5.7	2.405
12.767	0.000	6.09	0.00	5.06	5.7	2.405
12.783	0.000	6.10	0.00	5.06	5.8	2.405
12.800	0.000	6.11	0.00	5.06	5.8	2.406
12.817	0.000	6.14	0.00	5.06	5.8	2.406
12.833	0.000	6.16	0.00	5.06	5.8	2.407
12.850	0.000	6.18	0.00	5.07	5.8	2.407
12.867	0.000	6.21	0.00	5.07	5.9	2.408
12.883	0.000	6.23	0.00	5.07	5.9	2.408
12.900	0.000	6.25	0.00	5.07	5.9	2.409
12.917	0.000	6.27	0.00	5.07	5.9	2.409
12.933	0.000	6.30	0.00	5.07	6.0	2.410

12.950	0.000	6.32	0.00	5.07	6.0	2.410
12.967	0.000	6.34	0.00	5.07	6.0	2.411
12.983	0.000	6.37	0.00	5.07	6.0	2.411
13.000	0.000	6.39	0.00	5.07	6.0	2.412
13.017	0.000	6.41	0.00	5.07	6.1	2.412
13.033	0.000	6.44	0.00	5.07	6.1	2.413
13.050	0.000	6.46	0.00	5.07	6.1	2.413
13.067	0.000	6.48	0.00	5.08	6.1	2.414
13.083	0.000	6.49	0.00	5.08	6.1	2.414
13.100	0.000	6.51	0.00	5.08	6.2	2.415
13.117	0.000	6.52	0.00	5.08	6.2	2.415
13.133	0.000	6.53	0.00	5.08	6.2	2.415
13.150	0.000	6.54	0.00	5.08	6.2	2.416
13.167	0.000	6.56	0.00	5.08	6.2	2.416
13.183	0.000	6.57	0.00	5.08	6.3	2.417
13.200	0.000	6.58	0.00	5.08	6.3	2.417
13.217	0.000	6.60	0.00	5.08	6.3	2.418
13.233	0.000	6.61	0.00	5.08	6.3	2.418
13.250	0.000	6.62	0.00	5.08	6.3	2.418
13.267	0.000	6.64	0.00	5.08	6.4	2.419
13.283	0.000	6.65	0.00	5.08	6.4	2.419
13.300	0.000	6.66	0.00	5.08	6.4	2.420
13.317	0.000	6.68	0.00	5.09	6.4	2.420
13.333	0.000	6.69	0.00	5.09	6.4	2.420
13.350	0.000	6.72	0.00	5.09	6.4	2.421
13.367	0.000	6.75	0.00	5.09	6.5	2.421
13.383	0.000	6.78	0.00	5.09	6.5	2.421
13.400	0.000	6.81	0.00	5.09	6.5	2.422
13.417	0.000	6.84	0.00	5.09	6.5	2.422
13.433	0.000	6.87	0.00	5.09	6.5	2.423
13.450	0.000	6.90	0.00	5.09	6.6	2.423
13.467	0.000	6.93	0.00	5.09	6.6	2.424
13.483	0.000	6.96	0.00	5.09	6.6	2.424
13.500	0.000	6.99	0.00	5.09	6.6	2.425
13.517	0.000	7.02	0.00	5.09	6.6	2.425
13.533	0.000	7.05	0.00	5.09	6.7	2.426
13.550	0.000	7.08	0.00	5.10	6.7	2.426
13.567	0.000	7.11	0.00	5.10	6.7	2.427
13.583	0.000	7.14	0.00	5.10	6.7	2.428
13.600	0.000	7.17	0.00	5.10	6.8	2.428
13.617	0.000	7.19	0.00	5.10	6.8	2.429
13.633	0.000	7.21	0.00	5.10	6.8	2.429
13.650	0.000	7.23	0.00	5.10	6.8	2.430
13.667	0.000	7.24	0.00	5.10	6.9	2.430
13.683	0.000	7.26	0.00	5.10	6.9	2.431
13.700	0.000	7.28	0.00	5.10	6.9	2.431
13.717	0.000	7.30	0.00	5.10	6.9	2.432
13.733	0.000	7.31	0.00	5.10	7.0	2.432
13.750	0.000	7.33	0.00	5.11	7.0	2.433
13.767	0.000	7.35	0.00	5.11	7.0	2.433
13.783	0.000	7.37	0.00	5.11	7.0	2.434
13.800	0.000	7.38	0.00	5.11	7.0	2.434
13.817	0.000	7.40	0.00	5.11	7.1	2.435
13.833	0.000	7.42	0.00	5.11	7.1	2.435
13.850	0.000	7.44	0.00	5.11	7.1	2.436

13.867	0.000	7.46	0.00	5.11	7.1	2.436
13.883	0.000	7.50	0.00	5.11	7.1	2.437
13.900	0.000	7.54	0.00	5.11	7.2	2.437
13.917	0.000	7.58	0.00	5.11	7.2	2.438
13.933	0.000	7.62	0.00	5.11	7.2	2.438
13.950	0.000	7.66	0.00	5.11	7.2	2.439
13.967	0.000	7.71	0.00	5.12	7.3	2.439
13.983	0.000	7.75	0.00	5.12	7.3	2.440
14.000	0.000	7.79	0.00	5.12	7.3	2.441
14.017	0.000	7.83	0.00	5.12	7.3	2.441
14.033	0.000	7.87	0.00	5.12	7.4	2.442
14.050	0.000	7.91	0.00	5.12	7.4	2.443
14.067	0.000	7.96	0.00	5.12	7.4	2.444
14.083	0.000	8.00	0.00	5.12	7.5	2.444
14.100	0.000	8.04	0.00	5.12	7.5	2.445
14.117	0.000	8.08	0.00	5.13	7.5	2.446
14.133	0.000	8.12	0.00	5.13	7.6	2.446
14.150	0.000	8.15	0.00	5.13	7.6	2.447
14.167	0.000	8.17	0.00	5.13	7.6	2.448
14.183	0.000	8.19	0.00	5.13	7.7	2.449
14.200	0.000	8.22	0.00	5.13	7.7	2.449
14.217	0.000	8.24	0.00	5.13	7.7	2.450
14.233	0.000	8.26	0.00	5.13	7.8	2.451
14.250	0.000	8.29	0.00	5.13	7.8	2.451
14.267	0.000	8.31	0.00	5.14	7.8	2.452
14.283	0.000	8.33	0.00	5.14	7.9	2.453
14.300	0.000	8.36	0.00	5.14	7.9	2.453
14.317	0.000	8.38	0.00	5.14	7.9	2.454
14.333	0.000	8.41	0.00	5.14	7.9	2.455
14.350	0.000	8.43	0.00	5.14	8.0	2.455
14.367	0.000	8.45	0.00	5.14	8.0	2.456
14.383	0.000	8.48	0.00	5.14	8.0	2.457
14.400	0.000	8.50	0.00	5.14	8.1	2.457
14.417	0.000	8.56	0.00	5.15	8.1	2.458
14.433	0.000	8.62	0.00	5.15	8.1	2.459
14.450	0.000	8.69	0.00	5.15	8.1	2.459
14.467	0.000	8.75	0.00	5.15	8.2	2.460
14.483	0.000	8.82	0.00	5.15	8.2	2.461
14.500	0.000	8.88	0.00	5.15	8.2	2.462
14.517	0.000	8.95	0.00	5.15	8.3	2.463
14.533	0.000	9.01	0.00	5.15	8.3	2.464
14.550	0.000	9.08	0.00	5.16	8.4	2.465
14.567	0.000	9.14	0.00	5.16	8.4	2.466
14.583	0.000	9.21	0.00	5.16	8.5	2.467
14.600	0.000	9.27	0.00	5.16	8.5	2.468
14.617	0.000	9.34	0.00	5.16	8.6	2.469
14.633	0.000	9.40	0.00	5.16	8.6	2.470
14.650	0.000	9.46	0.00	5.17	8.7	2.471
14.667	0.000	9.53	0.00	5.17	8.7	2.472
14.683	0.000	9.57	0.00	5.17	8.8	2.473
14.700	0.000	9.62	0.00	5.17	8.8	2.475
14.717	0.000	9.66	0.00	5.17	8.9	2.476
14.733	0.000	9.70	0.00	5.17	8.9	2.477
14.750	0.000	9.74	0.00	5.18	8.9	2.478
14.767	0.000	9.78	0.00	5.18	9.0	2.479

14.783	0.000	9.83	0.00	5.18	9.0	2.480
14.800	0.000	9.87	0.00	5.18	9.1	2.481
14.817	0.000	9.91	0.00	5.18	9.1	2.482
14.833	0.000	9.95	0.00	5.18	9.2	2.483
14.850	0.000	9.99	0.00	5.19	9.2	2.484
14.867	0.000	10.04	0.00	5.19	9.3	2.485
14.883	0.000	10.08	0.00	5.19	9.3	2.486
14.900	0.000	10.12	0.00	5.19	9.4	2.487
14.917	0.000	10.16	0.00	5.19	9.4	2.488
14.933	0.000	10.21	0.00	5.19	9.5	2.489
14.950	0.000	10.30	0.00	5.20	9.5	2.490
14.967	0.000	10.42	0.00	5.20	9.6	2.492
14.983	0.000	10.54	0.00	5.20	9.6	2.493
15.000	0.000	10.66	0.00	5.20	9.7	2.494
15.017	0.000	10.77	0.00	5.20	9.7	2.496
15.033	0.000	10.89	0.00	5.21	9.8	2.497
15.050	0.000	11.01	0.00	5.21	9.9	2.499
15.067	0.000	11.12	0.00	5.21	9.9	2.500
15.083	0.000	11.24	0.00	5.21	10.0	2.502
15.100	0.000	11.36	0.00	5.22	10.1	2.504
15.117	0.000	11.48	0.00	5.22	10.2	2.506
15.133	0.000	11.59	0.00	5.22	10.2	2.508
15.150	0.000	11.71	0.00	5.23	10.3	2.509
15.167	0.000	11.83	0.00	5.23	10.4	2.511
15.183	0.000	11.95	0.00	5.23	10.5	2.513
15.200	0.000	12.06	0.00	5.24	10.6	2.515
15.217	0.000	12.16	0.00	5.24	10.7	2.517
15.233	0.000	12.25	0.00	5.24	10.8	2.520
15.250	0.000	12.33	0.00	5.25	10.9	2.522
15.267	0.000	12.42	0.00	5.25	10.9	2.524
15.283	0.000	12.51	0.00	5.25	11.0	2.526
15.300	0.000	12.60	0.00	5.25	11.1	2.528
15.317	0.000	12.68	0.00	5.26	11.2	2.530
15.333	0.000	12.77	0.00	5.26	11.3	2.532
15.350	0.000	12.86	0.00	5.26	11.4	2.534
15.367	0.000	12.95	0.00	5.27	11.5	2.536
15.383	0.000	13.03	0.00	5.27	11.6	2.538
15.400	0.000	13.12	0.00	5.27	11.7	2.540
15.417	0.000	13.21	0.00	5.28	11.8	2.542
15.433	0.000	13.29	0.00	5.28	11.8	2.544
15.450	0.000	13.38	0.00	5.28	11.9	2.546
15.467	0.000	13.47	0.00	5.29	12.0	2.548
15.483	0.000	13.80	0.00	5.29	12.1	2.550
15.500	0.000	14.27	0.00	5.29	12.2	2.553
15.517	0.000	14.75	0.00	5.30	12.4	2.556
15.533	0.000	15.22	0.00	5.31	12.5	2.560
15.550	0.000	15.69	0.00	5.31	12.7	2.564
15.567	0.000	16.17	0.00	5.32	12.9	2.569
15.583	0.000	16.64	0.00	5.33	13.1	2.573
15.600	0.000	17.11	0.00	5.34	13.3	2.579
15.617	0.000	17.59	0.00	5.34	13.6	2.584
15.633	0.000	18.06	0.00	5.35	13.8	2.590
15.650	0.000	18.53	0.00	5.36	14.1	2.596
15.667	0.000	19.00	0.00	5.37	14.3	2.603
15.683	0.000	19.48	0.00	5.38	14.6	2.609

15.700	0.000	19.95	0.00	5.39	14.9	2.616
15.717	0.000	20.42	0.00	5.41	15.2	2.623
15.733	0.000	20.90	0.00	5.42	15.6	2.631
15.750	0.000	21.39	0.00	5.43	15.9	2.638
15.767	0.000	21.90	0.00	5.44	16.2	2.646
15.783	0.000	22.41	0.00	5.45	16.6	2.654
15.800	0.000	22.92	0.00	5.47	16.9	2.662
15.817	0.000	23.43	0.00	5.48	17.3	2.671
15.833	0.000	23.94	0.00	5.49	17.7	2.679
15.850	0.000	24.44	0.00	5.51	18.1	2.688
15.867	0.000	24.95	0.00	5.52	18.5	2.697
15.883	0.000	25.46	0.00	5.54	18.9	2.706
15.900	0.000	25.97	0.00	5.55	19.3	2.715
15.917	0.000	26.48	0.00	5.57	19.7	2.725
15.933	0.000	26.99	0.00	5.58	20.1	2.734
15.950	0.000	27.50	0.00	5.60	20.5	2.744
15.967	0.000	28.01	0.00	5.61	20.9	2.754
15.983	0.000	28.52	0.00	5.63	21.4	2.763
16.000	0.000	29.03	0.00	5.64	21.8	2.773
16.017	0.000	30.75	0.00	5.66	22.3	2.785
16.033	0.000	33.69	0.00	5.68	22.9	2.800
16.050	0.000	36.64	0.00	5.71	23.6	2.818
16.067	0.000	39.58	0.00	5.75	24.5	2.839
16.083	0.000	42.52	0.00	5.78	25.4	2.862
16.100	0.000	45.46	0.00	5.82	26.5	2.888
16.117	0.000	48.40	0.00	5.87	27.7	2.917
16.133	0.000	51.34	0.00	5.92	29.0	2.947
16.150	0.000	54.28	0.00	5.97	30.5	2.980
16.167	0.000	57.23	0.00	6.02	31.9	3.015
16.183	0.000	60.17	0.00	6.07	33.2	3.052
16.200	0.000	63.11	0.00	6.13	34.4	3.092
16.217	0.000	66.05	0.00	6.19	35.8	3.134
16.233	0.000	68.99	0.00	6.25	37.2	3.177
16.250	0.000	71.93	0.00	6.32	38.7	3.223
16.267	0.000	74.88	0.00	6.38	40.2	3.271
16.283	0.000	76.54	0.00	6.45	41.8	3.319
16.300	0.000	71.26	0.00	6.51	43.2	3.358
16.317	0.000	67.58	0.00	6.55	44.4	3.390
16.333	0.000	63.89	0.00	6.59	45.3	3.415
16.350	0.000	60.20	0.00	6.61	46.1	3.435
16.367	0.000	56.52	0.00	6.63	46.6	3.448
16.383	0.000	52.83	0.00	6.64	47.0	3.456
16.400	0.000	49.15	0.00	6.65	47.1	3.459
16.417	0.000	45.46	0.00	6.65	47.2	3.457
16.433	0.000	41.78	0.00	6.63	47.0	3.449
16.450	0.000	38.09	0.00	6.62	46.7	3.438
16.467	0.000	34.40	0.00	6.60	46.2	3.421
16.483	0.000	30.72	0.00	6.57	45.6	3.401
16.500	0.000	27.03	0.00	6.53	44.9	3.376
16.517	0.000	23.35	0.00	6.49	44.0	3.348
16.533	0.000	19.66	0.00	6.45	43.0	3.316
16.550	0.000	17.21	0.00	6.40	41.9	3.282
16.567	0.000	16.79	0.00	6.35	40.8	3.249
16.583	0.000	16.40	0.00	6.31	39.7	3.216
16.600	0.000	16.01	0.00	6.26	38.7	3.185

16.617	0.000	15.62	0.00	6.22	37.7	3.155
16.633	0.000	15.23	0.00	6.18	36.7	3.125
16.650	0.000	14.84	0.00	6.14	35.7	3.097
16.667	0.000	14.44	0.00	6.10	34.8	3.069
16.683	0.000	14.05	0.00	6.06	33.9	3.041
16.700	0.000	13.66	0.00	6.02	33.0	3.015
16.717	0.000	13.27	0.00	5.98	32.0	2.989
16.733	0.000	12.88	0.00	5.94	31.0	2.964
16.750	0.000	12.49	0.00	5.91	29.9	2.940
16.767	0.000	12.10	0.00	5.87	28.9	2.917
16.783	0.000	11.71	0.00	5.83	27.9	2.894
16.800	0.000	11.32	0.00	5.80	26.9	2.873
16.817	0.000	11.01	0.00	5.77	26.0	2.852
16.833	0.000	10.88	0.00	5.74	25.1	2.833
16.850	0.000	10.75	0.00	5.71	24.2	2.814
16.867	0.000	10.62	0.00	5.68	23.4	2.797
16.883	0.000	10.49	0.00	5.65	22.7	2.780
16.900	0.000	10.36	0.00	5.63	22.0	2.764
16.917	0.000	10.23	0.00	5.60	21.3	2.749
16.933	0.000	10.11	0.00	5.58	20.6	2.734
16.950	0.000	9.98	0.00	5.56	20.0	2.720
16.967	0.000	9.85	0.00	5.54	19.4	2.707
16.983	0.000	9.72	0.00	5.52	18.8	2.695
17.000	0.000	9.59	0.00	5.50	18.3	2.683
17.017	0.000	9.46	0.00	5.48	17.8	2.671
17.033	0.000	9.33	0.00	5.46	17.3	2.660
17.050	0.000	9.21	0.00	5.45	16.8	2.650
17.067	0.000	9.08	0.00	5.43	16.3	2.640
17.083	0.000	8.96	0.00	5.42	15.9	2.630
17.100	0.000	8.89	0.00	5.40	15.5	2.621
17.117	0.000	8.81	0.00	5.39	15.1	2.612
17.133	0.000	8.74	0.00	5.38	14.7	2.604
17.150	0.000	8.66	0.00	5.36	14.4	2.596
17.167	0.000	8.59	0.00	5.35	14.0	2.589
17.183	0.000	8.51	0.00	5.34	13.7	2.582
17.200	0.000	8.44	0.00	5.33	13.4	2.575
17.217	0.000	8.36	0.00	5.32	13.1	2.568
17.233	0.000	8.29	0.00	5.31	12.8	2.562
17.250	0.000	8.21	0.00	5.30	12.6	2.556
17.267	0.000	8.14	0.00	5.29	12.3	2.550
17.283	0.000	8.06	0.00	5.28	12.0	2.545
17.300	0.000	7.99	0.00	5.27	11.8	2.539
17.317	0.000	7.91	0.00	5.27	11.6	2.534
17.333	0.000	7.84	0.00	5.26	11.4	2.530
17.350	0.000	7.76	0.00	5.25	11.2	2.525
17.367	0.000	7.71	0.00	5.24	11.0	2.520
17.383	0.000	7.66	0.00	5.24	10.8	2.516
17.400	0.000	7.60	0.00	5.23	10.6	2.512
17.417	0.000	7.55	0.00	5.22	10.4	2.508
17.433	0.000	7.50	0.00	5.22	10.2	2.504
17.450	0.000	7.44	0.00	5.21	10.1	2.501
17.467	0.000	7.39	0.00	5.21	9.9	2.497
17.483	0.000	7.34	0.00	5.20	9.8	2.494
17.500	0.000	7.28	0.00	5.20	9.6	2.491
17.517	0.000	7.23	0.00	5.19	9.5	2.488

17.533	0.000	7.18	0.00	5.19	9.3	2.485
17.550	0.000	7.12	0.00	5.18	9.2	2.482
17.567	0.000	7.07	0.00	5.18	9.1	2.479
17.583	0.000	7.02	0.00	5.17	9.0	2.476
17.600	0.000	6.96	0.00	5.17	8.8	2.474
17.617	0.000	6.91	0.00	5.17	8.7	2.471
17.633	0.000	6.87	0.00	5.16	8.6	2.469
17.650	0.000	6.83	0.00	5.16	8.5	2.466
17.667	0.000	6.79	0.00	5.15	8.4	2.464
17.683	0.000	6.76	0.00	5.15	8.3	2.462
17.700	0.000	6.72	0.00	5.15	8.2	2.460
17.717	0.000	6.68	0.00	5.15	8.1	2.458
17.733	0.000	6.64	0.00	5.14	8.1	2.456
17.750	0.000	6.60	0.00	5.14	8.0	2.454
17.767	0.000	6.56	0.00	5.14	7.9	2.452
17.783	0.000	6.52	0.00	5.13	7.8	2.451
17.800	0.000	6.48	0.00	5.13	7.7	2.449
17.817	0.000	6.44	0.00	5.13	7.7	2.447
17.833	0.000	6.40	0.00	5.13	7.6	2.446
17.850	0.000	6.36	0.00	5.12	7.5	2.444
17.867	0.000	6.32	0.00	5.12	7.4	2.442
17.883	0.000	6.28	0.00	5.12	7.4	2.441
17.900	0.000	6.25	0.00	5.12	7.3	2.439
17.917	0.000	6.22	0.00	5.11	7.2	2.438
17.933	0.000	6.19	0.00	5.11	7.2	2.437
17.950	0.000	6.16	0.00	5.11	7.1	2.435
17.967	0.000	6.13	0.00	5.11	7.1	2.434
17.983	0.000	6.10	0.00	5.11	7.0	2.433
18.000	0.000	6.07	0.00	5.10	7.0	2.432
18.017	0.000	6.04	0.00	5.10	6.9	2.430
18.033	0.000	6.01	0.00	5.10	6.9	2.429
18.050	0.000	5.98	0.00	5.10	6.8	2.428
18.067	0.000	5.95	0.00	5.10	6.7	2.427
18.083	0.000	5.92	0.00	5.09	6.7	2.426
18.100	0.000	5.89	0.00	5.09	6.7	2.425
18.117	0.000	5.85	0.00	5.09	6.6	2.424
18.133	0.000	5.82	0.00	5.09	6.6	2.423
18.150	0.000	5.79	0.00	5.09	6.5	2.422
18.167	0.000	5.75	0.00	5.09	6.5	2.421
18.183	0.000	5.71	0.00	5.08	6.4	2.420
18.200	0.000	5.67	0.00	5.08	6.4	2.419
18.217	0.000	5.62	0.00	5.08	6.3	2.418
18.233	0.000	5.58	0.00	5.08	6.3	2.417
18.250	0.000	5.54	0.00	5.08	6.3	2.416
18.267	0.000	5.50	0.00	5.08	6.2	2.415
18.283	0.000	5.45	0.00	5.08	6.2	2.414
18.300	0.000	5.41	0.00	5.07	6.1	2.413
18.317	0.000	5.37	0.00	5.07	6.1	2.412
18.333	0.000	5.33	0.00	5.07	6.0	2.411
18.350	0.000	5.29	0.00	5.07	6.0	2.410
18.367	0.000	5.24	0.00	5.07	6.0	2.409
18.383	0.000	5.20	0.00	5.07	5.9	2.408
18.400	0.000	5.16	0.00	5.06	5.9	2.407
18.417	0.000	5.12	0.00	5.06	5.8	2.406
18.433	0.000	5.09	0.00	5.06	5.8	2.405

18.450	0.000	5.07	0.00	5.06	5.7	2.404
18.467	0.000	5.05	0.00	5.06	5.7	2.403
18.483	0.000	5.03	0.00	5.06	5.7	2.402
18.500	0.000	5.01	0.00	5.06	5.6	2.402
18.517	0.000	4.99	0.00	5.05	5.6	2.401
18.533	0.000	4.97	0.00	5.05	5.6	2.400
18.550	0.000	4.95	0.00	5.05	5.5	2.399
18.567	0.000	4.93	0.00	5.05	5.5	2.398
18.583	0.000	4.91	0.00	5.05	5.4	2.398
18.600	0.000	4.89	0.00	5.05	5.4	2.397
18.617	0.000	4.87	0.00	5.05	5.4	2.396
18.633	0.000	4.85	0.00	5.05	5.4	2.396
18.650	0.000	4.83	0.00	5.05	5.3	2.395
18.667	0.000	4.81	0.00	5.04	5.3	2.394
18.683	0.000	4.79	0.00	5.04	5.3	2.394
18.700	0.000	4.77	0.00	5.04	5.2	2.393
18.717	0.000	4.76	0.00	5.04	5.2	2.392
18.733	0.000	4.74	0.00	5.04	5.2	2.392
18.750	0.000	4.72	0.00	5.04	5.2	2.391
18.767	0.000	4.71	0.00	5.04	5.1	2.391
18.783	0.000	4.69	0.00	5.04	5.1	2.390
18.800	0.000	4.67	0.00	5.04	5.1	2.389
18.817	0.000	4.66	0.00	5.04	5.1	2.389
18.833	0.000	4.64	0.00	5.04	5.0	2.388
18.850	0.000	4.62	0.00	5.03	5.0	2.388
18.867	0.000	4.60	0.00	5.03	5.0	2.387
18.883	0.000	4.59	0.00	5.03	5.0	2.387
18.900	0.000	4.57	0.00	5.03	4.9	2.386
18.917	0.000	4.55	0.00	5.03	4.9	2.386
18.933	0.000	4.54	0.00	5.03	4.9	2.385
18.950	0.000	4.52	0.00	5.03	4.9	2.385
18.967	0.000	4.51	0.00	5.03	4.9	2.384
18.983	0.000	4.49	0.00	5.03	4.8	2.384
19.000	0.000	4.48	0.00	5.03	4.8	2.383
19.017	0.000	4.46	0.00	5.03	4.8	2.383
19.033	0.000	4.45	0.00	5.03	4.8	2.383
19.050	0.000	4.43	0.00	5.03	4.8	2.382
19.067	0.000	4.42	0.00	5.02	4.7	2.382
19.083	0.000	4.40	0.00	5.02	4.7	2.381
19.100	0.000	4.39	0.00	5.02	4.7	2.381
19.117	0.000	4.37	0.00	5.02	4.7	2.380
19.133	0.000	4.36	0.00	5.02	4.7	2.380
19.150	0.000	4.35	0.00	5.02	4.6	2.380
19.167	0.000	4.33	0.00	5.02	4.6	2.379
19.183	0.000	4.32	0.00	5.02	4.6	2.379
19.200	0.000	4.30	0.00	5.02	4.6	2.378
19.217	0.000	4.29	0.00	5.02	4.6	2.378
19.233	0.000	4.27	0.00	5.02	4.6	2.378
19.250	0.000	4.26	0.00	5.02	4.5	2.377
19.267	0.000	4.25	0.00	5.02	4.5	2.377
19.283	0.000	4.24	0.00	5.02	4.5	2.377
19.300	0.000	4.22	0.00	5.02	4.5	2.376
19.317	0.000	4.21	0.00	5.02	4.5	2.376
19.333	0.000	4.20	0.00	5.01	4.5	2.375
19.350	0.000	4.19	0.00	5.01	4.4	2.375

19.367	0.000	4.17	0.00	5.01	4.4	2.375
19.383	0.000	4.16	0.00	5.01	4.4	2.374
19.400	0.000	4.15	0.00	5.01	4.4	2.374
19.417	0.000	4.14	0.00	5.01	4.4	2.374
19.433	0.000	4.12	0.00	5.01	4.4	2.373
19.450	0.000	4.11	0.00	5.01	4.3	2.373
19.467	0.000	4.10	0.00	5.01	4.3	2.373
19.483	0.000	4.08	0.00	5.01	4.3	2.372
19.500	0.000	4.07	0.00	5.01	4.3	2.372
19.517	0.000	4.06	0.00	5.01	4.3	2.372
19.533	0.000	4.05	0.00	5.01	4.3	2.371
19.550	0.000	4.04	0.00	5.01	4.3	2.371
19.567	0.000	4.03	0.00	5.01	4.3	2.371
19.583	0.000	4.02	0.00	5.01	4.2	2.371
19.600	0.000	4.01	0.00	5.01	4.2	2.370
19.617	0.000	4.00	0.00	5.01	4.2	2.370
19.633	0.000	3.98	0.00	5.01	4.2	2.370
19.650	0.000	3.97	0.00	5.01	4.2	2.369
19.667	0.000	3.96	0.00	5.00	4.2	2.369
19.683	0.000	3.95	0.00	5.00	4.2	2.369
19.700	0.000	3.94	0.00	5.00	4.1	2.369
19.717	0.000	3.93	0.00	5.00	4.1	2.368
19.733	0.000	3.92	0.00	5.00	4.1	2.368
19.750	0.000	3.91	0.00	5.00	4.1	2.368
19.767	0.000	3.90	0.00	5.00	4.1	2.367
19.783	0.000	3.89	0.00	5.00	4.1	2.367
19.800	0.000	3.88	0.00	5.00	4.1	2.367
19.817	0.000	3.87	0.00	5.00	4.1	2.367
19.833	0.000	3.86	0.00	5.00	4.0	2.366
19.850	0.000	3.85	0.00	5.00	4.0	2.366
19.867	0.000	3.84	0.00	5.00	4.0	2.366
19.883	0.000	3.83	0.00	5.00	4.0	2.366
19.900	0.000	3.82	0.00	5.00	4.0	2.365
19.917	0.000	3.81	0.00	5.00	4.0	2.365
19.933	0.000	3.80	0.00	5.00	4.0	2.365
19.950	0.000	3.79	0.00	5.00	4.0	2.364
19.967	0.000	3.78	0.00	5.00	4.0	2.364
19.983	0.000	3.77	0.00	5.00	4.0	2.364
20.000	0.000	3.76	0.00	5.00	4.0	2.363
20.017	0.000	3.75	0.00	4.99	4.0	2.363
20.033	0.000	3.74	0.00	4.99	4.0	2.363
20.050	0.000	3.73	0.00	4.99	4.0	2.362
20.067	0.000	3.72	0.00	4.99	4.0	2.362
20.083	0.000	3.71	0.00	4.99	4.0	2.361
20.100	0.000	3.70	0.00	4.99	4.0	2.361
20.117	0.000	3.70	0.00	4.99	4.0	2.361
20.133	0.000	3.69	0.00	4.99	4.0	2.360
20.150	0.000	3.68	0.00	4.99	4.0	2.360
20.167	0.000	3.67	0.00	4.99	4.0	2.359
20.183	0.000	3.66	0.00	4.99	4.0	2.359
20.200	0.000	3.65	0.00	4.99	4.0	2.358
20.217	0.000	3.64	0.00	4.99	4.0	2.358
20.233	0.000	3.63	0.00	4.99	4.0	2.357
20.250	0.000	3.63	0.00	4.98	4.0	2.357
20.267	0.000	3.62	0.00	4.98	4.0	2.356

20.283	0.000	3.61	0.00	4.98	4.0	2.356
20.300	0.000	3.60	0.00	4.98	4.0	2.355
20.317	0.000	3.59	0.00	4.98	4.0	2.355
20.333	0.000	3.58	0.00	4.98	4.0	2.354
20.350	0.000	3.58	0.00	4.98	4.0	2.354
20.367	0.000	3.57	0.00	4.98	4.0	2.353
20.383	0.000	3.56	0.00	4.98	3.9	2.353
20.400	0.000	3.55	0.00	4.98	3.9	2.352
20.417	0.000	3.54	0.00	4.98	3.9	2.352
20.433	0.000	3.54	0.00	4.97	3.9	2.351
20.450	0.000	3.53	0.00	4.97	3.9	2.351
20.467	0.000	3.52	0.00	4.97	3.9	2.350
20.483	0.000	3.51	0.00	4.97	3.9	2.349
20.500	0.000	3.50	0.00	4.97	3.9	2.349
20.517	0.000	3.50	0.00	4.97	3.9	2.348
20.533	0.000	3.49	0.00	4.97	3.9	2.348
20.550	0.000	3.48	0.00	4.97	3.9	2.347
20.567	0.000	3.47	0.00	4.97	3.9	2.346
20.583	0.000	3.46	0.00	4.97	3.9	2.346
20.600	0.000	3.46	0.00	4.96	3.9	2.345
20.617	0.000	3.45	0.00	4.96	3.9	2.345
20.633	0.000	3.44	0.00	4.96	3.9	2.344
20.650	0.000	3.44	0.00	4.96	3.9	2.343
20.667	0.000	3.43	0.00	4.96	3.9	2.343
20.683	0.000	3.42	0.00	4.96	3.9	2.342
20.700	0.000	3.41	0.00	4.96	3.9	2.341
20.717	0.000	3.41	0.00	4.96	3.9	2.341
20.733	0.000	3.40	0.00	4.96	3.9	2.340
20.750	0.000	3.39	0.00	4.95	3.9	2.340
20.767	0.000	3.39	0.00	4.95	3.9	2.339
20.783	0.000	3.38	0.00	4.95	3.9	2.338
20.800	0.000	3.37	0.00	4.95	3.9	2.338
20.817	0.000	3.36	0.00	4.95	3.9	2.337
20.833	0.000	3.36	0.00	4.95	3.8	2.336
20.850	0.000	3.35	0.00	4.95	3.8	2.335
20.867	0.000	3.34	0.00	4.95	3.8	2.335
20.883	0.000	3.34	0.00	4.95	3.8	2.334
20.900	0.000	3.33	0.00	4.94	3.8	2.333
20.917	0.000	3.32	0.00	4.94	3.8	2.333
20.933	0.000	3.32	0.00	4.94	3.8	2.332
20.950	0.000	3.31	0.00	4.94	3.8	2.331
20.967	0.000	3.30	0.00	4.94	3.8	2.331
20.983	0.000	3.30	0.00	4.94	3.8	2.330
21.000	0.000	3.29	0.00	4.94	3.8	2.329
21.017	0.000	3.28	0.00	4.94	3.8	2.329
21.033	0.000	3.28	0.00	4.93	3.8	2.328
21.050	0.000	3.27	0.00	4.93	3.8	2.327
21.067	0.000	3.26	0.00	4.93	3.8	2.326
21.083	0.000	3.26	0.00	4.93	3.8	2.326
21.100	0.000	3.25	0.00	4.93	3.8	2.325
21.117	0.000	3.25	0.00	4.93	3.8	2.324
21.133	0.000	3.24	0.00	4.93	3.8	2.323
21.150	0.000	3.23	0.00	4.93	3.8	2.323
21.167	0.000	3.23	0.00	4.92	3.8	2.322
21.183	0.000	3.22	0.00	4.92	3.8	2.321

21.200	0.000	3.22	0.00	4.92	3.8	2.321
21.217	0.000	3.21	0.00	4.92	3.7	2.320
21.233	0.000	3.20	0.00	4.92	3.7	2.319
21.250	0.000	3.20	0.00	4.92	3.7	2.318
21.267	0.000	3.19	0.00	4.92	3.7	2.318
21.283	0.000	3.19	0.00	4.92	3.7	2.317
21.300	0.000	3.18	0.00	4.91	3.7	2.316
21.317	0.000	3.17	0.00	4.91	3.7	2.315
21.333	0.000	3.17	0.00	4.91	3.7	2.315
21.350	0.000	3.16	0.00	4.91	3.7	2.314
21.367	0.000	3.16	0.00	4.91	3.7	2.313
21.383	0.000	3.15	0.00	4.91	3.7	2.312
21.400	0.000	3.14	0.00	4.91	3.7	2.312
21.417	0.000	3.14	0.00	4.91	3.7	2.311
21.433	0.000	3.13	0.00	4.90	3.7	2.310
21.450	0.000	3.13	0.00	4.90	3.7	2.309
21.467	0.000	3.12	0.00	4.90	3.7	2.308
21.483	0.000	3.12	0.00	4.90	3.7	2.308
21.500	0.000	3.11	0.00	4.90	3.7	2.307
21.517	0.000	3.10	0.00	4.90	3.7	2.306
21.533	0.000	3.10	0.00	4.90	3.7	2.305
21.550	0.000	3.09	0.00	4.89	3.7	2.305
21.567	0.000	3.09	0.00	4.89	3.6	2.304
21.583	0.000	3.08	0.00	4.89	3.6	2.303
21.600	0.000	3.08	0.00	4.89	3.6	2.302
21.617	0.000	3.07	0.00	4.89	3.6	2.302
21.633	0.000	3.07	0.00	4.89	3.6	2.301
21.650	0.000	3.06	0.00	4.89	3.6	2.300
21.667	0.000	3.06	0.00	4.89	3.6	2.299
21.683	0.000	3.05	0.00	4.88	3.6	2.298
21.700	0.000	3.05	0.00	4.88	3.6	2.298
21.717	0.000	3.04	0.00	4.88	3.6	2.297
21.733	0.000	3.04	0.00	4.88	3.6	2.296
21.750	0.000	3.03	0.00	4.88	3.6	2.295
21.767	0.000	3.02	0.00	4.88	3.6	2.295
21.783	0.000	3.02	0.00	4.88	3.6	2.294
21.800	0.000	3.01	0.00	4.87	3.6	2.293
21.817	0.000	3.01	0.00	4.87	3.6	2.292
21.833	0.000	3.00	0.00	4.87	3.6	2.291
21.850	0.000	3.00	0.00	4.87	3.6	2.291
21.867	0.000	2.99	0.00	4.87	3.6	2.290
21.883	0.000	2.99	0.00	4.87	3.6	2.289
21.900	0.000	2.98	0.00	4.87	3.6	2.288
21.917	0.000	2.98	0.00	4.87	3.5	2.288
21.933	0.000	2.97	0.00	4.86	3.5	2.287
21.950	0.000	2.97	0.00	4.86	3.5	2.286
21.967	0.000	2.96	0.00	4.86	3.5	2.285
21.983	0.000	2.96	0.00	4.86	3.5	2.284
22.000	0.000	2.95	0.00	4.86	3.5	2.284
22.017	0.000	2.95	0.00	4.86	3.5	2.283
22.033	0.000	2.95	0.00	4.86	3.5	2.282
22.050	0.000	2.94	0.00	4.85	3.5	2.281
22.067	0.000	2.94	0.00	4.85	3.5	2.281
22.083	0.000	2.93	0.00	4.85	3.5	2.280
22.100	0.000	2.93	0.00	4.85	3.5	2.279

22.117	0.000	2.92	0.00	4.85	3.5	2.278
22.133	0.000	2.92	0.00	4.85	3.5	2.277
22.150	0.000	2.91	0.00	4.85	3.5	2.277
22.167	0.000	2.91	0.00	4.85	3.5	2.276
22.183	0.000	2.90	0.00	4.84	3.5	2.275
22.200	0.000	2.90	0.00	4.84	3.5	2.274
22.216	0.000	2.89	0.00	4.84	3.5	2.273
22.233	0.000	2.89	0.00	4.84	3.5	2.273
22.250	0.000	2.88	0.00	4.84	3.4	2.272
22.266	0.000	2.88	0.00	4.84	3.4	2.271
22.283	0.000	2.88	0.00	4.84	3.4	2.270
22.300	0.000	2.87	0.00	4.83	3.4	2.270
22.316	0.000	2.87	0.00	4.83	3.4	2.269
22.333	0.000	2.86	0.00	4.83	3.4	2.268
22.350	0.000	2.86	0.00	4.83	3.4	2.267
22.366	0.000	2.85	0.00	4.83	3.4	2.266
22.383	0.000	2.85	0.00	4.83	3.4	2.266
22.400	0.000	2.84	0.00	4.83	3.4	2.265
22.416	0.000	2.84	0.00	4.83	3.4	2.264
22.433	0.000	2.84	0.00	4.82	3.4	2.263
22.450	0.000	2.83	0.00	4.82	3.4	2.263
22.466	0.000	2.83	0.00	4.82	3.4	2.262
22.483	0.000	2.82	0.00	4.82	3.4	2.261
22.500	0.000	2.82	0.00	4.82	3.4	2.260
22.516	0.000	2.82	0.00	4.82	3.4	2.260
22.533	0.000	2.81	0.00	4.82	3.4	2.259
22.550	0.000	2.81	0.00	4.81	3.4	2.258
22.566	0.000	2.80	0.00	4.81	3.4	2.257
22.583	0.000	2.80	0.00	4.81	3.4	2.256
22.600	0.000	2.79	0.00	4.81	3.3	2.256
22.616	0.000	2.79	0.00	4.81	3.3	2.255
22.633	0.000	2.79	0.00	4.81	3.3	2.254
22.650	0.000	2.78	0.00	4.81	3.3	2.253
22.666	0.000	2.78	0.00	4.81	3.3	2.253
22.683	0.000	2.77	0.00	4.80	3.3	2.252
22.700	0.000	2.77	0.00	4.80	3.3	2.251
22.716	0.000	2.77	0.00	4.80	3.3	2.250
22.733	0.000	2.76	0.00	4.80	3.3	2.250
22.750	0.000	2.76	0.00	4.80	3.3	2.249
22.766	0.000	2.75	0.00	4.80	3.3	2.248
22.783	0.000	2.75	0.00	4.80	3.3	2.247
22.800	0.000	2.75	0.00	4.80	3.3	2.247
22.816	0.000	2.74	0.00	4.79	3.3	2.246
22.833	0.000	2.74	0.00	4.79	3.3	2.245
22.850	0.000	2.73	0.00	4.79	3.3	2.244
22.866	0.000	2.73	0.00	4.79	3.3	2.244
22.883	0.000	2.73	0.00	4.79	3.3	2.243
22.900	0.000	2.72	0.00	4.79	3.3	2.242
22.916	0.000	2.72	0.00	4.79	3.3	2.241
22.933	0.000	2.71	0.00	4.78	3.3	2.241
22.950	0.000	2.71	0.00	4.78	3.3	2.240
22.966	0.000	2.71	0.00	4.78	3.2	2.239
22.983	0.000	2.70	0.00	4.78	3.2	2.238
23.000	0.000	2.70	0.00	4.78	3.2	2.238
23.016	0.000	2.70	0.00	4.78	3.2	2.237

23.033	0.000	2.69	0.00	4.78	3.2	2.236
23.050	0.000	2.69	0.00	4.78	3.2	2.235
23.066	0.000	2.68	0.00	4.77	3.2	2.235
23.083	0.000	2.68	0.00	4.77	3.2	2.234
23.100	0.000	2.68	0.00	4.77	3.2	2.233
23.116	0.000	2.67	0.00	4.77	3.2	2.232
23.133	0.000	2.67	0.00	4.77	3.2	2.232
23.150	0.000	2.67	0.00	4.77	3.2	2.231
23.166	0.000	2.66	0.00	4.77	3.2	2.230
23.183	0.000	2.66	0.00	4.77	3.2	2.230
23.200	0.000	2.66	0.00	4.76	3.2	2.229
23.216	0.000	2.65	0.00	4.76	3.2	2.228
23.233	0.000	2.65	0.00	4.76	3.2	2.227
23.250	0.000	2.64	0.00	4.76	3.2	2.227
23.266	0.000	2.64	0.00	4.76	3.2	2.226
23.283	0.000	2.64	0.00	4.76	3.2	2.225
23.300	0.000	2.63	0.00	4.76	3.2	2.225
23.316	0.000	2.63	0.00	4.76	3.2	2.224
23.333	0.000	2.63	0.00	4.75	3.1	2.223
23.350	0.000	2.62	0.00	4.75	3.1	2.222
23.366	0.000	2.62	0.00	4.75	3.1	2.222
23.383	0.000	2.62	0.00	4.75	3.1	2.221
23.400	0.000	2.61	0.00	4.75	3.1	2.220
23.416	0.000	2.61	0.00	4.75	3.1	2.220
23.433	0.000	2.61	0.00	4.75	3.1	2.219
23.450	0.000	2.60	0.00	4.75	3.1	2.218
23.466	0.000	2.60	0.00	4.75	3.1	2.217
23.483	0.000	2.60	0.00	4.74	3.1	2.217
23.500	0.000	2.59	0.00	4.74	3.1	2.216
23.516	0.000	2.59	0.00	4.74	3.1	2.215
23.533	0.000	2.59	0.00	4.74	3.1	2.215
23.550	0.000	2.58	0.00	4.74	3.1	2.214
23.566	0.000	2.58	0.00	4.74	3.1	2.213
23.583	0.000	2.58	0.00	4.74	3.1	2.212
23.600	0.000	2.57	0.00	4.74	3.1	2.212
23.616	0.000	2.57	0.00	4.73	3.1	2.211
23.633	0.000	2.57	0.00	4.73	3.1	2.210
23.650	0.000	2.56	0.00	4.73	3.1	2.210
23.666	0.000	2.56	0.00	4.73	3.1	2.209
23.683	0.000	2.56	0.00	4.73	3.1	2.208
23.700	0.000	2.55	0.00	4.73	3.1	2.208
23.716	0.000	2.55	0.00	4.73	3.0	2.207
23.733	0.000	2.55	0.00	4.73	3.0	2.206
23.750	0.000	2.54	0.00	4.72	3.0	2.206
23.766	0.000	2.54	0.00	4.72	3.0	2.205
23.783	0.000	2.54	0.00	4.72	3.0	2.204
23.800	0.000	2.53	0.00	4.72	3.0	2.204
23.816	0.000	2.53	0.00	4.72	3.0	2.203
23.833	0.000	2.53	0.00	4.72	3.0	2.202
23.850	0.000	2.52	0.00	4.72	3.0	2.202
23.866	0.000	2.52	0.00	4.72	3.0	2.201
23.883	0.000	2.52	0.00	4.72	3.0	2.200
23.900	0.000	2.52	0.00	4.71	3.0	2.200
23.916	0.000	2.51	0.00	4.71	3.0	2.199
23.933	0.000	2.51	0.00	4.71	3.0	2.198

23.950	0.000	2.51	0.00	4.71	3.0	2.198
23.966	0.000	2.50	0.00	4.71	3.0	2.197
23.983	0.000	2.50	0.00	4.71	3.0	2.196
24.000	0.000	2.50	0.00	4.71	3.0	2.196

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 11.619 AF
BASIN STORAGE = 0.117 AF (WITH 0.000 AF INITIALLY FILLED)
OUTFLOW VOLUME = 11.503 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 301.00 TO NODE 302.00 IS CODE = 4

>>>>MODEL PIPEFLOW ROUTING OF STREAM #3<<<<<
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MODEL PIPEFLOW ROUTING OF STREAM 3 WHERE
STORAGE EFFECTS ARE NEGLECTED WITHIN THE PIPE, FLOW
VELOCITIES ARE ESTIMATED BY ASSUMING STEADY FLOW FOR
EACH UNIT INTERVAL(NORMAL DEPTH, Dn), AND FLOWS IN EXCESS
OF (.82)(DIAMETER) ARE PONDED AT THE UPSTREAM INLET:
UNIT INTERVAL FLOW VELOCITY COMPUTED USING Dn UP TO
(0.938)(DIAMETER):

PIPELENGTH(FT) = 364.00 MANNINGS FACTOR = 0.013
UPSTREAM ELEVATION(FT) = 1246.00
DOWNSTREAM ELEVATION(FT) = 1237.00
PIPE DIAMETER(FT) = 2.00

NORMAL DEPTH VELOCITY PIPE ROUTING RESULTS:

TIME (HRS)	INFLOW (CFS)	VELOCITY (FPS)	OUTFLOW (CFS)	UPSTREAM PONDING(AF)
10.000	2.63	6.48	2.62	0.000
10.017	2.64	6.49	2.63	0.000
10.033	2.65	6.50	2.64	0.000
10.050	2.66	6.51	2.66	0.000
10.067	2.68	6.52	2.67	0.000
10.083	2.69	6.53	2.68	0.000
10.100	2.70	6.54	2.69	0.000
10.117	2.72	6.54	2.71	0.000
10.133	2.73	6.55	2.72	0.000
10.150	2.74	6.56	2.73	0.000
10.167	2.75	6.57	2.75	0.000
10.183	2.77	6.58	2.76	0.000
10.200	2.78	6.59	2.77	0.000
10.217	2.79	6.60	2.78	0.000
10.233	2.80	6.61	2.80	0.000
10.250	2.82	6.62	2.81	0.000

10.267	2.83	6.62	2.82	0.000
10.283	2.84	6.63	2.83	0.000
10.300	2.85	6.64	2.85	0.000
10.317	2.87	6.65	2.86	0.000
10.333	2.88	6.66	2.87	0.000
10.350	2.89	6.67	2.88	0.000
10.367	2.90	6.68	2.90	0.000
10.383	2.92	6.68	2.91	0.000
10.400	2.93	6.69	2.92	0.000
10.417	2.94	6.70	2.93	0.000
10.433	2.95	6.71	2.95	0.000
10.450	2.97	6.72	2.96	0.000
10.467	2.98	6.73	2.97	0.000
10.483	2.99	6.74	2.98	0.000
10.500	3.00	6.74	2.99	0.000
10.517	3.01	6.75	3.01	0.000
10.533	3.02	6.76	3.02	0.000
10.550	3.04	6.77	3.03	0.000
10.567	3.05	6.78	3.04	0.000
10.583	3.06	6.78	3.05	0.000
10.600	3.07	6.79	3.06	0.000
10.617	3.08	6.80	3.08	0.000
10.633	3.09	6.81	3.09	0.000
10.650	3.11	6.82	3.10	0.000
10.667	3.12	6.82	3.11	0.000
10.683	3.13	6.83	3.12	0.000
10.700	3.14	6.84	3.13	0.000
10.717	3.15	6.85	3.14	0.000
10.733	3.16	6.86	3.15	0.000
10.750	3.17	6.86	3.17	0.000
10.767	3.18	6.87	3.18	0.000
10.783	3.20	6.88	3.19	0.000
10.800	3.21	6.89	3.20	0.000
10.817	3.22	6.90	3.21	0.000
10.833	3.23	6.90	3.22	0.000
10.850	3.24	6.91	3.23	0.000
10.867	3.25	6.92	3.25	0.000
10.883	3.26	6.93	3.26	0.000
10.900	3.27	6.94	3.27	0.000
10.917	3.29	6.94	3.28	0.000
10.933	3.30	6.95	3.29	0.000
10.950	3.31	6.96	3.30	0.000
10.967	3.32	6.97	3.31	0.000
10.983	3.33	6.97	3.32	0.000
11.000	3.34	6.98	3.33	0.000
11.017	3.35	6.99	3.35	0.000
11.033	3.36	7.00	3.36	0.000
11.050	3.37	7.01	3.37	0.000
11.067	3.38	7.01	3.38	0.000
11.083	3.40	7.02	3.39	0.000
11.100	3.41	7.03	3.40	0.000
11.117	3.42	7.04	3.41	0.000
11.133	3.43	7.04	3.42	0.000
11.150	3.44	7.05	3.43	0.000
11.167	3.45	7.06	3.44	0.000

11.183	3.46	7.06	3.45	0.000
11.200	3.47	7.07	3.46	0.000
11.217	3.48	7.08	3.47	0.000
11.233	3.49	7.09	3.48	0.000
11.250	3.50	7.09	3.50	0.000
11.267	3.51	7.10	3.51	0.000
11.283	3.52	7.11	3.52	0.000
11.300	3.53	7.12	3.53	0.000
11.317	3.54	7.12	3.54	0.000
11.333	3.55	7.13	3.55	0.000
11.350	3.56	7.14	3.56	0.000
11.367	3.58	7.14	3.57	0.000
11.383	3.59	7.15	3.58	0.000
11.400	3.60	7.15	3.59	0.000
11.417	3.61	7.16	3.60	0.000
11.433	3.62	7.17	3.61	0.000
11.450	3.63	7.17	3.62	0.000
11.467	3.64	7.18	3.63	0.000
11.483	3.65	7.18	3.64	0.000
11.500	3.66	7.19	3.65	0.000
11.517	3.67	7.20	3.67	0.000
11.533	3.68	7.20	3.68	0.000
11.550	3.69	7.21	3.69	0.000
11.567	3.70	7.21	3.70	0.000
11.583	3.71	7.22	3.71	0.000
11.600	3.72	7.22	3.72	0.000
11.617	3.73	7.23	3.73	0.000
11.633	3.74	7.24	3.74	0.000
11.650	3.76	7.24	3.75	0.000
11.667	3.77	7.25	3.76	0.000
11.683	3.78	7.25	3.77	0.000
11.700	3.79	7.26	3.78	0.000
11.717	3.80	7.26	3.79	0.000
11.733	3.81	7.27	3.80	0.000
11.750	3.82	7.27	3.81	0.000
11.767	3.83	7.28	3.82	0.000
11.783	3.84	7.29	3.83	0.000
11.800	3.85	7.29	3.84	0.000
11.817	3.86	7.30	3.85	0.000
11.833	3.87	7.30	3.86	0.000
11.850	3.88	7.31	3.87	0.000
11.867	3.89	7.31	3.88	0.000
11.883	3.90	7.32	3.89	0.000
11.900	3.91	7.32	3.90	0.000
11.917	3.92	7.33	3.92	0.000
11.933	3.93	7.34	3.93	0.000
11.950	3.94	7.34	3.94	0.000
11.967	3.95	7.35	3.95	0.000
11.983	3.96	7.35	3.96	0.000
12.000	3.97	7.36	3.97	0.000
12.017	3.99	7.37	3.98	0.000
12.033	4.00	7.37	3.99	0.000
12.050	4.01	7.38	4.00	0.000
12.067	4.02	7.38	4.01	0.000
12.083	4.04	7.40	4.03	0.000

12.100	4.10	7.43	4.07	0.000
12.117	4.17	7.47	4.13	0.000
12.133	4.24	7.51	4.21	0.000
12.150	4.31	7.54	4.27	0.000
12.167	4.37	7.58	4.34	0.000
12.183	4.44	7.61	4.40	0.000
12.200	4.49	7.64	4.46	0.000
12.217	4.55	7.67	4.52	0.000
12.233	4.60	7.70	4.57	0.000
12.250	4.65	7.73	4.63	0.000
12.267	4.70	7.75	4.68	0.000
12.283	4.75	7.78	4.72	0.000
12.300	4.80	7.80	4.77	0.000
12.317	4.84	7.83	4.82	0.000
12.333	4.89	7.85	4.86	0.000
12.350	4.93	7.88	4.91	0.000
12.367	4.97	7.90	4.95	0.000
12.383	5.01	7.92	4.99	0.000
12.400	5.06	7.94	5.03	0.000
12.417	5.10	7.97	5.08	0.000
12.433	5.14	7.99	5.12	0.000
12.450	5.17	8.01	5.16	0.000
12.467	5.21	8.03	5.19	0.000
12.483	5.25	8.05	5.23	0.000
12.500	5.29	8.07	5.27	0.000
12.517	5.32	8.09	5.31	0.000
12.533	5.36	8.11	5.34	0.000
12.550	5.40	8.12	5.38	0.000
12.567	5.43	8.13	5.41	0.000
12.583	5.46	8.15	5.44	0.000
12.600	5.49	8.16	5.48	0.000
12.617	5.52	8.17	5.51	0.000
12.633	5.55	8.18	5.54	0.000
12.650	5.58	8.20	5.56	0.000
12.667	5.60	8.21	5.59	0.000
12.683	5.63	8.22	5.62	0.000
12.700	5.65	8.23	5.64	0.000
12.717	5.68	8.24	5.67	0.000
12.733	5.70	8.25	5.69	0.000
12.750	5.72	8.26	5.71	0.000
12.767	5.74	8.26	5.73	0.000
12.783	5.76	8.27	5.75	0.000
12.800	5.79	8.28	5.77	0.000
12.817	5.81	8.29	5.79	0.000
12.833	5.83	8.30	5.81	0.000
12.850	5.85	8.31	5.84	0.000
12.867	5.87	8.32	5.86	0.000
12.883	5.89	8.32	5.88	0.000
12.900	5.91	8.33	5.90	0.000
12.917	5.93	8.34	5.92	0.000
12.933	5.95	8.35	5.94	0.000
12.950	5.97	8.36	5.96	0.000
12.967	5.99	8.37	5.98	0.000
12.983	6.01	8.38	6.00	0.000
13.000	6.04	8.39	6.02	0.000

13.017	6.06	8.39	6.05	0.000
13.033	6.08	8.40	6.07	0.000
13.050	6.10	8.41	6.09	0.000
13.067	6.12	8.42	6.11	0.000
13.083	6.14	8.43	6.13	0.000
13.100	6.16	8.44	6.15	0.000
13.117	6.19	8.45	6.18	0.000
13.133	6.21	8.46	6.20	0.000
13.150	6.23	8.46	6.22	0.000
13.167	6.24	8.47	6.23	0.000
13.183	6.26	8.48	6.25	0.000
13.200	6.28	8.49	6.27	0.000
13.217	6.30	8.50	6.29	0.000
13.233	6.32	8.50	6.31	0.000
13.250	6.34	8.51	6.33	0.000
13.267	6.35	8.52	6.34	0.000
13.283	6.37	8.52	6.36	0.000
13.300	6.39	8.53	6.38	0.000
13.317	6.40	8.54	6.40	0.000
13.333	6.42	8.54	6.41	0.000
13.350	6.44	8.55	6.43	0.000
13.367	6.45	8.56	6.45	0.000
13.383	6.47	8.57	6.46	0.000
13.400	6.49	8.57	6.48	0.000
13.417	6.51	8.58	6.50	0.000
13.433	6.53	8.59	6.52	0.000
13.450	6.55	8.60	6.54	0.000
13.467	6.58	8.61	6.56	0.000
13.483	6.60	8.62	6.59	0.000
13.500	6.62	8.63	6.61	0.000
13.517	6.64	8.64	6.63	0.000
13.533	6.67	8.65	6.65	0.000
13.550	6.69	8.66	6.68	0.000
13.567	6.71	8.67	6.70	0.000
13.583	6.74	8.68	6.73	0.000
13.600	6.76	8.69	6.75	0.000
13.617	6.79	8.70	6.78	0.000
13.633	6.81	8.71	6.80	0.000
13.650	6.84	8.72	6.82	0.000
13.667	6.86	8.73	6.85	0.000
13.683	6.88	8.74	6.87	0.000
13.700	6.91	8.75	6.90	0.000
13.717	6.93	8.76	6.92	0.000
13.733	6.95	8.76	6.94	0.000
13.750	6.97	8.77	6.96	0.000
13.767	6.99	8.78	6.98	0.000
13.783	7.02	8.79	7.01	0.000
13.800	7.04	8.80	7.03	0.000
13.817	7.06	8.81	7.05	0.000
13.833	7.08	8.82	7.07	0.000
13.850	7.10	8.83	7.09	0.000
13.867	7.12	8.83	7.11	0.000
13.883	7.14	8.84	7.13	0.000
13.900	7.16	8.85	7.15	0.000
13.917	7.19	8.86	7.18	0.000

13.933	7.21	8.86	7.20	0.000
13.950	7.24	8.87	7.22	0.000
13.967	7.26	8.88	7.25	0.000
13.983	7.29	8.89	7.28	0.000
14.000	7.32	8.90	7.31	0.000
14.017	7.35	8.91	7.33	0.000
14.033	7.38	8.92	7.36	0.000
14.050	7.41	8.93	7.39	0.000
14.067	7.44	8.94	7.42	0.000
14.083	7.47	8.95	7.46	0.000
14.100	7.50	8.96	7.49	0.000
14.117	7.54	8.97	7.52	0.000
14.133	7.57	8.98	7.55	0.000
14.150	7.60	8.99	7.59	0.000
14.167	7.64	9.00	7.62	0.000
14.183	7.67	9.02	7.65	0.000
14.200	7.70	9.03	7.68	0.000
14.217	7.73	9.04	7.72	0.000
14.233	7.76	9.05	7.75	0.000
14.250	7.79	9.06	7.78	0.000
14.267	7.82	9.07	7.81	0.000
14.283	7.85	9.08	7.84	0.000
14.300	7.88	9.09	7.87	0.000
14.317	7.91	9.10	7.90	0.000
14.333	7.94	9.10	7.92	0.000
14.350	7.97	9.11	7.95	0.000
14.367	7.99	9.12	7.98	0.000
14.383	8.02	9.13	8.01	0.000
14.400	8.05	9.14	8.04	0.000
14.417	8.08	9.15	8.07	0.000
14.433	8.11	9.16	8.09	0.000
14.450	8.14	9.17	8.13	0.000
14.467	8.18	9.18	8.16	0.000
14.483	8.21	9.20	8.19	0.000
14.500	8.25	9.21	8.23	0.000
14.517	8.29	9.22	8.27	0.000
14.533	8.33	9.23	8.31	0.000
14.550	8.37	9.25	8.35	0.000
14.567	8.42	9.26	8.40	0.000
14.583	8.46	9.28	8.44	0.000
14.600	8.51	9.29	8.49	0.000
14.617	8.55	9.31	8.53	0.000
14.633	8.60	9.32	8.58	0.000
14.650	8.65	9.34	8.63	0.000
14.667	8.70	9.36	8.68	0.000
14.683	8.75	9.37	8.73	0.000
14.700	8.80	9.39	8.78	0.000
14.717	8.85	9.41	8.83	0.000
14.733	8.90	9.42	8.88	0.000
14.750	8.95	9.44	8.93	0.000
14.767	9.00	9.45	8.97	0.000
14.783	9.04	9.47	9.02	0.000
14.800	9.09	9.48	9.07	0.000
14.817	9.14	9.50	9.12	0.000
14.833	9.19	9.51	9.16	0.000

14.850	9.23	9.52	9.21	0.000
14.867	9.28	9.54	9.26	0.000
14.883	9.32	9.55	9.30	0.000
14.900	9.37	9.57	9.35	0.000
14.917	9.42	9.58	9.40	0.000
14.933	9.46	9.59	9.44	0.000
14.950	9.51	9.61	9.49	0.000
14.967	9.56	9.62	9.54	0.000
14.983	9.61	9.64	9.59	0.000
15.000	9.67	9.66	9.65	0.000
15.017	9.73	9.68	9.71	0.000
15.033	9.80	9.70	9.77	0.000
15.050	9.87	9.72	9.84	0.000
15.067	9.94	9.74	9.91	0.000
15.083	10.01	9.76	9.98	0.000
15.100	10.09	9.79	10.05	0.000
15.117	10.16	9.81	10.13	0.000
15.133	10.25	9.83	10.21	0.000
15.150	10.33	9.86	10.29	0.000
15.167	10.41	9.89	10.38	0.000
15.183	10.50	9.91	10.46	0.000
15.200	10.59	9.94	10.55	0.000
15.217	10.68	9.97	10.64	0.000
15.233	10.77	9.98	10.73	0.000
15.250	10.86	10.00	10.82	0.000
15.267	10.95	10.02	10.91	0.000
15.283	11.04	10.04	11.00	0.000
15.300	11.13	10.06	11.09	0.000
15.317	11.22	10.08	11.18	0.000
15.333	11.31	10.09	11.27	0.000
15.350	11.40	10.11	11.35	0.000
15.367	11.48	10.13	11.44	0.000
15.383	11.57	10.15	11.53	0.000
15.400	11.66	10.17	11.62	0.000
15.417	11.75	10.18	11.71	0.000
15.433	11.84	10.20	11.80	0.000
15.450	11.93	10.22	11.89	0.000
15.467	12.02	10.24	11.98	0.000
15.483	12.11	10.26	12.07	0.000
15.500	12.23	10.28	12.18	0.000
15.517	12.36	10.31	12.30	0.000
15.533	12.52	10.34	12.45	0.000
15.550	12.69	10.38	12.61	0.000
15.567	12.88	10.42	12.80	0.000
15.583	13.09	10.46	13.00	0.000
15.600	13.31	10.51	13.22	0.000
15.617	13.55	10.56	13.45	0.000
15.633	13.80	10.61	13.70	0.000
15.650	14.07	10.67	13.96	0.000
15.667	14.35	10.72	14.23	0.000
15.683	14.64	10.77	14.51	0.000
15.700	14.94	10.81	14.80	0.000
15.717	15.25	10.86	15.11	0.000
15.733	15.57	10.91	15.43	0.000
15.750	15.90	10.97	15.75	0.000

15.767	16.23	11.03	16.10	0.000
15.783	16.58	11.09	16.45	0.000
15.800	16.94	11.16	16.80	0.000
15.817	17.31	11.23	17.17	0.000
15.833	17.69	11.30	17.55	0.000
15.850	18.07	11.37	17.92	0.000
15.867	18.46	11.43	18.31	0.000
15.883	18.86	11.49	18.71	0.000
15.900	19.27	11.56	19.11	0.000
15.917	19.68	11.62	19.52	0.000
15.933	20.10	11.67	19.93	0.000
15.950	20.52	11.73	20.35	0.000
15.967	20.95	11.78	20.77	0.000
15.983	21.38	11.84	21.21	0.000
16.000	21.81	11.88	21.63	0.000
16.017	22.29	11.92	22.09	0.000
16.033	22.88	11.98	22.63	0.000
16.050	23.60	12.06	23.32	0.000
16.067	24.46	12.17	24.14	0.000
16.083	25.44	12.28	25.06	0.000
16.100	26.54	12.39	26.11	0.000
16.117	27.74	12.50	27.28	0.000
16.133	29.05	12.61	28.53	0.000
16.150	30.45	12.70	29.88	0.000
16.167	31.86	12.79	31.30	0.000
16.183	33.17	12.84	32.61	0.000
16.200	34.43	12.88	33.88	0.000
16.217	35.77	12.91	35.07	0.000
16.233	37.18	12.91	35.57	0.002
16.250	38.66	12.91	35.57	0.007
16.267	40.20	12.91	35.57	0.013
16.283	41.78	12.91	35.57	0.022
16.300	43.21	12.91	35.57	0.032
16.317	44.37	12.91	35.57	0.044
16.333	45.32	12.91	35.57	0.058
16.350	46.07	12.91	35.57	0.072
16.367	46.61	12.91	35.57	0.087
16.383	46.97	12.91	35.57	0.103
16.400	47.15	12.91	35.57	0.119
16.417	47.16	12.91	35.57	0.135
16.433	47.00	12.91	35.57	0.151
16.450	46.69	12.91	35.57	0.166
16.467	46.22	12.91	35.57	0.181
16.483	45.61	12.91	35.57	0.195
16.500	44.87	12.91	35.57	0.207
16.517	44.00	12.91	35.57	0.219
16.533	43.00	12.91	35.57	0.229
16.550	41.91	12.91	35.57	0.238
16.567	40.80	12.91	35.57	0.245
16.583	39.72	12.91	35.57	0.251
16.600	38.68	12.91	35.57	0.255
16.617	37.66	12.91	35.57	0.258
16.633	36.67	12.91	35.57	0.259
16.650	35.71	12.91	35.57	0.260
16.667	34.78	12.91	35.57	0.259

16.683	33.86	12.91	35.57	0.256
16.700	32.97	12.91	35.57	0.253
16.717	32.05	12.91	35.57	0.248
16.733	31.01	12.91	35.57	0.242
16.750	29.92	12.91	35.57	0.234
16.767	28.88	12.91	35.57	0.225
16.783	27.88	12.91	35.57	0.214
16.800	26.91	12.91	35.57	0.202
16.817	25.98	12.91	35.57	0.189
16.833	25.09	12.91	35.57	0.174
16.850	24.25	12.91	35.57	0.159
16.867	23.45	12.91	35.57	0.142
16.883	22.69	12.91	35.57	0.124
16.900	21.96	12.91	35.57	0.106
16.917	21.27	12.91	35.57	0.086
16.933	20.62	12.91	35.57	0.065
16.950	19.99	12.91	35.57	0.044
16.967	19.40	12.91	35.57	0.021
16.983	18.83	12.88	34.93	0.000
17.000	18.29	11.40	24.78	0.000
17.017	17.77	11.32	17.98	0.000
17.033	17.27	11.23	17.46	0.000
17.050	16.80	11.14	16.98	0.000
17.067	16.35	11.05	16.53	0.000
17.083	15.92	10.97	16.09	0.000
17.100	15.50	10.90	15.68	0.000
17.117	15.11	10.84	15.28	0.000
17.133	14.74	10.78	14.90	0.000
17.150	14.38	10.72	14.54	0.000
17.167	14.04	10.66	14.18	0.000
17.183	13.71	10.59	13.85	0.000
17.200	13.41	10.53	13.53	0.000
17.217	13.11	10.47	13.23	0.000
17.233	12.83	10.41	12.95	0.000
17.250	12.56	10.35	12.67	0.000
17.267	12.30	10.30	12.41	0.000
17.283	12.05	10.24	12.16	0.000
17.300	11.81	10.20	11.92	0.000
17.317	11.58	10.15	11.69	0.000
17.333	11.36	10.11	11.46	0.000
17.350	11.15	10.06	11.25	0.000
17.367	10.95	10.02	11.05	0.000
17.383	10.76	9.98	10.85	0.000
17.400	10.57	9.93	10.66	0.000
17.417	10.40	9.88	10.47	0.000
17.433	10.23	9.83	10.30	0.000
17.450	10.06	9.78	10.13	0.000
17.467	9.91	9.73	9.97	0.000
17.483	9.76	9.68	9.82	0.000
17.500	9.61	9.64	9.68	0.000
17.517	9.47	9.60	9.53	0.000
17.533	9.34	9.56	9.40	0.000
17.550	9.21	9.52	9.27	0.000
17.567	9.09	9.48	9.14	0.000
17.583	8.96	9.44	9.02	0.000

17.600	8.85	9.41	8.90	0.000
17.617	8.74	9.37	8.79	0.000
17.633	8.63	9.33	8.68	0.000
17.650	8.52	9.30	8.57	0.000
17.667	8.42	9.26	8.47	0.000
17.683	8.32	9.23	8.37	0.000
17.700	8.23	9.20	8.27	0.000
17.717	8.14	9.17	8.18	0.000
17.733	8.05	9.14	8.09	0.000
17.750	7.97	9.11	8.01	0.000
17.767	7.89	9.09	7.92	0.000
17.783	7.81	9.06	7.84	0.000
17.800	7.73	9.04	7.77	0.000
17.817	7.65	9.01	7.69	0.000
17.833	7.58	8.99	7.62	0.000
17.850	7.51	8.96	7.54	0.000
17.867	7.44	8.94	7.47	0.000
17.883	7.37	8.92	7.41	0.000
17.900	7.31	8.90	7.34	0.000
17.917	7.24	8.88	7.28	0.000
17.933	7.18	8.85	7.21	0.000
17.950	7.12	8.84	7.15	0.000
17.967	7.07	8.81	7.09	0.000
17.983	7.01	8.79	7.04	0.000
18.000	6.96	8.77	6.98	0.000
18.017	6.90	8.74	6.93	0.000
18.033	6.85	8.72	6.87	0.000
18.050	6.80	8.70	6.82	0.000
18.067	6.75	8.68	6.77	0.000
18.083	6.70	8.66	6.72	0.000
18.100	6.65	8.64	6.68	0.000
18.117	6.61	8.62	6.63	0.000
18.133	6.56	8.60	6.58	0.000
18.150	6.52	8.59	6.54	0.000
18.167	6.47	8.57	6.50	0.000
18.183	6.43	8.55	6.45	0.000
18.200	6.39	8.53	6.41	0.000
18.217	6.34	8.51	6.36	0.000
18.233	6.30	8.49	6.32	0.000
18.250	6.26	8.48	6.28	0.000
18.267	6.21	8.46	6.23	0.000
18.283	6.17	8.44	6.19	0.000
18.300	6.12	8.42	6.15	0.000
18.317	6.08	8.40	6.10	0.000
18.333	6.04	8.39	6.06	0.000
18.350	5.99	8.37	6.02	0.000
18.367	5.95	8.35	5.97	0.000
18.383	5.91	8.33	5.93	0.000
18.400	5.87	8.32	5.89	0.000
18.417	5.82	8.30	5.84	0.000
18.433	5.78	8.28	5.80	0.000
18.450	5.74	8.26	5.76	0.000
18.467	5.70	8.25	5.72	0.000
18.483	5.66	8.23	5.68	0.000
18.500	5.62	8.21	5.64	0.000

18.517	5.59	8.20	5.61	0.000
18.533	5.55	8.18	5.57	0.000
18.550	5.52	8.17	5.53	0.000
18.567	5.48	8.16	5.50	0.000
18.583	5.45	8.14	5.47	0.000
18.600	5.42	8.13	5.43	0.000
18.617	5.39	8.12	5.40	0.000
18.633	5.35	8.10	5.37	0.000
18.650	5.32	8.09	5.34	0.000
18.667	5.29	8.07	5.31	0.000
18.683	5.27	8.06	5.28	0.000
18.700	5.24	8.04	5.25	0.000
18.717	5.21	8.03	5.22	0.000
18.733	5.18	8.01	5.20	0.000
18.750	5.16	8.00	5.17	0.000
18.767	5.13	7.98	5.14	0.000
18.783	5.10	7.97	5.12	0.000
18.800	5.08	7.96	5.09	0.000
18.817	5.05	7.94	5.07	0.000
18.833	5.03	7.93	5.04	0.000
18.850	5.01	7.92	5.02	0.000
18.867	4.98	7.91	5.00	0.000
18.883	4.96	7.89	4.97	0.000
18.900	4.94	7.88	4.95	0.000
18.917	4.92	7.87	4.93	0.000
18.933	4.89	7.86	4.91	0.000
18.950	4.87	7.85	4.88	0.000
18.967	4.85	7.83	4.86	0.000
18.983	4.83	7.82	4.84	0.000
19.000	4.81	7.81	4.82	0.000
19.017	4.79	7.80	4.80	0.000
19.033	4.77	7.79	4.78	0.000
19.050	4.75	7.78	4.76	0.000
19.067	4.73	7.77	4.74	0.000
19.083	4.71	7.76	4.72	0.000
19.100	4.69	7.75	4.70	0.000
19.117	4.68	7.74	4.68	0.000
19.133	4.66	7.73	4.67	0.000
19.150	4.64	7.72	4.65	0.000
19.167	4.62	7.71	4.63	0.000
19.183	4.60	7.70	4.61	0.000
19.200	4.59	7.69	4.60	0.000
19.217	4.57	7.68	4.58	0.000
19.233	4.55	7.67	4.56	0.000
19.250	4.54	7.66	4.54	0.000
19.267	4.52	7.65	4.53	0.000
19.283	4.50	7.64	4.51	0.000
19.300	4.49	7.64	4.49	0.000
19.317	4.47	7.63	4.48	0.000
19.333	4.45	7.62	4.46	0.000
19.350	4.44	7.61	4.45	0.000
19.367	4.42	7.60	4.43	0.000
19.383	4.41	7.59	4.42	0.000
19.400	4.39	7.59	4.40	0.000
19.417	4.38	7.58	4.39	0.000

19.433	4.36	7.57	4.37	0.000
19.450	4.35	7.56	4.36	0.000
19.467	4.33	7.55	4.34	0.000
19.483	4.32	7.55	4.33	0.000
19.500	4.31	7.54	4.31	0.000
19.517	4.29	7.53	4.30	0.000
19.533	4.28	7.52	4.29	0.000
19.550	4.26	7.52	4.27	0.000
19.567	4.25	7.51	4.26	0.000
19.583	4.24	7.50	4.25	0.000
19.600	4.22	7.49	4.23	0.000
19.617	4.21	7.49	4.22	0.000
19.633	4.20	7.48	4.21	0.000
19.650	4.19	7.47	4.19	0.000
19.667	4.17	7.47	4.18	0.000
19.683	4.16	7.46	4.17	0.000
19.700	4.15	7.45	4.15	0.000
19.717	4.13	7.45	4.14	0.000
19.733	4.12	7.44	4.13	0.000
19.750	4.11	7.43	4.12	0.000
19.767	4.10	7.43	4.10	0.000
19.783	4.09	7.42	4.09	0.000
19.800	4.07	7.41	4.08	0.000
19.817	4.06	7.41	4.07	0.000
19.833	4.05	7.40	4.06	0.000
19.850	4.04	7.39	4.04	0.000
19.867	4.03	7.39	4.03	0.000
19.883	4.03	7.39	4.03	0.000
19.900	4.03	7.39	4.03	0.000
19.917	4.02	7.39	4.03	0.000
19.933	4.02	7.39	4.02	0.000
19.950	4.02	7.38	4.02	0.000
19.967	4.02	7.38	4.02	0.000
19.983	4.02	7.38	4.02	0.000
20.000	4.01	7.38	4.02	0.000
20.017	4.01	7.38	4.01	0.000
20.033	4.01	7.38	4.01	0.000
20.050	4.01	7.38	4.01	0.000
20.067	4.00	7.38	4.01	0.000
20.083	4.00	7.37	4.00	0.000
20.100	4.00	7.37	4.00	0.000
20.117	4.00	7.37	4.00	0.000
20.133	3.99	7.37	4.00	0.000
20.150	3.99	7.37	3.99	0.000
20.167	3.99	7.37	3.99	0.000
20.183	3.99	7.37	3.99	0.000
20.200	3.98	7.36	3.99	0.000
20.217	3.98	7.36	3.98	0.000
20.233	3.98	7.36	3.98	0.000
20.250	3.98	7.36	3.98	0.000
20.267	3.97	7.36	3.97	0.000
20.283	3.97	7.36	3.97	0.000
20.300	3.97	7.35	3.97	0.000
20.317	3.96	7.35	3.96	0.000
20.333	3.96	7.35	3.96	0.000

20.350	3.96	7.35	3.96	0.000
20.367	3.95	7.35	3.96	0.000
20.383	3.95	7.35	3.95	0.000
20.400	3.95	7.34	3.95	0.000
20.417	3.94	7.34	3.95	0.000
20.433	3.94	7.34	3.94	0.000
20.450	3.94	7.34	3.94	0.000
20.467	3.93	7.34	3.93	0.000
20.483	3.93	7.33	3.93	0.000
20.500	3.93	7.33	3.93	0.000
20.517	3.92	7.33	3.92	0.000
20.533	3.92	7.33	3.92	0.000
20.550	3.91	7.33	3.92	0.000
20.567	3.91	7.32	3.91	0.000
20.583	3.91	7.32	3.91	0.000
20.600	3.90	7.32	3.91	0.000
20.617	3.90	7.32	3.90	0.000
20.633	3.90	7.32	3.90	0.000
20.650	3.89	7.31	3.89	0.000
20.667	3.89	7.31	3.89	0.000
20.683	3.88	7.31	3.89	0.000
20.700	3.88	7.31	3.88	0.000
20.717	3.88	7.31	3.88	0.000
20.733	3.87	7.30	3.87	0.000
20.750	3.87	7.30	3.87	0.000
20.767	3.86	7.30	3.87	0.000
20.783	3.86	7.30	3.86	0.000
20.800	3.86	7.30	3.86	0.000
20.817	3.85	7.29	3.85	0.000
20.833	3.85	7.29	3.85	0.000
20.850	3.84	7.29	3.85	0.000
20.867	3.84	7.29	3.84	0.000
20.883	3.83	7.28	3.84	0.000
20.900	3.83	7.28	3.83	0.000
20.917	3.83	7.28	3.83	0.000
20.933	3.82	7.28	3.82	0.000
20.950	3.82	7.27	3.82	0.000
20.967	3.81	7.27	3.82	0.000
20.983	3.81	7.27	3.81	0.000
21.000	3.80	7.27	3.81	0.000
21.017	3.80	7.27	3.80	0.000
21.033	3.80	7.26	3.80	0.000
21.050	3.79	7.26	3.79	0.000
21.067	3.79	7.26	3.79	0.000
21.083	3.78	7.26	3.79	0.000
21.100	3.78	7.25	3.78	0.000
21.117	3.77	7.25	3.78	0.000
21.133	3.77	7.25	3.77	0.000
21.150	3.76	7.25	3.77	0.000
21.167	3.76	7.24	3.76	0.000
21.183	3.76	7.24	3.76	0.000
21.200	3.75	7.24	3.75	0.000
21.217	3.75	7.24	3.75	0.000
21.233	3.74	7.23	3.74	0.000
21.250	3.74	7.23	3.74	0.000

21.267	3.73	7.23	3.74	0.000
21.283	3.73	7.23	3.73	0.000
21.300	3.72	7.22	3.73	0.000
21.317	3.72	7.22	3.72	0.000
21.333	3.71	7.22	3.72	0.000
21.350	3.71	7.22	3.71	0.000
21.367	3.70	7.21	3.71	0.000
21.383	3.70	7.21	3.70	0.000
21.400	3.70	7.21	3.70	0.000
21.417	3.69	7.21	3.69	0.000
21.433	3.69	7.20	3.69	0.000
21.450	3.68	7.20	3.68	0.000
21.467	3.68	7.20	3.68	0.000
21.483	3.67	7.20	3.67	0.000
21.500	3.67	7.19	3.67	0.000
21.517	3.66	7.19	3.66	0.000
21.533	3.66	7.19	3.66	0.000
21.550	3.65	7.19	3.66	0.000
21.567	3.65	7.18	3.65	0.000
21.583	3.64	7.18	3.65	0.000
21.600	3.64	7.18	3.64	0.000
21.617	3.63	7.17	3.64	0.000
21.633	3.63	7.17	3.63	0.000
21.650	3.62	7.17	3.63	0.000
21.667	3.62	7.17	3.62	0.000
21.683	3.61	7.16	3.62	0.000
21.700	3.61	7.16	3.61	0.000
21.717	3.60	7.16	3.61	0.000
21.733	3.60	7.16	3.60	0.000
21.750	3.59	7.15	3.60	0.000
21.767	3.59	7.15	3.59	0.000
21.783	3.59	7.15	3.59	0.000
21.800	3.58	7.15	3.58	0.000
21.817	3.58	7.14	3.58	0.000
21.833	3.57	7.14	3.57	0.000
21.850	3.57	7.14	3.57	0.000
21.867	3.56	7.14	3.56	0.000
21.883	3.56	7.13	3.56	0.000
21.900	3.55	7.13	3.55	0.000
21.917	3.55	7.13	3.55	0.000
21.933	3.54	7.12	3.54	0.000
21.950	3.54	7.12	3.54	0.000
21.967	3.53	7.12	3.53	0.000
21.983	3.53	7.11	3.53	0.000
22.000	3.52	7.11	3.53	0.000
22.017	3.52	7.11	3.52	0.000
22.033	3.51	7.10	3.52	0.000
22.050	3.51	7.10	3.51	0.000
22.067	3.50	7.10	3.51	0.000
22.083	3.50	7.09	3.50	0.000
22.100	3.49	7.09	3.50	0.000
22.117	3.49	7.09	3.49	0.000
22.133	3.48	7.08	3.49	0.000
22.150	3.48	7.08	3.48	0.000
22.167	3.47	7.08	3.48	0.000

22.183	3.47	7.07	3.47	0.000
22.200	3.46	7.07	3.47	0.000
22.217	3.46	7.07	3.46	0.000
22.233	3.45	7.06	3.46	0.000
22.250	3.45	7.06	3.45	0.000
22.267	3.45	7.06	3.45	0.000
22.283	3.44	7.05	3.44	0.000
22.300	3.44	7.05	3.44	0.000
22.317	3.43	7.04	3.43	0.000
22.333	3.43	7.04	3.43	0.000
22.350	3.42	7.04	3.42	0.000
22.367	3.42	7.03	3.42	0.000
22.383	3.41	7.03	3.41	0.000
22.400	3.41	7.03	3.41	0.000
22.417	3.40	7.02	3.40	0.000
22.433	3.40	7.02	3.40	0.000
22.450	3.39	7.02	3.40	0.000
22.467	3.39	7.01	3.39	0.000
22.483	3.38	7.01	3.39	0.000
22.500	3.38	7.01	3.38	0.000
22.517	3.37	7.00	3.38	0.000
22.533	3.37	7.00	3.37	0.000
22.550	3.36	7.00	3.37	0.000
22.567	3.36	6.99	3.36	0.000
22.583	3.35	6.99	3.36	0.000
22.600	3.35	6.99	3.35	0.000
22.617	3.34	6.98	3.35	0.000
22.633	3.34	6.98	3.34	0.000
22.650	3.34	6.98	3.34	0.000
22.667	3.33	6.97	3.33	0.000
22.683	3.33	6.97	3.33	0.000
22.700	3.32	6.97	3.32	0.000
22.717	3.32	6.96	3.32	0.000
22.733	3.31	6.96	3.31	0.000
22.750	3.31	6.96	3.31	0.000
22.767	3.30	6.96	3.31	0.000
22.783	3.30	6.95	3.30	0.000
22.800	3.29	6.95	3.30	0.000
22.817	3.29	6.95	3.29	0.000
22.833	3.28	6.94	3.29	0.000
22.850	3.28	6.94	3.28	0.000
22.867	3.27	6.94	3.28	0.000
22.883	3.27	6.93	3.27	0.000
22.900	3.27	6.93	3.27	0.000
22.917	3.26	6.93	3.26	0.000
22.933	3.26	6.92	3.26	0.000
22.950	3.25	6.92	3.25	0.000
22.967	3.25	6.92	3.25	0.000
22.983	3.24	6.91	3.24	0.000
23.000	3.24	6.91	3.24	0.000
23.017	3.23	6.91	3.24	0.000
23.033	3.23	6.90	3.23	0.000
23.050	3.22	6.90	3.23	0.000
23.067	3.22	6.90	3.22	0.000
23.083	3.21	6.89	3.22	0.000

23.100	3.21	6.89	3.21	0.000
23.117	3.21	6.89	3.21	0.000
23.133	3.20	6.88	3.20	0.000
23.150	3.20	6.88	3.20	0.000
23.167	3.19	6.88	3.19	0.000
23.183	3.19	6.87	3.19	0.000
23.200	3.18	6.87	3.19	0.000
23.217	3.18	6.87	3.18	0.000
23.233	3.17	6.87	3.18	0.000
23.250	3.17	6.86	3.17	0.000
23.267	3.16	6.86	3.17	0.000
23.283	3.16	6.86	3.16	0.000
23.300	3.16	6.85	3.16	0.000
23.317	3.15	6.85	3.15	0.000
23.333	3.15	6.85	3.15	0.000
23.350	3.14	6.84	3.15	0.000
23.367	3.14	6.84	3.14	0.000
23.383	3.13	6.84	3.14	0.000
23.400	3.13	6.83	3.13	0.000
23.417	3.13	6.83	3.13	0.000
23.433	3.12	6.83	3.12	0.000
23.450	3.12	6.82	3.12	0.000
23.467	3.11	6.82	3.11	0.000
23.483	3.11	6.82	3.11	0.000
23.500	3.10	6.82	3.11	0.000
23.517	3.10	6.81	3.10	0.000
23.533	3.09	6.81	3.10	0.000
23.550	3.09	6.81	3.09	0.000
23.567	3.09	6.80	3.09	0.000
23.583	3.08	6.80	3.08	0.000
23.600	3.08	6.80	3.08	0.000
23.617	3.07	6.79	3.08	0.000
23.633	3.07	6.79	3.07	0.000
23.650	3.06	6.79	3.07	0.000
23.667	3.06	6.79	3.06	0.000
23.683	3.06	6.78	3.06	0.000
23.700	3.05	6.78	3.05	0.000
23.717	3.05	6.78	3.05	0.000
23.733	3.04	6.77	3.05	0.000
23.750	3.04	6.77	3.04	0.000
23.767	3.03	6.77	3.04	0.000
23.783	3.03	6.76	3.03	0.000
23.800	3.03	6.76	3.03	0.000
23.817	3.02	6.76	3.02	0.000
23.833	3.02	6.76	3.02	0.000
23.850	3.01	6.75	3.02	0.000
23.867	3.01	6.75	3.01	0.000
23.883	3.01	6.75	3.01	0.000
23.900	3.00	6.74	3.00	0.000
23.917	3.00	6.74	3.00	0.000
23.933	2.99	6.74	3.00	0.000
23.950	2.99	6.74	2.99	0.000
23.967	2.98	6.73	2.99	0.000
23.983	2.98	6.73	2.98	0.000
24.000	2.98	6.73	2.98	0.000

FLOW PROCESS FROM NODE 302.00 TO NODE 102.00 IS CODE = 5.1

>>>>MODEL CHANNEL ROUTING OF STREAM #3 BY THE TRANSLATION METHOD<<<<<
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THE TRANSLATION MODEL NEGLECTS ALL STORAGE ATTENUATION EFFECTS,
AND MOVES THE STREAM 3 RUNOFF HYDROGRAPH FORWARD IN TIME.

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 15.00 CHANNEL Z = 2.00
UPSTREAM ELEVATION(FT) = 1237.00
DOWNSTREAM ELEVATION(FT) = 1232.00
CHANNEL LENGTH(FT) = 443.00 MANNING'S FACTOR = 0.025
CONSTANT LOSS RATE(CFS) = 0.00

MEAN-FLOW RATE NORMAL-DEPTH FLOW VELOCITIES(FPS) ARE AS FOLLOWS:

(FLOW RATE (CFS)) [FLOW VELOCITY (FPS)]
AVERAGED PEAK 5-MINUTE: (16.2).....[3.01]
AVERAGED PEAK 15-MINUTE: (35.6).....[3.96]
AVERAGED PEAK 30-MINUTE: (35.6).....[3.96]
AVERAGED PEAK 1-HOUR: (33.7).....[3.99]
AVERAGED PEAK 3-HOUR: (19.5).....[3.17]
AVERAGED PEAK 6-HOUR: (13.1).....[2.83]
AVERAGED PEAK 24-HOUR: (5.0).....[1.84]

USER-SPECIFIED CHANNEL AVERAGE FLOW VELOCITY(FPS) = 3.420

HYDROGRAPH TRANSLATION TIME
= (CHANNEL LENGTH)/(AVERAGE FLOW VELOCITY)
= (443.00)/(3.420) = 0.036 HRS

TRANSLATION METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 3) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 3) (CFS)
10.000	2.62	2.59	2.59
10.017	2.63	2.60	2.60
10.033	2.64	2.61	2.61
10.050	2.66	2.63	2.63
10.067	2.67	2.64	2.64
10.083	2.68	2.65	2.65
10.100	2.69	2.67	2.67
10.117	2.71	2.68	2.68
10.133	2.72	2.69	2.69
10.150	2.73	2.71	2.71
10.167	2.75	2.72	2.72
10.183	2.76	2.73	2.73
10.200	2.77	2.74	2.74
10.217	2.78	2.76	2.76
10.233	2.80	2.77	2.77
10.250	2.81	2.78	2.78
10.267	2.82	2.79	2.79
10.283	2.83	2.81	2.81

10.300	2.85	2.82	2.82
10.317	2.86	2.83	2.83
10.333	2.87	2.84	2.84
10.350	2.88	2.86	2.86
10.367	2.90	2.87	2.87
10.383	2.91	2.88	2.88
10.400	2.92	2.89	2.89
10.417	2.93	2.91	2.91
10.433	2.95	2.92	2.92
10.450	2.96	2.93	2.93
10.467	2.97	2.94	2.94
10.483	2.98	2.96	2.96
10.500	2.99	2.97	2.97
10.517	3.01	2.98	2.98
10.533	3.02	2.99	2.99
10.550	3.03	3.00	3.00
10.567	3.04	3.02	3.02
10.583	3.05	3.03	3.03
10.600	3.06	3.04	3.04
10.617	3.08	3.05	3.05
10.633	3.09	3.06	3.06
10.650	3.10	3.07	3.07
10.667	3.11	3.09	3.09
10.683	3.12	3.10	3.10
10.700	3.13	3.11	3.11
10.717	3.14	3.12	3.12
10.733	3.15	3.13	3.13
10.750	3.17	3.14	3.14
10.767	3.18	3.15	3.15
10.783	3.19	3.16	3.16
10.800	3.20	3.18	3.18
10.817	3.21	3.19	3.19
10.833	3.22	3.20	3.20
10.850	3.23	3.21	3.21
10.867	3.25	3.22	3.22
10.883	3.26	3.23	3.23
10.900	3.27	3.24	3.24
10.917	3.28	3.25	3.25
10.933	3.29	3.27	3.27
10.950	3.30	3.28	3.28
10.967	3.31	3.29	3.29
10.983	3.32	3.30	3.30
11.000	3.33	3.31	3.31
11.017	3.35	3.32	3.32
11.033	3.36	3.33	3.33
11.050	3.37	3.34	3.34
11.067	3.38	3.35	3.35
11.083	3.39	3.37	3.37
11.100	3.40	3.38	3.38
11.117	3.41	3.39	3.39
11.133	3.42	3.40	3.40
11.150	3.43	3.41	3.41
11.167	3.44	3.42	3.42
11.183	3.45	3.43	3.43
11.200	3.46	3.44	3.44

11.217	3.47	3.45	3.45
11.233	3.48	3.46	3.46
11.250	3.50	3.47	3.47
11.267	3.51	3.48	3.48
11.283	3.52	3.49	3.49
11.300	3.53	3.50	3.50
11.317	3.54	3.51	3.51
11.333	3.55	3.53	3.53
11.350	3.56	3.54	3.54
11.367	3.57	3.55	3.55
11.383	3.58	3.56	3.56
11.400	3.59	3.57	3.57
11.417	3.60	3.58	3.58
11.433	3.61	3.59	3.59
11.450	3.62	3.60	3.60
11.467	3.63	3.61	3.61
11.483	3.64	3.62	3.62
11.500	3.65	3.63	3.63
11.517	3.67	3.64	3.64
11.533	3.68	3.65	3.65
11.550	3.69	3.66	3.66
11.567	3.70	3.67	3.67
11.583	3.71	3.68	3.68
11.600	3.72	3.70	3.70
11.617	3.73	3.71	3.71
11.633	3.74	3.72	3.72
11.650	3.75	3.73	3.73
11.667	3.76	3.74	3.74
11.683	3.77	3.75	3.75
11.700	3.78	3.76	3.76
11.717	3.79	3.77	3.77
11.733	3.80	3.78	3.78
11.750	3.81	3.79	3.79
11.767	3.82	3.80	3.80
11.783	3.83	3.81	3.81
11.800	3.84	3.82	3.82
11.817	3.85	3.83	3.83
11.833	3.86	3.84	3.84
11.850	3.87	3.85	3.85
11.867	3.88	3.86	3.86
11.883	3.89	3.87	3.87
11.900	3.90	3.88	3.88
11.917	3.92	3.89	3.89
11.933	3.93	3.90	3.90
11.950	3.94	3.91	3.91
11.967	3.95	3.92	3.92
11.983	3.96	3.93	3.93
12.000	3.97	3.95	3.95
12.017	3.98	3.96	3.96
12.033	3.99	3.97	3.97
12.050	4.00	3.98	3.98
12.067	4.01	3.99	3.99
12.083	4.03	4.00	4.00
12.100	4.07	4.01	4.01
12.117	4.13	4.03	4.03

12.133	4.21	4.06	4.06
12.150	4.27	4.12	4.12
12.167	4.34	4.19	4.19
12.183	4.40	4.26	4.26
12.200	4.46	4.33	4.33
12.217	4.52	4.39	4.39
12.233	4.57	4.45	4.45
12.250	4.63	4.51	4.51
12.267	4.68	4.57	4.57
12.283	4.72	4.62	4.62
12.300	4.77	4.67	4.67
12.317	4.82	4.72	4.72
12.333	4.86	4.76	4.76
12.350	4.91	4.81	4.81
12.367	4.95	4.86	4.86
12.383	4.99	4.90	4.90
12.400	5.03	4.94	4.94
12.417	5.08	4.99	4.99
12.433	5.12	5.03	5.03
12.450	5.16	5.07	5.07
12.467	5.19	5.11	5.11
12.483	5.23	5.15	5.15
12.500	5.27	5.19	5.19
12.517	5.31	5.23	5.23
12.533	5.34	5.26	5.26
12.550	5.38	5.30	5.30
12.567	5.41	5.34	5.34
12.583	5.44	5.37	5.37
12.600	5.48	5.41	5.41
12.617	5.51	5.44	5.44
12.633	5.54	5.47	5.47
12.650	5.56	5.50	5.50
12.667	5.59	5.53	5.53
12.683	5.62	5.56	5.56
12.700	5.64	5.59	5.59
12.717	5.67	5.61	5.61
12.733	5.69	5.64	5.64
12.750	5.71	5.66	5.66
12.767	5.73	5.68	5.68
12.783	5.75	5.71	5.71
12.800	5.77	5.73	5.73
12.817	5.79	5.75	5.75
12.833	5.81	5.77	5.77
12.850	5.84	5.79	5.79
12.867	5.86	5.81	5.81
12.883	5.88	5.83	5.83
12.900	5.90	5.85	5.85
12.917	5.92	5.87	5.87
12.933	5.94	5.89	5.89
12.950	5.96	5.92	5.92
12.967	5.98	5.94	5.94
12.983	6.00	5.96	5.96
13.000	6.02	5.98	5.98
13.017	6.05	6.00	6.00
13.033	6.07	6.02	6.02

13.050	6.09	6.04	6.04
13.067	6.11	6.06	6.06
13.083	6.13	6.09	6.09
13.100	6.15	6.11	6.11
13.117	6.18	6.13	6.13
13.133	6.20	6.15	6.15
13.150	6.22	6.17	6.17
13.167	6.23	6.19	6.19
13.183	6.25	6.21	6.21
13.200	6.27	6.23	6.23
13.217	6.29	6.25	6.25
13.233	6.31	6.27	6.27
13.250	6.33	6.29	6.29
13.267	6.34	6.31	6.31
13.283	6.36	6.32	6.32
13.300	6.38	6.34	6.34
13.317	6.40	6.36	6.36
13.333	6.41	6.38	6.38
13.350	6.43	6.39	6.39
13.367	6.45	6.41	6.41
13.383	6.46	6.43	6.43
13.400	6.48	6.44	6.44
13.417	6.50	6.46	6.46
13.433	6.52	6.48	6.48
13.450	6.54	6.50	6.50
13.467	6.56	6.52	6.52
13.483	6.59	6.54	6.54
13.500	6.61	6.56	6.56
13.517	6.63	6.58	6.58
13.533	6.65	6.61	6.61
13.550	6.68	6.63	6.63
13.567	6.70	6.65	6.65
13.583	6.73	6.67	6.67
13.600	6.75	6.70	6.70
13.617	6.78	6.72	6.72
13.633	6.80	6.75	6.75
13.650	6.82	6.77	6.77
13.667	6.85	6.80	6.80
13.683	6.87	6.82	6.82
13.700	6.90	6.84	6.84
13.717	6.92	6.87	6.87
13.733	6.94	6.89	6.89
13.750	6.96	6.91	6.91
13.767	6.98	6.94	6.94
13.783	7.01	6.96	6.96
13.800	7.03	6.98	6.98
13.817	7.05	7.00	7.00
13.833	7.07	7.02	7.02
13.850	7.09	7.05	7.05
13.867	7.11	7.07	7.07
13.883	7.13	7.09	7.09
13.900	7.15	7.11	7.11
13.917	7.18	7.13	7.13
13.933	7.20	7.15	7.15
13.950	7.22	7.17	7.17

13.967	7.25	7.20	7.20
13.983	7.28	7.22	7.22
14.000	7.31	7.25	7.25
14.017	7.33	7.27	7.27
14.033	7.36	7.30	7.30
14.050	7.39	7.33	7.33
14.067	7.42	7.36	7.36
14.083	7.46	7.39	7.39
14.100	7.49	7.42	7.42
14.117	7.52	7.45	7.45
14.133	7.55	7.48	7.48
14.150	7.59	7.52	7.52
14.167	7.62	7.55	7.55
14.183	7.65	7.58	7.58
14.200	7.68	7.61	7.61
14.217	7.72	7.65	7.65
14.233	7.75	7.68	7.68
14.250	7.78	7.71	7.71
14.267	7.81	7.74	7.74
14.283	7.84	7.77	7.77
14.300	7.87	7.80	7.80
14.317	7.90	7.83	7.83
14.333	7.92	7.86	7.86
14.350	7.95	7.89	7.89
14.367	7.98	7.92	7.92
14.383	8.01	7.95	7.95
14.400	8.04	7.98	7.98
14.417	8.07	8.01	8.01
14.433	8.09	8.03	8.03
14.450	8.13	8.06	8.06
14.467	8.16	8.09	8.09
14.483	8.19	8.12	8.12
14.500	8.23	8.15	8.15
14.517	8.27	8.19	8.19
14.533	8.31	8.23	8.23
14.550	8.35	8.26	8.26
14.567	8.40	8.30	8.30
14.583	8.44	8.35	8.35
14.600	8.49	8.39	8.39
14.617	8.53	8.43	8.43
14.633	8.58	8.48	8.48
14.650	8.63	8.52	8.52
14.667	8.68	8.57	8.57
14.683	8.73	8.62	8.62
14.700	8.78	8.67	8.67
14.717	8.83	8.72	8.72
14.733	8.88	8.77	8.77
14.750	8.93	8.82	8.82
14.767	8.97	8.87	8.87
14.783	9.02	8.92	8.92
14.800	9.07	8.97	8.97
14.817	9.12	9.01	9.01
14.833	9.16	9.06	9.06
14.850	9.21	9.11	9.11
14.867	9.26	9.16	9.16

14.883	9.30	9.20	9.20
14.900	9.35	9.25	9.25
14.917	9.40	9.30	9.30
14.933	9.44	9.34	9.34
14.950	9.49	9.39	9.39
14.967	9.54	9.43	9.43
14.983	9.59	9.48	9.48
15.000	9.65	9.53	9.53
15.017	9.71	9.58	9.58
15.033	9.77	9.64	9.64
15.050	9.84	9.70	9.70
15.067	9.91	9.76	9.76
15.083	9.98	9.83	9.83
15.100	10.05	9.89	9.89
15.117	10.13	9.97	9.97
15.133	10.21	10.04	10.04
15.150	10.29	10.12	10.12
15.167	10.38	10.20	10.20
15.183	10.46	10.28	10.28
15.200	10.55	10.37	10.37
15.217	10.64	10.45	10.45
15.233	10.73	10.54	10.54
15.250	10.82	10.63	10.63
15.267	10.91	10.71	10.71
15.283	11.00	10.80	10.80
15.300	11.09	10.89	10.89
15.317	11.18	10.98	10.98
15.333	11.27	11.07	11.07
15.350	11.35	11.16	11.16
15.367	11.44	11.25	11.25
15.383	11.53	11.34	11.34
15.400	11.62	11.43	11.43
15.417	11.71	11.52	11.52
15.433	11.80	11.61	11.61
15.450	11.89	11.70	11.70
15.467	11.98	11.79	11.79
15.483	12.07	11.87	11.87
15.500	12.18	11.96	11.96
15.517	12.30	12.05	12.05
15.533	12.45	12.16	12.16
15.550	12.61	12.28	12.28
15.567	12.80	12.42	12.42
15.583	13.00	12.59	12.59
15.600	13.22	12.77	12.77
15.617	13.45	12.97	12.97
15.633	13.70	13.18	13.18
15.650	13.96	13.41	13.41
15.667	14.23	13.66	13.66
15.683	14.51	13.92	13.92
15.700	14.80	14.19	14.19
15.717	15.11	14.46	14.46
15.733	15.43	14.76	14.76
15.750	15.75	15.06	15.06
15.767	16.10	15.38	15.38
15.783	16.45	15.70	15.70

15.800	16.80	16.04	16.04
15.817	17.17	16.39	16.39
15.833	17.55	16.75	16.75
15.850	17.92	17.11	17.11
15.867	18.31	17.49	17.49
15.883	18.71	17.86	17.86
15.900	19.11	18.25	18.25
15.917	19.52	18.64	18.64
15.933	19.93	19.05	19.05
15.950	20.35	19.45	19.45
15.967	20.77	19.86	19.86
15.983	21.21	20.28	20.28
16.000	21.63	20.71	20.71
16.017	22.09	21.14	21.14
16.033	22.63	21.56	21.56
16.050	23.32	22.02	22.02
16.067	24.14	22.55	22.55
16.083	25.06	23.21	23.21
16.100	26.11	24.01	24.01
16.117	27.28	24.92	24.92
16.133	28.53	25.94	25.94
16.150	29.88	27.09	27.09
16.167	31.30	28.33	28.33
16.183	32.61	29.67	29.67
16.200	33.88	31.07	31.07
16.217	35.07	32.40	32.40
16.233	35.57	33.68	33.68
16.250	35.57	34.88	34.88
16.267	35.57	35.49	35.49
16.283	35.57	35.57	35.57
16.300	35.57	35.57	35.57
16.317	35.57	35.57	35.57
16.333	35.57	35.57	35.57
16.350	35.57	35.57	35.57
16.367	35.57	35.57	35.57
16.383	35.57	35.57	35.57
16.400	35.57	35.57	35.57
16.417	35.57	35.57	35.57
16.433	35.57	35.57	35.57
16.450	35.57	35.57	35.57
16.467	35.57	35.57	35.57
16.483	35.57	35.57	35.57
16.500	35.57	35.57	35.57
16.517	35.57	35.57	35.57
16.533	35.57	35.57	35.57
16.550	35.57	35.57	35.57
16.567	35.57	35.57	35.57
16.583	35.57	35.57	35.57
16.600	35.57	35.57	35.57
16.617	35.57	35.57	35.57
16.633	35.57	35.57	35.57
16.650	35.57	35.57	35.57
16.667	35.57	35.57	35.57
16.683	35.57	35.57	35.57
16.700	35.57	35.57	35.57

16.717	35.57	35.57	35.57
16.733	35.57	35.57	35.57
16.750	35.57	35.57	35.57
16.767	35.57	35.57	35.57
16.783	35.57	35.57	35.57
16.800	35.57	35.57	35.57
16.817	35.57	35.57	35.57
16.833	35.57	35.57	35.57
16.850	35.57	35.57	35.57
16.867	35.57	35.57	35.57
16.883	35.57	35.57	35.57
16.900	35.57	35.57	35.57
16.917	35.57	35.57	35.57
16.933	35.57	35.57	35.57
16.950	35.57	35.57	35.57
16.967	35.57	35.57	35.57
16.983	34.93	35.57	35.57
17.000	24.78	35.57	35.57
17.017	17.98	35.03	35.03
17.033	17.46	26.39	26.39
17.050	16.98	19.06	19.06
17.067	16.53	17.54	17.54
17.083	16.09	17.06	17.06
17.100	15.68	16.60	16.60
17.117	15.28	16.16	16.16
17.133	14.90	15.75	15.75
17.150	14.54	15.34	15.34
17.167	14.18	14.96	14.96
17.183	13.85	14.59	14.59
17.200	13.53	14.24	14.24
17.217	13.23	13.90	13.90
17.233	12.95	13.58	13.58
17.250	12.67	13.28	13.28
17.267	12.41	12.99	12.99
17.283	12.16	12.72	12.72
17.300	11.92	12.45	12.45
17.317	11.69	12.20	12.20
17.333	11.46	11.96	11.96
17.350	11.25	11.72	11.72
17.367	11.05	11.50	11.50
17.383	10.85	11.28	11.28
17.400	10.66	11.08	11.08
17.417	10.47	10.88	10.88
17.433	10.30	10.69	10.69
17.450	10.13	10.50	10.50
17.467	9.97	10.33	10.33
17.483	9.82	10.16	10.16
17.500	9.68	10.00	10.00
17.517	9.53	9.85	9.85
17.533	9.40	9.70	9.70
17.550	9.27	9.56	9.56
17.567	9.14	9.42	9.42
17.583	9.02	9.29	9.29
17.600	8.90	9.16	9.16
17.617	8.79	9.04	9.04

17.633	8.68	8.92	8.92
17.650	8.57	8.80	8.80
17.667	8.47	8.69	8.69
17.683	8.37	8.59	8.59
17.700	8.27	8.48	8.48
17.717	8.18	8.38	8.38
17.733	8.09	8.29	8.29
17.750	8.01	8.20	8.20
17.767	7.92	8.11	8.11
17.783	7.84	8.02	8.02
17.800	7.77	7.94	7.94
17.817	7.69	7.86	7.86
17.833	7.62	7.78	7.78
17.850	7.54	7.70	7.70
17.867	7.47	7.63	7.63
17.883	7.41	7.56	7.56
17.900	7.34	7.49	7.49
17.917	7.28	7.42	7.42
17.933	7.21	7.35	7.35
17.950	7.15	7.29	7.29
17.967	7.09	7.22	7.22
17.983	7.04	7.16	7.16
18.000	6.98	7.10	7.10
18.017	6.93	7.05	7.05
18.033	6.87	6.99	6.99
18.050	6.82	6.94	6.94
18.067	6.77	6.88	6.88
18.083	6.72	6.83	6.83
18.100	6.68	6.78	6.78
18.117	6.63	6.73	6.73
18.133	6.58	6.68	6.68
18.150	6.54	6.64	6.64
18.167	6.50	6.59	6.59
18.183	6.45	6.55	6.55
18.200	6.41	6.50	6.50
18.217	6.36	6.46	6.46
18.233	6.32	6.41	6.41
18.250	6.28	6.37	6.37
18.267	6.23	6.33	6.33
18.283	6.19	6.28	6.28
18.300	6.15	6.24	6.24
18.317	6.10	6.20	6.20
18.333	6.06	6.15	6.15
18.350	6.02	6.11	6.11
18.367	5.97	6.07	6.07
18.383	5.93	6.02	6.02
18.400	5.89	5.98	5.98
18.417	5.84	5.94	5.94
18.433	5.80	5.89	5.89
18.450	5.76	5.85	5.85
18.467	5.72	5.81	5.81
18.483	5.68	5.77	5.77
18.500	5.64	5.73	5.73
18.517	5.61	5.69	5.69
18.533	5.57	5.65	5.65

18.550	5.53	5.61	5.61
18.567	5.50	5.58	5.58
18.583	5.47	5.54	5.54
18.600	5.43	5.51	5.51
18.617	5.40	5.47	5.47
18.633	5.37	5.44	5.44
18.650	5.34	5.41	5.41
18.667	5.31	5.38	5.38
18.683	5.28	5.34	5.34
18.700	5.25	5.31	5.31
18.717	5.22	5.28	5.28
18.733	5.20	5.26	5.26
18.750	5.17	5.23	5.23
18.767	5.14	5.20	5.20
18.783	5.12	5.17	5.17
18.800	5.09	5.15	5.15
18.817	5.07	5.12	5.12
18.833	5.04	5.10	5.10
18.850	5.02	5.07	5.07
18.867	5.00	5.05	5.05
18.883	4.97	5.02	5.02
18.900	4.95	5.00	5.00
18.917	4.93	4.98	4.98
18.933	4.91	4.95	4.95
18.950	4.88	4.93	4.93
18.967	4.86	4.91	4.91
18.983	4.84	4.89	4.89
19.000	4.82	4.87	4.87
19.017	4.80	4.84	4.84
19.033	4.78	4.82	4.82
19.050	4.76	4.80	4.80
19.067	4.74	4.78	4.78
19.083	4.72	4.76	4.76
19.100	4.70	4.74	4.74
19.117	4.68	4.73	4.73
19.133	4.67	4.71	4.71
19.150	4.65	4.69	4.69
19.167	4.63	4.67	4.67
19.183	4.61	4.65	4.65
19.200	4.60	4.63	4.63
19.217	4.58	4.62	4.62
19.233	4.56	4.60	4.60
19.250	4.54	4.58	4.58
19.267	4.53	4.56	4.56
19.283	4.51	4.55	4.55
19.300	4.49	4.53	4.53
19.317	4.48	4.51	4.51
19.333	4.46	4.50	4.50
19.350	4.45	4.48	4.48
19.367	4.43	4.47	4.47
19.383	4.42	4.45	4.45
19.400	4.40	4.43	4.43
19.417	4.39	4.42	4.42
19.433	4.37	4.40	4.40
19.450	4.36	4.39	4.39

19.467	4.34	4.37	4.37
19.483	4.33	4.36	4.36
19.500	4.31	4.35	4.35
19.517	4.30	4.33	4.33
19.533	4.29	4.32	4.32
19.550	4.27	4.30	4.30
19.567	4.26	4.29	4.29
19.583	4.25	4.27	4.27
19.600	4.23	4.26	4.26
19.617	4.22	4.25	4.25
19.633	4.21	4.23	4.23
19.650	4.19	4.22	4.22
19.667	4.18	4.21	4.21
19.683	4.17	4.19	4.19
19.700	4.15	4.18	4.18
19.717	4.14	4.17	4.17
19.733	4.13	4.16	4.16
19.750	4.12	4.14	4.14
19.767	4.10	4.13	4.13
19.783	4.09	4.12	4.12
19.800	4.08	4.11	4.11
19.817	4.07	4.09	4.09
19.833	4.06	4.08	4.08
19.850	4.04	4.07	4.07
19.867	4.03	4.06	4.06
19.883	4.03	4.05	4.05
19.900	4.03	4.04	4.04
19.917	4.03	4.03	4.03
19.933	4.02	4.03	4.03
19.950	4.02	4.03	4.03
19.967	4.02	4.02	4.02
19.983	4.02	4.02	4.02
20.000	4.02	4.02	4.02
20.017	4.01	4.02	4.02
20.033	4.01	4.02	4.02
20.050	4.01	4.01	4.01
20.067	4.01	4.01	4.01
20.083	4.00	4.01	4.01
20.100	4.00	4.01	4.01
20.117	4.00	4.00	4.00
20.133	4.00	4.00	4.00
20.150	3.99	4.00	4.00
20.167	3.99	4.00	4.00
20.183	3.99	3.99	3.99
20.200	3.99	3.99	3.99
20.217	3.98	3.99	3.99
20.233	3.98	3.99	3.99
20.250	3.98	3.98	3.98
20.267	3.97	3.98	3.98
20.283	3.97	3.98	3.98
20.300	3.97	3.97	3.97
20.317	3.96	3.97	3.97
20.333	3.96	3.97	3.97
20.350	3.96	3.97	3.97
20.367	3.96	3.96	3.96

20.383	3.95	3.96	3.96
20.400	3.95	3.96	3.96
20.417	3.95	3.95	3.95
20.433	3.94	3.95	3.95
20.450	3.94	3.95	3.95
20.467	3.93	3.94	3.94
20.483	3.93	3.94	3.94
20.500	3.93	3.94	3.94
20.517	3.92	3.93	3.93
20.533	3.92	3.93	3.93
20.550	3.92	3.92	3.92
20.567	3.91	3.92	3.92
20.583	3.91	3.92	3.92
20.600	3.91	3.91	3.91
20.617	3.90	3.91	3.91
20.633	3.90	3.91	3.91
20.650	3.89	3.90	3.90
20.667	3.89	3.90	3.90
20.683	3.89	3.89	3.89
20.700	3.88	3.89	3.89
20.717	3.88	3.89	3.89
20.733	3.87	3.88	3.88
20.750	3.87	3.88	3.88
20.767	3.87	3.88	3.88
20.783	3.86	3.87	3.87
20.800	3.86	3.87	3.87
20.817	3.85	3.86	3.86
20.833	3.85	3.86	3.86
20.850	3.85	3.85	3.85
20.867	3.84	3.85	3.85
20.883	3.84	3.85	3.85
20.900	3.83	3.84	3.84
20.917	3.83	3.84	3.84
20.933	3.82	3.83	3.83
20.950	3.82	3.83	3.83
20.967	3.82	3.83	3.83
20.983	3.81	3.82	3.82
21.000	3.81	3.82	3.82
21.017	3.80	3.81	3.81
21.033	3.80	3.81	3.81
21.050	3.79	3.80	3.80
21.067	3.79	3.80	3.80
21.083	3.79	3.79	3.79
21.100	3.78	3.79	3.79
21.117	3.78	3.79	3.79
21.133	3.77	3.78	3.78
21.150	3.77	3.78	3.78
21.167	3.76	3.77	3.77
21.183	3.76	3.77	3.77
21.200	3.75	3.76	3.76
21.217	3.75	3.76	3.76
21.233	3.74	3.75	3.75
21.250	3.74	3.75	3.75
21.267	3.74	3.75	3.75
21.283	3.73	3.74	3.74

21.300	3.73	3.74	3.74
21.317	3.72	3.73	3.73
21.333	3.72	3.73	3.73
21.350	3.71	3.72	3.72
21.367	3.71	3.72	3.72
21.383	3.70	3.71	3.71
21.400	3.70	3.71	3.71
21.417	3.69	3.70	3.70
21.433	3.69	3.70	3.70
21.450	3.68	3.69	3.69
21.467	3.68	3.69	3.69
21.483	3.67	3.68	3.68
21.500	3.67	3.68	3.68
21.517	3.66	3.68	3.68
21.533	3.66	3.67	3.67
21.550	3.66	3.67	3.67
21.567	3.65	3.66	3.66
21.583	3.65	3.66	3.66
21.600	3.64	3.65	3.65
21.617	3.64	3.65	3.65
21.633	3.63	3.64	3.64
21.650	3.63	3.64	3.64
21.667	3.62	3.63	3.63
21.683	3.62	3.63	3.63
21.700	3.61	3.62	3.62
21.717	3.61	3.62	3.62
21.733	3.60	3.61	3.61
21.750	3.60	3.61	3.61
21.767	3.59	3.60	3.60
21.783	3.59	3.60	3.60
21.800	3.58	3.59	3.59
21.817	3.58	3.59	3.59
21.833	3.57	3.58	3.58
21.850	3.57	3.58	3.58
21.867	3.56	3.57	3.57
21.883	3.56	3.57	3.57
21.900	3.55	3.56	3.56
21.917	3.55	3.56	3.56
21.933	3.54	3.55	3.55
21.950	3.54	3.55	3.55
21.967	3.53	3.55	3.55
21.983	3.53	3.54	3.54
22.000	3.53	3.54	3.54
22.017	3.52	3.53	3.53
22.033	3.52	3.53	3.53
22.050	3.51	3.52	3.52
22.067	3.51	3.52	3.52
22.083	3.50	3.51	3.51
22.100	3.50	3.51	3.51
22.117	3.49	3.50	3.50
22.133	3.49	3.50	3.50
22.150	3.48	3.49	3.49
22.167	3.48	3.49	3.49
22.183	3.47	3.48	3.48
22.200	3.47	3.48	3.48

22.217	3.46	3.47	3.47
22.233	3.46	3.47	3.47
22.250	3.45	3.46	3.46
22.267	3.45	3.46	3.46
22.283	3.44	3.45	3.45
22.300	3.44	3.45	3.45
22.317	3.43	3.44	3.44
22.333	3.43	3.44	3.44
22.350	3.42	3.43	3.43
22.367	3.42	3.43	3.43
22.383	3.41	3.42	3.42
22.400	3.41	3.42	3.42
22.417	3.40	3.41	3.41
22.433	3.40	3.41	3.41
22.450	3.40	3.41	3.41
22.467	3.39	3.40	3.40
22.483	3.39	3.40	3.40
22.500	3.38	3.39	3.39
22.517	3.38	3.39	3.39
22.533	3.37	3.38	3.38
22.550	3.37	3.38	3.38
22.567	3.36	3.37	3.37
22.583	3.36	3.37	3.37
22.600	3.35	3.36	3.36
22.617	3.35	3.36	3.36
22.633	3.34	3.35	3.35
22.650	3.34	3.35	3.35
22.667	3.33	3.34	3.34
22.683	3.33	3.34	3.34
22.700	3.32	3.33	3.33
22.717	3.32	3.33	3.33
22.733	3.31	3.32	3.32
22.750	3.31	3.32	3.32
22.767	3.31	3.32	3.32
22.783	3.30	3.31	3.31
22.800	3.30	3.31	3.31
22.817	3.29	3.30	3.30
22.833	3.29	3.30	3.30
22.850	3.28	3.29	3.29
22.867	3.28	3.29	3.29
22.883	3.27	3.28	3.28
22.900	3.27	3.28	3.28
22.917	3.26	3.27	3.27
22.933	3.26	3.27	3.27
22.950	3.25	3.26	3.26
22.967	3.25	3.26	3.26
22.983	3.24	3.25	3.25
23.000	3.24	3.25	3.25
23.017	3.24	3.25	3.25
23.033	3.23	3.24	3.24
23.050	3.23	3.24	3.24
23.067	3.22	3.23	3.23
23.083	3.22	3.23	3.23
23.100	3.21	3.22	3.22
23.117	3.21	3.22	3.22

23.133	3.20	3.21	3.21
23.150	3.20	3.21	3.21
23.167	3.19	3.20	3.20
23.183	3.19	3.20	3.20
23.200	3.19	3.20	3.20
23.217	3.18	3.19	3.19
23.233	3.18	3.19	3.19
23.250	3.17	3.18	3.18
23.267	3.17	3.18	3.18
23.283	3.16	3.17	3.17
23.300	3.16	3.17	3.17
23.317	3.15	3.16	3.16
23.333	3.15	3.16	3.16
23.350	3.15	3.15	3.15
23.367	3.14	3.15	3.15
23.383	3.14	3.15	3.15
23.400	3.13	3.14	3.14
23.417	3.13	3.14	3.14
23.433	3.12	3.13	3.13
23.450	3.12	3.13	3.13
23.467	3.11	3.12	3.12
23.483	3.11	3.12	3.12
23.500	3.11	3.12	3.12
23.517	3.10	3.11	3.11
23.533	3.10	3.11	3.11
23.550	3.09	3.10	3.10
23.567	3.09	3.10	3.10
23.583	3.08	3.09	3.09
23.600	3.08	3.09	3.09
23.617	3.08	3.08	3.08
23.633	3.07	3.08	3.08
23.650	3.07	3.08	3.08
23.667	3.06	3.07	3.07
23.683	3.06	3.07	3.07
23.700	3.05	3.06	3.06
23.717	3.05	3.06	3.06
23.733	3.05	3.05	3.05
23.750	3.04	3.05	3.05
23.767	3.04	3.05	3.05
23.783	3.03	3.04	3.04
23.800	3.03	3.04	3.04
23.817	3.02	3.03	3.03
23.833	3.02	3.03	3.03
23.850	3.02	3.03	3.03
23.867	3.01	3.02	3.02
23.883	3.01	3.02	3.02
23.900	3.00	3.01	3.01
23.917	3.00	3.01	3.01
23.933	3.00	3.00	3.00
23.950	2.99	3.00	3.00
23.967	2.99	3.00	3.00
23.983	2.98	2.99	2.99
24.000	2.98	2.99	2.99

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PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 11.502 AF
 OUTFLOW VOLUME = 11.502 AF
 LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 302.00 TO NODE 102.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<<

FLOW PROCESS FROM NODE 102.00 TO NODE 102.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

STREAM HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)
 (Notes: Time indicated is at END of Each Unit Intervals.
 Peak 5-minute rainfall intensity is modeled as
 a constant value for entire 5-minute period.)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	25.0	50.0	75.0	100.0
10.000	2.1113	6.30	. QV	.	.	.	.
10.017	2.1200	6.33	. QV	.	.	.	.
10.033	2.1288	6.36	. QV	.	.	.	.
10.050	2.1376	6.39	. QV	.	.	.	.
10.067	2.1464	6.42	. QV	.	.	.	.
10.083	2.1553	6.45	. QV	.	.	.	.
10.100	2.1642	6.48	. QV	.	.	.	.
10.117	2.1732	6.51	. QV	.	.	.	.
10.133	2.1822	6.54	. QV	.	.	.	.
10.150	2.1912	6.57	. QV	.	.	.	.
10.167	2.2003	6.60	. QV	.	.	.	.
10.183	2.2095	6.63	. QV	.	.	.	.
10.200	2.2186	6.66	. QV	.	.	.	.
10.217	2.2278	6.68	. QV	.	.	.	.
10.233	2.2371	6.71	. QV	.	.	.	.
10.250	2.2464	6.74	. QV	.	.	.	.
10.267	2.2557	6.76	. QV	.	.	.	.
10.283	2.2650	6.79	. QV	.	.	.	.
10.300	2.2744	6.81	. QV	.	.	.	.
10.317	2.2838	6.84	. QV	.	.	.	.
10.333	2.2933	6.86	. QV	.	.	.	.
10.350	2.3028	6.89	. QV	.	.	.	.
10.367	2.3123	6.91	. QV	.	.	.	.
10.383	2.3219	6.94	. QV	.	.	.	.
10.400	2.3315	6.96	. QV	.	.	.	.
10.417	2.3411	6.99	. QV	.	.	.	.
10.433	2.3507	7.01	. QV	.	.	.	.
10.450	2.3604	7.04	. QV	.	.	.	.
10.467	2.3702	7.06	. QV	.	.	.	.
10.483	2.3799	7.08	. QV	.	.	.	.

10.500	2.3897	7.11	. Q V	.	.	.	.
10.517	2.3995	7.13	. Q V	.	.	.	.
10.533	2.4094	7.16	. Q V	.	.	.	.
10.550	2.4193	7.19	. Q V	.	.	.	.
10.567	2.4292	7.21	. Q V	.	.	.	.
10.583	2.4392	7.24	. Q V	.	.	.	.
10.600	2.4492	7.26	. Q V	.	.	.	.
10.617	2.4592	7.29	. Q V	.	.	.	.
10.633	2.4693	7.32	. Q V	.	.	.	.
10.650	2.4794	7.34	. Q V	.	.	.	.
10.667	2.4896	7.37	. Q V	.	.	.	.
10.683	2.4998	7.39	. Q V	.	.	.	.
10.700	2.5100	7.42	. Q V	.	.	.	.
10.717	2.5202	7.44	. Q V	.	.	.	.
10.733	2.5305	7.47	. Q V	.	.	.	.
10.750	2.5408	7.49	. Q V	.	.	.	.
10.767	2.5512	7.52	. QV	.	.	.	.
10.783	2.5616	7.54	. QV	.	.	.	.
10.800	2.5720	7.57	. QV	.	.	.	.
10.817	2.5825	7.59	. QV	.	.	.	.
10.833	2.5930	7.61	. QV	.	.	.	.
10.850	2.6035	7.63	. QV	.	.	.	.
10.867	2.6140	7.65	. QV	.	.	.	.
10.883	2.6246	7.68	. QV	.	.	.	.
10.900	2.6352	7.70	. QV	.	.	.	.
10.917	2.6458	7.72	. QV	.	.	.	.
10.933	2.6565	7.74	. QV	.	.	.	.
10.950	2.6672	7.76	. QV	.	.	.	.
10.967	2.6779	7.78	. QV	.	.	.	.
10.983	2.6886	7.81	. QV	.	.	.	.
11.000	2.6994	7.83	. QV	.	.	.	.
11.017	2.7102	7.85	. QV	.	.	.	.
11.033	2.7211	7.87	. QV	.	.	.	.
11.050	2.7319	7.89	. QV	.	.	.	.
11.067	2.7428	7.91	. QV	.	.	.	.
11.083	2.7538	7.94	. QV	.	.	.	.
11.100	2.7647	7.96	. QV	.	.	.	.
11.117	2.7757	7.99	. QV	.	.	.	.
11.133	2.7868	8.01	. QV	.	.	.	.
11.150	2.7978	8.04	. QV	.	.	.	.
11.167	2.8089	8.06	. QV	.	.	.	.
11.183	2.8201	8.08	. QV	.	.	.	.
11.200	2.8312	8.11	. QV	.	.	.	.
11.217	2.8424	8.13	. QV	.	.	.	.
11.233	2.8537	8.16	. QV	.	.	.	.
11.250	2.8649	8.18	. QV	.	.	.	.
11.267	2.8762	8.20	. QV	.	.	.	.
11.283	2.8876	8.23	. QV	.	.	.	.
11.300	2.8989	8.25	. QV	.	.	.	.
11.317	2.9103	8.28	. QV	.	.	.	.
11.333	2.9218	8.30	. QV	.	.	.	.
11.350	2.9332	8.32	. QV	.	.	.	.
11.367	2.9447	8.34	. QV	.	.	.	.
11.383	2.9562	8.36	. QV	.	.	.	.
11.400	2.9678	8.38	. QV	.	.	.	.

11.417	2.9794	8.40	.	Q V	.	.	.	.
11.433	2.9910	8.42	.	Q V	.	.	.	.
11.450	3.0026	8.44	.	Q V	.	.	.	.
11.467	3.0143	8.46	.	Q V	.	.	.	.
11.483	3.0259	8.48	.	Q V	.	.	.	.
11.500	3.0377	8.50	.	Q V	.	.	.	.
11.517	3.0494	8.52	.	Q V	.	.	.	.
11.533	3.0612	8.55	.	Q V	.	.	.	.
11.550	3.0730	8.57	.	Q V	.	.	.	.
11.567	3.0848	8.59	.	Q V	.	.	.	.
11.583	3.0966	8.61	.	Q V	.	.	.	.
11.600	3.1085	8.63	.	Q V	.	.	.	.
11.617	3.1204	8.65	.	Q V	.	.	.	.
11.633	3.1324	8.67	.	Q V	.	.	.	.
11.650	3.1444	8.70	.	Q V	.	.	.	.
11.667	3.1564	8.72	.	Q V	.	.	.	.
11.683	3.1684	8.75	.	Q V	.	.	.	.
11.700	3.1805	8.77	.	Q V	.	.	.	.
11.717	3.1926	8.80	.	Q V	.	.	.	.
11.733	3.2048	8.82	.	Q V	.	.	.	.
11.750	3.2170	8.84	.	Q V	.	.	.	.
11.767	3.2292	8.87	.	Q V	.	.	.	.
11.783	3.2414	8.89	.	Q V	.	.	.	.
11.800	3.2537	8.92	.	Q V	.	.	.	.
11.817	3.2660	8.94	.	Q V	.	.	.	.
11.833	3.2784	8.97	.	Q V	.	.	.	.
11.850	3.2908	8.99	.	Q V	.	.	.	.
11.867	3.3032	9.02	.	Q V	.	.	.	.
11.883	3.3156	9.04	.	Q V	.	.	.	.
11.900	3.3281	9.07	.	Q V	.	.	.	.
11.917	3.3406	9.08	.	Q V	.	.	.	.
11.933	3.3532	9.10	.	Q V	.	.	.	.
11.950	3.3657	9.13	.	Q V	.	.	.	.
11.967	3.3783	9.15	.	Q V	.	.	.	.
11.983	3.3910	9.17	.	Q V	.	.	.	.
12.000	3.4036	9.19	.	Q V	.	.	.	.
12.017	3.4163	9.21	.	Q V	.	.	.	.
12.033	3.4290	9.23	.	Q V	.	.	.	.
12.050	3.4418	9.25	.	Q V	.	.	.	.
12.067	3.4545	9.27	.	Q V	.	.	.	.
12.083	3.4673	9.29	.	Q V	.	.	.	.
12.100	3.4802	9.32	.	Q V	.	.	.	.
12.117	3.4930	9.34	.	Q V	.	.	.	.
12.133	3.5060	9.39	.	Q V	.	.	.	.
12.150	3.5190	9.46	.	Q V	.	.	.	.
12.167	3.5321	9.54	.	Q V	.	.	.	.
12.183	3.5454	9.63	.	Q V	.	.	.	.
12.200	3.5588	9.73	.	Q V	.	.	.	.
12.217	3.5723	9.82	.	Q V	.	.	.	.
12.233	3.5860	9.91	.	Q V	.	.	.	.
12.250	3.5997	9.99	.	Q V	.	.	.	.
12.267	3.6136	10.08	.	Q V	.	.	.	.
12.283	3.6276	10.16	.	Q V	.	.	.	.
12.300	3.6417	10.24	.	Q V	.	.	.	.
12.317	3.6559	10.31	.	Q V	.	.	.	.

12.333	3.6702	10.39	.	Q	V	.	.	.	.
12.350	3.6846	10.46	.	Q	V	.	.	.	.
12.367	3.6992	10.54	.	Q	V	.	.	.	.
12.383	3.7138	10.61	.	Q	V	.	.	.	.
12.400	3.7285	10.68	.	Q	V	.	.	.	.
12.417	3.7433	10.75	.	Q	V	.	.	.	.
12.433	3.7582	10.82	.	Q	V	.	.	.	.
12.450	3.7732	10.89	.	Q	V	.	.	.	.
12.467	3.7883	10.94	.	Q	V	.	.	.	.
12.483	3.8034	10.99	.	Q	V	.	.	.	.
12.500	3.8186	11.04	.	Q	V	.	.	.	.
12.517	3.8339	11.09	.	Q	V	.	.	.	.
12.533	3.8492	11.14	.	Q	V	.	.	.	.
12.550	3.8646	11.19	.	Q	V	.	.	.	.
12.567	3.8801	11.24	.	Q	V	.	.	.	.
12.583	3.8957	11.29	.	Q	V	.	.	.	.
12.600	3.9113	11.34	.	Q	V	.	.	.	.
12.617	3.9270	11.39	.	Q	V	.	.	.	.
12.633	3.9427	11.43	.	Q	V	.	.	.	.
12.650	3.9585	11.47	.	Q	V	.	.	.	.
12.667	3.9744	11.52	.	Q	V	.	.	.	.
12.683	3.9903	11.56	.	Q	V	.	.	.	.
12.700	4.0063	11.60	.	Q	V	.	.	.	.
12.717	4.0223	11.64	.	Q	V	.	.	.	.
12.733	4.0384	11.68	.	Q	V	.	.	.	.
12.750	4.0546	11.72	.	Q	V	.	.	.	.
12.767	4.0708	11.77	.	Q	V	.	.	.	.
12.783	4.0870	11.81	.	Q	V	.	.	.	.
12.800	4.1034	11.85	.	Q	V	.	.	.	.
12.817	4.1198	11.90	.	Q	V	.	.	.	.
12.833	4.1362	11.94	.	Q	V	.	.	.	.
12.850	4.1527	11.98	.	Q	V	.	.	.	.
12.867	4.1692	12.02	.	Q	V	.	.	.	.
12.883	4.1859	12.06	.	Q	V	.	.	.	.
12.900	4.2025	12.10	.	Q	V	.	.	.	.
12.917	4.2193	12.14	.	Q	V	.	.	.	.
12.933	4.2360	12.19	.	Q	V	.	.	.	.
12.950	4.2529	12.23	.	Q	V	.	.	.	.
12.967	4.2698	12.27	.	Q	V	.	.	.	.
12.983	4.2867	12.31	.	Q	V	.	.	.	.
13.000	4.3038	12.35	.	Q	V	.	.	.	.
13.017	4.3208	12.39	.	Q	V	.	.	.	.
13.033	4.3379	12.43	.	Q	V	.	.	.	.
13.050	4.3551	12.46	.	Q	V	.	.	.	.
13.067	4.3723	12.50	.	Q	V	.	.	.	.
13.083	4.3896	12.54	.	Q	V	.	.	.	.
13.100	4.4069	12.57	.	Q	V	.	.	.	.
13.117	4.4243	12.61	.	Q	V	.	.	.	.
13.133	4.4417	12.65	.	Q	V	.	.	.	.
13.150	4.4592	12.68	.	Q	V	.	.	.	.
13.167	4.4767	12.72	.	Q	V	.	.	.	.
13.183	4.4943	12.75	.	Q	V	.	.	.	.
13.200	4.5119	12.79	.	Q	V	.	.	.	.
13.217	4.5295	12.82	.	Q	V	.	.	.	.
13.233	4.5472	12.85	.	Q	V	.	.	.	.

13.250	4.5650	12.89	.	Q	V	.	.	.	.
13.267	4.5828	12.92	.	Q	V	.	.	.	.
13.283	4.6006	12.95	.	Q	V	.	.	.	.
13.300	4.6185	13.00	.	Q	V	.	.	.	.
13.317	4.6365	13.05	.	Q	V	.	.	.	.
13.333	4.6545	13.09	.	Q	V	.	.	.	.
13.350	4.6726	13.13	.	Q	V	.	.	.	.
13.367	4.6908	13.17	.	Q	V	.	.	.	.
13.383	4.7090	13.22	.	Q	V	.	.	.	.
13.400	4.7272	13.26	.	Q	V	.	.	.	.
13.417	4.7455	13.30	.	Q	V	.	.	.	.
13.433	4.7639	13.35	.	Q	V	.	.	.	.
13.450	4.7824	13.39	.	Q	V	.	.	.	.
13.467	4.8009	13.44	.	Q	V	.	.	.	.
13.483	4.8195	13.49	.	Q	V	.	.	.	.
13.500	4.8381	13.53	.	Q	V	.	.	.	.
13.517	4.8568	13.58	.	Q	V	.	.	.	.
13.533	4.8756	13.63	.	Q	V	.	.	.	.
13.550	4.8944	13.68	.	Q	V	.	.	.	.
13.567	4.9133	13.72	.	Q	V	.	.	.	.
13.583	4.9323	13.76	.	Q	V	.	.	.	.
13.600	4.9513	13.81	.	Q	V	.	.	.	.
13.617	4.9704	13.86	.	Q	V	.	.	.	.
13.633	4.9895	13.89	.	Q	V	.	.	.	.
13.650	5.0087	13.93	.	Q	V	.	.	.	.
13.667	5.0280	13.98	.	Q	V	.	.	.	.
13.683	5.0473	14.02	.	Q	V	.	.	.	.
13.700	5.0666	14.06	.	Q	V	.	.	.	.
13.717	5.0861	14.10	.	Q	V	.	.	.	.
13.733	5.1056	14.15	.	Q	V	.	.	.	.
13.750	5.1251	14.19	.	Q	V	.	.	.	.
13.767	5.1447	14.23	.	Q	V	.	.	.	.
13.783	5.1644	14.27	.	Q	V	.	.	.	.
13.800	5.1841	14.31	.	Q	V	.	.	.	.
13.817	5.2038	14.35	.	Q	V	.	.	.	.
13.833	5.2237	14.40	.	Q	V	.	.	.	.
13.850	5.2436	14.46	.	Q	V	.	.	.	.
13.867	5.2636	14.51	.	Q	V	.	.	.	.
13.883	5.2836	14.57	.	Q	V	.	.	.	.
13.900	5.3038	14.62	.	Q	V	.	.	.	.
13.917	5.3240	14.68	.	Q	V	.	.	.	.
13.933	5.3443	14.73	.	Q	V	.	.	.	.
13.950	5.3647	14.79	.	Q	V	.	.	.	.
13.967	5.3851	14.85	.	Q	V	.	.	.	.
13.983	5.4056	14.91	.	Q	V	.	.	.	.
14.000	5.4263	14.97	.	Q	V	.	.	.	.
14.017	5.4470	15.03	.	Q	V	.	.	.	.
14.033	5.4678	15.09	.	Q	V	.	.	.	.
14.050	5.4886	15.16	.	Q	V	.	.	.	.
14.067	5.5096	15.22	.	Q	V	.	.	.	.
14.083	5.5306	15.29	.	Q	V	.	.	.	.
14.100	5.5518	15.35	.	Q	V	.	.	.	.
14.117	5.5730	15.40	.	Q	V	.	.	.	.
14.133	5.5943	15.46	.	Q	V	.	.	.	.
14.150	5.6157	15.51	.	Q	V	.	.	.	.

14.167	5.6371	15.56	.	Q V.	.	.	.
14.183	5.6586	15.61	.	Q V.	.	.	.
14.200	5.6802	15.67	.	Q V.	.	.	.
14.217	5.7018	15.72	.	Q V.	.	.	.
14.233	5.7236	15.77	.	Q V.	.	.	.
14.250	5.7454	15.83	.	Q V.	.	.	.
14.267	5.7672	15.88	.	Q V.	.	.	.
14.283	5.7892	15.93	.	Q V.	.	.	.
14.300	5.8112	15.98	.	Q V.	.	.	.
14.317	5.8333	16.03	.	Q V.	.	.	.
14.333	5.8554	16.08	.	Q V.	.	.	.
14.350	5.8777	16.14	.	Q V.	.	.	.
14.367	5.8999	16.19	.	Q V.	.	.	.
14.383	5.9223	16.24	.	Q V.	.	.	.
14.400	5.9448	16.32	.	Q V.	.	.	.
14.417	5.9674	16.40	.	Q V	.	.	.
14.433	5.9901	16.48	.	Q V	.	.	.
14.450	6.0129	16.56	.	Q V	.	.	.
14.467	6.0358	16.64	.	Q V	.	.	.
14.483	6.0588	16.72	.	Q V	.	.	.
14.500	6.0820	16.79	.	Q V	.	.	.
14.517	6.1052	16.87	.	Q V	.	.	.
14.533	6.1286	16.96	.	Q V	.	.	.
14.550	6.1521	17.05	.	Q V	.	.	.
14.567	6.1757	17.14	.	Q V	.	.	.
14.583	6.1994	17.23	.	Q V	.	.	.
14.600	6.2233	17.32	.	Q V	.	.	.
14.617	6.2473	17.42	.	Q V	.	.	.
14.633	6.2714	17.51	.	Q V	.	.	.
14.650	6.2956	17.61	.	Q V	.	.	.
14.667	6.3200	17.70	.	Q V	.	.	.
14.683	6.3445	17.79	.	Q V	.	.	.
14.700	6.3691	17.88	.	Q V	.	.	.
14.717	6.3939	17.97	.	Q V	.	.	.
14.733	6.4188	18.06	.	Q V	.	.	.
14.750	6.4437	18.15	.	Q V	.	.	.
14.767	6.4689	18.24	.	Q V	.	.	.
14.783	6.4941	18.32	.	Q V	.	.	.
14.800	6.5195	18.41	.	Q V	.	.	.
14.817	6.5450	18.50	.	Q V	.	.	.
14.833	6.5706	18.59	.	Q .V	.	.	.
14.850	6.5963	18.68	.	Q .V	.	.	.
14.867	6.6221	18.77	.	Q .V	.	.	.
14.883	6.6481	18.86	.	Q .V	.	.	.
14.900	6.6742	18.95	.	Q .V	.	.	.
14.917	6.7004	19.04	.	Q .V	.	.	.
14.933	6.7268	19.13	.	Q .V	.	.	.
14.950	6.7533	19.26	.	Q .V	.	.	.
14.967	6.7800	19.39	.	Q .V	.	.	.
14.983	6.8069	19.53	.	Q .V	.	.	.
15.000	6.8340	19.67	.	Q .V	.	.	.
15.017	6.8613	19.81	.	Q .V	.	.	.
15.033	6.8888	19.95	.	Q .V	.	.	.
15.050	6.9165	20.10	.	Q .V	.	.	.
15.067	6.9444	20.25	.	Q .V	.	.	.

15.083	6.9725	20.40	.	Q .V	.	.	.
15.100	7.0008	20.56	.	Q .V	.	.	.
15.117	7.0294	20.74	.	Q .V	.	.	.
15.133	7.0582	20.95	.	Q .V	.	.	.
15.150	7.0874	21.19	.	Q .V	.	.	.
15.167	7.1169	21.44	.	Q .V	.	.	.
15.183	7.1468	21.68	.	Q . V	.	.	.
15.200	7.1770	21.92	.	Q . V	.	.	.
15.217	7.2075	22.16	.	Q . V	.	.	.
15.233	7.2383	22.38	.	Q . V	.	.	.
15.250	7.2695	22.61	.	Q. V	.	.	.
15.267	7.3009	22.84	.	Q. V	.	.	.
15.283	7.3327	23.06	.	Q. V	.	.	.
15.300	7.3648	23.28	.	Q. V	.	.	.
15.317	7.3971	23.51	.	Q. V	.	.	.
15.333	7.4298	23.73	.	Q. V	.	.	.
15.350	7.4628	23.95	.	Q. V	.	.	.
15.367	7.4961	24.17	.	Q. V	.	.	.
15.383	7.5297	24.39	.	Q. V	.	.	.
15.400	7.5636	24.61	.	Q. V	.	.	.
15.417	7.5978	24.82	.	Q. V	.	.	.
15.433	7.6323	25.04	.	Q V	.	.	.
15.450	7.6671	25.26	.	Q V	.	.	.
15.467	7.7022	25.48	.	Q V	.	.	.
15.483	7.7376	25.70	.	Q V	.	.	.
15.500	7.7736	26.13	.	Q V	.	.	.
15.517	7.8102	26.62	.	Q V	.	.	.
15.533	7.8476	27.11	.	Q V	.	.	.
15.550	7.8856	27.59	.	.Q V	.	.	.
15.567	7.9243	28.13	.	.Q V	.	.	.
15.583	7.9638	28.69	.	.Q V	.	.	.
15.600	8.0042	29.28	.	.Q V	.	.	.
15.617	8.0453	29.90	.	.Q V	.	.	.
15.633	8.0874	30.54	.	. QV	.	.	.
15.650	8.1303	31.14	.	. QV	.	.	.
15.667	8.1741	31.83	.	. QV	.	.	.
15.683	8.2190	32.55	.	. Q	.	.	.
15.700	8.2648	33.28	.	. Q	.	.	.
15.717	8.3117	34.03	.	. Q	.	.	.
15.733	8.3596	34.80	.	. QV	.	.	.
15.750	8.4086	35.59	.	. Q	.	.	.
15.767	8.4587	36.37	.	. Q	.	.	.
15.783	8.5099	37.10	.	. Q	.	.	.
15.800	8.5620	37.86	.	. VQ	.	.	.
15.817	8.6152	38.63	.	. VQ	.	.	.
15.833	8.6695	39.42	.	. VQ	.	.	.
15.850	8.7249	40.23	.	. V Q	.	.	.
15.867	8.7814	41.03	.	. V Q	.	.	.
15.883	8.8391	41.84	.	. V Q	.	.	.
15.900	8.8978	42.68	.	. V Q	.	.	.
15.917	8.9578	43.53	.	. V Q	.	.	.
15.933	9.0189	44.39	.	. V Q	.	.	.
15.950	9.0813	45.26	.	. V Q	.	.	.
15.967	9.1448	46.13	.	. V Q	.	.	.
15.983	9.2096	47.01	.	. V Q	.	.	.

16.000	9.2756	47.92	.	.	V	Q.	.	.
16.017	9.3429	48.85	.	.	V	Q.	.	.
16.033	9.4115	49.80	.	.	V	Q.	.	.
16.050	9.4837	52.46	.	.	V	Q	.	.
16.067	9.5598	55.24	.	.	V	. Q	.	.
16.083	9.6392	57.64	.	.	V	. Q	.	.
16.100	9.7229	60.76	.	.	V	. Q	.	.
16.117	9.8112	64.12	.	.	V	. Q	.	.
16.133	9.9041	67.44	.	.	V	. Q	.	.
16.150	10.0020	71.09	.	.	V	. Q	.	.
16.167	10.1049	74.66	.	.	V	. Q.	.	.
16.183	10.2131	78.57	.	.	V	. .Q	.	.
16.200	10.3267	82.45	.	.	V	. Q	.	.
16.217	10.4455	86.32	.	.	V	. Q	.	.
16.233	10.5689	89.57	.	.	V	. Q	.	.
16.250	10.6949	91.42	.	.	V	. Q	.	.
16.267	10.8216	92.03	.	.	V	. Q	.	.
16.283	10.9485	92.11	.	.	V	. Q	.	.
16.300	11.0754	92.11	.	.	V	. Q	.	.
16.317	11.2022	92.11	.	.	V	. Q	.	.
16.333	11.3291	92.11	.	.	V.	. Q	.	.
16.350	11.4560	92.11	.	.	V.	. Q	.	.
16.367	11.5829	92.11	.	.	V.	. Q	.	.
16.383	11.7097	92.11	.	.	V.	. Q	.	.
16.400	11.8366	92.11	.	.	V.	. Q	.	.
16.417	11.9635	92.11	.	.	V	. Q	.	.
16.433	12.0904	92.11	.	.	V	. Q	.	.
16.450	12.2173	92.11	.	.	V	. Q	.	.
16.467	12.3367	86.70	.	.	V	. Q	.	.
16.483	12.4460	79.34	.	.	V	. Q	.	.
16.500	12.5521	77.03	.	.	.V	. Q	.	.
16.517	12.6556	75.14	.	.	.V	. Q	.	.
16.533	12.7573	73.83	.	.	.V	. Q.	.	.
16.550	12.8550	70.98	.	.	.V	. Q	.	.
16.567	12.9505	69.29	.	.	.V	. Q	.	.
16.583	13.0432	67.32	.	.	.V	. Q	.	.
16.600	13.1343	66.16	.	.	. V	. Q	.	.
16.617	13.2255	66.20	.	.	. V	. Q	.	.
16.633	13.3164	66.00	.	.	. V	. Q	.	.
16.650	13.4024	62.40	.	.	. V Q	.	.	.
16.667	13.4825	58.20	.	.	. VQ	.	.	.
16.683	13.5609	56.87	.	.	. Q	.	.	.
16.700	13.6382	56.15	.	.	. Q	.	.	.
16.717	13.7146	55.43	.	.	. QV	.	.	.
16.733	13.7900	54.76	.	.	.Q V	.	.	.
16.750	13.8645	54.11	.	.	.Q V	.	.	.
16.767	13.9382	53.49	.	.	.Q V	.	.	.
16.783	14.0111	52.91	.	.	.Q V	.	.	.
16.800	14.0832	52.35	.	.	Q V	.	.	.
16.817	14.1546	51.80	.	.	Q V	.	.	.
16.833	14.2252	51.28	.	.	Q V	.	.	.
16.850	14.2951	50.73	.	.	Q V	.	.	.
16.867	14.3643	50.23	.	.	Q V	.	.	.
16.883	14.4330	49.88	.	.	Q. V	.	.	.
16.900	14.5012	49.57	.	.	Q. V	.	.	.

16.917	14.5691	49.27	.	.	Q.	V	.	.
16.933	14.6366	48.98	.	.	Q.	V	.	.
16.950	14.7037	48.71	.	.	Q.	V	.	.
16.967	14.7704	48.44	.	.	Q.	V	.	.
16.983	14.8368	48.19	.	.	Q.	V	.	.
17.000	14.9028	47.94	.	.	Q.	V	.	.
17.017	14.9677	47.16	.	.	Q.	V	.	.
17.033	15.0205	38.29	.	.	Q	.	V	.
17.050	15.0628	30.74	.	.	Q	.	V	.
17.067	15.1028	29.01	.	.	Q	.	V	.
17.083	15.1418	28.33	.	.	Q	.	V	.
17.100	15.1799	27.67	.	.	Q	.	V	.
17.117	15.2172	27.04	.	.	Q	.	V	.
17.133	15.2536	26.44	.	.	Q	.	V	.
17.150	15.2892	25.87	.	.	Q	.	V	.
17.167	15.3241	25.34	.	.	Q	.	V	.
17.183	15.3583	24.83	.	.	Q.	.	V	.
17.200	15.3919	24.35	.	.	Q.	.	V	.
17.217	15.4248	23.88	.	.	Q.	.	V	.
17.233	15.4571	23.45	.	.	Q.	.	V	.
17.250	15.4888	23.03	.	.	Q.	.	V	.
17.267	15.5199	22.63	.	.	Q.	.	V	.
17.283	15.5506	22.24	.	.	Q	.	V	.
17.300	15.5807	21.87	.	.	Q	.	V	.
17.317	15.6103	21.51	.	.	Q	.	V	.
17.333	15.6395	21.17	.	.	Q	.	V	.
17.350	15.6682	20.84	.	.	Q	.	V	.
17.367	15.6965	20.52	.	.	Q	.	V	.
17.383	15.7243	20.21	.	.	Q	.	V	.
17.400	15.7517	19.91	.	.	Q	.	V	.
17.417	15.7788	19.62	.	.	Q	.	V	.
17.433	15.8054	19.35	.	.	Q	.	V	.
17.450	15.8317	19.08	.	.	Q	.	V	.
17.467	15.8576	18.84	.	.	Q	.	V	.
17.483	15.8833	18.62	.	.	Q	.	V	.
17.500	15.9086	18.42	.	.	Q	.	V	.
17.517	15.9337	18.22	.	.	Q	.	V	.
17.533	15.9586	18.04	.	.	Q	.	V	.
17.550	15.9832	17.85	.	.	Q	.	V	.
17.567	16.0075	17.68	.	.	Q	.	V	.
17.583	16.0316	17.50	.	.	Q	.	V	.
17.600	16.0555	17.34	.	.	Q	.	V	.
17.617	16.0792	17.19	.	.	Q	.	V	.
17.633	16.1026	17.02	.	.	Q	.	V	.
17.650	16.1259	16.85	.	.	Q	.	V	.
17.667	16.1489	16.70	.	.	Q	.	V	.
17.683	16.1717	16.55	.	.	Q	.	V	.
17.700	16.1943	16.41	.	.	Q	.	V	.
17.717	16.2167	16.27	.	.	Q	.	V	.
17.733	16.2389	16.14	.	.	Q	.	V	.
17.750	16.2610	16.02	.	.	Q	.	V	.
17.767	16.2828	15.89	.	.	Q	.	V	.
17.783	16.3046	15.77	.	.	Q	.	V	.
17.800	16.3261	15.65	.	.	Q	.	V	.
17.817	16.3475	15.54	.	.	Q	.	V	.

17.833	16.3688	15.43	.	Q	.	.	V	.	.
17.850	16.3899	15.32	.	Q	.	.	V	.	.
17.867	16.4108	15.21	.	Q	.	.	V	.	.
17.883	16.4316	15.10	.	Q	.	.	V	.	.
17.900	16.4523	15.00	.	Q	.	.	V	.	.
17.917	16.4728	14.89	.	Q	.	.	V	.	.
17.933	16.4932	14.79	.	Q	.	.	V	.	.
17.950	16.5134	14.69	.	Q	.	.	V	.	.
17.967	16.5335	14.59	.	Q	.	.	V	.	.
17.983	16.5535	14.50	.	Q	.	.	V	.	.
18.000	16.5733	14.40	.	Q	.	.	V	.	.
18.017	16.5930	14.31	.	Q	.	.	V	.	.
18.033	16.6126	14.22	.	Q	.	.	V	.	.
18.050	16.6321	14.14	.	Q	.	.	V	.	.
18.067	16.6515	14.05	.	Q	.	.	V	.	.
18.083	16.6707	13.97	.	Q	.	.	V	.	.
18.100	16.6898	13.88	.	Q	.	.	V	.	.
18.117	16.7088	13.80	.	Q	.	.	V	.	.
18.133	16.7277	13.72	.	Q	.	.	V	.	.
18.150	16.7465	13.64	.	Q	.	.	V	.	.
18.167	16.7652	13.56	.	Q	.	.	V	.	.
18.183	16.7838	13.48	.	Q	.	.	V	.	.
18.200	16.8022	13.40	.	Q	.	.	V	.	.
18.217	16.8206	13.32	.	Q	.	.	V	.	.
18.233	16.8388	13.24	.	Q	.	.	V	.	.
18.250	16.8569	13.16	.	Q	.	.	V	.	.
18.267	16.8749	13.08	.	Q	.	.	V	.	.
18.283	16.8929	13.01	.	Q	.	.	V	.	.
18.300	16.9107	12.93	.	Q	.	.	V	.	.
18.317	16.9284	12.85	.	Q	.	.	V	.	.
18.333	16.9460	12.77	.	Q	.	.	V	.	.
18.350	16.9634	12.69	.	Q	.	.	V	.	.
18.367	16.9808	12.62	.	Q	.	.	V	.	.
18.383	16.9981	12.54	.	Q	.	.	V	.	.
18.400	17.0153	12.46	.	Q	.	.	V	.	.
18.417	17.0323	12.38	.	Q	.	.	V	.	.
18.433	17.0493	12.30	.	Q	.	.	V	.	.
18.450	17.0661	12.23	.	Q	.	.	V	.	.
18.467	17.0828	12.15	.	Q	.	.	V	.	.
18.483	17.0995	12.07	.	Q	.	.	V	.	.
18.500	17.1160	12.00	.	Q	.	.	V	.	.
18.517	17.1324	11.92	.	Q	.	.	V	.	.
18.533	17.1487	11.85	.	Q	.	.	V	.	.
18.550	17.1650	11.78	.	Q	.	.	V	.	.
18.567	17.1811	11.72	.	Q	.	.	V	.	.
18.583	17.1972	11.67	.	Q	.	.	V	.	.
18.600	17.2132	11.61	.	Q	.	.	V	.	.
18.617	17.2291	11.55	.	Q	.	.	V	.	.
18.633	17.2449	11.49	.	Q	.	.	V	.	.
18.650	17.2607	11.43	.	Q	.	.	V	.	.
18.667	17.2763	11.38	.	Q	.	.	V	.	.
18.683	17.2919	11.32	.	Q	.	.	V	.	.
18.700	17.3074	11.27	.	Q	.	.	V	.	.
18.717	17.3229	11.21	.	Q	.	.	V	.	.
18.733	17.3383	11.16	.	Q	.	.	V	.	.

18.750	17.3536	11.11	.	Q	.	.	V.	.
18.767	17.3688	11.06	.	Q	.	.	V.	.
18.783	17.3839	11.01	.	Q	.	.	V.	.
18.800	17.3990	10.96	.	Q	.	.	V.	.
18.817	17.4141	10.91	.	Q	.	.	V.	.
18.833	17.4290	10.86	.	Q	.	.	V.	.
18.850	17.4439	10.81	.	Q	.	.	V.	.
18.867	17.4587	10.77	.	Q	.	.	V.	.
18.883	17.4735	10.72	.	Q	.	.	V.	.
18.900	17.4882	10.68	.	Q	.	.	V.	.
18.917	17.5029	10.63	.	Q	.	.	V.	.
18.933	17.5174	10.59	.	Q	.	.	V.	.
18.950	17.5320	10.54	.	Q	.	.	V.	.
18.967	17.5464	10.50	.	Q	.	.	V.	.
18.983	17.5608	10.46	.	Q	.	.	V.	.
19.000	17.5752	10.42	.	Q	.	.	V.	.
19.017	17.5895	10.37	.	Q	.	.	V.	.
19.033	17.6037	10.33	.	Q	.	.	V.	.
19.050	17.6179	10.29	.	Q	.	.	V.	.
19.067	17.6320	10.25	.	Q	.	.	V.	.
19.083	17.6461	10.21	.	Q	.	.	V.	.
19.100	17.6601	10.17	.	Q	.	.	V.	.
19.117	17.6740	10.13	.	Q	.	.	V.	.
19.133	17.6879	10.09	.	Q	.	.	V.	.
19.150	17.7018	10.05	.	Q	.	.	V.	.
19.167	17.7156	10.02	.	Q	.	.	V.	.
19.183	17.7293	9.98	.	Q	.	.	V.	.
19.200	17.7430	9.94	.	Q	.	.	V.	.
19.217	17.7566	9.91	.	Q	.	.	V.	.
19.233	17.7702	9.87	.	Q	.	.	V.	.
19.250	17.7838	9.83	.	Q	.	.	V.	.
19.267	17.7973	9.80	.	Q	.	.	V.	.
19.283	17.8107	9.76	.	Q	.	.	V.	.
19.300	17.8241	9.73	.	Q	.	.	V.	.
19.317	17.8375	9.69	.	Q	.	.	V.	.
19.333	17.8508	9.66	.	Q	.	.	V.	.
19.350	17.8640	9.62	.	Q	.	.	V.	.
19.367	17.8773	9.59	.	Q	.	.	V	.
19.383	17.8904	9.56	.	Q	.	.	V	.
19.400	17.9035	9.52	.	Q	.	.	V	.
19.417	17.9166	9.49	.	Q	.	.	V	.
19.433	17.9296	9.46	.	Q	.	.	V	.
19.450	17.9426	9.43	.	Q	.	.	V	.
19.467	17.9556	9.40	.	Q	.	.	V	.
19.483	17.9685	9.37	.	Q	.	.	V	.
19.500	17.9813	9.33	.	Q	.	.	V	.
19.517	17.9941	9.30	.	Q	.	.	V	.
19.533	18.0069	9.27	.	Q	.	.	V	.
19.550	18.0196	9.24	.	Q	.	.	V	.
19.567	18.0323	9.21	.	Q	.	.	V	.
19.583	18.0450	9.18	.	Q	.	.	V	.
19.600	18.0576	9.15	.	Q	.	.	V	.
19.617	18.0701	9.12	.	Q	.	.	V	.
19.633	18.0827	9.09	.	Q	.	.	V	.
19.650	18.0951	9.06	.	Q	.	.	V	.

19.667	18.1076	9.03	.	Q	.	.	V	.
19.683	18.1200	9.01	.	Q	.	.	V	.
19.700	18.1324	8.98	.	Q	.	.	V	.
19.717	18.1447	8.95	.	Q	.	.	V	.
19.733	18.1570	8.92	.	Q	.	.	V	.
19.750	18.1692	8.90	.	Q	.	.	V	.
19.767	18.1815	8.87	.	Q	.	.	V	.
19.783	18.1936	8.84	.	Q	.	.	V	.
19.800	18.2058	8.81	.	Q	.	.	V	.
19.817	18.2179	8.79	.	Q	.	.	V	.
19.833	18.2299	8.76	.	Q	.	.	V	.
19.850	18.2420	8.73	.	Q	.	.	V	.
19.867	18.2540	8.71	.	Q	.	.	V	.
19.883	18.2659	8.68	.	Q	.	.	V	.
19.900	18.2778	8.66	.	Q	.	.	V	.
19.917	18.2897	8.64	.	Q	.	.	V	.
19.933	18.3016	8.62	.	Q	.	.	V	.
19.950	18.3135	8.60	.	Q	.	.	V	.
19.967	18.3253	8.59	.	Q	.	.	V	.
19.983	18.3371	8.57	.	Q	.	.	V	.
20.000	18.3489	8.56	.	Q	.	.	V	.
20.017	18.3607	8.54	.	Q	.	.	V	.
20.033	18.3724	8.53	.	Q	.	.	V	.
20.050	18.3841	8.51	.	Q	.	.	V	.
20.067	18.3958	8.50	.	Q	.	.	V	.
20.083	18.4075	8.48	.	Q	.	.	V	.
20.100	18.4192	8.47	.	Q	.	.	V	.
20.117	18.4308	8.45	.	Q	.	.	V	.
20.133	18.4424	8.44	.	Q	.	.	V	.
20.150	18.4540	8.42	.	Q	.	.	V	.
20.167	18.4656	8.40	.	Q	.	.	.V	.
20.183	18.4772	8.39	.	Q	.	.	.V	.
20.200	18.4887	8.37	.	Q	.	.	.V	.
20.217	18.5002	8.36	.	Q	.	.	.V	.
20.233	18.5117	8.34	.	Q	.	.	.V	.
20.250	18.5232	8.33	.	Q	.	.	.V	.
20.267	18.5346	8.31	.	Q	.	.	.V	.
20.283	18.5461	8.30	.	Q	.	.	.V	.
20.300	18.5575	8.28	.	Q	.	.	.V	.
20.317	18.5689	8.27	.	Q	.	.	.V	.
20.333	18.5802	8.25	.	Q	.	.	.V	.
20.350	18.5916	8.24	.	Q	.	.	.V	.
20.367	18.6029	8.23	.	Q	.	.	.V	.
20.383	18.6142	8.21	.	Q	.	.	.V	.
20.400	18.6255	8.20	.	Q	.	.	.V	.
20.417	18.6368	8.18	.	Q	.	.	.V	.
20.433	18.6480	8.17	.	Q	.	.	.V	.
20.450	18.6593	8.15	.	Q	.	.	.V	.
20.467	18.6705	8.14	.	Q	.	.	.V	.
20.483	18.6816	8.12	.	Q	.	.	.V	.
20.500	18.6928	8.11	.	Q	.	.	.V	.
20.517	18.7040	8.09	.	Q	.	.	.V	.
20.533	18.7151	8.08	.	Q	.	.	.V	.
20.550	18.7262	8.06	.	Q	.	.	.V	.
20.567	18.7373	8.05	.	Q	.	.	.V	.

20.583	18.7484	8.04	.	Q	.	.	.	.V	.
20.600	18.7594	8.02	.	Q	.	.	.	.V	.
20.617	18.7704	8.01	.	Q	.	.	.	.V	.
20.633	18.7814	7.99	.	Q	.	.	.	.V	.
20.650	18.7924	7.98	.	Q	.	.	.	.V	.
20.667	18.8034	7.96	.	Q	.	.	.	.V	.
20.683	18.8144	7.95	.	Q	.	.	.	.V	.
20.700	18.8253	7.94	.	Q	.	.	.	.V	.
20.717	18.8362	7.92	.	Q	.	.	.	.V	.
20.733	18.8471	7.91	.	Q	.	.	.	.V	.
20.750	18.8580	7.89	.	Q	.	.	.	.V	.
20.767	18.8688	7.88	.	Q	.	.	.	.V	.
20.783	18.8797	7.87	.	Q	.	.	.	.V	.
20.800	18.8905	7.85	.	Q	.	.	.	.V	.
20.817	18.9013	7.84	.	Q	.	.	.	.V	.
20.833	18.9120	7.82	.	Q	.	.	.	.V	.
20.850	18.9228	7.81	.	Q	.	.	.	.V	.
20.867	18.9335	7.80	.	Q	.	.	.	.V	.
20.883	18.9443	7.78	.	Q	.	.	.	.V	.
20.900	18.9550	7.77	.	Q	.	.	.	.V	.
20.917	18.9656	7.76	.	Q	.	.	.	.V	.
20.933	18.9763	7.74	.	Q	.	.	.	.V	.
20.950	18.9870	7.73	.	Q	.	.	.	.V	.
20.967	18.9976	7.72	.	Q	.	.	.	.V	.
20.983	19.0082	7.70	.	Q	.	.	.	.V	.
21.000	19.0188	7.69	.	Q	.	.	.	.V	.
21.017	19.0294	7.67	.	Q	.	.	.	.V	.
21.033	19.0399	7.66	.	Q	.	.	.	.V	.
21.050	19.0504	7.65	.	Q	.	.	.	.V	.
21.067	19.0610	7.63	.	Q	.	.	.	.V	.
21.083	19.0715	7.62	.	Q	.	.	.	.V	.
21.100	19.0819	7.61	.	Q	.	.	.	.V	.
21.117	19.0924	7.60	.	Q	.	.	.	.V	.
21.133	19.1028	7.58	.	Q	.	.	.	.V	.
21.150	19.1133	7.57	.	Q	.	.	.	.V	.
21.167	19.1237	7.56	.	Q	.	.	.	.V	.
21.183	19.1341	7.54	.	Q	.	.	.	.V	.
21.200	19.1444	7.53	.	Q	.	.	.	.V	.
21.217	19.1548	7.52	.	Q	.	.	.	.V	.
21.233	19.1651	7.50	.	Q	.	.	.	.V	.
21.250	19.1754	7.49	.	Q	.	.	.	.V	.
21.267	19.1857	7.48	.	Q	.	.	.	.V	.
21.283	19.1960	7.46	.	Q	.	.	.	.V	.
21.300	19.2063	7.45	.	Q	.	.	.	.V	.
21.317	19.2165	7.44	.	Q	.	.	.	.V	.
21.333	19.2268	7.43	.	Q	.	.	.	.V	.
21.350	19.2370	7.41	.	Q	.	.	.	.V	.
21.367	19.2472	7.40	.	Q	.	.	.	.V	.
21.383	19.2573	7.39	.	Q	.	.	.	.V	.
21.400	19.2675	7.38	.	Q	.	.	.	.V	.
21.417	19.2776	7.36	.	Q	.	.	.	.V	.
21.433	19.2878	7.35	.	Q	.	.	.	.V	.
21.450	19.2979	7.34	.	Q	.	.	.	.V	.
21.467	19.3080	7.33	.	Q	.	.	.	.V	.
21.483	19.3180	7.31	.	Q	.	.	.	.V	.

21.500	19.3281	7.30	. Q	.	.	. V	.
21.517	19.3381	7.29	. Q	.	.	. V	.
21.533	19.3482	7.28	. Q	.	.	. V	.
21.550	19.3582	7.26	. Q	.	.	. V	.
21.567	19.3682	7.25	. Q	.	.	. V	.
21.583	19.3781	7.24	. Q	.	.	. V	.
21.600	19.3881	7.23	. Q	.	.	. V	.
21.617	19.3980	7.22	. Q	.	.	. V	.
21.633	19.4079	7.20	. Q	.	.	. V	.
21.650	19.4179	7.19	. Q	.	.	. V	.
21.667	19.4277	7.18	. Q	.	.	. V	.
21.683	19.4376	7.17	. Q	.	.	. V	.
21.700	19.4475	7.16	. Q	.	.	. V	.
21.717	19.4573	7.14	. Q	.	.	. V	.
21.733	19.4671	7.13	. Q	.	.	. V	.
21.750	19.4769	7.12	. Q	.	.	. V	.
21.767	19.4867	7.11	. Q	.	.	. V	.
21.783	19.4965	7.10	. Q	.	.	. V	.
21.800	19.5063	7.08	. Q	.	.	. V	.
21.817	19.5160	7.07	. Q	.	.	. V	.
21.833	19.5257	7.06	. Q	.	.	. V	.
21.850	19.5354	7.05	. Q	.	.	. V	.
21.867	19.5451	7.04	. Q	.	.	. V	.
21.883	19.5548	7.03	. Q	.	.	. V	.
21.900	19.5645	7.01	. Q	.	.	. V	.
21.917	19.5741	7.00	. Q	.	.	. V	.
21.933	19.5837	6.99	. Q	.	.	. V	.
21.950	19.5934	6.98	. Q	.	.	. V	.
21.967	19.6030	6.97	. Q	.	.	. V	.
21.983	19.6125	6.96	. Q	.	.	. V	.
22.000	19.6221	6.95	. Q	.	.	. V	.
22.017	19.6317	6.93	. Q	.	.	. V	.
22.033	19.6412	6.92	. Q	.	.	. V	.
22.050	19.6507	6.91	. Q	.	.	. V	.
22.067	19.6602	6.90	. Q	.	.	. V	.
22.083	19.6697	6.89	. Q	.	.	. V	.
22.100	19.6792	6.88	. Q	.	.	. V	.
22.117	19.6886	6.87	. Q	.	.	. V	.
22.133	19.6981	6.86	. Q	.	.	. V	.
22.150	19.7075	6.84	. Q	.	.	. V	.
22.167	19.7169	6.83	. Q	.	.	. V	.
22.183	19.7263	6.82	. Q	.	.	. V	.
22.200	19.7357	6.81	. Q	.	.	. V	.
22.217	19.7451	6.80	. Q	.	.	. V	.
22.233	19.7544	6.79	. Q	.	.	. V	.
22.250	19.7638	6.78	. Q	.	.	. V	.
22.267	19.7731	6.77	. Q	.	.	. V	.
22.283	19.7824	6.76	. Q	.	.	. V	.
22.300	19.7917	6.75	. Q	.	.	. V	.
22.317	19.8010	6.74	. Q	.	.	. V	.
22.333	19.8102	6.73	. Q	.	.	. V	.
22.350	19.8195	6.71	. Q	.	.	. V	.
22.367	19.8287	6.70	. Q	.	.	. V	.
22.383	19.8379	6.69	. Q	.	.	. V	.
22.400	19.8471	6.67	. Q	.	.	. V	.

22.417	19.8563	6.66	. Q	.	.	.	V	.
22.433	19.8655	6.65	. Q	.	.	.	V	.
22.450	19.8746	6.64	. Q	.	.	.	V	.
22.467	19.8837	6.63	. Q	.	.	.	V	.
22.483	19.8929	6.62	. Q	.	.	.	V	.
22.500	19.9020	6.61	. Q	.	.	.	V	.
22.517	19.9111	6.60	. Q	.	.	.	V	.
22.533	19.9201	6.59	. Q	.	.	.	V	.
22.550	19.9292	6.58	. Q	.	.	.	V	.
22.567	19.9383	6.57	. Q	.	.	.	V	.
22.583	19.9473	6.56	. Q	.	.	.	V	.
22.600	19.9563	6.55	. Q	.	.	.	V	.
22.617	19.9653	6.54	. Q	.	.	.	V	.
22.633	19.9743	6.53	. Q	.	.	.	V	.
22.650	19.9833	6.52	. Q	.	.	.	V	.
22.667	19.9923	6.51	. Q	.	.	.	V	.
22.683	20.0012	6.50	. Q	.	.	.	V	.
22.700	20.0102	6.49	. Q	.	.	.	V	.
22.717	20.0191	6.48	. Q	.	.	.	V	.
22.733	20.0280	6.47	. Q	.	.	.	V	.
22.750	20.0369	6.46	. Q	.	.	.	V	.
22.767	20.0458	6.45	. Q	.	.	.	V	.
22.783	20.0546	6.44	. Q	.	.	.	V	.
22.800	20.0635	6.44	. Q	.	.	.	V	.
22.817	20.0724	6.42	. Q	.	.	.	V	.
22.833	20.0812	6.41	. Q	.	.	.	V	.
22.850	20.0900	6.40	. Q	.	.	.	V	.
22.867	20.0988	6.39	. Q	.	.	.	V	.
22.883	20.1076	6.38	. Q	.	.	.	V	.
22.900	20.1164	6.37	. Q	.	.	.	V	.
22.917	20.1251	6.36	. Q	.	.	.	V	.
22.933	20.1339	6.35	. Q	.	.	.	V	.
22.950	20.1426	6.34	. Q	.	.	.	V	.
22.967	20.1514	6.33	. Q	.	.	.	V	.
22.983	20.1601	6.32	. Q	.	.	.	V	.
23.000	20.1688	6.31	. Q	.	.	.	V	.
23.017	20.1775	6.31	. Q	.	.	.	V	.
23.033	20.1861	6.30	. Q	.	.	.	V	.
23.050	20.1948	6.29	. Q	.	.	.	V	.
23.067	20.2034	6.28	. Q	.	.	.	V	.
23.083	20.2121	6.27	. Q	.	.	.	V	.
23.100	20.2207	6.26	. Q	.	.	.	V	.
23.117	20.2293	6.25	. Q	.	.	.	V	.
23.133	20.2379	6.24	. Q	.	.	.	V	.
23.150	20.2465	6.23	. Q	.	.	.	V	.
23.167	20.2550	6.22	. Q	.	.	.	V	.
23.183	20.2636	6.21	. Q	.	.	.	V	.
23.200	20.2721	6.20	. Q	.	.	.	V	.
23.217	20.2807	6.19	. Q	.	.	.	V	.
23.233	20.2892	6.19	. Q	.	.	.	V	.
23.250	20.2977	6.18	. Q	.	.	.	V	.
23.267	20.3062	6.17	. Q	.	.	.	V	.
23.283	20.3147	6.16	. Q	.	.	.	V	.
23.300	20.3232	6.15	. Q	.	.	.	V	.
23.317	20.3316	6.14	. Q	.	.	.	V	.

23.333	20.3401	6.13	. Q	.	.	.	V	.
23.350	20.3485	6.12	. Q	.	.	.	V	.
23.367	20.3569	6.11	. Q	.	.	.	V	.
23.383	20.3653	6.11	. Q	.	.	.	V	.
23.400	20.3737	6.10	. Q	.	.	.	V	.
23.417	20.3821	6.09	. Q	.	.	.	V	.
23.433	20.3905	6.08	. Q	.	.	.	V	.
23.450	20.3988	6.07	. Q	.	.	.	V	.
23.467	20.4072	6.06	. Q	.	.	.	V	.
23.483	20.4155	6.05	. Q	.	.	.	V	.
23.500	20.4239	6.04	. Q	.	.	.	V	.
23.517	20.4322	6.04	. Q	.	.	.	V	.
23.533	20.4405	6.03	. Q	.	.	.	V	.
23.550	20.4488	6.02	. Q	.	.	.	V	.
23.567	20.4570	6.01	. Q	.	.	.	V	.
23.583	20.4653	6.00	. Q	.	.	.	V	.
23.600	20.4736	5.99	. Q	.	.	.	V	.
23.617	20.4818	5.98	. Q	.	.	.	V	.
23.633	20.4900	5.98	. Q	.	.	.	V	.
23.650	20.4983	5.97	. Q	.	.	.	V	.
23.667	20.5065	5.96	. Q	.	.	.	V	.
23.683	20.5147	5.95	. Q	.	.	.	V	.
23.700	20.5228	5.94	. Q	.	.	.	V	.
23.717	20.5310	5.93	. Q	.	.	.	V	.
23.733	20.5392	5.93	. Q	.	.	.	V	.
23.750	20.5473	5.92	. Q	.	.	.	V	.
23.767	20.5555	5.91	. Q	.	.	.	V	.
23.783	20.5636	5.90	. Q	.	.	.	V	.
23.800	20.5717	5.89	. Q	.	.	.	V	.
23.817	20.5798	5.88	. Q	.	.	.	V	.
23.833	20.5879	5.88	. Q	.	.	.	V	.
23.850	20.5960	5.87	. Q	.	.	.	V	.
23.867	20.6041	5.86	. Q	.	.	.	V	.
23.883	20.6121	5.85	. Q	.	.	.	V	.
23.900	20.6202	5.84	. Q	.	.	.	V	.
23.917	20.6282	5.84	. Q	.	.	.	V	.
23.933	20.6363	5.83	. Q	.	.	.	V	.
23.950	20.6443	5.82	. Q	.	.	.	V	.
23.967	20.6523	5.81	. Q	.	.	.	V	.
23.983	20.6603	5.80	. Q	.	.	.	V	.
24.000	20.6683	5.80	. Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1441.0
10%	1441.0
20%	805.0
30%	465.0
40%	380.0
50%	320.0

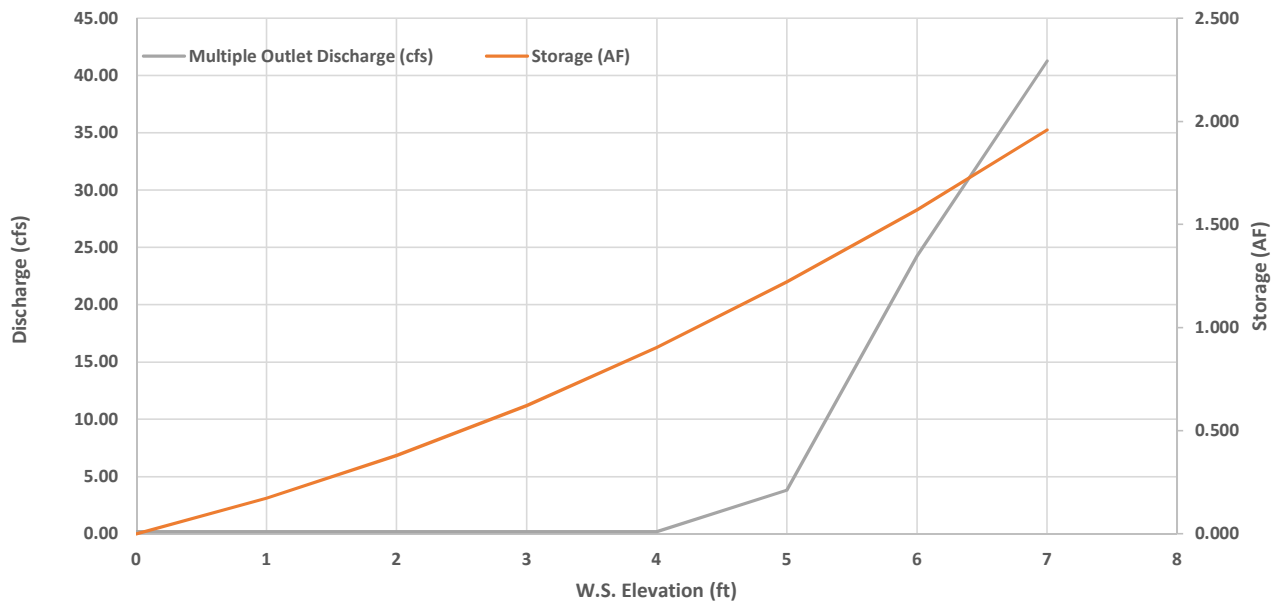
60%	195.0
70%	155.0
80%	115.0
90%	80.0

=====

END OF FLOODSCx ROUTING ANALYSIS

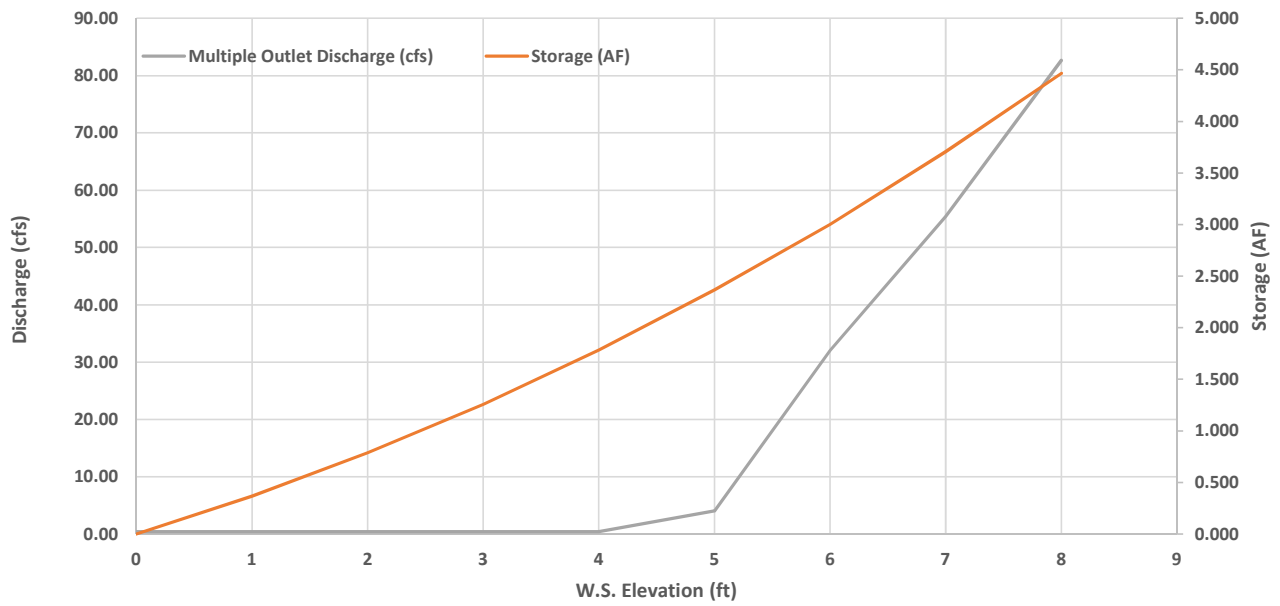
C-4: Stage-Outflow Relationship

North Detention Basin Discharge Chart



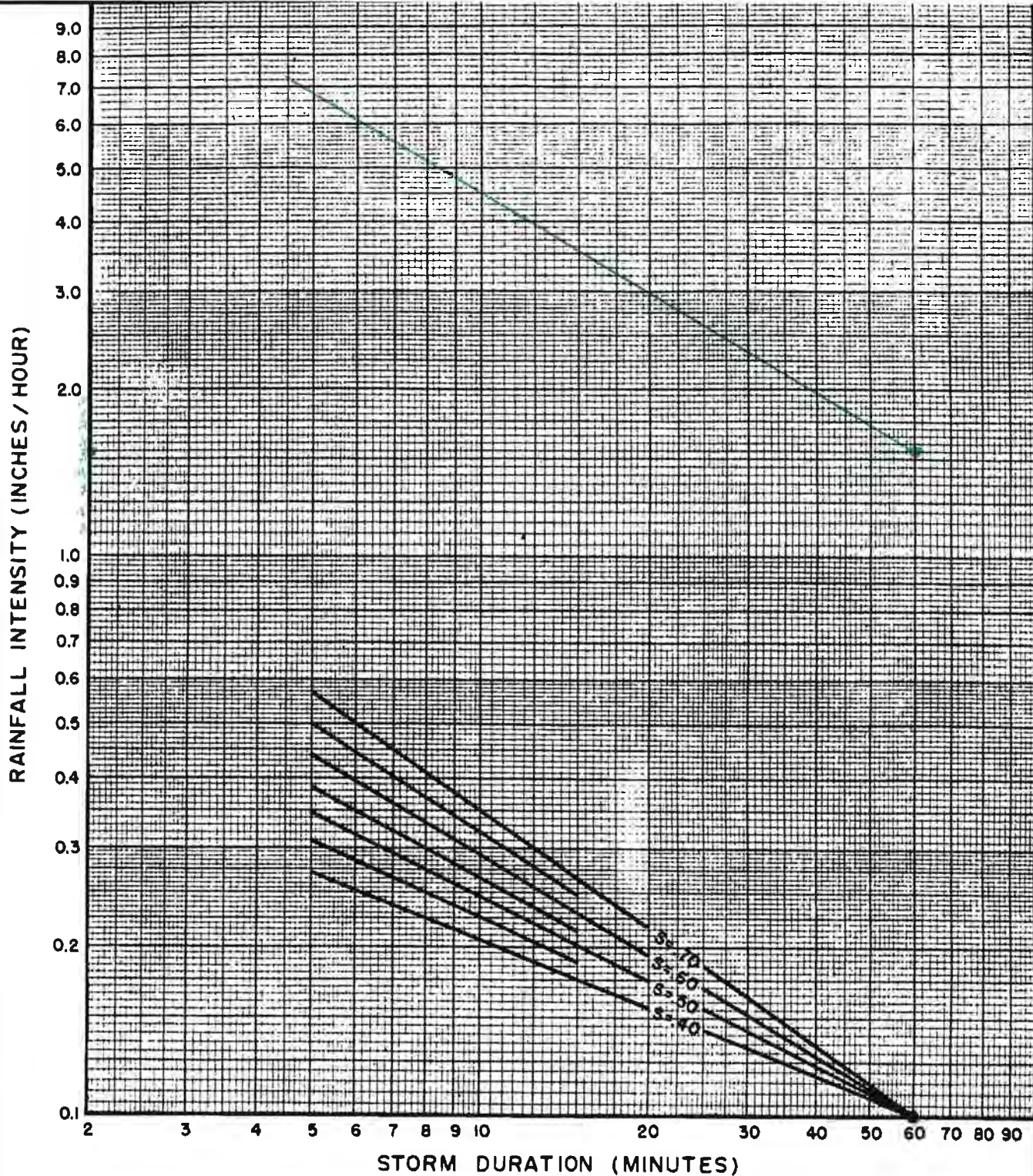
Proposed Detention Basin -North Basin -100 YR										
Stage-Storage-Discharge Table										
Stage (ft)	Surface Area (SQFT)	Storage (AF)	Multiple Outlet Discharge (cfs)				ORIFICE DIMS			WEIR DIMS
0	6830.47	0.000	0.19				L (FT)=	1.5		L (FT)= 2.5
1	6830.47	0.173	0.19				H (FT)=	0.5		C= 2.68
2	6830.47	0.380	0.19				C=	0.6		
3	6830.47	0.623	0.19		0.189735278					
4	6830.47	0.904	0.19							
5	6830.47	1.221	3.80	ORIFICE						
6	6830.47	1.570	24.25	ORIFICE & WEIR						
7	6830.47	1.958	41.26	ORIFICE & WEIR						

South Detention Basin Discharge Chart



Proposed Detention Basin -South Basin -100 YR									
Stage-Storage-Discharge Table									
Stage (ft)	Surface Area (SQFT)	Storage (AF)	Multiple Outlet Discharge (cfs)			ORIFICE DIMS		WEIR DIMS	
0	14985.00	0.000	0.42			L (FT)=	1.5	L (FT)=	3.5
1	14985.00	0.368	0.42			H (FT)=	0.5	C=	2.68
2	14985.00	0.786	0.42		0.41625	C=	0.6		
3	14985.00	1.257	0.42						
4	14985.00	1.783	0.42						
5	14985.00	2.366	4.03	ORIFICE					
6	14985.00	3.000	32.05	ORIFICE & WEIR					
7	14985.00	3.708	55.41	ORIFICE & WEIR					
8	14985.00	4.466	82.68	ORIFICE & WEIR					

C-5: Intensity Duration Curve



DESIGN STORM FREQUENCY = 100 YEARS
 ONE HOUR POINT RAINFALL = 1.54 INCHES
 LOG-LOG SLOPE = 0.60
 PROJECT LOCATION = SOUTH WEST OF SBC

SAN BERNARDINO COUNTY
 HYDROLOGY MANUAL

**INTENSITY - DURATION
 CURVES
 CALCULATION SHEET**

Appendix D

Hydraulic Analyses

D-1: WSPG Analysis

D-2: Flowmaster Street Flow Analysis

D-3: AES Catch Basin Analysis

D-4: Emergency Overflow Calculations

(To be provided at Final Engineering)

Appendix E

Referenced Materials

Pictures of Existing Condition







