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00001> 2      Metric units
00002> *#*****
00003> *# SWMHYMO Ver:5.02/Jan 2001 <BETA> / INPUT DATA FILE
00004> *#*****
00005> *# Project Name: [Richmond FPM]      Project Number: [709]
00006> *# Date       : 04-21-2009
00007> *# Revised    : 05-27-2009; 07-22-2009; 08-06-2009; 08-31-2009; 11-16-2009
00008> *# Modeller   : [Bryan Willcott B.Eng.]
00009> *# Company    : J.F. Sabourin and Associates
00010> *# License #   : 3410370
00011> *#*****
00012>
00013> *#*****
00014> *# [BW] May 27, 2009
00015> *# This model has been updated using revised values for Tp. Previous versions
00016> *# of this model used a calculated Tp=0.6Tc. This model used a calculated
00017> *# Tp=0.6Tc.
00018> *#*****
00019> *# [BW] July 22, 2009
00020> *# This model has been revised to include "existing" cross section information
00021> *# received from Robinson Consultants. The Cross section revised in the model
00022> *# is Sec 5.2 (channel receiving flow from "arbucks"). Also, channel and
00023> *# floodplain slopes for ROUTE CHANNEL commands were updated to be equal
00024> *#*****
00025> *# [BW] August 6, 2009
00026> *# This model has been revised to include cross section information
00027> *# from Robinson Consultants Engineer's Report July 2003. The cross
00028> *# section revised in the model is Sec 5.1. Cross sections Sec 1.03
00029> *# and Sec 5.3 have also been revised
00030> *#*****
00031> *# [BW] August 31, 2009
00032> *# Model updated to include the proposed DSEL berm. This affects the geometry
00033> *# of Route Channel Sect 5.2 located on the Arbuckle drain. Route Channels 5.2
00034> *# and 1.03 have also been revised to reduce the number of values in the
00035> *# x-y matrix.
00036> *#*****
00037> *# [BW] November 16, 2009
00038> *# Model updated to include revised CN and Tp values subsequent to review of
00039> *# memo received from AECOM on Oct. 2, 2009
00040> *#*****
00041> *#
00042> *# 25mm 4HR Chicago Storm
00043> *# START          TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[001]
00044> *#                ["4HR-25mm.stm"]
00045> *#-----|
00046> *# READ STORM     STORM_FILENAME=["STORM.001"]
00047> *#-----|
00048> *#*****
00049> *# Van Gaal / Arbuckle Drain
00050> *#*****
00051> *# DSEL SUBCATCHMENT VG-1 HAS BEEN BROKEN INTO 6 SUB-AREAS (BW)
00052> *#*****
00053> *#-----|
00054> *# CALIB NASHYD   ID=[1], NHYD=["VG-1A"], DT=[5]min, AREA=[311.9](ha),
00055> *#                DWF=[0](cms), CN/C=[73], IA=[3.9](mm),
00056> *#                N=[3], TP=[5.3]hrs,
00057> *#                RAINFALL=[ , , , ](mm/hr), END=-1
00058> *#-----|
00059> *# SAVE HYD       ID=[1], # OF PCYCLES=[-1], ICASEsh=[1]
00060> *#                HYD_COMMENT=["VG-1A"]
00061> *#-----|
00062> *#*****
00063> *# Tp FOR VG-1B HAS BEEN REVISED TO REFLECT A HYDRAULIC LENGTH OF 1710 m, A
00064> *# LENGTH THAT INCLUDES DISTANCE TO THE VG1-1 CONFLUENCE IN ADDITION TO THE
00065> *# LONGEST FLOW PATH WITHIN VG-1B. THIS IS DONE TO SIMULATE CHANNEL ROUTING
00066> *#*****
00067> *# CALIB NASHYD   ID=[2], NHYD=["VG-1B"], DT=[5]min, AREA=[24.8](ha),
00068> *#                DWF=[0](cms), CN/C=[73], IA=[4.0](mm),
00069> *#                N=[3], TP=[2.7]hrs,
00070> *#                RAINFALL=[ , , , ](mm/hr), END=-1
00071> *#-----|

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00072> *#*****
00073> *# VG1-1 IS THE SUM OF FLOWS TO THE CONFLUENCE OF NORTHERN MOST WATERCOURSE IN
00074> *# OUR AREA OF STUDY WITH THE ROADSIDE DITCH ON GARVIN ROAD
00075> *#*****
00076> *#
00077> *# ADD HYD         IDsum=[3], NHYD=["VG1-1"], IDs to add=[1 2]
00078> *#-----|
00079> *# SAVE HYD       ID=[3], # OF PCYCLES=[-1], ICASEsh=[1]
00080> *#                HYD_COMMENT=["VG1-1"]
00081> *#-----|
00082> *# CALIB NASHYD   ID=[4], NHYD=["VG-1D"], DT=[5]min, AREA=[47.8](ha),
00083> *#                DWF=[0](cms), CN/C=[88], IA=[2.5](mm),
00084> *#                N=[3], TP=[1.8]hrs,
00085> *#                RAINFALL=[ , , , ](mm/hr), END=-1
00086> *#-----|
00087> *#*****
00088> *# VG1-2 IS THE SUM OF FLOWS AT THE GARVIN ROAD CROSS CULVERT AND
00089> *# CONSERVATIVELY INCLUDES THE AREA VG-1D, WHICH IS LOCATED JUST DOWNSTREAM
00090> *# OF THE CULVERT
00091> *#*****
00092> *#
00093> *# ADD HYD         IDsum=[5], NHYD=["VG1-2"], IDs to add=[3 4]
00094> *#-----|
00095> *# SAVE HYD       ID=[5], # OF PCYCLES=[-1], ICASEsh=[1]
00096> *#                HYD_COMMENT=["VG1-2"]
00097> *#-----|
00098> *# ROUTE CHANNEL  IDout=[6], NHYD=["VG1R-2"], IDin=[5],
00099> *#                RDT=[5](min),
00100> *#                CHLGT=[865](m), CHSLOPE=[0.15](%),
00101> *#                FPSLOPE=[0.15](%),
00102> *#                SECNUM=[1.01], NSEG=[3]
00103> *#                ( SEGROUGH, SEGDIST (m))=[0.08,51.41 -0.035,55.58 0.08,228.3
00104> *#                ( DISTANCE (m), ELEVATION (m))=[0, 96.719]
00105> *#                [22.98, 96.598]
00106> *#                [42.45, 96.66]
00107> *#                [47.63, 96.5]
00108> *#                [49.64, 96.424]
00109> *#                [51.41, 96]
00110> *#                [53.36, 95.79]
00111> *#                [55.58, 95.887]
00112> *#                [57.42, 96.242]
00113> *#                [87.69, 96.5]
00114> *#                [119.62, 96.509]
00115> *#                [140.1, 96.601]
00116> *#                [179.39, 96.722]
00117> *#                [200.6, 96.89]
00118> *#                [228.39, 97]
00119> *#-----|
00120> *# CALIB NASHYD   ID=[7], NHYD=["VG-1C"], DT=[5]min, AREA=[211.8](ha),
00121> *#                DWF=[0](cms), CN/C=[70], IA=[3.9](mm),
00122> *#                N=[3], TP=[4.7]hrs,
00123> *#                RAINFALL=[ , , , ](mm/hr), END=-1
00124> *#-----|
00125> *# CALIB NASHYD   ID=[8], NHYD=["VG-1E"], DT=[5]min, AREA=[13.4](ha),
00126> *#                DWF=[0](cms), CN/C=[73], IA=[4.0](mm),
00127> *#                N=[3], TP=[0.64]hrs,
00128> *#                RAINFALL=[ , , , ](mm/hr), END=-1
00129> *#-----|
00130> *#*****
00131> *# VG1-3 IS THE SUM OF FLOWS TO JOY'S ROAD CROSS CULVERT AND CONSERVATIVELY
00132> *# INCLUDES THE AREA VG-1E, WHICH IS LOCATED JUST DOWNSTREAM OF THE CULVERT
00133> *#*****
00134> *#
00135> *# ADD HYD         IDsum=[9], NHYD=["VG1-3"], IDs to add=[7 8]
00136> *#-----|
00137> *# SAVE HYD       ID=[9], # OF PCYCLES=[-1], ICASEsh=[1]
00138> *#                HYD_COMMENT=["VG1-3"]
00139> *#-----|
00140> *# ROUTE CHANNEL  IDout=[10], NHYD=["VG1R-3"], IDin=[9],
00141> *#                RDT=[5](min),
00142> *#                CHLGT=[630](m), CHSLOPE=[0.20](%),

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00143>                                FPSLOPE=[0.20](%),
00144> SECNUM=[1.02], NSEGE=[3]
00145> ( SEGROUGH, SEGDIST (m))=[0.08,80.53 -0.035,82.4 0.08,124.53
00146> ( DISTANCE (m), ELEVATION (m))=[0 97
00147>                                0.61 97.01
00148>                                3.8 97.03
00149>                                17.49 97.18
00150>                                19.18 97.17
00151>                                26.62 97.15
00152>                                46.29 97.12
00153>                                73.97 97.17
00154>                                76.3 97.04
00155>                                77.53 97
00156>                                80.53 96.86
00157>                                81.38 96.5
00158>                                82.4 96.07
00159>                                87.91 96.07
00160>                                89.65 96.5
00161>                                90.75 96.78
00162>                                91.88 96.91
00163>                                96.2 97
00164>                                99.01 97.1
00165>                                119.73 97.14
00166>                                124.53 97]
00167> *%-----|-----|
00168> *#*****|-----|
00169> *# VG1-4 IS THE SUM OF FLOWS AT THE CONFLUENCE OF THE WATERCOURSE FROM JOY'S
00170> *# ROAD WITH THE MAIN DRAIN
00171> *#*****|-----|
00172> *#
00173> ADD HYD IDsum=[1], NHYD=["VG1-4"], IDs to add=[6 10]
00174> *%-----|-----|
00175> SAVE HYD ID=[1], # OF PCYCLES=[-1], ICASEsh=[1]
00176> HYD_COMMENT=["VG1-4"]
00177> *%-----|-----|
00178> ROUTE CHANNEL IDout=[2], NHYD=["VG1R-4"], IDin=[1],
00179> RDT=[5](min),
00180> CHLGTH=[485](m), CHSLOPE=[0.20](%),
00181> FPSLOPE=[0.20](%),
00182> SECNUM=[1.03], NSEGE=[3]
00183> ( SEGROUGH, SEGDIST (m))=[0.08,44.17 -0.035,53.58 0.08,243.3
00184> ( DISTANCE (m), ELEVATION (m))=
00185> [-44.2, 95.7
00186> 0, 95.5
00187> 19.69, 95.421
00188> 27.91, 95.5
00189> 31.73, 95.5
00190> 32.29, 95.325
00191> 32.71, 95.5
00192> 41.04, 95.5
00193> 44.17, 95.449
00194> 45.63, 95.389
00195> 48.22, 95
00196> 48.54, 94.882
00197> 49.35, 94.5
00198> 49.64, 94.311
00199> 50.46, 94.497
00200> 52.21, 94.993
00201> 53.58, 95.406
00202> 55.08, 95.333
00203> 55.94, 95.157
00204> 76.35, 95.275
00205> 131, 95.403
00206> 213.2, 95.5
00207> 243.3, 95.8]
00208> *%-----|-----|
00209> CALIB NASHYD ID=[3], NHYD=["VG-1F"], DT=[5]min, AREA=[117.7](ha),
00210> DWF=[0](cms), CN/C=[86], IA=[2.6](mm),
00211> N=[3], TP=[2.9]hrs,
00212> RAINFALL=[, , , , ](mm/hr), END=-1
00213> *%-----|-----|

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00214> *#*****|-----|
00215> *# VG1 IS THE SUM OF FLOWS AT THE CONFLUENCE OF THE VAN GAAL WEST MAIN DRAIN
00216> *# WITH VAN GAAL WEST TRIBUTARY
00217> *#*****|-----|
00218> *#
00219> ADD HYD IDsum=[4], NHYD=["VG1"], IDs to add=[2 3]
00220> *%-----|-----|
00221> SAVE HYD ID=[4], # OF PCYCLES=[-1], ICASEsh=[1]
00222> HYD_COMMENT=["VG1"]
00223> *%-----|-----|
00224> ROUTE CHANNEL IDout=[5], NHYD=["VGR2-1"], IDin=[4],
00225> RDT=[5](min),
00226> CHLGTH=[755](m), CHSLOPE=[0.2](%),
00227> FPSLOPE=[0.2](%),
00228> SECNUM=[5.1], NSEGE=[3]
00229> ( SEGROUGH, SEGDIST (m))=[0.08,98.046 -0.035,105.496 0.08,51
00230> ( DISTANCE (m), ELEVATION (m))=[0, 96.11
00231> 20, 94.4
00232> 26.106, 94.5
00233> 41.686, 94.465
00234> 63.506, 94.427
00235> 84.666, 94.492
00236> 95.476, 94.363
00237> 97.736, 94
00238> 98.046, 93.967
00239> 100.336, 92.8193
00240> 101.536, 92.8193
00241> 102.736, 92.8193
00242> 105.496, 94.199
00243> 127.006, 94.345
00244> 142.116, 94.5
00245> 148.376, 94.568
00246> 478.406, 94.7
00247> 518.306, 95]
00248> *%-----|-----|
00249> CALIB NASHYD ID=[6], NHYD=["VG-2"], DT=[5]min, AREA=[63.1](ha),
00250> DWF=[0](cms), CN/C=[81], IA=[2.8](mm),
00251> N=[3], TP=[1.6]hrs,
00252> RAINFALL=[, , , , ](mm/hr), END=-1
00253> *%-----|-----|
00254> ROUTE CHANNEL IDout=[7], NHYD=["PerN"], IDin=[6],
00255> RDT=[5](min),
00256> CHLGTH=[550](m), CHSLOPE=[0.2](%),
00257> FPSLOPE=[0.2](%),
00258> SECNUM=[1.1], NSEGE=[3]
00259> ( SEGROUGH, SEGDIST (m))=[0.08,70 -0.035,72 0.08,77] NSEGE ti
00260> ( DISTANCE (m), ELEVATION (m))=[0, 94.4]
00261> [70, 94.0]
00262> [71, 93.5]
00263> [72, 94.0]
00264> [77, 94.4]
00265> *%-----|-----|
00266> CALIB NASHYD ID=[8], NHYD=["VG-3"], DT=[5]min, AREA=[40.6](ha),
00267> DWF=[0](cms), CN/C=[88], IA=[2.5](mm),
00268> N=[3], TP=[1.6]hrs,
00269> RAINFALL=[, , , , ](mm/hr), END=-1
00270> *%-----|-----|
00271> CALIB STANDHYD ID=[9], NHYD=["VG-4"], DT=[5](min), AREA=[24.6](ha),
00272> XIMP=[0.4], TIMP=[0.5], DWF=[0](cms), LOSS=[1],
00273> Horton: Fo=[76.20](mm/hr), Fc=[13.20](mm/hr),
00274> DCAY=[4.14](/hr), F=[0](mm),
00275> Pervious surfaces: IAper=[1.5](mm), SLPP=[1.5](%),
00276> LGP=[35](m), MNP=[0.250], SCP=[0](min),
00277> Impervious surfaces: IAimp=[0.8](mm), SLPI=[0.3](%),
00278> LGI=[1000](m), MNI=[0.013], SCI=[0](min
00279> RAINFALL=[, , , , ](mm/hr), END=-1
00280> *%-----|-----|
00281> ADD HYD IDsum=[1], NHYD=["perthst"], IDs to add=[5 7 8 9]
00282> *%-----|-----|
00283> SAVE HYD ID=[1], # OF PCYCLES=[-1], ICASEsh=[1]
00284> HYD_COMMENT=["perthst"]

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00285> *%-----|-----|
00286> CALIB NASHYD ID=[2], NHYD=["VG-5"], DT=[5]min, AREA=[34.4](ha),
00287> DWF=[0](cms), CN/C=[76], IA=[3.0](mm),
00288> N=[3], TP=[2.3]hrs,
00289> RAINFALL=[ , , , ](mm/hr), END=-1
00290> *%-----|-----|
00291> ROUTE CHANNEL IDout=[3], NHYD=["PerS"], IDin=[2],
00292> RDT=[5](min),
00293> CHLGTH=[550](m), CHSLOPE=[0.2](%),
00294> FPSLOPE=[0.2](%),
00295> SECNUM=[1.1], NSEG=[3]
00296> ( SEGROUGH, SEGDIST (m))=[0.08,70 -0.035,72 0.08,77] NSEG ti
00297> ( DISTANCE (m), ELEVATION (m))=[0, 94.4]
00298> [70, 94.0]
00299> [71, 93.5]
00300> [72, 94.0]
00301> [77, 94.4]
00302> *%-----|-----|
00303> ADD HYD IDsum=[2], NHYD=["arbuck"], IDs to add=[1 3]
00304> *%-----|-----|
00305> SAVE HYD ID=[2], # OF PCYCLES=[-1], ICASEsh=[1]
00306> HYD_COMMENT=["arbuck"]
00307> *%-----|-----|
00308> ROUTE CHANNEL IDout=[9], NHYD=["VGR2-2"], IDin=[2],
00309> RDT=[5](min),
00310> CHLGTH=[520](m), CHSLOPE=[0.15](%),
00311> FPSLOPE=[0.15](%),
00312> NSEG=[3]
00313> SECNUM=[5.2],
00314> ( SEGROUGH, SEGDIST (m))=[0.08,65.27 -0.035,72.03 0.08,317.3]
00315> ( DISTANCE (m), ELEVATION (m))=
00316> [1.87 94
00317> 3.26 93.815
00318> 25.32 93.589
00319> 40.32 93.586
00320> 53.15 93.49
00321> 65.27 92.99
00322> 67.31 92.06
00323> 69.39 91.93
00324> 69.99 92.03
00325> 70.75 92.68
00326> 72.03 93
00327> 78.14 93
00328> 87.57 92.828
00329> 98.82 93
00330> 131.96 93.341
00331> 152.55 93.318
00332> 220.7 93.525
00333> 262.64 93.983
00334> 274.22 94
00335> 286.88 94
00336> 297.86 93.981
00337> 314.39 94.09
00338> 317.39, 95.09]
00339> *%-----|-----|
00339> CALIB NASHYD ID=[1], NHYD=["VG-6"], DT=[5]min, AREA=[94.2](ha),
00340> DWF=[0](cms), CN/C=[77], IA=[2.9](mm),
00341> N=[3], TP=[3.2]hrs,
00342> RAINFALL=[ , , , ](mm/hr), END=-1
00343> *%-----|-----|
00344> ROUTE CHANNEL IDout=[2], NHYD=["VG-6"], IDin=[1],
00345> RDT=[5](min),
00346> CHLGTH=[600](m), CHSLOPE=[0.18](%),
00347> FPSLOPE=[0.18](%),
00348> SECNUM=[2.1], NSEG=[3]
00349> ( SEGROUGH, SEGDIST (m))=[0.08,700 -0.035,703 0.08,1000] NSE
00350> ( DISTANCE (m), ELEVATION (m))=[0, 94.6]
00351> [700, 94.5]
00352> [701.4, 94.1]
00353> [701.6, 94.1]
00354> [703, 94.5]
00355> [1000, 95.1]

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00356> *%-----|-----|
00357> SAVE HYD ID=[2], # OF PCYCLES=[-1], ICASEsh=[1]
00358> HYD_COMMENT=["VG-6"]
00359> *%-----|-----|
00360> CALIB NASHYD ID=[3], NHYD=["VG-7"], DT=[5]min, AREA=[39.2](ha),
00361> DWF=[0](cms), CN/C=[80], IA=[3.5](mm),
00362> N=[3], TP=[2.9]hrs,
00363> RAINFALL=[ , , , ](mm/hr), END=-1
00364> *%-----|-----|
00365> SAVE HYD ID=[3], # OF PCYCLES=[-1], ICASEsh=[1]
00366> HYD_COMMENT=["VG-7"]
00367> *%-----|-----|
00368> ROUTE CHANNEL IDout=[4], NHYD=["VG-7"], IDin=[3],
00369> RDT=[5](min),
00370> CHLGTH=[1480](m), CHSLOPE=[0.2](%),
00371> FPSLOPE=[0.2](%),
00372> SECNUM=[3.1], NSEG=[3]
00373> ( SEGROUGH, SEGDIST (m))=[0.08,50 -0.035,52 0.08,102] NSEG t
00374> ( DISTANCE (m), ELEVATION (m))=[0,95.2]
00375> [50,95.0]
00376> [51,94.5]
00377> [52,95.0]
00378> [102,95.2]
00379> *%-----|-----|
00380> ADD HYD IDsum=[5], NHYD=["Moore"], IDs to add=[2 4](maximum ten)
00381> *%-----|-----|
00382> SAVE HYD ID=[5], # OF PCYCLES=[-1], ICASEsh=[1]
00383> HYD_COMMENT=["Moore"]
00384> *%-----|-----|
00385> CALIB NASHYD ID=[5], NHYD=["VG-8"], DT=[5]min, AREA=[91.8](ha),
00386> DWF=[0](cms), CN/C=[88], IA=[2.6](mm),
00387> N=[3], TP=[2.1]hrs,
00388> RAINFALL=[ , , , ](mm/hr), END=-1
00389> *%-----|-----|
00390> CALIB STANDHYD ID=[6], NHYD=["VG-9"], DT=[5](min), AREA=[11.4](ha),
00391> XIMP=[0.4], TIMP=[0.5], DWF=[0](cms), LOSS=[1],
00392> Horton: Fo=[76.20](mm/hr), Fc=[13.20](mm/hr),
00393> DCAY=[4.14](/hr), F=[0](mm),
00394> Pervious surfaces: Iaper=[1.5](mm), SLPP=[1.5](%),
00395> LGP=[50](m), MNP=[0.250], SCP=[0](min),
00396> Impervious surfaces: IAimp=[0.8](mm), SLPI=[0.3](%),
00397> LGI=[530](m), MNI=[0.013], SCI=[0](min)
00398> RAINFALL=[ , , , ](mm/hr), END=-1
00399> *%-----|-----|
00400> ADD HYD IDsum=[1], NHYD=["Fortune"], IDs to add=[2 4 5 6 9]
00401> *%-----|-----|
00402> SAVE HYD ID=[1], # OF PCYCLES=[-1], ICASEsh=[1]
00403> HYD_COMMENT=["Fortune"]
00404> *%-----|-----|
00405> ROUTE CHANNEL IDout=[3], NHYD=["VGR2-3"], IDin=[1],
00406> RDT=[5](min),
00407> CHLGTH=[750](m), CHSLOPE=[0.2](%),
00408> FPSLOPE=[0.2](%),
00409> SECNUM=[5.3], NSEG=[3]
00410> ( SEGROUGH, SEGDIST (m))=[0.05,3.22 -0.035,47.84 0.05,77.80]
00411> ( DISTANCE (m), ELEVATION (m))=[0, 93.5]
00412> 3.22, 93
00413> 20.87, 92.5
00414> 42.19, 92
00415> 47.84, 92
00416> 48.60, 92.5
00417> 50.14, 93
00418> 72.67, 93.526
00419> 77.80, 93.5]
00420> *%-----|-----|
00421> CALIB STANDHYD ID=[2], NHYD=["VG-10"], DT=[5](min), AREA=[20.3](ha),
00422> XIMP=[0.4], TIMP=[0.5], DWF=[0](cms), LOSS=[1],
00423> Horton: Fo=[76.20](mm/hr), Fc=[13.20](mm/hr),
00424> DCAY=[4.14](/hr), F=[0](mm),
00425> Pervious surfaces: Iaper=[1.5](mm), SLPP=[1.5](%),
00426> LGP=[50](m), MNP=[0.250], SCP=[0](min),

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00427> Impervious surfaces: IAimp=[0.8](mm), SLPI=[0.3](%),
00428> LGI=[560](m), MNI=[0.013], SCI=[0](min)
00429> RAINFALL=[ , , , ](mm/hr) , END=-1
00430> *%-----|
00431> ADD HYD IDsum=[9], NHYD=["JockVG"], IDs to add=[2 3]
00432> *%-----|
00433> SAVE HYD ID=[9], # OF PCYCLES=[-1], ICASEsh=[1]
00434> HYD_COMMENT=["Flow from Van Gaal Drain at Jock River"]
00435> *%-----|
00436> *% 2 year 24 Hour SCS Type II Storm used in Jock River Model
00437> START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[002]
00438> ["SC24002x.stm"]
00439> *%-----|
00440> *% 5 year 24 Hour SCS Type II Storm used in Jock River Model
00441> START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[005]
00442> ["SC24005x.stm"]
00443> *%-----|
00444> *% 100 year 24 Hour SCS Type II Storm used in Jock River Model
00445> START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[100]
00446> ["SC24100x.stm"]
00447> *%-----|
00448> *% 4 hour - 2 year Chicago Storm
00449> START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[102]
00450> ["CH4H002x.stm"]
00451> *%-----|
00452> *% 4 hour - 5 year Chicago Storm
00453> START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[105]
00454> ["CH4H005x.stm"]
00455> *%-----|
00456> *% 4 hour - 100 year Chicago Storm
00457> START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[199]
00458> ["CH4H100x.stm"]
00459> *%-----|
00460> FINISH
00461>
00462>
00463>
00464>
00465>
```

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00001> 2      Metric units
00002> *#*****
00003> *# SWMHYMO Ver:5.02/Jan 2001 <BETA> / INPUT DATA FILE
00004> *#*****
00005> *# Project Name: [Richmond FPM]      Project Number: [709]
00006> *# Date       : 04-21-2009
00007> *# Revised    : 04-31-2009; 05-25-2009; 07-22-2009; 08-06-2009; 08-31-2009
00008> *#           : 11-16-2009
00009> *# Modeller   : [Bryan Willcott B.Eng.]
00010> *# Company    : J.F. Sabourin and Associates
00011> *# License #   : 3410370
00012> *#*****
00013> *# [BW] April 31, 2009
00014> *# This model is the same as the JFSA summer model with the exception of the
00015> *# storm files used and the CN values have been increased to 95
00016> *#*****
00017> *# [BW] May 25, 2009
00018> *# This model has been updated using revised values for Tp. Previous versions
00019> *# of this model used a calculated Tp=0.6Tc. This model used a calculated
00020> *# Tp=0.67Tc. Manning's n values for the overbanks in the ROUTE CHANNEL
00021> *# commands have been changed to 0.05 for Spring conditions. Design storms
00022> *# have changed to match those used in the Jock River Model
00023> *#*****
00024> *# [BW] July 22, 2009
00025> *# This model has been revised to include "existing" cross section information
00026> *# received from Robinson Consultants. The Cross section revised in the model
00027> *# is Sec 5.2 (channel receiving flow from "arbucks"). Also, channel and
00028> *# floodplain slopes for ROUTE CHANNEL commands were updated to be equal
00029> *#*****
00030> *# [BW] August 6, 2009
00031> *# This model has been revised to include cross section information
00032> *# from Robinson Consultants Engineer's Report July 2003. The cross
00033> *# section revised in the model is Sec 5.1. Cross sections Sec 1.03
00034> *# and Sec 5.3 have also been revised
00035> *#*****
00036> *# [BW] August 31, 2009
00037> *# Model updated to include the proposed DSEL berm. This affects the geometry
00038> *# of Route Channel Sect 5.2 located on the Arbuttle drain. Route Channels 5.2
00039> *# and 1.03 have also been revised to reduce the number of values in the
00040> *# x-y matrix
00041> *#*****
00042> *# [BW] November 16, 2009
00043> *# Model updated to include revised Tp values subsequent to review of
00044> *# memo received from AECOM on Oct. 2, 2009
00045> *#*****
00046> *#
00047> *# 10 day - 2 year storm with snow melt
00048> *# START          TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[002]
00049> *#               ["50021012.STM"]
00050> *#-----|-----|
00051> *# READ STORM    STORM_FILENAME=["STORM.001"]
00052> *#-----|-----|
00053> *# SAVE HYD      ICASEsh=[1] START saving all simulated hydrographs
00054> *#               {All hydrologographs will be saved as NHYD.NRUN}
00055> *#               {Use SAVE HYD with ICASEsh=[-2] to cancel the autosave.}
00056> *#-----|-----|
00057> *#-----|-----|
00058> *#*****
00059> *# Van Gaal / Arbuttle Drain
00060> *#*****
00061> *# DSEL SUBCATCHMENT VG-1 HAS BEEN BROKEN INTO 6 SUB-AREAS (BW)
00062> *#*****
00063> *#-----|-----|
00064> *# CALIB NASHYD  ID=[1], NHYD=["VG-1A"], DT=[5]min, AREA=[311.9](ha),
00065> *#               DWF=[0](cms), CN/C=[95], IA=[3.9](mm),
00066> *#               N=[3], TP=[5.3]hrs,
00067> *#               RAINFALL=[ , , , ](mm/hr), END=-1
00068> *#-----|-----|
00069> *# SAVE HYD      ID=[1], # OF PCYCLES=[-1], ICASEsh=[1]
00070> *#               HYD_COMMENT=["VG-1A"]
00071> *#-----|-----|

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00072> *#*****
00073> *# Tp FOR VG-1B HAS BEEN REVISED TO REFLECT A HYDRAULIC LENGTH OF 1710 m, A
00074> *# LENGTH THAT INCLUDES DISTANCE TO THE VG1-1 CONFLUENCE IN ADDITION TO THE
00075> *# LONGEST FLOW PATH WITHIN VG-1B. THIS IS DONE TO SIMULATE CHANNEL ROUTING
00076> *#*****
00077> *# CALIB NASHYD  ID=[2], NHYD=["VG-1B"], DT=[5]min, AREA=[24.8](ha),
00078> *#               DWF=[0](cms), CN/C=[95], IA=[4.0](mm),
00079> *#               N=[3], TP=[2.7]hrs,
00080> *#               RAINFALL=[ , , , ](mm/hr), END=-1
00081> *#-----|-----|
00082> *#*****
00083> *# VG1-1 IS THE SUM OF FLOWS TO THE CONFLUENCE OF NORTHERN MOST WATERCOURSE IN
00084> *# OUR AREA OF STUDY WITH THE ROADSIDE DITCH ON GARVIN ROAD
00085> *#*****
00086> *#
00087> *# ADD HYD       IDsum=[3], NHYD=["VG1-1"], IDs to add=[1 2]
00088> *#-----|-----|
00089> *# SAVE HYD      ID=[3], # OF PCYCLES=[-1], ICASEsh=[1]
00090> *#               HYD_COMMENT=["VG1-1"]
00091> *#-----|-----|
00092> *# CALIB NASHYD  ID=[4], NHYD=["VG-1D"], DT=[5]min, AREA=[47.8](ha),
00093> *#               DWF=[0](cms), CN/C=[95], IA=[2.5](mm),
00094> *#               N=[3], TP=[1.8]hrs,
00095> *#               RAINFALL=[ , , , ](mm/hr), END=-1
00096> *#-----|-----|
00097> *#*****
00098> *# VG1-2 IS THE SUM OF FLOWS AT THE GARVIN ROAD CROSS CULVERT AND
00099> *# CONSERVATIVELY INCLUDES THE AREA VG-1D, WHICH IS LOCATED JUST DOWNSTREAM
00100> *# OF THE CULVERT
00101> *#*****
00102> *#
00103> *# ADD HYD       IDsum=[5], NHYD=["VG1-2"], IDs to add=[3 4]
00104> *#-----|-----|
00105> *# SAVE HYD      ID=[5], # OF PCYCLES=[-1], ICASEsh=[1]
00106> *#               HYD_COMMENT=["VG1-2"]
00107> *#-----|-----|
00108> *# ROUTE CHANNEL IDout=[6], NHYD=["VG1R-2"], IDin=[5],
00109> *#               RDT=[5](min),
00110> *#               CHLGTH=[865](m), CHSLOPE=[0.15](%),
00111> *#               FPSLOPE=[0.15](%),
00112> *#               NSEG=[3]
00113> *#               ( SEGROUGH, SEGDIST (m))=[0.05,51.41 -0.035,55.58 0.05,228.3
00114> *#               ( DISTANCE (m), ELEVATION (m))=[0, 96.719]
00115> *#               [22.98, 96.598]
00116> *#               [42.45, 96.66]
00117> *#               [47.63, 96.5]
00118> *#               [49.64, 96.424]
00119> *#               [51.41, 96]
00120> *#               [53.36, 95.79]
00121> *#               [55.58, 95.887]
00122> *#               [57.42, 96.242]
00123> *#               [87.69, 96.5]
00124> *#               [119.62, 96.509]
00125> *#               [140.1, 96.601]
00126> *#               [179.39, 96.722]
00127> *#               [200.6, 96.89]
00128> *#               [228.39, 97]
00129> *#-----|-----|
00130> *# CALIB NASHYD  ID=[7], NHYD=["VG-1C"], DT=[5]min, AREA=[211.8](ha),
00131> *#               DWF=[0](cms), CN/C=[95], IA=[3.9](mm),
00132> *#               N=[3], TP=[4.7]hrs,
00133> *#               RAINFALL=[ , , , ](mm/hr), END=-1
00134> *#-----|-----|
00135> *# CALIB NASHYD  ID=[8], NHYD=["VG-1E"], DT=[5]min, AREA=[13.4](ha),
00136> *#               DWF=[0](cms), CN/C=[95], IA=[4.0](mm),
00137> *#               N=[3], TP=[0.64]hrs,
00138> *#               RAINFALL=[ , , , ](mm/hr), END=-1
00139> *#-----|-----|
00140> *#*****
00141> *# VG1-3 IS THE SUM OF FLOWS TO JOY'S ROAD CROSS CULVERT AND CONSERVATIVELY
00142> *# INCLUDES THE AREA VG-1E, WHICH IS LOCATED JUST DOWNSTREAM OF THE CULVERT

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00143> *#*****
00144> *#
00145> ADD HYD          IDsum=[9], NHYD=["VG1-3"], IDs to add=[7 8]
00146> *#-----|-----|
00147> SAVE HYD          ID=[9], # OF PCYCLES=[-1], ICASEsh=[1]
00148>                   HYD_COMMENT=["VG1-3"]
00149> *#-----|-----|
00150> ROUTE CHANNEL     IDout=[10], NHYD=["VGR-3"], IDin=[9],
00151>                   RDT=[5](min),
00152>                   CHLGTH=[630](m),  CHSLOPE=[0.20](%),
00153>                   FPSLOPE=[0.20](%),
00154>                   SECNUM=[1.02],      NSEG=[3]
00155>                   ( SEGROUGH, SEGDIST (m))=[0.05,80.53 -0.035,82.4 0.05,124.53
00156>                   ( DISTANCE (m), ELEVATION (m))=[0,
00157>                   0.61, 97.01
00158>                   3.8, 97.03
00159>                   17.49, 97.18
00160>                   19.18, 97.17
00161>                   26.62, 97.15
00162>                   46.29, 97.12
00163>                   73.97, 97.17
00164>                   76.3, 97.04
00165>                   77.53, 97
00166>                   80.53, 96.86
00167>                   81.38, 96.5
00168>                   82.4, 96.07
00169>                   87.91, 96.07
00170>                   89.65, 96.5
00171>                   90.75, 96.78
00172>                   91.88, 96.91
00173>                   96.2, 97
00174>                   99.01, 97.1
00175>                   119.73, 97.14
00176>                   124.53, 97]
00177> *#-----|-----|
00178> *#*****
00179> *# VG1-4 IS THE SUM OF FLOWS AT THE CONFLUENCE OF THE WATERCOURSE FROM JOY'S
00180> *# ROAD WITH THE MAIN DRAIN
00181> *#*****
00182> *#
00183> ADD HYD          IDsum=[1], NHYD=["VG1-4"], IDs to add=[6 10]
00184> *#-----|-----|
00185> SAVE HYD          ID=[1], # OF PCYCLES=[-1], ICASEsh=[1]
00186>                   HYD_COMMENT=["VG1-4"]
00187> *#-----|-----|
00188> ROUTE CHANNEL     IDout=[2], NHYD=["VGR1-4"], IDin=[1],
00189>                   RDT=[5](min),
00190>                   CHLGTH=[485](m),  CHSLOPE=[0.20](%),
00191>                   FPSLOPE=[0.20](%),
00192>                   SECNUM=[1.03],      NSEG=[3]
00193>                   ( SEGROUGH, SEGDIST (m))=[0.05,44.17 -0.035,53.58 0.05,243.3
00194>                   ( DISTANCE (m), ELEVATION (m))=
00195>                   [-44.2, 95.7
00196>                   0, 95.5
00197>                   19.69, 95.421
00198>                   27.91, 95.5
00199>                   31.73, 95.5
00200>                   32.29, 95.325
00201>                   32.71, 95.5
00202>                   41.04, 95.5
00203>                   44.17, 95.449
00204>                   45.63, 95.389
00205>                   48.22, 95
00206>                   48.54, 94.882
00207>                   49.35, 94.5
00208>                   49.64, 94.311
00209>                   50.46, 94.497
00210>                   52.21, 94.993
00211>                   53.58, 95.406
00212>                   55.08, 95.333
00213>                   55.94, 95.157

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00214>                   76.35, 95.275
00215>                   131, 95.403
00216>                   213.2, 95.5
00217>                   243.3, 95.8]
00218> *#-----|-----|
00219> CALIB NASHYD       ID=[3], NHYD=["VG-1F"], DT=[5]min, AREA=[117.7](ha),
00220>                   DWF=[0](cms),  CN/C=[95], IA=[2.6](mm),
00221>                   N=[3], TP=[2.9]hrs,
00222>                   RAINFALL=[ , , , ](mm/hr),  END=-1
00223> *#-----|-----|
00224> *#*****
00225> *# VG1 IS THE SUM OF FLOWS AT THE CONFLUENCE OF THE VAN GAAL WEST MAIN DRAIN
00226> *# WITH VAN GAAL WEST TRIBUTARY
00227> *#*****
00228> *#
00229> ADD HYD          IDsum=[4], NHYD=["VG1"], IDs to add=[2 3]
00230> *#-----|-----|
00231> SAVE HYD          ID=[4], # OF PCYCLES=[-1], ICASEsh=[1]
00232>                   HYD_COMMENT=["VG1"]
00233> *#-----|-----|
00234> ROUTE CHANNEL     IDout=[5], NHYD=["VGR2-1"], IDin=[4],
00235>                   RDT=[5](min),
00236>                   CHLGTH=[755](m),  CHSLOPE=[0.2](%),
00237>                   FPSLOPE=[0.2](%),
00238>                   SECNUM=[5.1],      NSEG=[3]
00239>                   ( SEGROUGH, SEGDIST (m))=[0.05,98.046 -0.035,105.496 0.05,51
00240>                   ( DISTANCE (m), ELEVATION (m))=[0,
00241>                   20, 96.11
00242>                   26.106, 94.5
00243>                   41.686, 94.465
00244>                   63.506, 94.427
00245>                   84.666, 94.492
00246>                   95.476, 94.363
00247>                   97.736, 94
00248>                   98.046, 93.967
00249>                   100.336, 92.8193
00250>                   101.536, 92.8193
00251>                   102.736, 92.8193
00252>                   105.496, 94.199
00253>                   127.006, 94.345
00254>                   142.116, 94.5
00255>                   148.376, 94.568
00256>                   478.406, 94.7
00257>                   518.306, 95]
00258> *#-----|-----|
00259> CALIB NASHYD       ID=[6], NHYD=["VG-2"], DT=[5]min, AREA=[63.1](ha),
00260>                   DWF=[0](cms),  CN/C=[95], IA=[2.8](mm),
00261>                   N=[3], TP=[1.6]hrs,
00262>                   RAINFALL=[ , , , ](mm/hr),  END=-1
00263> *#-----|-----|
00264> ROUTE CHANNEL     IDout=[7], NHYD=["PerN"], IDin=[6],
00265>                   RDT=[5](min),
00266>                   CHLGTH=[550](m),  CHSLOPE=[0.2](%),
00267>                   FPSLOPE=[0.2](%),
00268>                   SECNUM=[1.1],      NSEG=[3]
00269>                   ( SEGROUGH, SEGDIST (m))=[0.05,70 -0.035,72 0.05,77] NSEG ti
00270>                   ( DISTANCE (m), ELEVATION (m))=[0, 94.4]
00271>                   [70, 94.0]
00272>                   [71, 93.5]
00273>                   [72, 94.0]
00274>                   [77, 94.4]
00275> *#-----|-----|
00276> CALIB NASHYD       ID=[8], NHYD=["VG-3"], DT=[5]min, AREA=[40.6](ha),
00277>                   DWF=[0](cms),  CN/C=[95], IA=[2.5](mm),
00278>                   N=[3], TP=[1.6]hrs,
00279>                   RAINFALL=[ , , , ](mm/hr),  END=-1
00280> *#-----|-----|
00281> CALIB STANDHYD     ID=[9], NHYD=["VG-4"], DT=[5](min), AREA=[24.6](ha),
00282>                   XIMP=[0.4], TIMP=[0.5], DWF=[0](cms), LOSS=[1],
00283>                   Horton: Fo=[76.20](mm/hr), Fc=[13.20](mm/hr),
00284>                   DCAY=[4.14](/hr), F=[0](mm),

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00285> Pervious surfaces: IAPER=[1.5](mm), SLPP=[1.5](%),
00286> LGP=[35](m), MNP=[0.250], SCP=[0](min),
00287> Impervious surfaces: IAimp=[0.8](mm), SLPI=[0.3](%),
00288> LGI=[1000](m), MNI=[0.013], SCI=[0](min)
00289> RAINFALL=[ , , , ](mm/hr) , END=-1
00290> *%-----|-----|
00291> ADD HYD IDsum=[1], NHYD=["perthst"], IDs to add=[5 7 8 9]
00292> *%-----|-----|
00293> SAVE HYD ID=[1], # OF PCYCLES=[-1], ICASEsh=[1]
00294> HYD_COMMENT=["perthst"]
00295> *%-----|-----|
00296> CALIB NASHYD ID=[2], NHYD=["VG-5"], DT=[5]min, AREA=[34.4](ha),
00297> DWF=[0](cms), CN/C=[95], IA=[3.0](mm),
00298> N=[3], TP=[2.3]hrs,
00299> RAINFALL=[ , , , ](mm/hr) , END=-1
00300> *%-----|-----|
00301> ROUTE CHANNEL IDout=[3], NHYD=["PerS"], IDin=[2],
00302> RDT=[5](min),
00303> CHLGT=[550](m), CHSLOPE=[0.2](%),
00304> FPSLOPE=[0.2](%),
00305> SECNUM=[1.1], NSEG=[3]
00306> ( SEGROUGH, SEGDIST (m))=[0.05,70 -0.035,72 0.05,77] NSEG ti
00307> ( DISTANCE (m), ELEVATION (m))=[0, 94.4]
00308> [70, 94.0]
00309> [71, 93.5]
00310> [72, 94.0]
00311> [77, 94.4]
00312> *%-----|-----|
00313> ADD HYD IDsum=[2], NHYD=["ar buck"], IDs to add=[1 3]
00314> *%-----|-----|
00315> SAVE HYD ID=[2], # OF PCYCLES=[-1], ICASEsh=[1]
00316> HYD_COMMENT=["ar buck"]
00317> *%-----|-----|
00318> ROUTE CHANNEL IDout=[9], NHYD=["VGR2-2"], IDin=[2],
00319> RDT=[5](min),
00320> CHLGT=[520](m), CHSLOPE=[0.15](%),
00321> FPSLOPE=[0.15](%),
00322> SECNUM=[5.2], NSEG=[3]
00323> ( SEGROUGH, SEGDIST (m))=[0.05,65.27 -0.035,72.03 0.05,317.3]
00324> ( DISTANCE (m), ELEVATION (m))=
00325> [1.87 94
00326> 3.26 93.815
00327> 25.32 93.589
00328> 40.32 93.586
00329> 53.15 93.49
00330> 65.27 92.99
00331> 67.31 92.06
00332> 69.39 91.93
00333> 69.99 92.03
00334> 70.75 92.68
00335> 72.03 93
00336> 78.14 93
00337> 87.57 92.828
00338> 98.82 93
00339> 131.96 93.341
00340> 152.55 93.318
00341> 220.7 93.525
00342> 262.64 93.983
00343> 274.22 94
00344> 286.88 94
00345> 297.86 93.981
00346> 314.39 94.09
00347> 317.39, 95.09]
00348> *%-----|-----|
00349> CALIB NASHYD ID=[1], NHYD=["VG-6"], DT=[5]min, AREA=[94.2](ha),
00350> DWF=[0](cms), CN/C=[95], IA=[2.9](mm),
00351> N=[3], TP=[3.2]hrs,
00352> RAINFALL=[ , , , ](mm/hr) , END=-1
00353> *%-----|-----|
00354> ROUTE CHANNEL IDout=[2], NHYD=["VG-6"], IDin=[1],
00355> RDT=[5](min),

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00356> CHLGT=[600](m), CHSLOPE=[0.18](%),
00357> FPSLOPE=[0.18](%),
00358> SECNUM=[2.1], NSEG=[3]
00359> ( SEGROUGH, SEGDIST (m))=[0.05,700 -0.035,703 0.05,1000] NSE
00360> ( DISTANCE (m), ELEVATION (m))=[0, 94.6]
00361> [700, 94.5]
00362> [701.4, 94.1]
00363> [701.6, 94.1]
00364> [703, 94.5]
00365> [1000, 95.1]
00366> *%-----|-----|
00367> SAVE HYD ID=[2], # OF PCYCLES=[-1], ICASEsh=[1]
00368> HYD_COMMENT=["VG-6"]
00369> *%-----|-----|
00370> CALIB NASHYD ID=[3], NHYD=["VG-7"], DT=[5]min, AREA=[39.2](ha),
00371> DWF=[0](cms), CN/C=[95], IA=[3.5](mm),
00372> N=[3], TP=[2.9]hrs,
00373> RAINFALL=[ , , , ](mm/hr) , END=-1
00374> *%-----|-----|
00375> SAVE HYD ID=[3], # OF PCYCLES=[-1], ICASEsh=[1]
00376> HYD_COMMENT=["VG-7"]
00377> *%-----|-----|
00378> ROUTE CHANNEL IDout=[4], NHYD=["VG-7"], IDin=[3],
00379> RDT=[5](min),
00380> CHLGT=[1480](m), CHSLOPE=[0.2](%),
00381> FPSLOPE=[0.2](%),
00382> SECNUM=[3.1], NSEG=[3]
00383> ( SEGROUGH, SEGDIST (m))=[0.05,50 -0.035,52 0.05,102] NSEG t
00384> ( DISTANCE (m), ELEVATION (m))=[0,95.2]
00385> [50,95.0]
00386> [51,94.5]
00387> [52,95.0]
00388> [102,95.2]
00389> *%-----|-----|
00390> ADD HYD IDsum=[5], NHYD=["Moore"], IDs to add=[2 4](maximum ten)
00391> *%-----|-----|
00392> SAVE HYD ID=[5], # OF PCYCLES=[-1], ICASEsh=[1]
00393> HYD_COMMENT=["Moore"]
00394> *%-----|-----|
00395> CALIB NASHYD ID=[5], NHYD=["VG-8"], DT=[5]min, AREA=[91.8](ha),
00396> DWF=[0](cms), CN/C=[95], IA=[2.6](mm),
00397> N=[3], TP=[2.1]hrs,
00398> RAINFALL=[ , , , ](mm/hr) , END=-1
00399> *%-----|-----|
00400> CALIB STANDHYD ID=[6], NHYD=["VG-9"], DT=[5](min), AREA=[11.4](ha),
00401> XIMP=[0.4], TIMP=[0.5], DWF=[0](cms), LOSS=[1],
00402> Horton: Fo=[76.20](mm/hr), Fc=[13.20](mm/hr),
00403> DCAY=[4.14](/hr), F=[0](mm),
00404> Pervious surfaces: IAPER=[1.5](mm), SLPP=[1.5](%),
00405> LGP=[50](m), MNP=[0.250], SCP=[0](min),
00406> Impervious surfaces: IAimp=[0.8](mm), SLPI=[0.3](%),
00407> LGI=[530](m), MNI=[0.013], SCI=[0](min)
00408> RAINFALL=[ , , , ](mm/hr) , END=-1
00409> *%-----|-----|
00410> ADD HYD IDsum=[1], NHYD=["Fortune"], IDs to add=[2 4 5 6 9]
00411> *%-----|-----|
00412> SAVE HYD ID=[1], # OF PCYCLES=[-1], ICASEsh=[1]
00413> HYD_COMMENT=["Fortune"]
00414> *%-----|-----|
00415> ROUTE CHANNEL IDout=[3], NHYD=["VGR2-3"], IDin=[1],
00416> RDT=[5](min),
00417> CHLGT=[750](m), CHSLOPE=[0.2](%),
00418> FPSLOPE=[0.2](%),
00419> SECNUM=[5.3], NSEG=[3]
00420> ( SEGROUGH, SEGDIST (m))=[0.05,3.22 -0.035,47.84 0.05,77.80]
00421> ( DISTANCE (m), ELEVATION (m))=[0, 93.5]
00422> 3.22, 93
00423> 20.87, 92.5
00424> 42.19, 92
00425> 47.84, 92
00426> 48.60, 92.5

```

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00427>                               50.14,    93
00428>                               72.67,    93.526
00429>                               77.80,    93.5]
00430> *-----|-----|
00431> CALIB STANDHYD | ID=[2], NHYD=["VG-10"], DT=[5](min), AREA=[20.3](ha),
00432> | XIMP=[0.4], TIMP=[0.5], DWF=[0](cms), LOSS=[1],
00433> | Horton: Fo=[76.20](mm/hr), Fc=[13.20](mm/hr),
00434> |          DCAY=[4.14](/hr), F=[0](mm),
00435> | Pervious surfaces: IAper=[1.5](mm), SLPP=[1.5](%),
00436> |          LGP=[50](m), MNP=[0.250], SCP=[0](min),
00437> | Impervious surfaces: IAimp=[0.8](mm), SLPI=[0.3](%),
00438> |          LGI=[560](m), MNI=[0.013], SCI=[0](min)
00439> | RAINFALL=[ , , , ](mm/hr) , END=-1
00440> *-----|-----|
00441> ADD HYD | IDsum=[9], NHYD=["JockVG"], IDs to add=[2 3]
00442> *-----|-----|
00443> SAVE HYD | ID=[9], # OF PCYCLES=[-1], ICASEsh=[-1]
00444> | HYD_FILENAME=["JockVG"]
00445> | HYD_COMMENT=["Flow from Van Gaal at Jock River"]
00446> *-----|-----|
00447> *% 10 day - 5 year storm with snow melt
00448> START | TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[005]
00449> | ["50051012.STM"]
00450> *-----|-----|
00451> *% 10 day - 100 year storm with snow melt
00452> START | TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[100]
00453> | ["51001012.STM"]
00454> *-----|-----|
00455> FINISH
00456>
00457>
00458>
00459>
00460>

```