MODFLOW DATA MODEL v3.0

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Arc Hydro Groundwater

Cell2D
HydroID HydroCode IJ	Long Int. Text Long Int.

Node2D
HydroID HydroCode IJ	Long Int. Text Long Int.

CellIndex
I J K IJ IJK	Long Int. Long Int. Long Int. Long Int. Long Int.

Cell3D
HydroID HydroCode IJK	Long Int. Text Long Int.

Node3D
HydroID HydroCode IJK	Long Int. Text Long Int.

Global Settings

MDFGlobals
MODFLOW_Version DataModelVersion NameFilePath	Text Text Text

NameFile
FileType Nunit Fname Use	Text Long Int. Text Short Int.

Basic (BAS6)

BASVars
Options HNOFLO HEADNG1 HEADNG2	Text Double Text Text

Basic
IJK IBOUND STRT	Long Int. Long Int. Double

BasicArrayMult
Layer AM_IBOUND AM_STRT	Long Int. Long Int. Double

Discretization (DIS)

DISVars
NLAY NROW NCOL ITMUNI LENUNI RefTime	Long Int. Long Int. Long Int. Short Int. Short Int. Date

DELRC
Direction Num Width	Text Long Int. Double

TopElev
IJK TopElev	Long Int. Double

BotmElev
IJK BotmElev BotmElevCBD	Long Int. Double Double

DISLayers
Layer LAYCBD AM_TopElev AM_BotmElev AM_BotmElevCBD	Long Int. Short Int. Double Double Double

StressPeriods
SPID PERLEN NSTP TSMULT SSorTr RIV_ITMP WEL_ITMP DRN_ITMP GHB_ITMP CHD_ITMP RCH_INRECH RCH_INIRCH EVT_INSURF EVT_INEVTR EVT_INEXDP EVT_INIEVT STR_ITMP STR_IRDFLG STR_IPTFLG SFR_ITMP SFR_IRDFLG SFR_IPTFLG LAK_ITMP LAK_ITMP1 LAK_LWRT MNW1_ITMP DRT_ITMP ETS_INETSS ETS_INETSR ETS_INETSX ETS_INIETS ETS_INSGDF	Long Int. Double Long Int. Double Text Short Int.

Output Control (OC)

OCVars
IHEDFM IDDNFM IHEDUN IDDNUN IBDOPT IAUXSV	Short Int. Short Int. Long Int. Long Int. Long Int. Short Int.

OCTS
SPID TSNum IHDDFL IBUDFL ICBCFL Hdpr Ddpr Hdsv Ddsv	Long Int. Long Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int.

CBFlags
IBCFCB ILPFCB IRIVCB IWELCB IDRNCB IGHBCB IRCHCB IEVTCB ILKCB IHUFCB ISTCB1_STR ISTCB2_STR ISTCB1_SFR ISTCB2_SFR MNW1CB IDRTCB IETSCB IUZFCB1 IUZFCB2	Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int. Short Int.

Gaging Station File (GAGE)

GAGSFR
GAGESEG GAGERCH UNIT OUTTYPE	Long Int. Long Int. Short Int. Short Int.

GAGLAK
LAKE UNIT OUTTYPE	Long Int. Short Int. Short Int.

Layer-Property Flow (LPF)

LPFVars
HDRY WETFCT IWETIT IHDWET	Double Double Long Int. Short Int.

LPFLayers
Layer LAYTYP LAYAVG CHANI LAYVKA LAYWET AM_HK AM_HANI AM_VKA AM_Ss AM_Sy AM_WETDRY AM_VKCB	Long Int. Short Int. Short Int. Double Short Int. Short Int. Double Double Double Double Double Double Double

LPFProperties
IJK HK HANI VKA Ss Sy WETDRY VKCB	Long Int. Double Double Double Double Double Double Double

Unsaturated Zone Flow (UZF)

UZFVars
NUZTOP IUZFOPT IRUNFLG IETLFG NTRAIL2 NSETS2 NUZGAG SURFDEP	Short Int. Short Int. Short Int. Short Int. Long Int. Long Int. Long Int. Double

UZFArrayMult
AM_IUZFBND AM_IRUNBND AM_VKS AM_EPS AM_THTS AM_THTI	Long Int. Long Int. Double Double Double Double

UZFGages
IUZROW IUZCOL IFTUNIT IUZOPT	Long Int. Long Int. Long Int. Long Int.

UZFArrays
IJ IUZFBND IRUNBND VKS EPS THTS THTI	Long Int. Long Int. Long Int. Double Double Double Double

UZFStressArrays
IJ SPID FINF PET EXTDP EXTWC	Long Int. Long Int. Double Double Double Double

UZFStressArrayMult
SPID AM_FINF AM_PET AM_EXTDP AM_EXTWC NUZF1 NUZF2 NUZF3 NUZF4	Long Int. Double Double Double Double Short Int. Short Int. Short Int. Short Int.

Block-Centered Flow (BCF6)

BCFVars
HDRY IWDFLG WETFCT IWETIT IHDWET	Double Short Int. Double Long Int. Short Int.

BCFLayers
Layer LAYAVG LAYCON TRPY AM_Sf1 AM_Tran AM_HY AM_Vcont AM_Sf2 AM_WETDRY	Long Int. Short Int. Short Int. Double Double Double Double Double Double Double

BCFProperties
IJK HY Tran Vcont Sf1 Sf2 WETDRY	Long Int. Double Double Double Double Double Double

Hydrogeologic Unit Flow (HUF2)

HUFVars
HDRY NHUF IOHUFHEADS IOHUFFLOWS WETFCT IWETIT IHDWET	Double Long Int. Short Int. Short Int. Double Long Int. Short Int.

HUFLayers
Layer LTHUF LAYWT AM_WETDRY	Long Int. Short Int. Short Int. Double

HUFUnits
HGUID HGUNAME HGUHANI HGUVANI PRINTCODE PRINTFLAGS AM_Top AM_Thick PRINTCODE_HK PRINTCODE_HANI PRINTCODE_VK PRINTCODE_Ss PRINTCODE_Sy	Long Int. Text Double Double Short Int. Short Int. Double Double Short Int. Short Int. Short Int. Short Int. Short Int.

HUFUnitProps
IJK HGUID Top Thick	Long Int. Long Int. Double Double

HUFWetDry
IJK WETDRY	Long Int. Double

Solvers

SIP
MXITER NPARM ACCL HCLOSE IPCALC WSEED IPRSIP	Long Int. Long Int. Double Double Short Int. Double Long Int.

DE4
ITMX MXUP MXLOW MXBW IFREQ MUTD4 ACCL HCLOSE IPRD4	Long Int. Long Int. Long Int. Long Int. Short Int. Short Int. Double Double Long Int.

SOR
MXITER ACCL HCLOSE IPRSOR	Long Int. Double Double Long Int.

PCG
MXITER ITER1 NPCOND HCLOSE RCLOSE RELAX NBPOL IPRPCG MUTPCG DAMP	Long Int. Long Int. Short Int. Double Double Double Short Int. Long Int. Short Int. Double

GMG
RCLOSE IITER HCLOSE MXITER DAMP IADAMP IOUTGMG ISM ISC RELAX	Double Long Int. Double Long Int. Double Short Int. Short Int. Short Int. Short Int. Double

LMG
STOR1 STOR2 STOR3 ICG MXITER MXCYC BCLOSE DAMP IOUTAMG DUP DLOW	Double Double Double Short Int. Long Int. Long Int. Double Double Short Int. Double Double

Lake (LAK3)

LAKVars
THETA NSSITR SSCNCR	Double Short Int. Double

LAKStages
LakeID STAGES SSMN SSMX	Long Int. Double Double Double

LAKRates
SPID LakeID PRCPLK EVAPLK RNF WTHDRW SSMN SSMX	Long Int. Long Int. Double Double Double Double Double Double

LAKArrays
IJK SPID LKARR BDLKNC	Long Int. Long Int. Long Int. Double

LAKSublakes
SPID SystemID ISUB SILLVT	Long Int. Long Int. Long Int. Double

Streamflow-Routing (SFR2)

SFRVars
CONST DLEAK	Double Double

SFRReaches
IJK ISEG IREACH RCHLEN	Long Int. Long Int. Long Int. Double

SFRFlowTab
SPID NSEG FLOWTAB DPTHTAB WDTHTAB	Long Int. Long Int. Double Double Double

SFRSegments
SPID NSEG ICALC OUTSEG IUPSEG IPRIOR NSTRPTS FLOW RUNOFF ETSW PPTSW ROUGHCH ROUGHBK CDPTH FDPTH AWDTH BWDTH HCOND1 THICKM1 ELEVUP WIDTH1 DEPTH1 HCOND2 THICKM2 ELEVDN WIDTH2 DEPTH2	Long Int. Long Int. Short Int. Long Int. Long Int. Short Int. Short Int. Double

SFRXsect
SPID NSEG XCPT1 ZCPT1 XCPT2 ZCPT2 XCPT3 ZCPT3 XCPT4 ZCPT4 XCPT5 ZCPT5 XCPT6 ZCPT6 XCPT7 ZCPT7 XCPT8 ZCPT8	Long Int. Long Int. Double Double Double Double Double Double Double Double Double Double Double Double Double Double Double Double

List-Based Stress Packages

RIV
IJK SPID Stage Cond Rbot IFACE Condfact SourceID LinearScale	Long Int. Long Int. Double Double Double Long Int. Double Long Int. Double

CHD
IJK SPID Shead EheadShdfact Ehdfact SourceID LinearScale	Long Int. Long Int. Double Double Double Double Long Int. Double

WEL
IJK SPID Q Qfact IFACE SourceID LinearScale	Long Int. Long Int. Double Double Long Int. Long Int. Double

DRT
IJK SPID Elevation Cond IFACE Condfact LayR RowR ColR Rfprop SourceID LinearScale	Long Int. Long Int. Double Double Long Int. Double Long Int. Long Int. Long Int. Double Long Int. Double

DRN
IJK SPID Elevation Cond IFACE Condfact SourceID LinearScale	Long Int. Long Int. Double Double Long Int. Double Long Int. Double

GHB
IJK SPID Bhead Cond IFACE Condfact SourceID LinearScale	Long Int. Long Int. Double Double Long Int. Double Long Int. Double

HFB6
IJK1 IJK2 Hydchr Factor SourceID	Long Int. Long Int. Double Double Long Int.

Array-Based Stress Packages

Recharge (RCH)

RCHVars
NRCHOP	Short Int.

RCHArrays
IJ SPID RECH IRCH	Long Int. Long Int. Double Long Int.

RCHArrayMult
SPID AM_RECH AM_IRCH	Long Int. Double Long Int.

Evapotranspiration (EVT)

EVTVars
NEVTOP	Short Int.

EVTArrays
IJ SPID SURF EVTR EXPD IEVT	Long Int. Long Int. Double Double Double Long Int.

EVTArrayMult
SPID AM_SURF AM_EVTR AM_EXPD AM_IEVT	Long Int. Double Double Double Long Int.

EvapoTrans Segments (ETS)

ETSVars
NETSOP NETSEG	Short Int. Long Int.

ETSArrays
IJ SPID ETSS ETSR ETSX IETS	Long Int. Long Int. Double Double Double Long Int.

ETSArrayMult
SPID AM_ETSS AM_ETSR AM_ETSX AM_IETS	Long Int. Double Double Double Long Int.

ETSSegArrays
IJ SPID SEGID PXDP PETM	Long Int. Long Int. Long Int. Double Double

ETSSegArrayMult
SPID SEGID AM_PXDP AM_PETM	Long Int. Long Int. Double Double

SEN, PES Processes

SEN
ISENALL IUHEAD IPRINTS ISENSU ISENPU ISENFM	Short Int. Short Int. Short Int. Short Int. Short Int. Short Int.

PES
MAXITER MAXCHANGE TOL SOSC IBEFLG IYCFLG IOSTAR NOPT NFIT SOSR RMAR RMARM IAP IPRCOV IPRINT LPRINT CSA FCONV LASTX	Double Double Double Double Short Int. Short Int. Short Int. Short Int. Long Int. Double Double Double Short Int. Short Int. Short Int. Short Int. Double Double Double

Output

OutputFiles
FileType Description Format Compress File Path	Text Text Text Text Blob Text

OutputTime
TimeID SPNum TSNum TotalTime PeriodTime AbsoluteTime	Long Int. Long Int. Long Int. Double Double Date

OutputFlow
TimeID IJK FlowType Flow	Long Int. Long Int. Short Int. Double

OutputHead
TimeID IJK Head	Long Int. Long Int. Double

OutputDrawdown
TimeID IJK Drawdown	Long Int. Long Int. Double

Parameters

Params
ParamID PARNAM PARTYPE TableCode FieldCode Parval B Keyval BL BU BSCAL LN ISENS LogInterp LogMinVal Tied Source	Long Int. Text Text Text Text Double Double Double Double Double Double Short Int. Short Int. Short Int. Double Text Short Int.

PilotPts
ParamID PointName Parval B ISENS MultID SourceID	Long int. Text Double Double Short Int. Long Int. Long Int.

ParInstSP
ParInstID SPID	Long Int. Long Int.

ParInstances
ParInstID InstName ParamID	Long Int. Text Long Int.

Clusters
ClusterID ParInstID Layer ZoneID MultID HGUNAME	Long Int. Long Int. Long Int. Long Int. Long Int. Text

IZ
ClusterID IZ	Long Int. Long Int.

ZoneNames
ZoneID ZoneName ArrayMult	Long Int. Text Long Int.

Zones
ZoneID IJ IZON	Long Int. Long Int. Long Int.

Multipliers
MultID IJ RMLT	Long Int. Long Int. Double

MultNames
MultID MultName ArrayMult Function	Long Int. Text Long Int. Text

Stream (STR6)

STRVars
ICALC CONST	Short Int. Double

STRReaches
IJK SPID Seg Reach Flow Stage Cond Sbot Stop Width Slope Rough Condfact SourceID LinearScale	Long Int. Long Int. Long Int. Long Int. Double Double Double Double Double Double Double Double Double Long Int. Double

STRItrib
Seg SPID Itrib	Long Int. Long Int. Long Int.

STRIupseg
Seg SPID Iupseg	Long Int. Long Int. Long Int.

Observations

OBSVars
OUTNAM ISCALS TOMULTH EVH IUHOBSV HOBDRY TOMULTGB EVFGB IUGBOBSV TOMULTDR EVFDR IUDROBSV TOMULTRV EVFRV IURVOBSV TOMULTCH EVFCH IUCHOBSV TOMULTST EVFST IUSTOBSV TOMULTDT EVFDT	Text Long Int. Double Double Long Int. Double Double Double Long Int. Double Double Long Int. Double Double Long Int. Double Double Long Int. Double Double Long Int. Double Double

HOB
HOBID OBSNAM IJ ROFF COFF ITT	Long Int. Text Long Int. Double Double Short Int.

HOBLayers
HOBID Layer PR	Long Int. Long Int. Double

HOBTimes
HOBID OBSNAM IREFSP TOFFSET HOBS HSIM STATh STATdd STATFLAG PLOTSYMBOL	Long Int. Text Long Int. Double Double Double Double Double Short Int. Long Int.

FLOB
FLOBID FLOBType OBSNAM IREFSP TOFFSET HOBS HSIM STATISTIC STATFLAG PLOTSYMBOL	Long Int. Text Text Long Int. Double Double Double Double Short Int. Long Int.

FLOBFactors
FLOBID IJK Factor	Long Int. Long Int. Double

Multi-Node Well (MNW1)

MNW1
IJK SPID WellID Qdes QwVal Rw Skin Hlim Href DD Lwgrp Cp_C QCUT Qfrcmn Qfrcmx SITE	Long Int. Long Int. Long Int. Double Double Double Double Double Double Long Int. Long Int. Double Long Int. Double Double Text

MNW1Vars
IWELPT NOMOITER Kspref LOSSTYPE PLossMNW PREFIX WEL1_FILE Iunw1 BYNODE_FILE Iunby BYNODE_ALLTIME QSUM_FILE Iunqs QSUM_ALLTIME	Short Int. Long Int. Long Int. Text Double Text Text Long Int. Text Long Int. Short Int. Text Long Int. Short Int.