APPENDIX C
List of Electronic Files Used for Groundwater Model (compiled by Applied Hydrology and Associates, Inc.) and Instructions for Running the Model

Electronic Files Used for Groundwater Model

File Name	File Type	Description
		Model Support Files
99PITAR1	AutoCAD (.dwg)	GAGMO outline of mine pit and backfill in Area 1
99PITAR2	AutoCAD (.dwg)	GAGMO outline of mine pit and backfill in Area 2
99PITAR3	AutoCAD (.dwg)	GAGMO outline of mine pit and backfill in Area 3
99PITAR4	AutoCAD (.dwg)	GAGMO outline of mine pit and backfill in Area 4
99PITAR5	AutoCAD (.dwg)	GAGMO outline of mine pit and backfill in Area 5
AllUnits	Excel	Goolsby data modified by AHA to create model layer elevations
alluvium	DXF	Alluvium in the PRB
alluvium_cropped	DXF	Alluvium in the PRB - used for the Caballo Creek Model
Allwellspre2000_8-14-02	DBF	DBF for associated .shp listing allo f the pre Year 2000 wells
AllWellsPre2002	DXF	Locations of all pre-2002 model wells
APPHYD 3847	Excel	Goolsby, Finley, and Assoc. coal seam elevations for Townships 38 through 47
APPHYD 38N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 38N
APPHYD 39N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 39N
APPHYD 40N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 40N
APPHYD 41N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 41N
APPHYD 43N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 43N
APPHYD 44N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 44N
APPHYD 45N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 45N
APPHYD 46N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 46N
APPHYD 47N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 47N
APPHYD 4853	Excel	Goolsby, Finley, and Assoc. coal seam elevations for Townships 48 through 53
APPHYD 48N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 48N
APPHYD 49N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 49N
APPHYD 51N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 51N
APPHYD 52N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 52N
APPHYD 53N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 53N
APPHYD 53N2	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 53N
APPHYD 54N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 54N
APPHYD 55N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 55N
APPHYD 56N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 56N
APPHYD 57N	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units at 57N
APPHYD MONT	Excel	Goolsby, Finley, and Assoc. coal seam elevations for the first township in Montana across the border
APPHYD NS CENTRAL	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units North to South in central part of PRB
APPHYD NS EAST	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units North to South in east part of PRB
APPHYD NS WEST	Acrobat PDF	Goolsby, Finley, and Assoc. geologic cross-section showing coal units North to South in west part of PRB
APPLIED HYROLOGY 54-57n	Excel	Goolsby, Finley, and Assoc. coal seam elevations for Townships 54 through 57
AREA1	AutoCAD (.dwg)	GAGMO drawdown contours for Area 1
Area1_DD	AutoCAD (.dwg)	Areal drawdown
AREA1-95DD_UTM	AutoCAD (.dwg)	GAGMO drawdown contours for Area 1 in UTM Z13m NAD 27 coordinates
AREA2	AutoCAD (.dwg)	GAGMO drawdown contours for Area 2
AREA3	AutoCAD (.dwg)	GAGMO drawdown contours for Area 3
AREA4	AutoCAD (.dwg)	GAGMO drawdown contours for Area 4
AREA5	AutoCAD (.dwg)	GAGMO drawdown contours for Area 5
Areas and Mines	DXF	Active mine pit outlines and GAGMO 15 Year drawdown (1980 to 1995)
Assign_Layer_macro	Excel	Excel Macro used to assign model layers to wells
BLM_monitoring_weldata_arp_02	Excel	BLM monitoring well data up to April 2002
buff_projwells_24sept	DBF	DBF for associated .shp file used to create area of development

Electronic Files Used for Groundwater Model

File Name	File Type	Description
01 buff_projwells_24sept01	SHX	SHX for associated .shp file used to create area of development
buffwells_exist_permitted_all_merge_17oct	DBF	DBF for associated .shp file used to create area of development
buffwells_exist_permitted_all_merge_17oct	SHX	SHX for associated .shp file used to create area of development
Calibration Nodes and Layer	DXF	Model Nodes used to calibrate transient model to reported production
CBM_Drain_Nodes	DXF	Locations of existing, permitted, and proposed CBM wells represented as drain boundaries in the model.
cbm_pads_existing	DBF	DBF for associated .shp file used to locate existing CBM well pads
cbm_pads_existing	DXF	DXF file create from .shp file
cbm_pads_existing	SBN	SBN file for associated .shp file used to locate existing CBM well pads
cbm_pads_existing	SBX	SBX file for associated .shp file used to locate existing CBM well pads
cbm_pads_existing	SHX	SHX file for associated .shp file used to locate existing CBM well pads
cbm_wells_prop_2002_v2	DBF	DBF for associated .shp file used to locate proposed CBM well pads
cbm_wells_prop_2002_v2	SBN	SBN for associated .shp file used to locate proposed CBM well pads
cbm_wells_prop_2002_v2	SBX	SBX for associated .shp file used to locate proposed CBM well pads
cbm_wells_prop_2002_v2	SHX	SHX for associated .shp file used to locate proposed CBM well pads
cbmdrns3	Fortran Executable	Program used to create drain boundary shchedules for input into MODFLOW
CBMWells-Access2000--7-20-2001	Access (.mdb)	WOGCC CBM database from 7-20-2001. Contains additional tables and queries created by AHA and updated WOGC information edited by Joe Meyer of the BLM
Constratined PRB Aq Tests Results083002	Excel	Summary of aquifer test data within PRB.
Counties	DXF	Counties of the PRB
Daddow Water Level Data Wyodak	Excel	Table of Daddow (1986) data some which was used for steady state calibration.
Anderson Coal Bed Drains	Access (.mdb)	AHA created database used to place CBM wells and coal mines in the model as drain boundaries
edit_elevations3	Excel	Goolsby data modified by AHA to create model layer elevations
EIS_Outline	DXF	Outline of the PRB EIS area
EIS_Watersheds	DXF	Sub-watersheds in the PRB
ExistingCBMWells	DXF	Flowing artesian wells in Sheridan County
FlowingWells	DXF	Locatoins of flowing artesian wells in Sheridan County
FlowingWellsand Rates	DXF	Locations and flow rate of flowing artesian wells in Sheridan County.
greystone 1 well per pad	DBF	DBF for associated .shp file showing the locations of well pads with one well
greystone 1 well per pad	SBN	SBN for associated .shp file showing the locations of well pads with one well
greystone 1 well per pad	SBX	SBX for associated .shp file showing the locations of well pads with one well
greystone 1 well per pad	SHX	SHX for associated .shp file showing the locations of well pads with one well
greystone 2 well per pad	DBF	DBF for associated .shp file showing the locations of well pads with two well
greystone 2 well per pad	SBN	SBN for associated .shp file showing the locations of well pads with two well

Electronic Files Used for Groundwater Model

File Name	File Type	Description
greystone 2 well per pad	SBX	SBX for associated .shp file showing the locations of well pads with just one well
greystone 2 well per pad	SHX	SHX for associated .shp file showing the locations of well pads with just one well
greystone 3 well per pad	DBF	DBF for associated .shp file showing the locations of well pads with just one well
greystone 3 well per pad	SBN	SBN for associated .shp file showing the locations of well pads with just one well
greystone 3 well per pad	SBX	SBX for associated .shp file showing the locations of well pads with just one well
greystone 3 well per pad	SHX	SHX for associated .shp file showing the locations of well pads with just one well
gridextract	Fortran Executable	Program used to extract the row, column, and elevation of each grid node for each layer from the model .bcf file and put the data into i,j,z .txt format.
Kl_Wells	DXF	Lebo wells in Sheridan County
LAKES	DXF	Lakes in the PRB
LXBAR_BOUNDARY_feet	DXF	LX Bar groundwater model boundary
LXBAR_RIVERNAMES_feet	DXF	LX Bar groundwater model river names
LXBAR_RIVERS_feet2	DXF	LX Bar groundwater model rivers
LXBAR_SECTIONS_feet	DXF	LX Bar groundwater model sections
LXBAR_TOWNSHIPS_feet	DXF	LX Bar groundwater model townhips
LXBAR_WATERSHED_feet	DXF	LX Bar groundwater model watershed
merged coals	DBF	DBF for associated .shp showing the areal extent of the coals
merged coals	SHX	SHX for associated .shp showing the areal extent of the coals
mine_drains	Fortran Executable	Program used to change mine progression data form .txt (i,j,z) into a .vmb compatible format.
mines_progression	DXF	Shows all mines and mine plans in the PRB
ModelGrid	DXF	Map of the model grid (1/4 mile x 1/4 mile)
MunicipalPumpingWells	DXF	Locations of the municipal pumping wells on the eastern half of the PRB
MunicipalPumpingWells	Excel	Locations and pumping schedules for the municipal wells
ObservationWell	Access (.mdb)	AHA created database used to place BLM observation well data in the model.
prb coal seam development	DBF	DBF for associated .shp file
prb coal seam development	SHX	SHX for associated .shp file
PRB_Topo_UTM	Text	Text file (X,Y,Z) created from translated USGS DEM 1:250,000 files to create to model surface topo.
PRBOutcropPlus	DXF	Wyodak-Anderson outcrop (inferred where data does not exist on the Crow reservation)
PRBOutcropPlus_cropped	DXF	Wyodak-Anderson outcrop (inferred where data does not exist on the Crow reservation) - used for the Caballo Creek Model
Production Per Watershed Per Year	Excel	Model predicted produced water per year per wathershed

Electronic Files Used for Groundwater Model

File Name	File Type	Description
Qal_Wells	DXF	Alluvial wells in Sheridan County
Qt_Wells	DXF	Tongue Fm wells in Sheridan County
Reinfiltration_FromPRBEIS_OneModel	Excel	Model predicted production turned into an equivalent recharge rate
Rivers	DXF	Rivers in the PRB
Rivers_cropped	DXF	Rivers in the PRB - used for the Caballo Creek Model
Roads	DXF	Roads in the PRB
Scoria	DXF	Scoria in the PRB
SECTIONS	DXF	Section lines for the PRB
Sheridan County Well Records	Excel	Table compiling data from the "Ground-Water Resources of Sheridan County, Wyoming (1966) some of which was used for steady state calibration
STATE LINE	DXF	The Wyoming-Montana state line
Tf_Wells	DXF	Fort Union Fm wells in Sheridan County
TopoSurface	DXF	Topographic contours of the surface of the PRB
Towns	DXF	Major towns in the PRB
Tw_Wells	DXF	Wasatch Fm wells in Sheridan County
TWP	DXF	Township and Range
WasatchOutcrop	DXF	Outcrop of the Wasatch formation
WasatchOutcrop_cropped	DXF	Outcrop of the Wasatch formation - used for the Caballo Creek Model
watershed_cropped	DXF	Major watersheds in the PRB - used for the Caballo Creek Model
watersheds	DXF	Major watersheds in the PRB
wells_cbm_exist_watershed	DBF	DBF for associated .shp file
wells_cbm_exist_watershed	SHX	SHX for associated .shp file
Readme-rm	TXT	Readme file with directions on how to run the regional transient model.
Readme-srm	TXT	Readme file describing the sub area model files.

List of Shape Files Used for Groundwater Model

File	Type	Comment
buff_projwells_24sep01	Arcview (.shp)	1/2 mile buffer around projected wells
buffwells_exist_permitted_all_merge_17oct	Arcview (.shp)	1/2 mile buffer around existing and permitted wells
cbm_pads_existing	Arcview (.shp)	All pre 2002 CBM well pad locations. Provided by Greystone.
Cbm_wells_prop_2002_v2	Arcview (.shp)	Proposed CBM well locations. Includes moved wells. Provided by Greystone.
greystone 1 well per pad	Arcview (.shp)	Locations of well pads with one well per pad
greystone 2 well per pad	Arcview (.shp)	Locations of well pads with two wells per pad
greystone 3 well per pad	Arcview (.shp)	Locations of well pads with three wells per pad
merged coals	Arcview (.shp)	Areal extent of coals
prb coal seam development	Arcview (.shp)	Areal extent of development in the PRB
prb_modflow_model2	Arcview (.shp)	Arcview shape file of the model grid. The shape file has the x,y and row, column for each node
Wells_cbm_exist_watershed	Arcview (.shp)	All pre 2002 CBM well locations and watershed designation. Provided by Greystone

List of Groundwater Models and Associated Files

File	Type	Comment
PRBEIS_oneModel_modK.vmf	**Vmodflow**	**Region groundwater transient model with results for years 1975-2220. Run date 8/26/02**
Model Files Associated With PRBEIS_oneModel_modK.vmf		
Prbeis_onemodel_modk.vmt	VMT File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.$STRG	$STRG File	Visual MODFLOW modeling file
fort.456	456 File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.ov...	BACKUP File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.vm...	BACKUP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.bcf	BCF File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mo...	BF File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.BGT	BGT File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.ch	CH File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.clb	CLB File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.En...	Configuratio...	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.ini	Configuratio...	Visual MODFLOW modeling file
Schema.ini	Configuratio...	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.DDN	DDN File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.drn	DRN File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.DVT	DVT File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.HDS	HDS File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.HVT	HVT File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mo...	IN File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.zo...	IN File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.vm...	LOCK File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.LST	LST File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.ah...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.al...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.an...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.be...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.cb...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.ex...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.ex...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.ex...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.fl...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.fl...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.li...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.mi...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.mi...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.mi...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.ov...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.po...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.pr...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.ri...	MAP File	Visual MODFLOW modeling file

List of Groundwater Models and Associated Files

File	Type	Comment
Prbeis_onemodel_modk.sa...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.sc...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.st...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.to...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.tw...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.up...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.wa...	MAP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.wa...	MAP File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.MBT	MBT File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.Co...	MCP File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mfi	MFI File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mdb	Microsoft Ac...	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.vm...	Microsoft Pr...	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.vm...	Microsoft Sc...	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mps	MPS File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mrk	MRK File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.bat	MS-DOS Batch...	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.MSS	MSS File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mtd	MTD File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mth	MTH File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.Co...	MTI File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mtn	MTN File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mts	MTS File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mtt	MTT File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mtv	MTV File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.ndc	NDC File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.oc	OC File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.ovmf	OVMF File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.rch	RCH File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.mo...	RPT File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.bas	BAS File	Visual MODFLOW modeling file
TCObservations.txt	Text Document	Visual MODFLOW modeling file
TCPoints.txt	Text Document	Visual MODFLOW modeling file
TCWells.txt	Text Document	Visual MODFLOW modeling file
test.TXT	Text Document	Visual MODFLOW modeling file
TFObservations.txt	Text Document	Visual MODFLOW modeling file
TFPoints.txt	Text Document	Visual MODFLOW modeling file
TFWells.txt	Text Document	Visual MODFLOW modeling file
TGroupPoints.txt	Text Document	Visual MODFLOW modeling file
TGroups.txt	Text Document	Visual MODFLOW modeling file
TPumpingSchedules.txt	Text Document	Visual MODFLOW modeling file
Twells.txt	Text Document	Visual MODFLOW modeling file
TWellScreens.txt	Text Document	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vih	VIH File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vma	VMA File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vmb	VMB File	Visual MODFLOW modeling file

List of Groundwater Models and Associated Files

File	Type	Comment
PRBEIS_oneModel_modK.vmf	VMF File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vmg	VMG File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vmn	VMN File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vmo	VMO File	Visual MODFLOW modeling file
PRBEIS_ONEMODEL_MODKOld...	VMO File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vmp	VMP File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vmr	VMR File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.$CND	$CND File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vmv	VMV File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vmw	VMW File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vmz	VMZ File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vor	VOR File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.vrt	VRT File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.wel	WEL File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.WHS	WHS File	Visual MODFLOW modeling file
Prbeis_onemodel_modk.zbi	ZBI File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.zni	ZNI File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.Zo...	ZONEBUDGET File	Visual MODFLOW modeling file
PRBEIS_oneModel_modK.ZOT	ZOT File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10	**Vmodflow**	**Regional groundwater steady state model with results for year 1975. Run date 8/26/02**

Model Files Associated With PRBEIS_SS802_mod10

Prbeis_ss802_mod10.vor	VOR File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.$STRG	$STRG File	Visual MODFLOW modeling file
fort.456	456 File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.vmf....	BACKUP File	Visual MODFLOW modeling file
PRBEIS_SS802_MOD10.VMB.bak	BAK File	Visual MODFLOW modeling file
PRBEIS_SS802_MOD10.VMP.bak	BAK File	Visual MODFLOW modeling file
PRBEIS_SS802_MOD10.VMW.bak	BAK File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.modf...	BF File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.BGT	BGT File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.clb	CLB File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.Engi...	Configuratio...	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.ini	Configuratio...	Visual MODFLOW modeling file
Schema.ini	Configuratio...	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.DDN	DDN File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.drn	DRN File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.DVT	DVT File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.HDS	HDS File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.HVT	HVT File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.modf...	IN File	Visual MODFLOW modeling file

List of Groundwater Models and Associated Files

File	Type	Comment
PRBEIS_SS802_mod10.zone...	IN File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.vmf....	LOCK File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.LST	LST File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.aha ...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.allu...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.ante...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.bell...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.cbm_...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.deve...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.flow...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.flow...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.litt...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.midd...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.midd...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.mine...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.over...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.pots...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.prbo...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.rive...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.salt...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.scor...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.stat...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.town...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.uppe...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.wasa...	MAP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.wate...	MAP File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.MBT	MBT File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.mfi	MFI File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.mdb	Microsoft Ac...	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.mps	MPS File	Visual MODFLOW modeling file
		Visual MODFLOW modeling file
PRBEIS_SS802_mod10.bat	MS-DOS Batch...	
PRBEIS_SS802_mod10.MSS	MSS File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.ndc	NDC File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.oc	OC File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.modb...	RPT File	Visual MODFLOW modeling file
TCObservations.txt	Text Document	Visual MODFLOW modeling file
TCPoints.txt	Text Document	Visual MODFLOW modeling file
TCWells.txt	Text Document	Visual MODFLOW modeling file
TFObservations.txt	Text Document	Visual MODFLOW modeling file
TFPoints.txt	Text Document	Visual MODFLOW modeling file
TFWells.txt	Text Document	Visual MODFLOW modeling file
TGroupPoints.txt	Text Document	Visual MODFLOW modeling file
TGroups.txt	Text Document	Visual MODFLOW modeling file
TPumpingSchedules.txt	Text Document	Visual MODFLOW modeling file
Twells.txt	Text Document	Visual MODFLOW modeling file
TWellScreens.txt	Text Document	Visual MODFLOW modeling file

List of Groundwater Models and Associated Files

File	Type	Comment
Prbeis_ss802_mod10.vih	VIH File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.vma	VMA File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.vmb	VMB File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.vmf	VMF File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.vmg	VMG File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.vmn	VMN File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.vmo	VMO File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.vmp	VMP File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.vmr	VMR File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.vmt	VMT File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.vmv	VMV File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.vmw	VMW File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.vmz	VMZ File	Visual MODFLOW modeling file
PRBEIS_SS802_mod10.$CND	$CND File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.vrt	VRT File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.wel	WEL File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.whs	WHS File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.zbi	ZBI File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.zni	ZNI File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.zone...	ZONEBUDGET File	Visual MODFLOW modeling file
Prbeis_ss802_mod10.zot	ZOT File	Visual MODFLOW modeling file
LXBar-flat-04.vmf	**Vmodflow**	**LX Bar groundwater model**
Model Files Associated With LXBar-flat-04		
FOR097	File	Visual MODFLOW modeling file
FOR098	File	Visual MODFLOW modeling file
IMFlow	MS-DOS Batch File	Visual MODFLOW modeling file
IZBud	MS-DOS Batch File	Visual MODFLOW modeling file
LXBar-boundaries	EMF	Visual MODFLOW modeling file
LXBar-buildup	EMF	Visual MODFLOW modeling file
LXBar-flat-04	MS-DOS Batch File	Visual MODFLOW modeling file
LXBar-flat-04	Configuration Settings	Visual MODFLOW modeling file
LXBar-flat-04	Microsoft Access	Visual MODFLOW modeling file
LXBar-flat-04.BAS	BAS	Visual MODFLOW modeling file
LXBar-flat-04.BCF	BCF	Visual MODFLOW modeling file
LXBar-flat-04.BF	BF	Visual MODFLOW modeling file
LXBar-flat-04.BGT	BGT	Visual MODFLOW modeling file
LXBar-flat-04.CH	CH	Visual MODFLOW modeling file
LXBar-flat-04.CLB	CLB	Visual MODFLOW modeling file
LXBar-flat-04.CONC001.MCP	MCP	Visual MODFLOW modeling file

List of Groundwater Models and Associated Files

File	Type	Comment
LXBar-flat-04.CONC001.MTI	MTI	Visual MODFLOW modeling file
LXBar-flat-04.DDN	DDN	Visual MODFLOW modeling file
LXBar-flat-04.DRN	DRN	Visual MODFLOW modeling file
LXBar-flat-04.DVT	DVT	Visual MODFLOW modeling file
LXBar-flat-04.ENGINS	Configuration Settings	Visual MODFLOW modeling file
LXBar-flat-04.GHB	GHB	Visual MODFLOW modeling file
LXBar-flat-04.HDS	HDS	Visual MODFLOW modeling file
LXBar-flat-04.HVT	HVT	Visual MODFLOW modeling file
LXBar-flat-04.LST	LST	Visual MODFLOW modeling file
LXBar-flat-04.MBT	MBT	Visual MODFLOW modeling file
LXBar-flat-04.MFI	MFI	Visual MODFLOW modeling file
LXBar-flat-04.MPEG	MPEG	Visual MODFLOW modeling file
LXBar-flat-04.MRK	MRK	Visual MODFLOW modeling file
LXBar-flat-04.MSS	MSS	Visual MODFLOW modeling file
LXBar-flat-04.MTD	MTD	Visual MODFLOW modeling file
LXBar-flat-04.MTH	MTH	Visual MODFLOW modeling file
LXBar-flat-04.MTN	MTN	Visual MODFLOW modeling file
LXBar-flat-04.MTS	MTS	Visual MODFLOW modeling file
LXBar-flat-04.MTT	MTT	Visual MODFLOW modeling file
LXBar-flat-04.MTV	MTV	Visual MODFLOW modeling file
LXBar-flat-04.NDC	NDC	Visual MODFLOW modeling file
LXBar-flat-04.OC	OC	Visual MODFLOW modeling file
LXBar-flat-04.RCH	RCH	Visual MODFLOW modeling file
LXBar-flat-04.VIH	VIH	Visual MODFLOW modeling file
LXBar-flat-04.VMA	VMA	Visual MODFLOW modeling file
LXBar-flat-04.VMB	VMB	Visual MODFLOW modeling file
LXBar-flat-04.vmf.backup	BACKUP File	Visual MODFLOW modeling file
LXBar-flat-04.VMG	VMG	Visual MODFLOW modeling file
LXBar-flat-04.VMN	VMN	Visual MODFLOW modeling file
LXBar-flat-04.VMO	VMO	Visual MODFLOW modeling file
LXBar-flat-04.VMO	Microsoft Program Group	Visual MODFLOW modeling file
LXBar-flat-04.VMP	VMP	Visual MODFLOW modeling file
LXBar-flat-04.VMR	VMR	Visual MODFLOW modeling file
LXBar-flat-04.VMT	VMT	Visual MODFLOW modeling file
LXBar-flat-04.VMT	Microsoft Program Group	Visual MODFLOW modeling file
LXBar-flat-04.VMV	VMV	Visual MODFLOW modeling file
LXBar-flat-04.VMW	VMW	Visual MODFLOW modeling file
LXBar-flat-04.VMZ	VMZ	Visual MODFLOW modeling file
LXBar-flat-04.VOI	VOI	Visual MODFLOW modeling file
LXBar-flat-04.VOO	VOO	Visual MODFLOW modeling file
LXBar-flat-04.WEL	WEL	Visual MODFLOW modeling file
LXBar-flat-04.WHS	WHS	Visual MODFLOW modeling file
LXBar-flat-04.ZBI	ZBI	Visual MODFLOW modeling file
LXBar-flat-04.ZNI	ZNI	Visual MODFLOW modeling file

List of Groundwater Models and Associated Files

File	Type	Comment
LXBar-flat-04.ZONEBUDGET	ZONEBUDGET	Visual MODFLOW modeling file
LXBar-flat-04.ZOT	ZOT	Visual MODFLOW modeling file
LXBar-flat-04ss	MS-DOS Batch File	Visual MODFLOW modeling file
LXBar-flat-04ss	Configuration Settings	Visual MODFLOW modeling file
LXBar-flat-04ss	Microsoft Access	Visual MODFLOW modeling file
LXBar-flat-04ss.BAS	BAS	Visual MODFLOW modeling file
LXBar-flat-04ss.BCF	BCF	Visual MODFLOW modeling file
LXBar-flat-04ss.BF	BF	Visual MODFLOW modeling file
LXBar-flat-04ss.BGT	BGT	Visual MODFLOW modeling file
LXBar-flat-04ss.CH	CH	Visual MODFLOW modeling file
LXBar-flat-04ss.CLB	CLB	Visual MODFLOW modeling file
LXBar-flat-04ss.CONC001.MCP	MCP	Visual MODFLOW modeling file
LXBar-flat-04ss.CONC001.MTI	MTI	Visual MODFLOW modeling file
LXBar-flat-04ss.DDN	DDN	Visual MODFLOW modeling file
LXBar-flat-04ss.DRN	DRN	Visual MODFLOW modeling file
LXBar-flat-04ss.DVT	DVT	Visual MODFLOW modeling file
LXBar-flat-04ss.ENGINS	Configuration Settings	Visual MODFLOW modeling file
LXBar-flat-04ss.GHB	GHB	Visual MODFLOW modeling file
LXBar-flat-04ss.HDS	HDS	Visual MODFLOW modeling file
LXBar-flat-04ss.HVT	HVT	Visual MODFLOW modeling file
LXBar-flat-04ss.LST	LST	Visual MODFLOW modeling file
LXBar-flat-04ss.MBT	MBT	Visual MODFLOW modeling file
LXBar-flat-04ss.MFI	MFI	Visual MODFLOW modeling file
LXBar-flat-04ss.MODFLOW	MODFLOW	Visual MODFLOW modeling file
LXBar-flat-04ss.MPS	MPS	Visual MODFLOW modeling file
LXBar-flat-04ss.MRK	MRK	Visual MODFLOW modeling file
LXBar-flat-04ss.MSS	MSS	Visual MODFLOW modeling file
LXBar-flat-04ss.MTD	MTD	Visual MODFLOW modeling file
LXBar-flat-04ss.MTH	MTH	Visual MODFLOW modeling file
LXBar-flat-04ss.MTN	MTN	Visual MODFLOW modeling file
LXBar-flat-04ss.MTS	MTS	Visual MODFLOW modeling file
LXBar-flat-04ss.MTT	MTT	Visual MODFLOW modeling file
LXBar-flat-04ss.MTV	MTV	Visual MODFLOW modeling file
LXBar-flat-04ss.NDC	NDC	Visual MODFLOW modeling file
LXBar-flat-04ss.OC	OC	Visual MODFLOW modeling file
LXBar-flat-04ss.RCH	RCH	Visual MODFLOW modeling file
LXBar-flat-04ss.VIH	VIH	Visual MODFLOW modeling file
LXBar-flat-04ss.VMA	VMA	Visual MODFLOW modeling file
LXBar-flat-04ss.VMB	VMB	Visual MODFLOW modeling file
LXBar-flat-04ss.vmf	vmf	Visual MODFLOW modeling file
LXBar-flat-04ss.vmf.backup	BACKUP File	Visual MODFLOW modeling file
LXBar-flat-04ss.VMG	VMG	Visual MODFLOW modeling file
LXBar-flat-04ss.VMN	VMN	Visual MODFLOW modeling file
LXBar-flat-04ss.VMO	VMO	Visual MODFLOW modeling file

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File	Type	Comment
LXBar-flat-04ss.VMO	Microsoft Program Group	Visual MODFLOW modeling file
LXBar-flat-04ss.VMP	VMP	Visual MODFLOW modeling file
LXBar-flat-04ss.VMR	VMR	Visual MODFLOW modeling file
LXBar-flat-04ss.VMT	VMT	Visual MODFLOW modeling file
LXBar-flat-04ss.VMT	Microsoft Program Group	Visual MODFLOW modeling file
LXBar-flat-04ss.VMV	VMV	Visual MODFLOW modeling file
LXBar-flat-04ss.VMW	VMW	Visual MODFLOW modeling file
LXBar-flat-04ss.VMZ	VMZ	Visual MODFLOW modeling file
LXBar-flat-04ss.VOI	VOI	Visual MODFLOW modeling file
LXBar-flat-04ss.VOO	VOO	Visual MODFLOW modeling file
LXBar-flat-04ss.WEL	WEL	Visual MODFLOW modeling file
LXBar-flat-04ss.WHS	WHS	Visual MODFLOW modeling file
LXBar-flat-04ss.ZBI	ZBI	Visual MODFLOW modeling file
LXBar-flat-04ss.ZNI	ZNI	Visual MODFLOW modeling file
LXBar-flat-04ss.ZONEBUDGET	ZONEBUDGET	Visual MODFLOW modeling file
LXBar-flat-04ss.ZOT	ZOT	Visual MODFLOW modeling file
modbatch.rpt	RPT	Visual MODFLOW modeling file
modflow.bf	BF	Visual MODFLOW modeling file
modflow.in	IN	Visual MODFLOW modeling file
SCHEMA	Configuration Settings	Visual MODFLOW modeling file
TCObservations	text document	Visual MODFLOW modeling file
TCPoints	text document	Visual MODFLOW modeling file
TCWells	text document	Visual MODFLOW modeling file
TFObservations	text document	Visual MODFLOW modeling file
TFPoints	text document	Visual MODFLOW modeling file
TFWells	text document	Visual MODFLOW modeling file
TGroupPoints	text document	Visual MODFLOW modeling file
TGroups	text document	Visual MODFLOW modeling file
TPumpingSchedules	text document	Visual MODFLOW modeling file
TWells	text document	Visual MODFLOW modeling file
TWellScreens	text document	Visual MODFLOW modeling file
zonebud.in	IN	Visual MODFLOW modeling file
LXBAR	DXF	Visual MODFLOW modeling file
LXBAR_BOUNDARY_feet	DXF	Visual MODFLOW modeling file
LXBAR_BOUNDARY_feet	EXT	Visual MODFLOW modeling file
LXBAR_BOUNDARY_feet	MAP	Visual MODFLOW modeling file
LXBAR_R12	DXF	Visual MODFLOW modeling file
LXBAR_RIVERNAMES_feet	DXF	Visual MODFLOW modeling file
LXBAR_RIVERNAMES_feet	EXT	Visual MODFLOW modeling file
LXBAR_RIVERNAMES_feet	MAP	Visual MODFLOW modeling file
LXBAR_RIVERS_feet2	DXF	Visual MODFLOW modeling file
LXBAR_RIVERS_feet2	EXT	Visual MODFLOW modeling file
LXBAR_RIVERS_feet2	MAP	Visual MODFLOW modeling file
LXBAR_SECTIONS_feet	DXF	Visual MODFLOW modeling file

List of Groundwater Models and Associated Files

File	Type	Comment
LXBAR_SECTIONS_feet	EXT	Visual MODFLOW modeling file
LXBAR_SECTIONS_feet	MAP	Visual MODFLOW modeling file
Lxbar_Topo_feet	DXF	Visual MODFLOW modeling file
Lxbar_Topo_feet	EXT	Visual MODFLOW modeling file
Lxbar_Topo_feet	MAP	Visual MODFLOW modeling file
LXBAR_TOWNSHIPS_feet	DXF	Visual MODFLOW modeling file
LXBAR_TOWNSHIPS_feet	EXT	Visual MODFLOW modeling file
LXBAR_TOWNSHIPS_feet	MAP	Visual MODFLOW modeling file
LXBAR_WATERSHED_feet	DXF	Visual MODFLOW modeling file
LXBAR_WATERSHED_feet	EXT	Visual MODFLOW modeling file
LXBAR_WATERSHED_feet	MAP	Visual MODFLOW modeling file
Sstate9.vmf	**Vmodflow**	**Caballo Creek steady state groundwater model**
	Model Files Associated With Sstate9	
sstate9.APR	APR	Visual MODFLOW modeling file
sstate9.vmf.backup	BACKUP File	Visual MODFLOW modeling file
sstate9.BAK	BAK	Visual MODFLOW modeling file
sstate9.BAS	BAS	Visual MODFLOW modeling file
sstate9.BCF	BCF	Visual MODFLOW modeling file
sstate9.BF	BF	Visual MODFLOW modeling file
sstate9.BGT	BGT	Visual MODFLOW modeling file
sstate9.CLB	CLB	Visual MODFLOW modeling file
sstate9	Configuration Settings	Visual MODFLOW modeling file
sstate9.ENGINS	Configuration Settings	Visual MODFLOW modeling file
sstate9.PESTPLOT	Configuration Settings	Visual MODFLOW modeling file
sstate9.DDN	DDN	Visual MODFLOW modeling file
sstate9.DRN	DRN	Visual MODFLOW modeling file
sstate9.DVT	DVT	Visual MODFLOW modeling file
sstate9.HDS	HDS	Visual MODFLOW modeling file
sstate9.HVT	HVT	Visual MODFLOW modeling file
sstate9.INH	INH	Visual MODFLOW modeling file
sstate9.JST	JST	Visual MODFLOW modeling file
sstate9.LST	LST	Visual MODFLOW modeling file
sstate9.MBT	MBT	Visual MODFLOW modeling file
sstate9.CONC001.MCP	MCP	Visual MODFLOW modeling file
sstate9.MFI	MFI	Visual MODFLOW modeling file
sstate9	Microsoft Access	Visual MODFLOW modeling file
sstate9.VMO	Microsoft Program Group	Visual MODFLOW modeling file
sstate9.VMT	Microsoft Program Group	Visual MODFLOW modeling file

List of Groundwater Models and Associated Files

File	Type	Comment
sstate9.MPS	MPS	Visual MODFLOW modeling file
sstate9.MRK	MRK	Visual MODFLOW modeling file
sstate9	MS-DOS Batch File	Visual MODFLOW modeling file
sstate9.MSS	MSS	Visual MODFLOW modeling file
sstate9.MTD	MTD	Visual MODFLOW modeling file
sstate9.MTH	MTH	Visual MODFLOW modeling file
sstate9.CONC001.MTI	MTI	Visual MODFLOW modeling file
sstate9.MTN	MTN	Visual MODFLOW modeling file
sstate9.MTS	MTS	Visual MODFLOW modeling file
sstate9.MTT	MTT	Visual MODFLOW modeling file
sstate9.MTV	MTV	Visual MODFLOW modeling file
sstate9.OC	OC	Visual MODFLOW modeling file
sstate9	Office Data File	Visual MODFLOW modeling file
sstate9.PAR	PAR	Visual MODFLOW modeling file
sstate9	PKCS #7 Certificates	Visual MODFLOW modeling file
sstate9.RCH	RCH	Visual MODFLOW modeling file
sstate9.REC	REC	Visual MODFLOW modeling file
sstate9.RST	RST	Visual MODFLOW modeling file
sstate9.SEN	SEN	Visual MODFLOW modeling file
sstate9.BCF.SRC	SRC	Visual MODFLOW modeling file
sstate9	text document	Visual MODFLOW modeling file
sstate9.VMW	text document	Visual MODFLOW modeling file
sstate9.MF.TPL	TPL	Visual MODFLOW modeling file
sstate9.VBB	VBB	Visual MODFLOW modeling file
sstate9.VBH	VBH	Visual MODFLOW modeling file
sstate9.VBT	VBT	Visual MODFLOW modeling file
sstate9.VIH	VIH	Visual MODFLOW modeling file
sstate9.VMA	VMA	Visual MODFLOW modeling file
sstate9.VMB	VMB	Visual MODFLOW modeling file
sstate9.VMG	VMG	Visual MODFLOW modeling file
sstate9.VMN	VMN	Visual MODFLOW modeling file
sstate9.VMO	VMO	Visual MODFLOW modeling file
sstate9.VMP	VMP	Visual MODFLOW modeling file
sstate9.VMR	VMR	Visual MODFLOW modeling file
sstate9.VMT	VMT	Visual MODFLOW modeling file
sstate9.VMV	VMV	Visual MODFLOW modeling file
sstate9.VMW	VMW	Visual MODFLOW modeling file
sstate9.VMZ	VMZ	Visual MODFLOW modeling file
sstate9.VOI	VOI	Visual MODFLOW modeling file
sstate9.VOO	VOO	Visual MODFLOW modeling file
sstate9.VOR	VOR	Visual MODFLOW modeling file
sstate9.WEL	WEL	Visual MODFLOW modeling file
sstate9.WHS	WHS	Visual MODFLOW modeling file
sstate9.ZBI	ZBI	Visual MODFLOW modeling file
sstate9.ZNI	ZNI	Visual MODFLOW modeling file

List of Groundwater Models and Associated Files

File	Type	Comment
sstate9.ZONEBUDGET	ZONEBUDGET	Visual MODFLOW modeling file
sstate9.ZOT	ZOT	Visual MODFLOW modeling file
tran23.vmf	**Vmodflow**	**Caballo Creek transient groundwater model**
	Model Files Associated With tran23	
tran23.APR	APR	Visual MODFLOW modeling file
tran23.vmf.backup	BACKUP File	Visual MODFLOW modeling file
tran23.BAK	BAK	Visual MODFLOW modeling file
tran23.BAS	BAS	Visual MODFLOW modeling file
tran23.BCF	BCF	Visual MODFLOW modeling file
tran23.BF	BF	Visual MODFLOW modeling file
tran23.BGT	BGT	Visual MODFLOW modeling file
tran23.CLB	CLB	Visual MODFLOW modeling file
tran23	Configuration Settings	Visual MODFLOW modeling file
tran23.ENGINS	Configuration Settings	Visual MODFLOW modeling file
tran23.PESTPLOT	Configuration Settings	Visual MODFLOW modeling file
tran23.DDN	DDN	Visual MODFLOW modeling file
tran23.DRN	DRN	Visual MODFLOW modeling file
tran23.DVT	DVT	Visual MODFLOW modeling file
tran23	File	Visual MODFLOW modeling file
tran23.HDS	HDS	Visual MODFLOW modeling file
tran23ss.HDS	HDS	Visual MODFLOW modeling file
tran23.HVT	HVT	Visual MODFLOW modeling file
tran23.INH	INH	Visual MODFLOW modeling file
tran23.JST	JST	Visual MODFLOW modeling file
tran23.LST	LST	Visual MODFLOW modeling file
tran23.MBT	MBT	Visual MODFLOW modeling file
tran23.CONC001.MCP	MCP	Visual MODFLOW modeling file
tran23.MFI	MFI	Visual MODFLOW modeling file
tran23	Microsoft Access	Visual MODFLOW modeling file
tran23	Microsoft Excel	Visual MODFLOW modeling file
tran23	Microsoft Program Group	Visual MODFLOW modeling file
tran23	Microsoft Program Group	Visual MODFLOW modeling file
tran23.MPS	MPS	Visual MODFLOW modeling file
tran23.MRK	MRK	Visual MODFLOW modeling file
tran23	MS-DOS Batch File	Visual MODFLOW modeling file
tran23.MSS	MSS	Visual MODFLOW modeling file
tran23.MTD	MTD	Visual MODFLOW modeling file

List of Groundwater Models and Associated Files

File	Type	Comment
tran23.MTH	MTH	Visual MODFLOW modeling file
tran23.MTI	MTI	Visual MODFLOW modeling file
tran23.MTN	MTN	Visual MODFLOW modeling file
tran23.MTS	MTS	Visual MODFLOW modeling file
tran23.MTT	MTT	Visual MODFLOW modeling file
tran23.MTV	MTV	Visual MODFLOW modeling file
tran23.NDC	NDC	Visual MODFLOW modeling file
tran23.OC	OC	Visual MODFLOW modeling file
tran23	Office Data File	Visual MODFLOW modeling file
tran23.PAR	PAR	Visual MODFLOW modeling file
tran23	PKCS #7 Certificates	Visual MODFLOW modeling file
tran23.RCH	RCH	Visual MODFLOW modeling file
tran23.REC	REC	Visual MODFLOW modeling file
tran23.RST	RST	Visual MODFLOW modeling file
tran23.SEN	SEN	Visual MODFLOW modeling file
tran23.SOR	SOR	Visual MODFLOW modeling file
tran23.BCF.SRC	SRC	Visual MODFLOW modeling file
tran23	text document	Visual MODFLOW modeling file
tran23.VMW	text document	Visual MODFLOW modeling file
tran23.MF.TPL	TPL	Visual MODFLOW modeling file
tran23.VBB	VBB	Visual MODFLOW modeling file
tran23.VBH	VBH	Visual MODFLOW modeling file
tran23.VBT	VBT	Visual MODFLOW modeling file
tran23.VIH	VIH	Visual MODFLOW modeling file
tran23.VMA	VMA	Visual MODFLOW modeling file
tran23.VMB	VMB	Visual MODFLOW modeling file
tran23.VMG	VMG	Visual MODFLOW modeling file
tran23.VMN	VMN	Visual MODFLOW modeling file
tran23.VMO	VMO	Visual MODFLOW modeling file
tran23.VMP	VMP	Visual MODFLOW modeling file
tran23.VMR	VMR	Visual MODFLOW modeling file
tran23.VMT	VMT	Visual MODFLOW modeling file
tran23.VMV	VMV	Visual MODFLOW modeling file
tran23.VMW	VMW	Visual MODFLOW modeling file
tran23.VMZ	VMZ	Visual MODFLOW modeling file
tran23.VOI	VOI	Visual MODFLOW modeling file
tran23.VOO	VOO	Visual MODFLOW modeling file
tran23.VOR	VOR	Visual MODFLOW modeling file
tran23.WEL	WEL	Visual MODFLOW modeling file
tran23.WHS	WHS	Visual MODFLOW modeling file
tran23.ZBI	ZBI	Visual MODFLOW modeling file
tran23.ZNI	ZNI	Visual MODFLOW modeling file
tran23.ZONEBUDGET	ZONEBUDGET	Visual MODFLOW modeling file
tran23.ZOT	ZOT	Visual MODFLOW modeling file

How to Run the Regional Transient Model

This readme file provides instructions on how to run the PRB EIS regional model in Transient mode. This readme file shows at which stress periods the model might stall, and how to change the run parameters, particularly the damp factor and/or the convergence criteria, for the WHS solver in order to get the model to converge. This model utilizes rewetting which makes it more difficult to get the model to converge. This readme file assumes that the user is familiar with Visual MODFLOW and the WHS solver. It should be noted that there are any number of combinations of changes that can be made to the run parameters. Each combination can yield slightly different results in the output. In a quick check between successive model runs using slightly different run parameters, model predicted production changed by at most 0.2% for a given stress period. The mass balance did not change at all between the two runs. This model was run using Visual MODFLOW v. 3.0 build 175. For more details on how the model was designed and to see output, please review the Groundwater Model Technical Report.

Starting the model run:

1. In the main Visual MODFLOW menu, go to **Setup**, then select *Numeric Engines*, then select *Flow*. Specify "USGS MODFLOW 96 from WHI".
2. Go to the **Run** menu.
3. Select *Transient Run*
4. Under **Modflow96**:
    a. **Timesteps** – do not make any changes
    b. **Initial Heads** – select "Previous Visual MODFLOW Run", make sure that "PRBEIS_SS802_mod10.hds" is the specified file. Select the only available time step for the initial heads.
    c. **Solver** – select WHS: Max Outer = 50000, Max Inner = 25000, Head Change (HCLOSE) = 0.01, Head Change (RCLOSE) = 0.01, Damp = 0.9. Leave everything else as the default.
    d. **Recharge** – set to "Highest Active Cell"
    e. **Layers** – Layer 1 is set as "Type 1 Unconfined", Layers 2-17 are set as "Type 3 Confined/Unconfined variable S/T"
    f. **Rewetting** – Select "Activate". Wetting Threshold = 5, Wetting Interval = 15, select "From Sides and Below" and select "Calculated from Threshold", set WETFCT = 0.1. Leave everything else as default.
    g. Leave everything else as default.
5. Hit **Run**
6. Check the box next to "MODFLOW 96" and "Zonebudge"
7. Select "Run "

At this point it will take the model some time to compile – 20 to 60 minutes depending on your computer. Once the model starts running, make the following adjustments during the run at the specified stress period and time step in order to get the model to converge. Simply make the change to the run parameter and hit "Apply", and the new settings will take effect. Do not hit the stop button or the model will restart. Once the change is made leave it until the next stress

period. For example, at stress period 8 time step 9, change the damp factor to 0.8, and don't change it again until stress period 23, time step 9.

Stress Period	Time Step	Damp	HCLOSE
8	9	0.8	1.0
23	9	0.7	5.0
25	1	0.8	1.0
27	1	0.8	3.0
37	8	0.8	2.0
44	1	0.8	0.1
44	8	0.8	0.5
44	9	0.8	3.0

If you want rewetting to activate at any given stress period, reduce HCLOSE so that it takes more than 15 outer iterations to converge. Every 15th outer iteration, rewetting is invoked.

Note also that the first time the model is opened, it will look for overlays that are no longer needed for the model. These overlays were used at one point in time, but have been superseded by newer dxf's. The old files are:

PotSurf__Coal.dxf
Overburden Potsurf(m).dxf
CBM_Existing_To2002_Doubled.dxf
SaltCreekCBMLocs.dxf
MiddlePowderNonCBMCondLocs.dxf
BelleFourcheWellMapKeys.dxf
AntelopeCreekWellMapKeys.dxf
Township Range PRB.dxf
UpperCheyenneWellMapkeys.dxf
MiddlePowderWellMapKeys.dxf
LittlePowderWellMapkeys.dxf
Ahawatersheds.dxf
CBMWElls_Y2000.dxf
ExistingCBMWells_Y2000.L14.dxf
ExistingCBMWells_Y2000.L10

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