# AG Package Input File

The Ag Package is activated, and the input file is read when the file type “AG” is specified within the Name file for MODFLOW and GSFLOW simulations. The AG Package input file consists of character variables that define 1) model options, 2) time series output, 3) well list, and 4) stress period data. The options block must begin with the character “options” and end with the character “end” and is not case sensitive. At least one option is required for the Ag Package to be used. The time series data only are required if one or more of the time series character variables are specified within the options block. The time series block must begin with the character “time series” and end with the character “end.”

The optional well list data input includes all wells that will be used during a simulation and is included only if the variable “MAXWELLS” is specified in the options block followed by a nonzero value specified for nummaxwell. The well list block must begin with the character “well list” and end with the character “end.” Any well can be made inactive or active during a simulation within the stress period block. Specified pumping rates can be used to limit the pumping capacity for supplementary wells (character option “SUPPLEMENTAL\_WELL”) or for wells with simulated pumping rates using the NIWR (character options “ETDEMAND” or “TRIGGER”). Pumping rates can be specified in the well list and these rates will remain constant during a simulation. For cases where pumping rates vary in time, tabular input files (character option “TABFILES”) can be used to specify pumping rates. Only negative pumping rates can be specified for the Ag Package. Details regarding these inputs are provided in a separate input instructions document.

# Output Options

Three output options are available for the Ag Package, including 1) standard cell by cell pumping rates output to an unformatted file; 2) lists of flows for each SFR surface water diversion and well, irrigated amount for each cell/HRU for a diversion, and irrigated amount for each cell/HRU for a well; and 3) time series of diversion flows or groundwater pumping rates for wells, and time series of volumetric rates of well-watered (potential) consumption and actual crop consumption for cells/HRUs supplied by a diversion/well. The time series file generated for “TIMESERIES\_SFR” includes all supplemental pumping for the SFR diversion if there are supplemental wells. The last column of values for all other time series files will be labeled “NULL” and should be ignored. Additional to these output options, a water budget table that lists all inflows and outflows for the Ag Package can be output to the MODFLOW List File or separate formatted output file using Output Control options. All flows are output as volumetric flow rates in units determined from the unit specifications in the MODFLOW Discretization Package.