B) Irrigation onset and duration are caclulated using configuration 2 (TRIGGER) with Surface water (SW) and groundwater (GW) irrigation simulated using IRRIGATION_DIVERSION and IRRIGATION_WELL features in the AG Package, respectively. The SUPPLEMENTAL_WELL feature is used to supplement an IRRIGATION_DIVERSION when specified demands are greater than SW supply, and the same well can be designated as an IRRIGATION_WELL. ET_a is simulated actual evapotranspiration, and ET_o is reference evapotranspiration.

Externally (UZF) or internally (PRMS) calculated ET_o

ET_a is calculated by UZF/PRMS

(TRIGGER)
Irrigation begins at specified rate if $ET_a/K_cET_o<TRIGGERFACTOR$ and irrigation continues for IRRPERIOD and until $ET_a/K_cET_o>TRIGGERFACTOR$

(IRRIGATION_DIVERSION)
SW diversion set as SW Irrigation demand, routed to field, and applied to cells/HRUs

Limits on irrigation diversion

1) Specified diverison flow rate in SFR input file
2)Simulated flow rate upstream of diversion point

Groundwater return flow (GWRF)
UZF/PRMS simulates canopy and soil-water balance and deep percolation to water table

Surface water return flow (SWRF)
UZF adds simulated runoff to user-specified stream or lake, PRMS routes simulated runoff using cascade routing procedure

(SUPPLEMENTAL_WELL)
If diversion less than demand set pumping rate to SW shortfall

Limits on irrigation pumping rate

1) Rates specified in AG input file
2) Water table drawdown at well

(IRRIGATION_WELL)
Set irrigation to specified pumping rate in AG or SW shortfall for SUP-IRR wells