
APPENDIX M – COMPARISON OF HSPF AND MODFLOW SIMULATED GROUNDWATER EVAPOTRANSPIRATION OF MAJOR RIVER BASINS

Appendix M includes comparisons between HSPF and MODFLOW simulated groundwater evapotranspiration (ET) within 11 of the HUC8 basins covering the CSM domain (the remaining two HUC8 basins are not included as only a small portion of these basins is located in the model domain). The hydrological system is simulated using HSPF models for surface water and MODFLOW for groundwater. The monthly time-series of HSPF-simulated saturated ET (AGWET&BASET) was compared to the groundwater ET calculated using the EVT package of MODFLOW during the transient model simulation period (2005 through 2018).

Note: The following definitions apply to all figures included in this appendix.

in/yr = inches/year

HSPF AGWET&BASET = saturated evapotranspiration simulated in the Hydrological Simulation Program – FORTRAN (HSPF) models

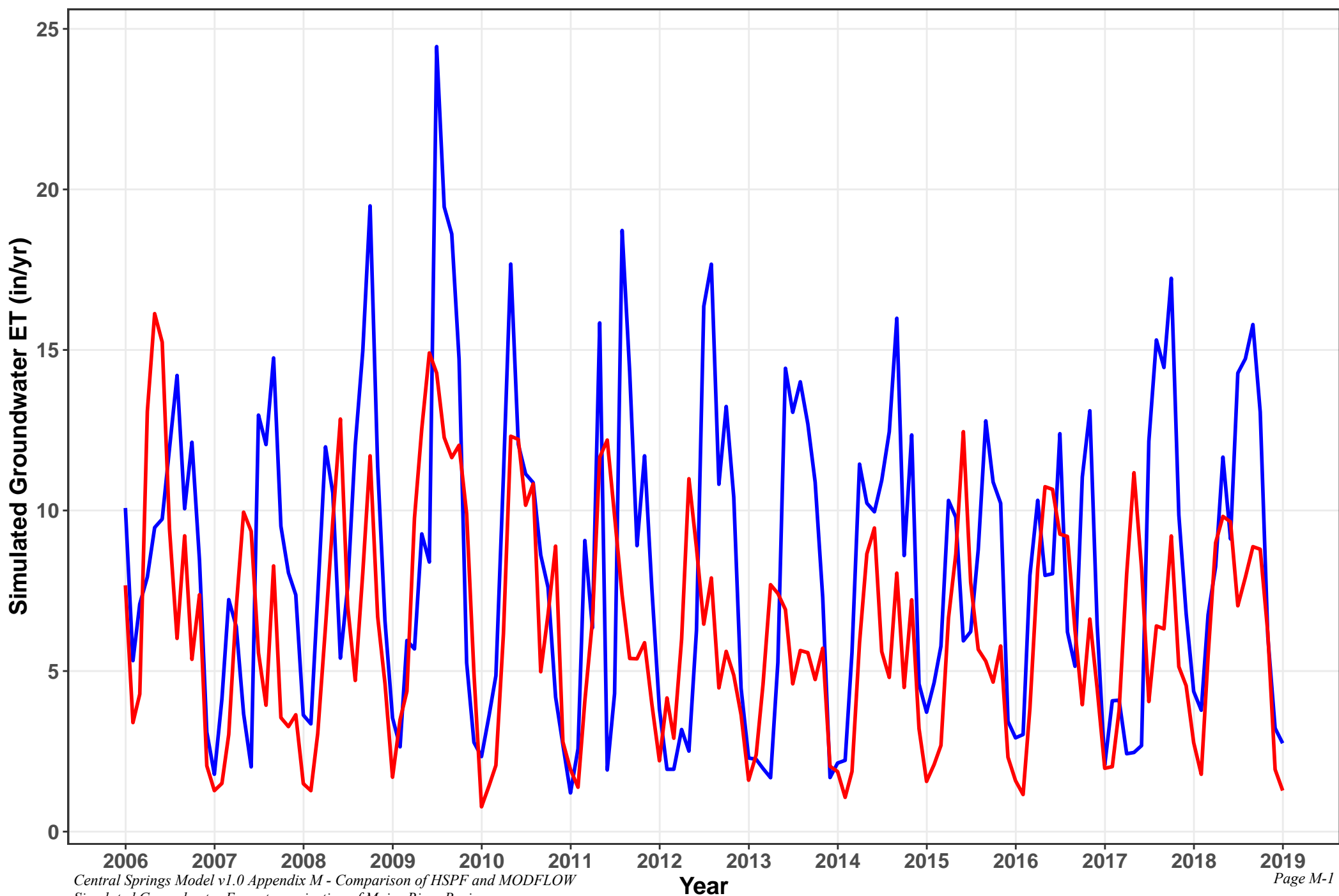
MODFLOW EVT = groundwater evapotranspiration calculated in the EVT package of the MODFLOW groundwater flow simulation software

HUC = Hydrologic Unit Code

HUC 03080101 @ Upper St. Johns

HSPF Mean = 8.37 in/yr MODFLOW Mean = 6.28 in/yr

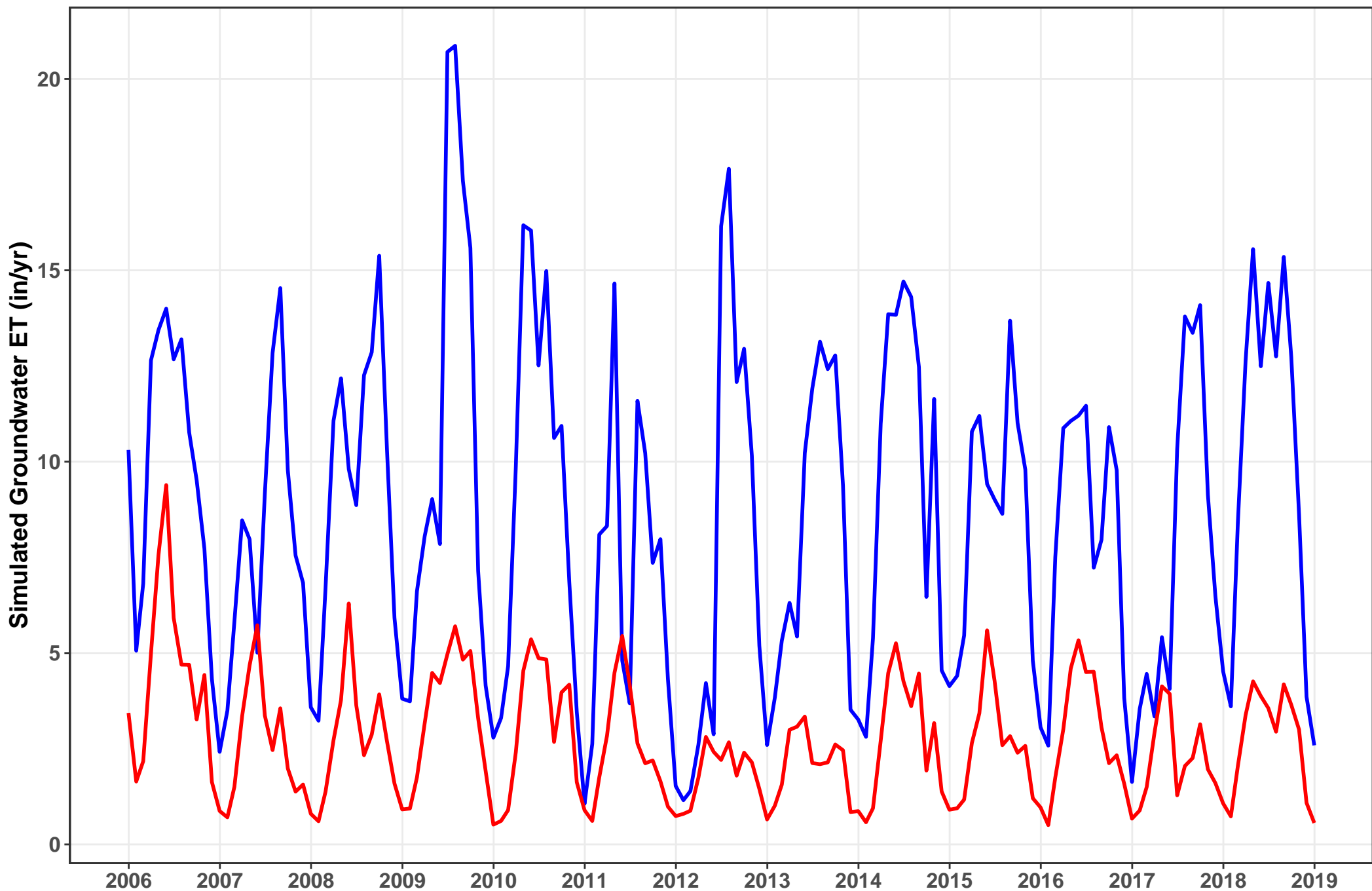
— HSPF AGWET&BASET — MODFLOW EVT



HUC 03080102 @ Ocklawaha

HSPF Mean = 8.69 in/yr MODFLOW Mean = 2.75 in/yr

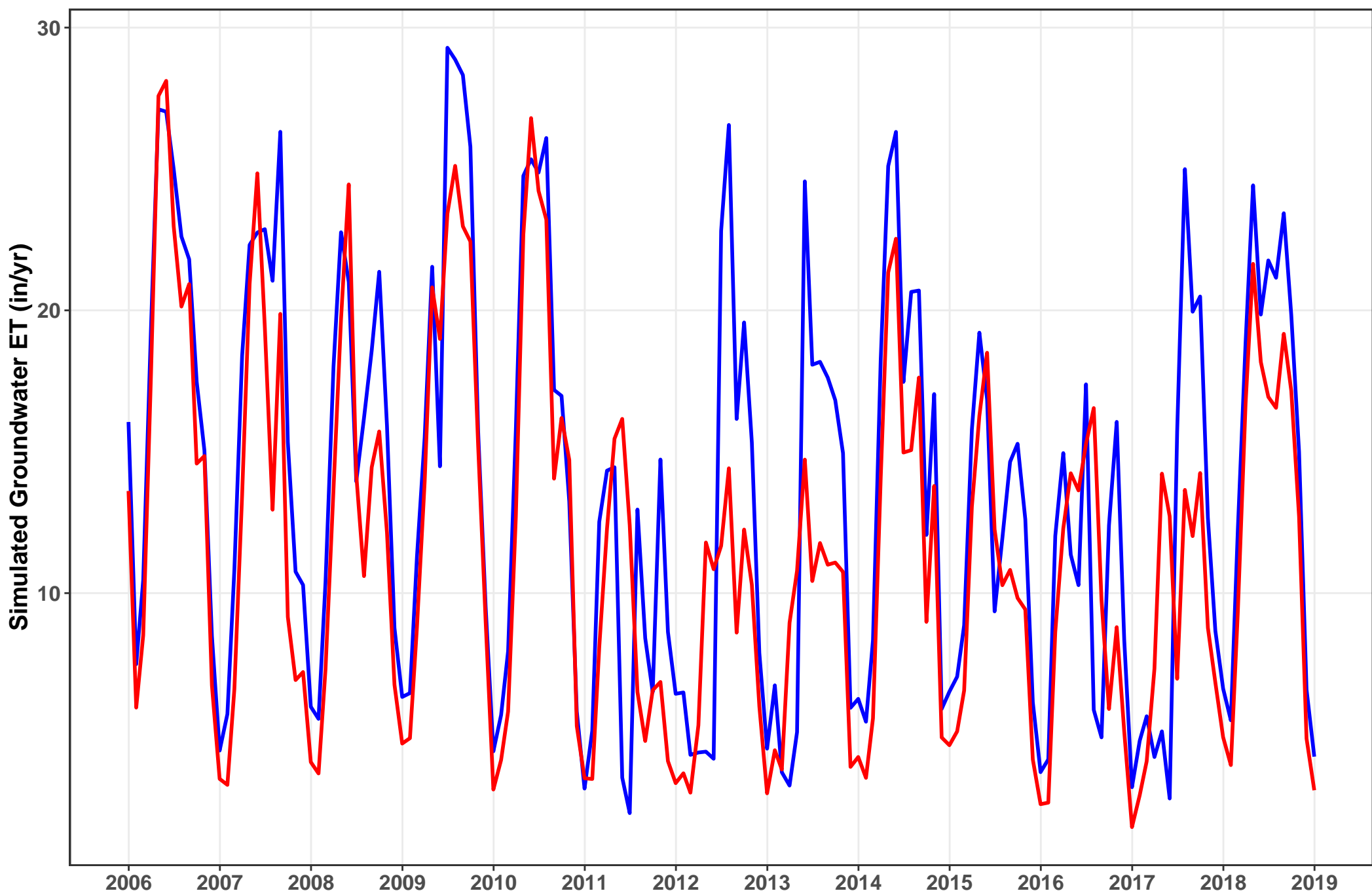
— HSPF AGWET&BASET — MODFLOW EVT



HUC 03080103 @ Lower St. Johns

HSPF Mean = 13.7 in/yr MODFLOW Mean = 11.6 in/yr

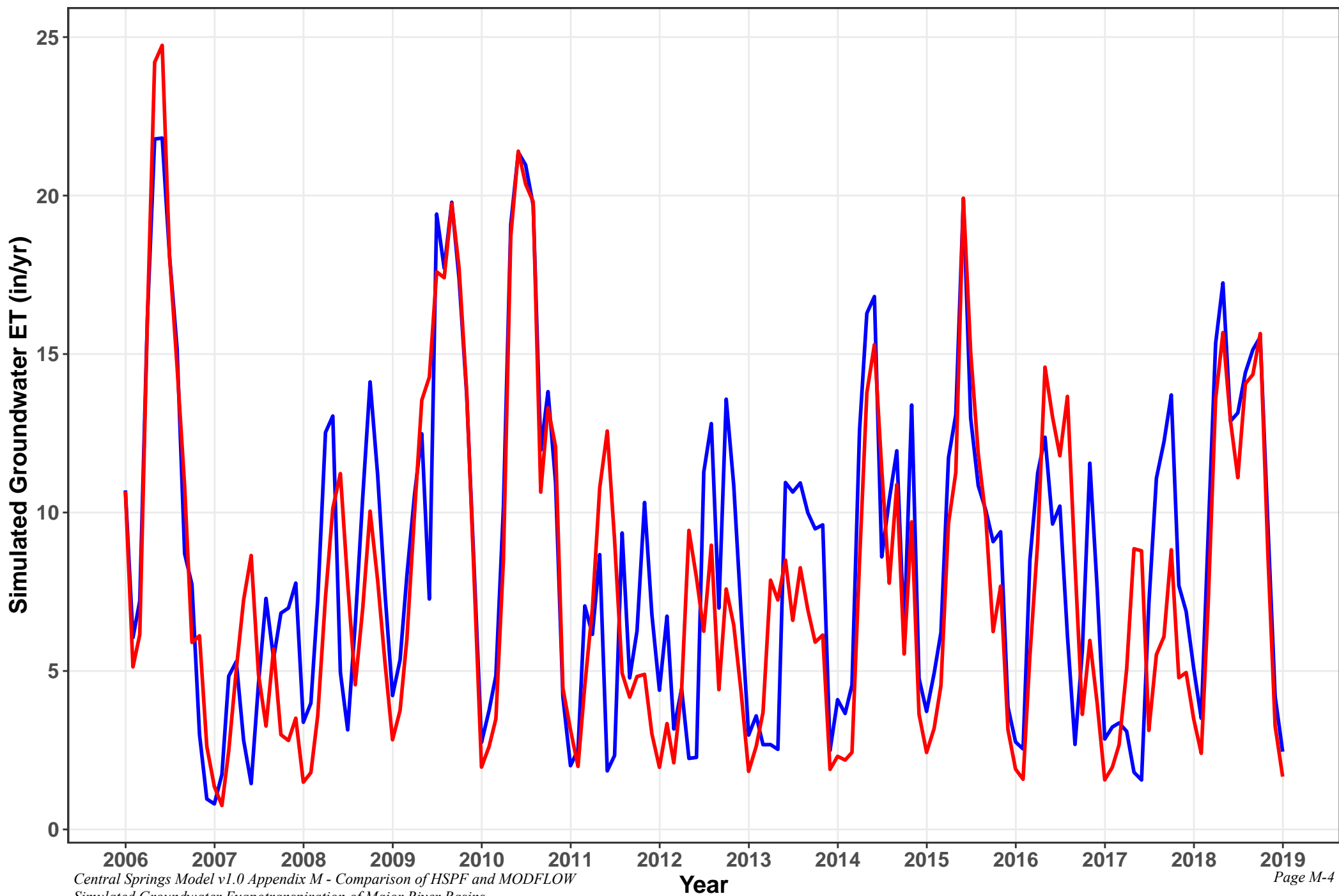
— HSPF AGWET&BASET — MODFLOW EVT



HUC 03080201 @ Daytona-St. Augustine

HSPF Mean = 8.56 in/yr MODFLOW Mean = 7.88 in/yr

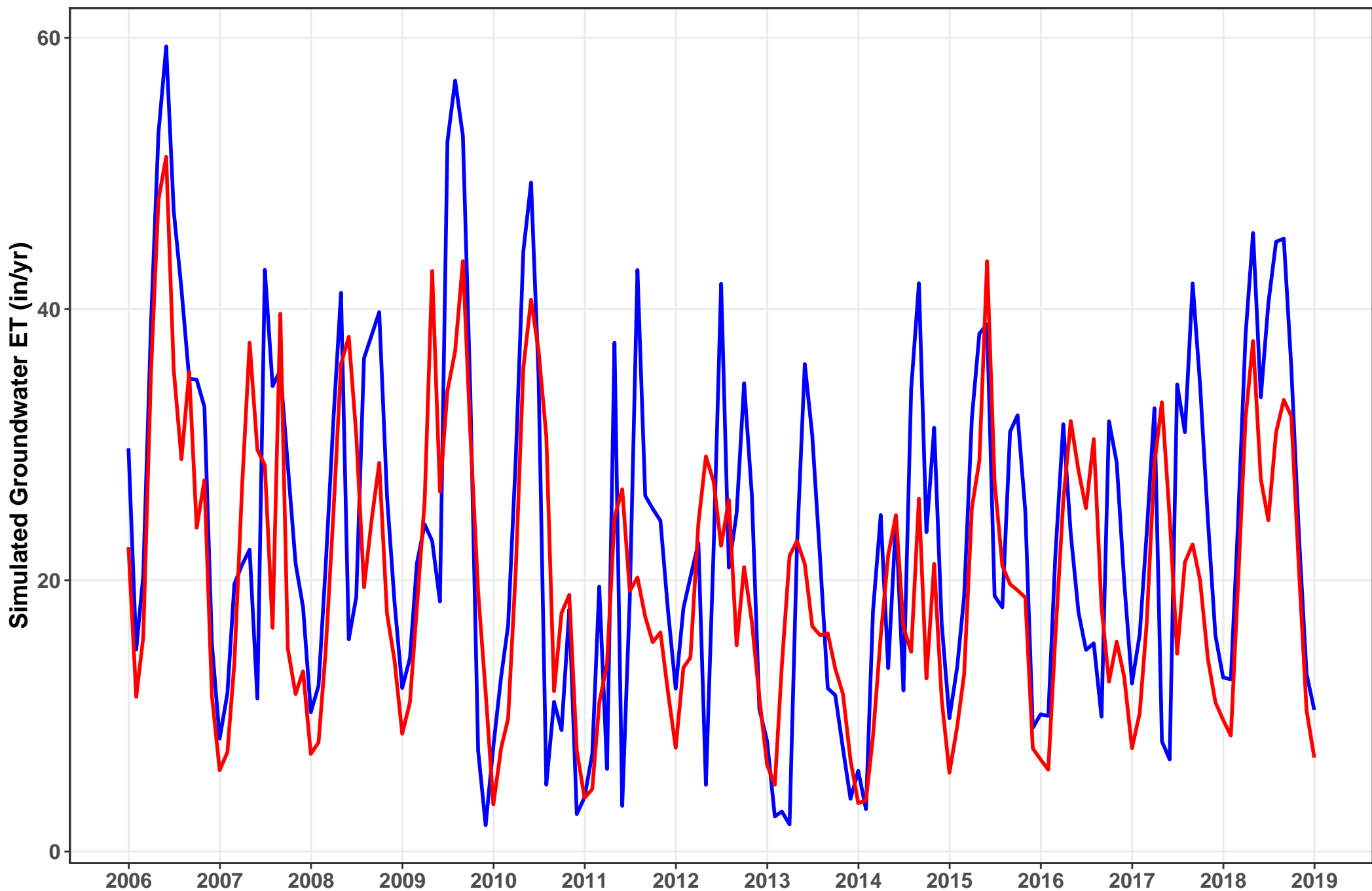
— HSPF AGWET&BASET — MODFLOW EVT



HUC 03080202 @ Cape Canaveral

HSPF Mean = 23.3 in/yr MODFLOW Mean = 20.1 in/yr

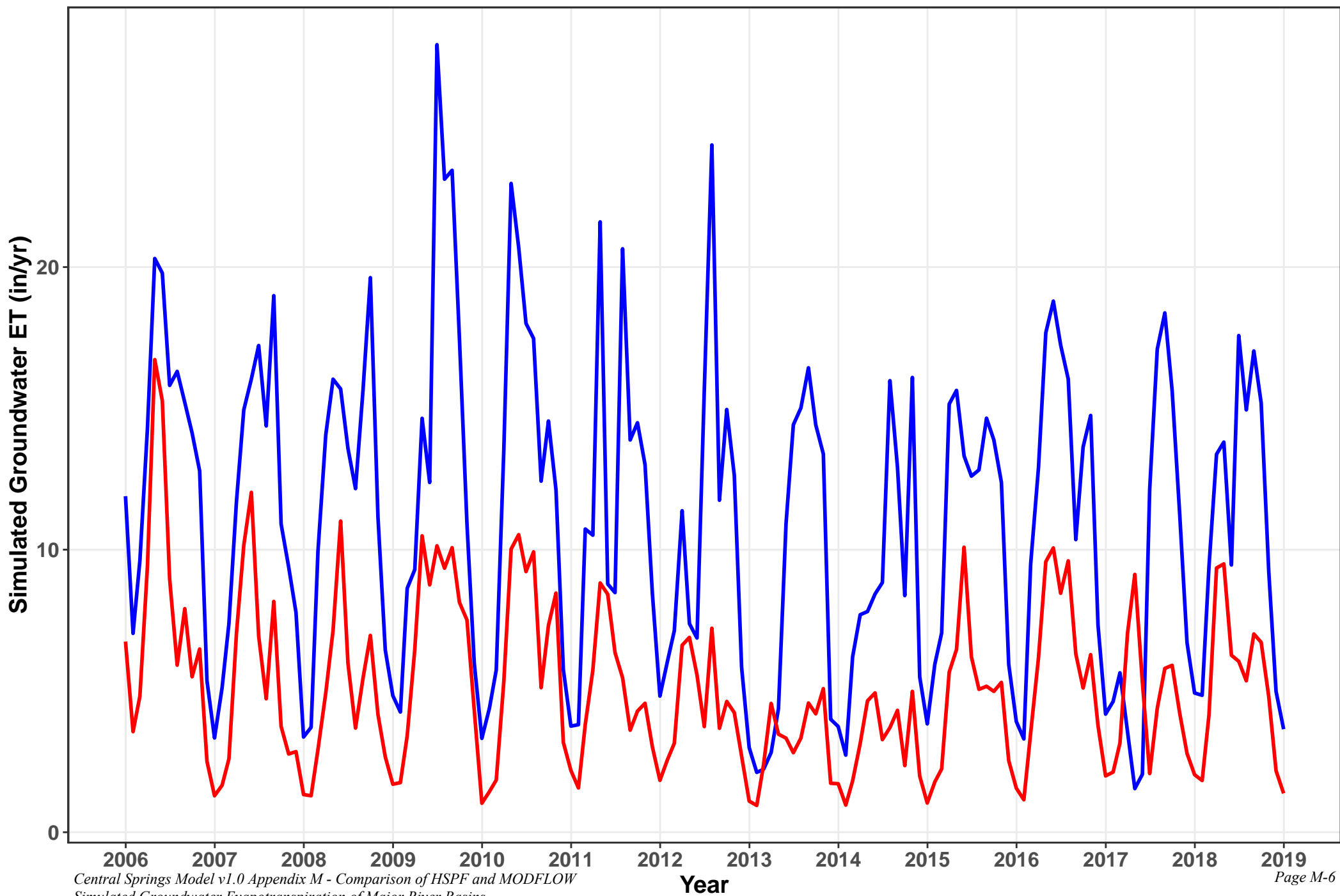
— HSPF AGWET&BASET — MODFLOW EVT



HUC 03090101 @ Kissimmee

HSPF Mean = 11.1 in/yr MODFLOW Mean = 5.13 in/yr

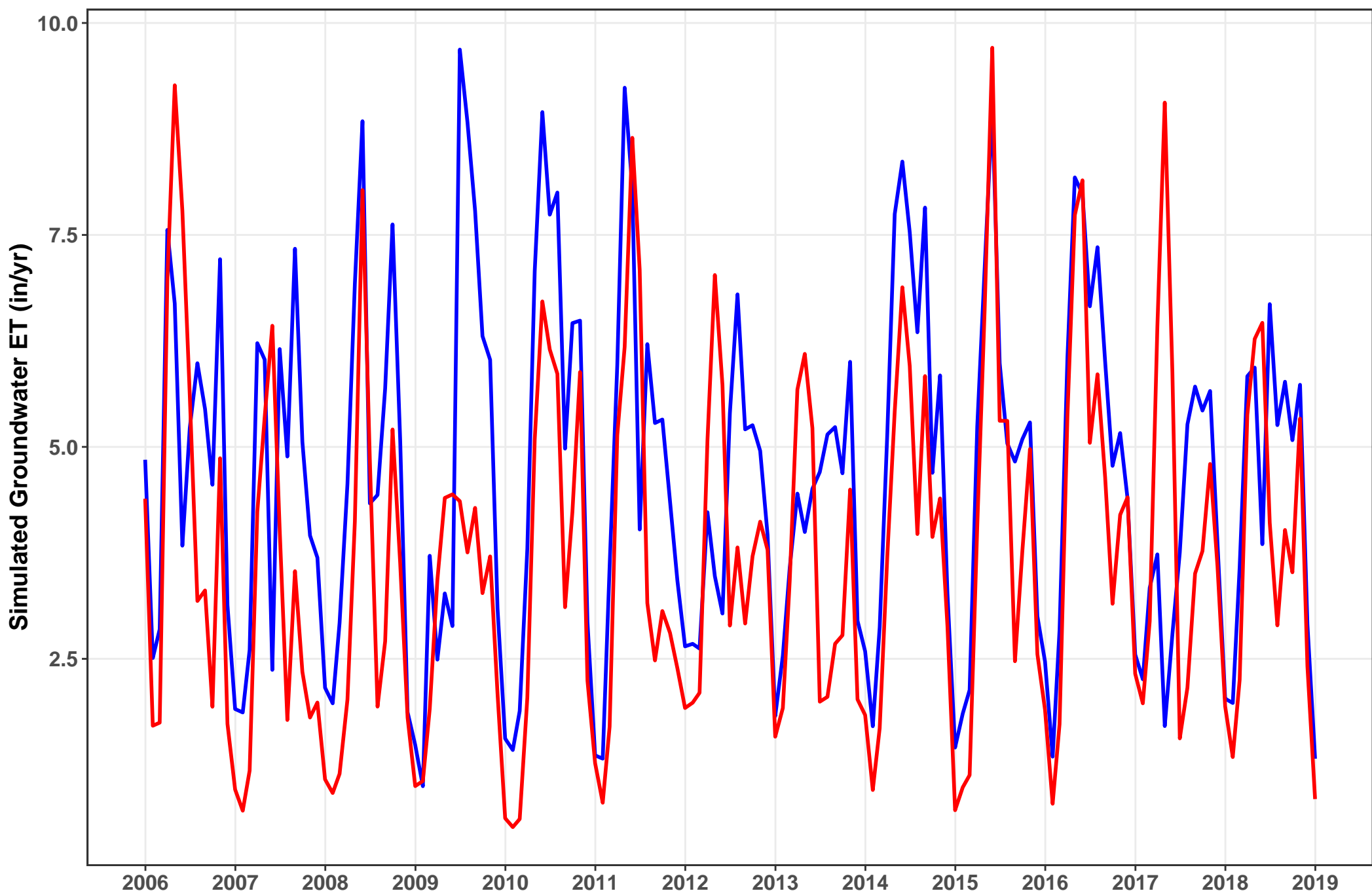
— HSPF AGWET&BASET — MODFLOW EVT



HUC 03100205 @ Hillsborough

HSPF Mean = 4.65 in/yr MODFLOW Mean = 3.68 in/yr

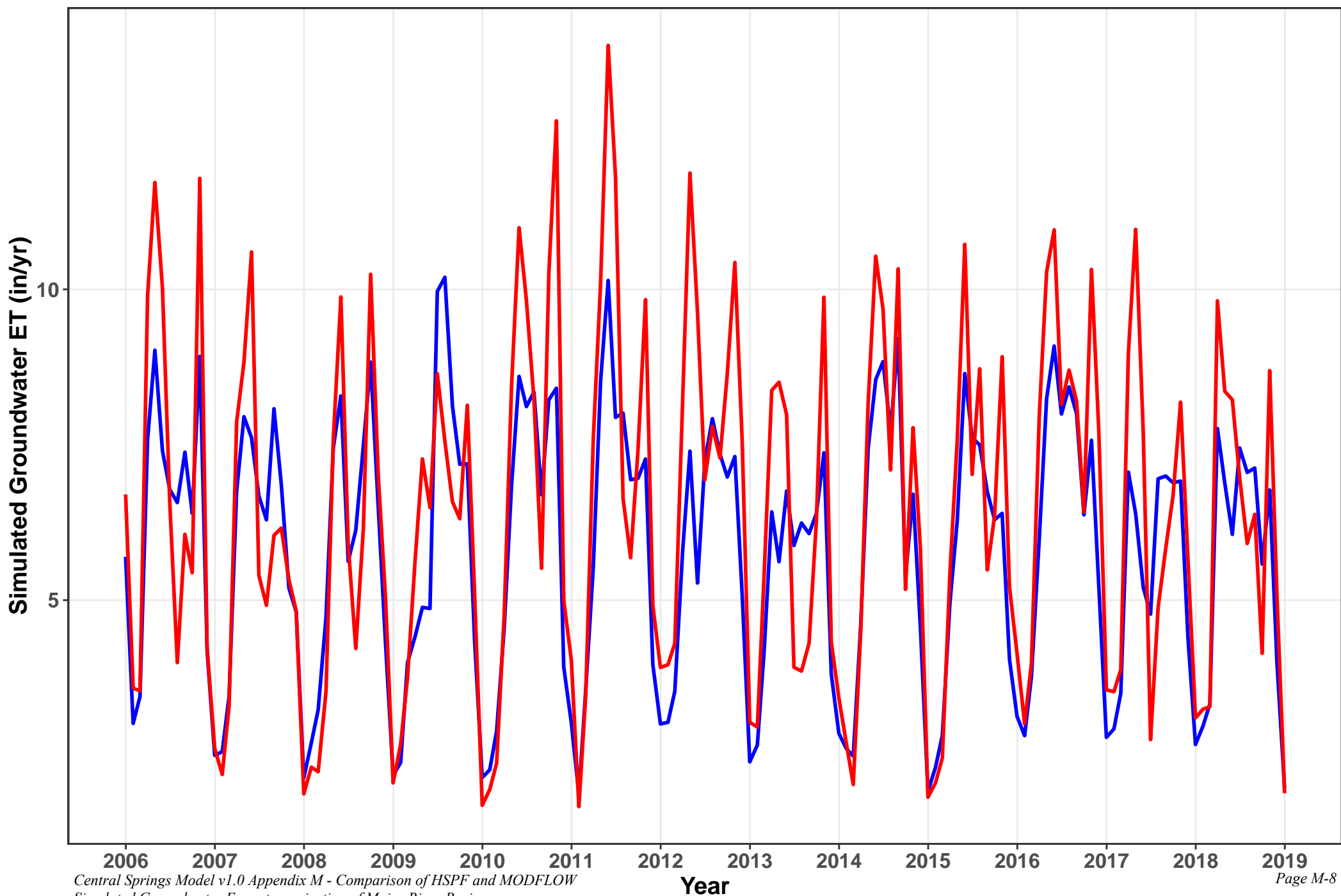
— HSPF AGWET&BASET — MODFLOW EVT



HUC 03100206 @ Tampa Bay

HSPF Mean = 5.79 in/yr MODFLOW Mean = 6.39 in/yr

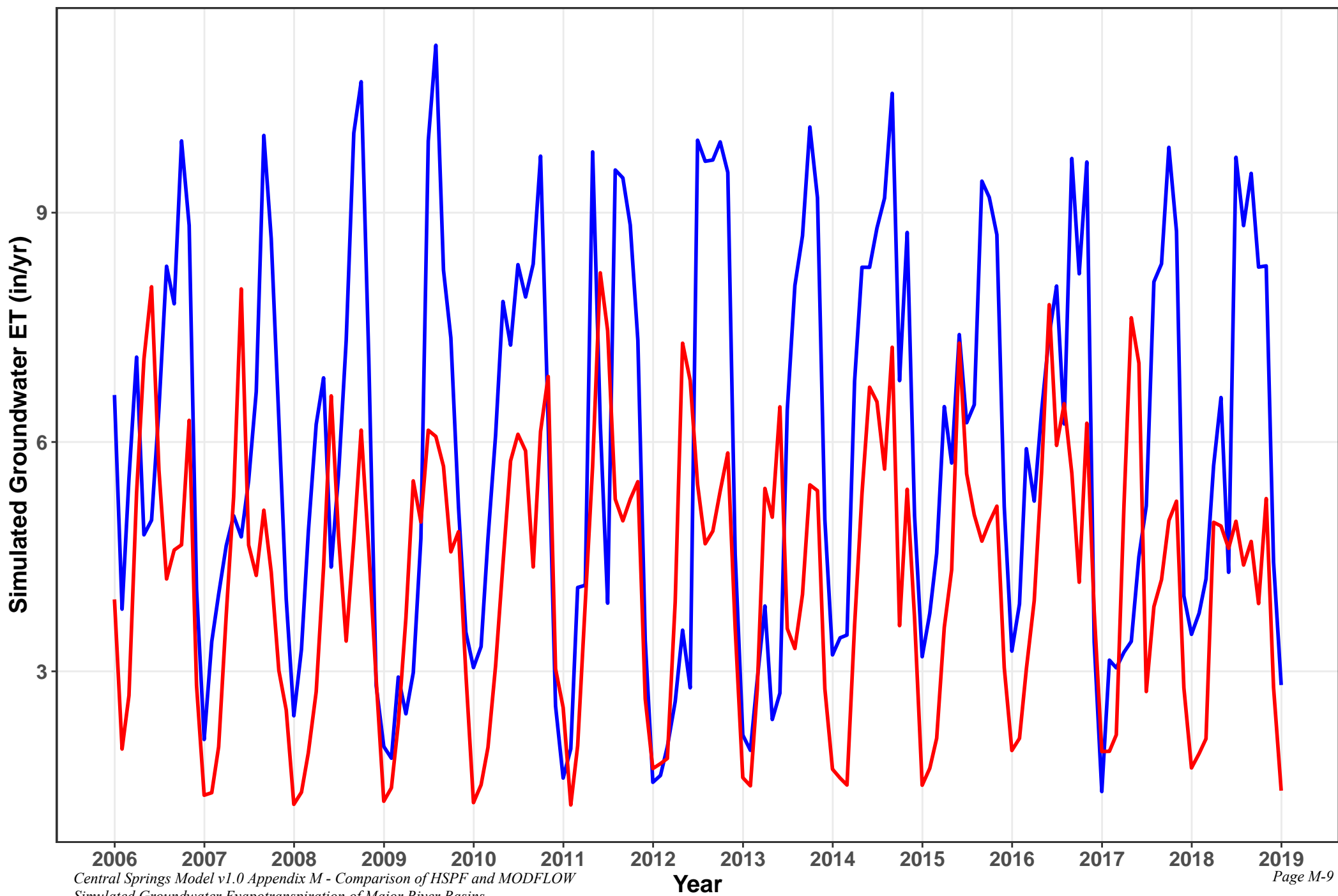
— HSPF AGWET&BASET — MODFLOW EVT



HUC 03100207 @ Crystal-Pithlachascotee

HSPF Mean = 5.94 in/yr MODFLOW Mean = 4.19 in/yr

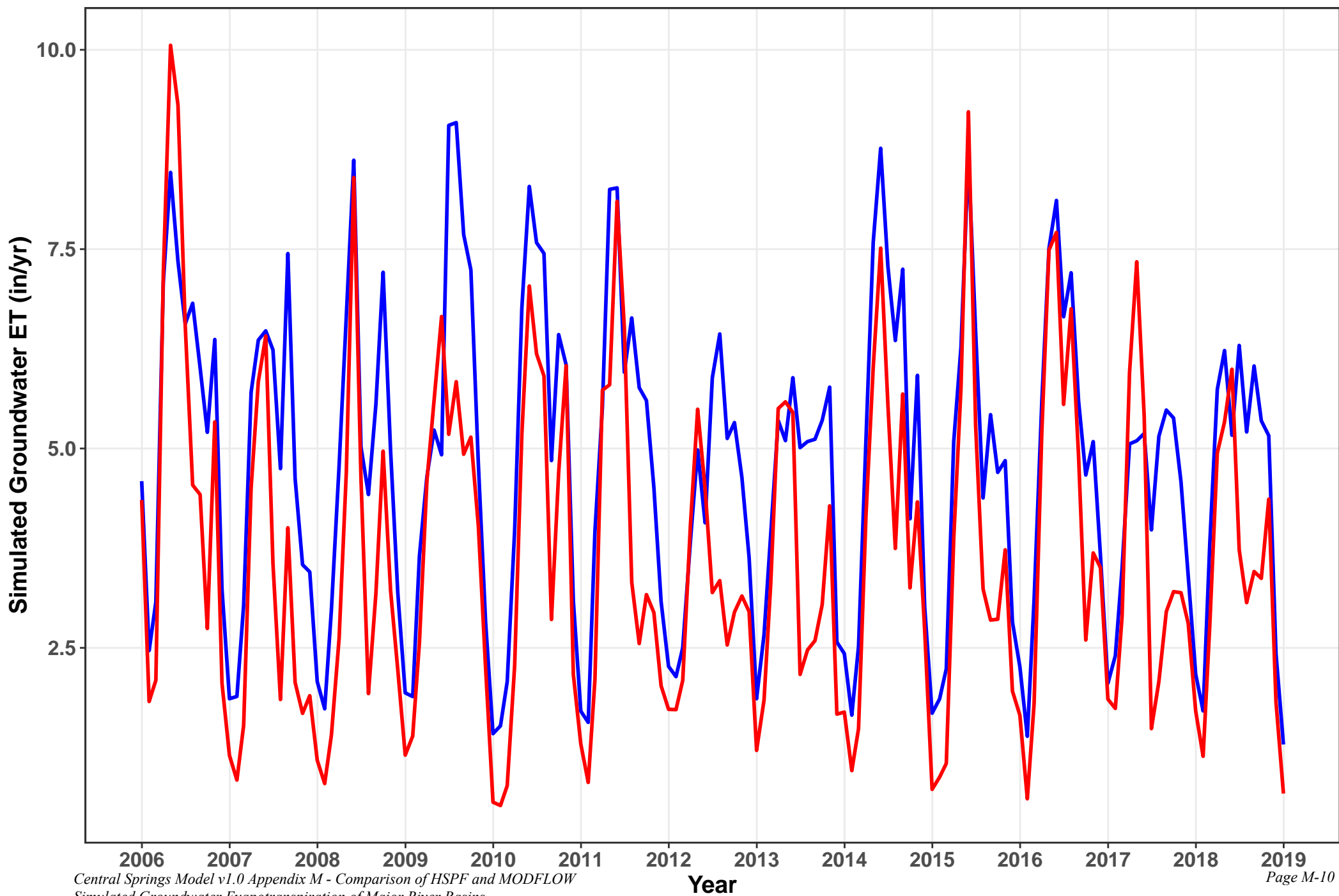
— HSPF AGWET&BASET — MODFLOW EVT



HUC 03100208 @ Withlacoochee

HSPF Mean = 4.8 in/yr MODFLOW Mean = 3.65 in/yr

— HSPF AGWET&BASET — MODFLOW EVT



HUC 03110101 @ Waccasassa

HSPF Mean = 4.9 in/yr MODFLOW Mean = 8.97 in/yr

— HSPF AGWET&BASET — MODFLOW EVT

