FAM code changes WRIMS GUI IDE 08062014

✓Added FAM-related WRESL files (41)

✓Added FAM related Lookup Tables (28)

✓Modified WRESL files to include FAM-related code (5)

✓Modified Lookup Tables to FAM (2)

✓Added DSS files

-CL\_FUTURE\_BO\_20140429\_SV.dss (For debugging purposes)

-transfer FAM-related timeseries to most recent CL SV file

- Existing conditions FAM SV file (Preceding task: Update SV file for non-FAM run)

-CL\_INIT.dss

Note: WSI/DI is not currently linked, as it is the only option, so it is always active. In the FAM code, there is now an option

**New Files**

**1. Added FAM folder into run directory:**

|  |  |  |
| --- | --- | --- |
| IF | wresl | .\Run\FAM\OperationsCriteria |
| MinimumFlows\_Forecasted | wresl | .\Run\FAM\Regulations |
| GeneralInfo\_Forecasted\_CAMOnly | wresl | .\Run\FAM\Misc |
| General | wresl | .\Run\FAM\Misc |
| pumping\_limit | wresl | .\Run\FAM\Regulations |
| diversions | wresl | .\Run\FAM\network |
| AprMayExport | wresl | .\Run\FAM\Regulations |
| EIRatio | wresl | .\Run\FAM\Regulations |
| connectivity | wresl | .\Run\FAM\network |
| SWP\_PA | wresl | .\Run\FAM\Demands |
| OMR\_low | wresl | .\Run\FAM\Regulations |
| CVP | wresl | .\Run\FAM\Demands |
| CVP\_Balancing | wresl | .\Run\FAM\OperationsCriteria |
| OMR\_moderate | wresl | .\Run\FAM\Regulations |
| WYT\_Forecasted\_90 | wresl | .\Run\FAM\Regulations |
| inflows\_Forecasted\_90 | wresl | .\Run\FAM\network |
| WYT\_Forecasted\_CAMDLL | wresl | .\Run\FAM\Regulations |
| WYT\_Forecasted\_75 | wresl | .\Run\FAM\Regulations |
| WYT\_Forecasted\_50 | wresl | .\Run\FAM\Regulations |
| North\_NCP\_Forecasted | wresl | .\Run\FAM\Demands |
| Objective | wresl | .\Run\FAM\Misc |
| South\_NCP\_Forecasted | wresl | .\Run\FAM\Demands |
| FolsomDemands\_Forecasted | wresl | .\Run\FAM\Demands |
| inflows\_Forecasted\_50 | wresl | .\Run\FAM\network |
| inflows\_Forecasted\_75 | wresl | .\Run\FAM\network |
| FloodConservation | wresl | .\Run\FAM\OperationsCriteria |
| evaporation | wresl | .\Run\FAM\network |
| DO\_Forecasted | wresl | .\Run\FAM\Regulations |
| storage | wresl | .\Run\FAM\network |
| SWP\_Carryover\_X | wresl | .\Run\FAM\OperationsCriteria |
| Art21 | wresl | .\Run\FAM\OperationsCriteria |
| OrovilleDemands\_Forecasted | wresl | .\Run\FAM\Demands |
| inflows\_Forecasted\_CAMDLL | wresl | .\Run\FAM\network |
| COA | wresl | .\Run\FAM\Regulations |
| SJR\_IE | wresl | .\Run\FAM\Regulations |
| noninfeasibility | wresl | .\Run\FAM\network |
| Input\_DLL | wresl | .\Run\FAM\ForecastData |
| Debug\_Input\_DLL | wresl | .\Run\FAM\ForecastData |
| channels | wresl | .\Run\FAM\network |
| Call\_CAMDLL | wresl | .\Run\FAM\ForecastData |
| BanksIncrease | wresl | .\Run\FAM\Regulations |

**2. Added new lookup tables**

|  |  |  |
| --- | --- | --- |
| CAM\_SWPDem\_SOD | table | .\Run\Lookup |
| CAM\_SWPDem\_NOD | table | .\Run\Lookup |
| FAM\_WHL | table | .\Run\Lookup |
| CAM\_pumping\_limit | table | .\Run\Lookup |
| Weights | table | .\Run\Lookup |
| DCU\_MAC | table | .\Run\Lookup |
| TempCtrFactor | table | .\Run\Lookup |
| FloodConservation | table | .\Run\Lookup |
| Demands\_SNCP | table | .\Run\Lookup |
| Demands\_NNCP | table | .\Run\Lookup |
| CVPDemandPattern | table | .\Run\Lookup |
| WaterRight\_NTHRM | table | .\Run\Lookup |
| MarshCreekInflow | table | .\Run\Lookup |
| SWP\_Loss | table | .\Run\Lookup |
| CC\_Demand | table | .\Run\Lookup |
| CAM\_X2\_PC | table | .\Run\Lookup |
| swp\_a56\_del | table | .\Run\Lookup |
| CAM\_SVI | table | .\Run\Lookup |
| CAM\_DO | table | .\Run\Lookup |
| frst\_Oro\_Apr\_Jul | table | .\Run\Lookup |
| CAM\_X2\_CHP | table | .\Run\Lookup |
| CAM\_SJRES | table | .\Run\Lookup |
| CAM\_Oro\_Apr\_Jul | table | .\Run\Lookup |
| CAM\_MinFlow | table | .\Run\Lookup |
| CAM\_Fall | table | .\Run\Lookup |
| CAM\_Exc\_Level | table | .\Run\Lookup |
| CAM\_CVP | table | .\Run\Lookup |
| CAM\_CalSim\_DO | table | .\Run\Lookup |

\*\*Modified SWP\_limits.table by appending the following:

11 1 14200.0 14200.0

11 2 14200.0 14200.0

11 3 14200.0 14200.0

11 4 14200.0 14200.0

11 5 14200.0 14200.0

11 6 14200.0 14200.0

11 7 14200.0 14200.0

11 8 14200.0 14200.0

11 9 14200.0 14200.0

11 10 14200.0 14200.0

11 11 14200.0 14200.0

11 12 14200.0 14200.0

**3. Modified WRESL Files**

**.\Run\swp\_dellogic\WSI\_DI**

**delcar\_swp.wresl**

Added

! Get annual delivery from allocation model

**define** SWPC\_NTHRM\_A56 {**select** Butte\_TA **from** CAM\_SWPDem\_NOD **where** **month**= 99}

**define** SWPC\_STHRM\_A56 {**select** Yuba\_TA **from** CAM\_SWPDem\_NOD **where** **month**= 99}

**define** NBV\_A56 {**select** NB\_TA **from** CAM\_SWPDem\_NOD **where** **month**= 99}

**define** fam\_swpdel {

**case** JantoJun {

**condition** **month** >=**JAN** .and. **month** <=**may**

**value** SWP\_Delivery[FAM] + 64.5 + SWPC\_NTHRM\_A56 + SWPC\_STHRM\_A56 + NBV\_A56}

**case** start {

**condition** **wateryear**==1922 .and. **month**==**oct**

**value** 0.}

**case** otherwise {

**condition** always

**value** 0.}

}

**define** fam\_swpdel\_dv {**alias** fam\_swpdel **kind** 'swp-delivery' **units** 'TAF'}

Added

**case** FAM\_IF{

**condition** AllocationSwitch == 2 .and. int(BanksIFSwitch) == 1

**value** max(fam\_swpdel, deltar\_drymin)

}

**case** FAM\_BO{

**condition** AllocationSwitch == 2 .and. int(RunBasis\_DLTSW) == 2

**value** max(min(fam\_swpdel,deltar\_expmax),deltar\_drymin)

}

**case** FAM\_Other{

**condition** AllocationSwitch == 2

**value** max(fam\_swpdel, deltar\_drymin)

}

**.\Run\cvp\_dellogic\CVP\_delivery\_logic\_south**

**delcar\_cvp\_south\_B2BO.wresl**

Added Line 250

**case** MarToMay\_FAM\_IF { ! from the delivery-carryover table

**condition** AllocationSwitch == 2 .and. JonesIFSwitch ==1 .and. (**month** >= **MAR** .and. **month** <= **MAY**)

**value** min(AnnDelCapEst, CVP\_Delivery\_South[FAM])}

**case** MarToMay\_FAM { ! from the delivery-carryover table

**condition** AllocationSwitch == 2 .and. (**month** >= **MAR** .and. **month** <= **MAY**)

**value** min(AnnDelCapEst, CVP\_Delivery\_South[FAM]\*1.1)}

**.\Run\cvp\_dellogic\CVP\_delivery\_logic\_system**

**Delivery\_carryover\_split\_CVP\_system**

Added in line 15

**case** MarToMay\_FAM { ! from the delivery-carryover table

**condition** AllocationSwitch == 2 .and. (**month** >= **MAR** .and. **month** <= **MAY**)

**value** CVP\_Delivery\_Sys[FAM]}

**.\Run**

**Main.wresl**

Description of changes:

Added FAM Cycle as cycle 1, shifted cycles

Added FAM includes

**.\Run\Assumptions**

Options\_Switches

Added in line 111

**define** AllocationSwitch {**select** Option **from** GUI\_Operations **where** Index=5} !Allocation method

**4. Modified lookup tables**

**.\Run\Lookup**

**GUI\_Operations.table**

Added index 5

5 2 ! 0 = wsi-di; 1 = Fixed; 2 = FAM

**.\Run\Lookup**

**swp\_limits.table**

11 1 14200.0 14200.0

11 2 14200.0 14200.0

11 3 14200.0 14200.0

11 4 14200.0 14200.0

11 5 14200.0 14200.0

11 6 14200.0 14200.0

11 7 14200.0 14200.0

11 8 14200.0 14200.0

11 9 14200.0 14200.0

11 10 14200.0 14200.0

11 11 14200.0 14200.0

11 12 14200.0 14200.0

Link to GUI

Modify .xml to enable FAM selection (temporary)

Modify Link table to allow for AllocationSwitch rdb