```
Attribute VB_Name = "Main"

Sub Run_QWASI()
'MSExcel Version of QWASI model - SS and Dynamic formats incorporated
If [agro!e14] Then
    Call Main.InitTimestep
End If
Application.ScreenUpdating = False

'check whether to include the foodweb or not, true = include, false = skip it
'foody = True
foody = [agro!p3]
'use defined constant timestep or one that varies with changing conditions
keepcalcdtimestepconstant = [agro!p4]

' Initialize special characters
    DEGREES = Chr(176)
    SUPER3 = Chr(179)
    SUPER2 = Chr(178)
    MICRO = Chr(181)
    COPYRT = Chr(169)

'check that we don't have any silly sediment depo/resusp/burial values
'i.e. check that CB didn't end up with negative burial rates
Sheets("Environment").Select
If [Environment!B26] > [Environment!B24] Then [Environment!B26] = [Environment!B24]
[Environment!B25] = [Environment!B24] - [Environment!B26]

'Check to see whether model is in dynamic or steady-state mode
Sheets("AGRO").Select
If [AGRO!p2] = 1 Then Dynamic = False
If [AGRO!p2] = 2 Then Dynamic = True

'start a timer 06/04/07
[AGRO!B24] = Now()

Application.ScreenUpdating = False

'check whether to read preprocessed results (E16 false) or reprocess PRZM data (E16 true)
EmisDynDirect = [AGRO!E16]
'check whether results should go into this workbook, or a separate one 06/04/07
If [AGRO!C20] Then separateResults = True
If [AGRO!C21] Then separateResults = False
separateFile = False
If [AGRO!C22] Then
    separateResults = False
    separateFile = True
    filepath = ActiveWorkbook.Path
    Open filepath & "\DYN-timeseries.csv" For Output As #1
End If

'Define model name and version number
ModelName = [AGRO!A1]
VersionNumber = [AGRO!A2]
```

```
SimText = [AGRO!G3]
AddComments = [AGRO!G4]

If [AGRO!E21] Then
    'we are running the PRZM variable sedimentation scheme
    If sedResuspPerCent = 0 Then
        'then we must be running manually
        'we cannot be running from the PA5 shell
        'because this would be set on reading AGRO.INP
        'so we need to set it from the built in environment that was chosen
        sedResuspPerCent = [Environment!B36]
    Else
        'we MUST be running from the shell so put the
        'resuspension percent into the list of values ran
        [Environment!B36] = sedResuspPerCent
    End If
Else
    'we are not running the PRZM variable sedimentation scheme
    sedResuspPerCent = 0
End If

model$ = ActiveCell.Parent.Parent.name

If Dynamic = True Then
    Sheets("Emissions").Select
    If [Emissions!P2] = 1 Then EmisDyn = False
    If [Emissions!P2] = 2 Then EmisDyn = True
    Else: EmisDyn = False

    'set min timestep checkers to 0 at beginning of simulation
    tk1_old = 0
    tk2_old = 0

End If


'Create output book
Call Outputs.outputbooks
'Initialize min Dvalue array
Call CustomOutputs.initializeMinDvalues

'Select Unsteady-State or Steady State Solution
    If Dynamic = True Then
        Call Main.Unsteadystate
    ElseIf Dynamic = False Then
        Call Main.Steadystate
    End If

'Application.ScreenUpdating = True

Workbooks(model$).Activate

'Write Dvalue extrema
Call CustomOutputs.DvalueExtremaWrite
```

```
'Write n-day-average annual maxima
Call CustomOutputs.yearlyMaximaWriteAll
'If option checked, write cumulative system outputs
If [AGRO!p5] Then
    Call CustomOutputs.writeCumulativeOutputs
End If

If separateFile Then
    Application.Calculation = xlCalculationManual
    Close #1
    Call Outputs.getCSVdirect
    Application.Calculate
    Application.Calculation = xlCalculationAutomatic
End If
'Sheets("DYN-process-ts").Select
'ActiveSheet.PivotTables("PivotTable1").PivotCache.Refresh

'If foody Then
    'Call Outputs.summaryFW
'End If

Sheets("AGRO").Select
[AGRO!B25] = Now()
[A1].Select

If separateResults Then
    Workbooks(outputbook$).Activate
    Sheets(1).Select
    [A1].Select
End If

Application.ScreenUpdating = True

End Sub
Sub Steadystate()
    Call QWASI.QWASIcalcs
End Sub
Sub Unsteadystate()
Dim maxSteps As Long
Dim stepsPerDay As Integer
Dim stepsPerOutput As Integer
Application.ScreenUpdating = False
    'initialize values here:
    timestep = 0
    tim = 0
    timLoop = 0
    simout = 0
    PRZMsimday_last = 0
    Emis_kg(1) = 0

'check that when running PRZM dynamic inputs the baseflow data
'has not changed
Dim oldInflow As Double, curInflow As Double
If EmisDyn Then
```

```
    Workbooks(model$).Activate
    Sheets("Environment").Select
    oldInflow = [E22]
    curInflow = [B22]
    [B23] = curInflow   'if running dynamic MUST have matched inflow and outflow
    If curInflow <> oldInflow Then
        [E22] = curInflow
        [E23] = curInflow
    End If
End If

If EmisDyn = True Then simday = 1
PRZMsimday = 1

'find day of first application in PRZM and begin simulation there
'define variable "simday" for reading in inputs from PRZM

Workbooks(model$).Activate
Sheets("PRZMforInput").Select
[a3].Select
If EmisDyn = True Then
    Do Until Emis_kg(1) > 0
        Emis_kg(1) = ActiveCell.Offset(1, 4)
        ActiveCell.Offset(1, 0).Select
    Loop

    'Dec 4/2007 - let's start it a day earlier to run-in
    'avoids the first time step not being easily accounted for
    PRZMsimday = ActiveCell.Offset(1, 0) - 2
    PRZMsimday = ActiveCell.Offset(1, 0) - 1
    'at least handle crudely applications first occuring on day 1 (jan 1)
    If PRZMsimday < 1 Then PRZMsimday = 1

    simday = 1
    'reset so that there is no emission at time 0
    Emis_kg(1) = 0
End If


If EmisDyn = False Then
    simday = 1
    PRZMsimday = 1
End If

Call Main.zero_before_run
'InitialTimestepCalc = True

'get numbers that might be needed by emisDynDirect calculation
baseFlow = [Environment!B22]
baseFlowParticles = [Environment!B9]

Call QWASI.QWASIcalcs 'timestep is defined in this cycle
'InitialTimestepCalc = False
```

```
Workbooks(model$).Activate
'define total running time and output frequency
'specify length of run not in years, but in days derived from real end dates
'(to allow for leap years) - col A in OutputsFromPRZM contains number of days in run
PRZM_Inputs.GetNumDays
totaltime = daysInRun * 24 'hrs

Sheets("AGRO").Select
'totaltime = [b14] * 8760 'years to hours

'check that user choice for number of years of run
'is not at odds with the number of years of data we have loaded
startYear = [GetPRZM_Files!B4].Value
maxYear = [GetPRZM_Files!L2].Value
numYearsToRun = [AGRO!b14].Value
If maxYear - startYear + 1 <> numYearsToRun Then
    changeRunLength = MsgBox("Number of years of data is not equal to requested model run time."
     & Chr(13) & Chr(13) & "Press Yes to run for " & Format([b14].Value, "#") & " years" & Chr(
    13) & "Press No to run with all available data." & Chr(13) & "or press Cancel to stop now.",
     vbYesNoCancel, "LENGTH OF MODEL RUN")
    If changeRunLength = vbCancel Then
        End
    End If
    If changeRunLength = vbYes Then 'means OK was pressed
        yearsInRun = Int([b14].Value)
        If yearsInRun < 1 Then yearsInRun = 1
        daysInRun = 1 + DateSerial(startYear + yearsInRun - 1, 12, 31) - DateSerial(startYear, 1
        , 1)
        totaltime = daysInRun * 24 'hrs
    End If
End If

outputtime = [b15] 'hours
timestep = [b16]

stepsPerOutput = outputtime / timestep
'output = outputtime
output = stepsPerOutput


Rem reset variables to zero again after timestep is set
Call Main.zero_before_run

If EmisDyn = False Then
    simday = 1
    PRZMsimday = 1
End If

Rem reset output counter to zero before running model
'output = 0

oldStatusBar = Application.DisplayStatusBar
Application.DisplayStatusBar = True
Application.StatusBar = "Starting loop..."
```

```
maxSteps = totaltime / timestep
stepsPerDay = 24 / timestep
If stepsPerDay <> 24 / timestep Then
    'this means 24hrs is not an exact multiple of timestep
    timestep = 24 / stepsPerDay
    maxSteps = totaltime / timestep
    stepsPerOutput = outputtime / timestep
    output = stepsPerOutput
    [AGRO!b16] = timestep
End If

'loop through timesteps from here
'For tim = 0 To totaltime Step timestep
'For tim = timestep To totaltime Step timestep

'this is before the loop so timLoop and tim should be zero
'check this
'XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Call QWASI.QWASIcalcs   'testing 4/12/2007 - this wasn't called before the loop
Call Outputs.OutputDyn
'4/12/2007 test
'XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

'Initialize running sums for custom output to zero
Call CustomOutputs.dailyAvgReset
'Write headers at top of worksheet
Call CustomOutputs.dailyAvgHeaders

For timLoop = 1 To maxSteps - 1
'For timLoop = 0 To maxSteps - 1
    tim = timLoop * 24 / stepsPerDay
    Rem If tim = timestep Then GoTo notinitial

    'Determine hour of the current day
    ModuloTime_h = tim - (24 * Int(tim / 24))
    'Set the zero hour to 24
    If ModuloTime_h = 0 Then
        ModuloTime_h = 24
    End If

    If tim > timestep Then GoTo notinitial

'Calculate Initial Inventories
    For medium = 1 To 2
        Fug_old(medium) = Fugacity(medium)
        Init_Inv_mol(medium) = Fug_old(medium) * ZvalueBulk(medium) * Volume(medium)
        Inv_mol(medium) = Init_Inv_mol(medium)
    Next medium

    Fug_old(3) = Fugacity(3)
    Fug_old(4) = Fugacity(4)

notinitial:
```

```
    Call QWASI.QWASIcalcs
    'keep running sums for daily average output
    Call CustomOutputs.dailyAccumulation(stepsPerDay)
    'update extrema for Dvalues
    Call CustomOutputs.updateDvalueExtrema

    'for reading in daily PRZM data
    PRZMsimday_last = PRZMsimday
'    If tim > (simday * 24) Then
    If timLoop >= (simday * stepsPerDay) Then
        simday = simday + 1
        PRZMsimday = PRZMsimday + 1
        Application.StatusBar = "Simulation day: " & Format(simday, "#0") & " Timestep: " &
        Format(timestep) & " hrs"

        'write to custom output tab
        Call CustomOutputs.dailyAvgOutput

    End If

'    Call QWASI.QWASIcalcs

    'XXXXXXXXXXXXXXXXXXX
    'If tim = 0 Then GoTo nosummation
    '12/4/2007
    'XXXXXXXXXXXXXXXXXXX

    'sum total of emissions via various inputs
    'direct emissions
    SumEmiskg = SumEmiskg + (timestep * Emis_kg(1) / 8760)
    'from runoff/inflow water
    'SumInflowkg = SumInflowkg + (timestep * ConcBulk_n(3) * GRate(15) / 1000000#)
    SumInflowkg = SumInflowkg + (timestep * ConcBulk_n(3) * GRate(15) / 1000000000#)
    '*******************************************************
    '* note 6/6/2007                                       *
    '* ConcBulk_n is in ng/L                               *
    '* GRate(15) is flow in m3/hr                          *
    '* timestep in hrs                                     *
    '* convert to Litres from m3 is x 1000                 *
    '* convert to Kg from ng is /1E12                      *
    '* thus this conversion should be /1E9 or /1000000000#  *
    '*******************************************************

    'from ambient air contamination
    SumBulkAirkg = SumBulkAirkg + ((timestep * DAirToWater * Fugacity(4)) * MolMass / 1000)
    SumInput = SumEmiskg + SumInflowkg + SumBulkAirkg

    'sum total of various system losses
    SumVolatkg = SumVolatkg + ((timestep * Fug_old(1) * Dvalue(8)) * MolMass / 1000)
    SumWatAdv = SumWatAdv + ((timestep * Fug_old(1) * (Dvalue(10) + Dvalue(11))) * MolMass /
    1000)
    SumWatRxn = SumWatRxn + ((timestep * Fug_old(1) * Dvalue(7)) * MolMass / 1000)
    SumSedBurial = SumSedBurial + ((timestep * Fug_old(2) * Dvalue(1)) * MolMass / 1000)
```

```
    SumSedRxn = SumSedRxn + ((timestep * Fug_old(2) * Dvalue(2)) * MolMass / 1000)
    SumLoss = SumVolatkg + SumWatAdv + SumWatRxn + SumSedBurial + SumSedRxn

nosummation:
    'check if output to dynamic form should happen

    If tim = 0 Then
'        'GoTo outputinitial
        Call Outputs.OutputDyn
        output = output + stepsPerOutput
        simout = simout + 1
    End If

'    If timLoop < output Then GoTo nooutputthistime
    If timLoop >= output Then
        Call Outputs.OutputDyn
        output = output + stepsPerOutput
        simout = simout + 1
    End If

outputinitial:
'    Call Outputs.OutputDyn
''    output = output + outputtime
'    output = output + stepsPerOutput
'    simout = simout + 1

nooutputthistime:

    For medium = 1 To 2
        Inv_old(medium) = Inv_mol(medium)
        Fug_old(medium) = Fugacity(medium)
    Next medium

    Fug_old(3) = Fugacity(3)
    Fug_old(4) = Fugacity(4)

    If yearly = 0 And EmisDyn = True Then
        GoTo endsimnow
    End If

Next timLoop

Application.StatusBar = False
Application.DisplayStatusBar = oldStatusBar
endsimnow:

'output dynamic summary of results
Call Outputs.OutputSteady
End Sub
Sub InitTimestep()
InitialTimestepCalc = True
keepcalcdtimestepconstant = False

foody = [agro!p3]
```

```
timestep = 100
tim = 0
tk1_old = 0
tk2_old = 0
Call QWASI.QWASIcalcs
'Call Main.CalcMinTimestep

InitialTimestepCalc = False

Sheets("AGRO").Select
[A1].Select

End Sub
Sub CalcMinTimestep()
If keepcalcdtimestepconstant = True Then GoTo nochange

'calculate half-time for each total process
tk1 = Dtotal(1) / (ZvalueBulk(1) * Volume(1)): maxk = tk1
tk2 = Dtotal(2) / (ZvalueBulk(2) * Volume(2)): If tk2 > maxk Then maxk = tk2



'If tk1 = tk1_old And tk2 = tk2_old Then
'GoTo nochange
'End If

tk1_old = tk1
tk2_old = tk2

timestepnew = 0.05 / maxk
If timestep = 0 Then timestep = timestepnew
If timestepnew <> timestep Then timestep = timestepnew
' if 24 hours is not entirely divisible by timestep then
' we should make timestep slightly shorter so that it is
' 06/06/2007
If timestep > 0.3 Then timestep = 0.3
If (24 / timestep - Round(24 / timestep, 0)) <> 0 Then
    timestep = 24 / (Round(24 / timestep, 0) + 1)
End If

If foody = True Then
    If timestepf < timestepnew Then
        'timestep = timestepf
        'this test is taken out to allow equilibrium concentrations
        'to be estimated for fast processes in the food web model
        [AGRO!C16] = "would've been determined by foodweb"
        [AGRO!D16] = timestepf
    Else
        [AGRO!C16] = "is determined by exposure model"
        [AGRO!D16] = ""
    End If
Else
        [AGRO!C16] = "is determined by exposure model"
        [AGRO!D16] = ""
```

```
End If

Workbooks(model$).Activate
Sheets("AGRO").Select
If InitialTimestepCalc = True Then
[b16] = timestep
End If
nochange:
End Sub
Sub zero_before_run()
    'reset fugacities, inventories and concentrations to 0 before running the model
    For medium = 1 To 2
        Fugacity(medium) = 0
        Fug_old(medium) = 0
        Init_Inv_mol(medium) = 0
        Inv_mol(medium) = 0
        Inv_old(medium) = 0
        ConcBulk(medium) = 0
        ConcSub(medium, 1) = 0
        ConcSub(medium, 2) = 0
    Next medium
    For organism = 1 To 8
        Corganism(organism) = 0
    Next organism

    'reset pure phase to zero
    Fugacity(5) = 0
    Fug_old(5) = 0
    Inv_mol(5) = 0
    Inv_old(5) = 0

    Rem reset inflow concs to zero
    ConcBulk(3) = 0: ConcBulk(4) = 0
    ConcBulk_n(3) = 0: ConcBulk_n(4) = 0

    'reset sum of inflows at beginning of simulation
    SumEmiskg = 0: SumInflowkg = 0: SumBulkAirkg = 0: SumInput = 0
    'reset sum of losses at beginning of simulation
    SumVolatkg = 0: SumWatAdv = 0: SumWatRxn = 0: SumSedBurial = 0: SumSedRxn = 0: SumLoss = 0

    'clear out the year storage area
    For dayOfYr = 1 To 366
        For compartmentclear = 1 To 3
            chemConcs(compartmentclear, dayOfYr) = 0
        Next compartmentclear
    Next dayOfYr

    'create the file that will contain the yearly summary lines for post processing to get
    'the 90th %ile values
'    Open projectFilePath & "\sumofyrs.csv" For Output As #3
'    Write #3, "Summary of Annual Peak Values - units are ppb - ug/L, ug/kg, and ug/L"
'    Write #3, "Compartment", "Year", "Peak", "4day", "21day", "60day", "90day", "Annual"
'    Close #3
```

```
    Sheets("DYNyearly").Select
    [a2].Select
    Selection.CurrentRegion.Select
    Selection.ClearContents
    'make sure the 30 year sets of data are clear
    Range("DYNYearly!A4").Resize(30, 7).ClearContents
    Range("DYNYearly!A37").Resize(30, 7).ClearContents
    Range("DYNYearly!A70").Resize(30, 7).ClearContents
    Range("A1").Select

End Sub
Sub Run_withoutQWASI()
'this replaces QWASI and takes water and sediment pore-water concentrations directly from
'an external source - initially this will be EXAMS
'If [agro!e14] Then
    'Call Main.InitTimestep 'not needed if not running QWASI
'End If
Application.ScreenUpdating = False

foody = True

If projectName = "" Or projectFilePath = "" Then
    'then we're probably running manually
    'and we will make a best faith effort
    'at seeing if AGRO.INP is available to set project details
    PA5.PA5_input_read
End If

'use defined constant timestep or one that varies with changing conditions
keepcalcdtimestepconstant = [agro!p4]

' Initialize special characters
    DEGREES = Chr(176)
    SUPER3 = Chr(179)
    SUPER2 = Chr(178)
    MICRO = Chr(181)
    COPYRT = Chr(169)

'run in Dynamic mode
Sheets("AGRO").Select
Dynamic = True

'start a timer 06/04/07
[AGRO!B24] = Now()

Application.ScreenUpdating = False

'check whether results should go into this workbook, or a separate one 06/04/07
If [AGRO!C20] Then separateResults = True
If [AGRO!C21] Then separateResults = False
separateFile = False
If [AGRO!C22] Then
    separateResults = False
    separateFile = True
```

```
    filepath = ActiveWorkbook.Path
    Open filepath & "\DYN-timeseries.csv" For Output As #1
End If

'Define model name and version number
ModelName = [AGRO!A1]
VersionNumber = [AGRO!A2]
SimText = [AGRO!G3]
AddComments = [AGRO!G4]

model$ = ActiveCell.Parent.Parent.name

If Dynamic = True Then
'may not need EmisDyn for this section - bypasses AGRO so why
'read in PRZM again. Come back and clear this up.
'AMW 3/7/08
    Sheets("Emissions").Select
    If [Emissions!P2] = 1 Then EmisDyn = False
    If [Emissions!P2] = 2 Then EmisDyn = True
    Else: EmisDyn = False

    'set min timestep checkers to 0 at beginning of simulation
    tk1_old = 0
    tk2_old = 0
End If


'Create output book
Call Outputs.outputbooks

'Select Unsteady-State or Steady State Solution
    If Dynamic = True Then
        'Call Main.Unsteadystate
        'don't need to do AGRO QWASI calcs if using EXAMS results
        Call Main.LoopForFood
    ElseIf Dynamic = False Then
        'shouldn't really get here, but leave this for now
        Call Main.Steadystate
    End If

'Application.ScreenUpdating = True

Workbooks(model$).Activate

If separateFile Then
    Application.Calculation = xlCalculationManual
    Close #1
    Call Outputs.getCSVdirect
    Application.Calculate
    Application.Calculation = xlCalculationAutomatic
End If

If separateResults Then
    Workbooks(outputbook$).Activate
```

```
    Sheets(1).Select
    [A1].Select
End If

Sheets("AGRO").Select
[AGRO!B25] = Now()
[A1].Select

Application.ScreenUpdating = True

End Sub

Sub LoopForFood()
'this is for looping into the foodweb model with EXAMS inputs instead of AGRO exposure values

Dim maxSteps As Long
Dim stepsPerDay As Integer
Dim stepsPerOutput As Integer
Dim FullOutVals


Application.ScreenUpdating = False
'initialize values here:
timestep = 0
tim = 0
timLoop = 0
simout = 0
PRZMsimday_last = 0
noAGRO = True


If EmisDyn = True Then simday = 1
PRZMsimday = 1

'find day of first application in EXAMS and begin simulation there
'define variable "simday" for reading in inputs from EXAMS


Workbooks(model$).Activate

EXAMSfull = projectFilePath & "\FullOut.xms"
Open EXAMSfull For Input As #2
If EmisDyn = True Then
    i = 0
    Do Until concWat > 0
        Line Input #2, a
        If Left(a, 1) <> "!" Then
            i = i + 1
            FullOutVals = Split(a)
            concWat = FullOutVals(2)
        End If
    Loop
    EXAMS_CW(1) = FullOutVals(2) * 1000 'convert from ppm to ppb mg/L to ug/L
    EXAMS_CPW(1) = FullOutVals(4) * 1000 'convert from ppm to ppb mg/L to ug/L
```

```
    EXAMS_Css(1) = FullOutVals(5) * 1000 'convert from ppm to ppb mg/kg to ug/kg
    PRZMsimday = i
    yearly = Val(Left(FullOutVals(1), 4))
    monthy = Mid(FullOutVals(1), 6, 2)
    dayy = Right(FullOutVals(1), 2)
    veryFirstDay = DateSerial(yearly, monthy, dayy)
    i = 2
    Do Until EOF(2)
        Line Input #2, a
        FullOutVals = Split(a)
        EXAMS_CW(i) = FullOutVals(2) * 1000 'convert from ppm to ppb mg/L to ug/L
        EXAMS_CPW(i) = FullOutVals(4) * 1000 'convert from ppm to ppb mg/L to ug/L
        EXAMS_Css(i) = FullOutVals(5) * 1000 'convert from ppm to ppb mg/kg to ug/kg
        i = i + 1
    Loop
    Close #2
    daysInRun = i
    'at least handle crudely applications first occuring on day 1 (jan 1)
    If PRZMsimday < 1 Then PRZMsimday = 1
    simday = 1
End If


totaltime = daysInRun * 24 'hrs

Sheets("AGRO").Select

outputtime = [b15] 'hours
timestep = [b16]

stepsPerOutput = outputtime / timestep
'output = outputtime
output = stepsPerOutput

'reset output counter to zero before running model
output = 0

oldStatusBar = Application.DisplayStatusBar
Application.DisplayStatusBar = True
Application.StatusBar = "Starting loop..."

maxSteps = totaltime / timestep
stepsPerDay = 24 / timestep
If stepsPerDay <> 24 / timestep Then
    'this means 24hrs is not an exact multiple of timestep
    timestep = 24 / stepsPerDay
    maxSteps = totaltime / timestep
    stepsPerOutput = outputtime / timestep
    output = stepsPerOutput
    [AGRO!b16] = timestep
End If

tim = 0
Call FoodWeb.Input_foodweb 'initializes all foodwebby stuff
```

```
simout = simout + 1

For timLoop = 1 To maxSteps - 1
    tim = timLoop * 24 / stepsPerDay

    PRZMsimday_last = PRZMsimday
    If timLoop >= (simday * stepsPerDay) Then
        simday = simday + 1
        excelDay = veryFirstDay + simday
        yearly = Year(excelDay)
        monthy = Month(excelDay)
        dayy = Day(excelDay)
        PRZMsimday = PRZMsimday + 1
        Application.StatusBar = "Simulation day: " & Format(simday, "#0") & " Timestep: " &
        Format(timestep) & " hrs"
    End If

    'for getting the daily EXAMS data
    CW = EXAMS_CW(simday)
    CPW = EXAMS_CPW(simday)
    CSedSol = EXAMS_Css(simday)
    FoodWeb.Input_foodweb

'    If timLoop < output Then GoTo nooutputthistime
    If timLoop >= output Then
        Call Outputs.OutputDyn
        output = output + stepsPerOutput
        simout = simout + 1
    End If

outputinitial:

nooutputthistime:

Next timLoop

Application.StatusBar = False
Application.DisplayStatusBar = oldStatusBar
endsimnow:

'output dynamic summary of results
Call Outputs.OutputSteady

End Sub
```