Routines:		Description
BackSub	-	Solves for the vector X in matrix equation X[A] = Y.
CalcActCoeff	-	Calculates activity coefficients based on user choice.
CalcResidual	-	Calculates the residual of the components as the difference between the known totals and the totals calculated by mass balance.
CalcSpeciesConc	-	Calculates the concentration of each species.
ChargeBal	-	Calculates the charge balance and ionic strength of the system.
CheckIndex	-	Checks if all species of interest to TREGRO are present in the soil model.
Concen	-	Calculates the concentration of components not constrained by mass balance.
CtoM	-	Assigns a concentration-to-mass conversion factor for a component.
Davies	-	Calculates the Davies coefficient for ionic strength correction.
DeCntrl	-	Controls the input and output to the decomposition routine.
Decomp	-	Calculates decomposition.
DefineProb	-	Processes lists of phases and constructs lists of species with interdependencies.
FGuess	-	First guess for component concentrations.
FindIndex	-	Finds the indices for a set of species of interest to TREGRO.
Flop	-	Calculates the amount of components entering the first layer in rainfall or throughfall.
FluxErr	-	Checks for errors in resulting water flux.
FluxKT	-	Controls the calculations for new known totals for components due to water flux.
FMovIon	-	Calculates the new known totals for components in each layer given the amount of each component that moves between the layers.
FODecay	-	First order mineralization for calcium, magnesium and potassium.
ForwardElim	-	Transforms a matrix into an upper triangular matrix.
FSolub	-	Calculates the amount of each component that is soluble and determines the fraction of that soluble total that will move with the flux.
Gauss	-	Solves a set of simultaneous equations represented in matrix form.

Routines:		Description
InDat	-	Reads input data.
IndSort	-	Sorts the indices of one array with respect to another array.
Init	-	Initializes constants.
InitCtoM	-	Initializes concentration-to-mass conversion factors.
InParam	-	Reads in data from a file which fakes TREGRO inputs when TREGRO is not run with YASE.
Jake	-	Calculates the partial derivative of each component's total concentration with respect to each free component's concentration.
NitroCheck	-	Checks that nitrogen is present - necessary for decomposition routines to work.
NuTree	-	Calculates the remaining nutrients in the soil after nutrient uptake by the tree.
OutDat	-	Outputs input data.
OutResults	-	Outputs species concentrations and known totals.
PickNext	-	Picks the next available item in a list.
PivotMatrix	-	Orders a matrix by the largest coefficient in each column.
PropDecay	-	Mineralization proportional to nitrogen for phosphorous and sulfur.
ScaleOrder	-	Scales all matrix rows so that all numbers are one or less.
SelectComp	-	Analyzes phases and determines how they will affect basic equilibrium problem.
SoilChem	-	Top level controlling routine for the soil model.
Solve	-	Finds a set of values for component concentrations that gives the known total concentration of all components, assuming equilibrium.
StartUp	-	Performs initialization and problem set up.
Swap	-	Swaps the values of two variables.
TFSetUp	-	Sets up appropriate throughfall numbers.
Update	-	Updates component concentrations based on solution of equilibrium problem.
WhereIs	-	Returns the index of a given species.
WthrKT	-	Calculates the amount of each mineral that is weathered and updates the known totals for components contained in these minerals.
YASEDriver	-	Acts as the go-between for TREGRO and YASE when TREGRO is connected to YASE.

YASEQL_SE	-	Top level of YASE when it is run as a stand-alone model.