AnnAGNPS Version 3.5:

Input File Specifications
28 March 2005

Input Specification Document for AnnAGNPS

Unused input variables

The following list of input variables are not currently used in the AnnAGNPS input file. Some of these variables will be used in later versions as more detailed computational procedures are added while others will eventually be deleted.

Cell Data —	**Concentrated flow bottom width**
	Concentrated flow side slope
Crop Data	**Annual C-factor**
	Residue Adjust Amount
	Annual crop code
	Legume code
	Pre-harvest C-N Ratio
	Harvest Water
	Pre-harvest C-P Ratio
Feedlot Management Data	**Feedlot Management Rotation**
Fertilizer Application Data	**Fertilizer Depth**
Fertilizer Reference Data	**Fertilizer N**
	Fertilizer Nitrate
	Fertilizer Ammonia
	Fertilizer Mineral Ammonia
	Fertilizer P
	Fertilizer Soluble P
	Fertilizer Consistency code
Impoundment Data	**Impoundment Infiltration**
	Impoundment Seepage
Reach Data	**Reach Infiltration Rate**
	Start Diversion
	Stop Diversion
	Valley Clay Scour code
	Valley Silt Scour code
	Valley Sand Scour code
	Valley Small Aggregate Scour code
	Valley Large Aggregate Scour code
Reach Output Specification	**Event Water Temperature code**
Runoff Curve Number Data	**Residue Adjustment code**
Simulation Period data	**Precipitation Nitrogen**
Watershed Data	**Watershed Description**
	Longitude

AnnAGNPS Operation Modes

AnnAGNPS can be operated in two different modes. The standard mode (AnnAGNPS) allows for continuous simulation of a watershed using a daily time step. AGNPS mode is no longer supported because it can be duplicated by the AnnAGNPS mode which can be used for a simulation period of one day.

Input Files for AnnAGNPS

There are three input files that are used by AnnAGNPS: **AnnAGNPS input file names**; **AnnAGNPS input**; and **Daily Climate Data**. The first file (AnnAGNPS input file names) is optional and allows the entry of filenames for the AnnAGNPS input and the daily climate input. If this file does not exist then "AnnAGNPS.inp" is used as the name of the AnnAGNPS input and "DayClim.inp" is used for the climate input. The second file (AnnAGNPS input) contains all of the data that is watershed specific for an AnnAGNPS simulation. This watershed data is supplemented with daily climate data contained in the third file (Daily Climate Data).

Each of the input files will be described separately in the remainder of this document. Two forms of presentation are included for each file type: Input parameter definition (description, units, range (domain), and location in input) and Input layout matrix (summary of input parameter locations on each file record). The AnnAGNPS input file also includes a suggested input order as the user generally has the freedom to assemble this file in any order.

The "Format" column in the Input parameter definition presentation contains a letter (A, I, or F) and a number indicating the field width. The "A" represents an alphanumeric field (alphabet, numbers, and keyboard symbols) but may be restricted by information contained in the "Domain" column. The "I" represents an integer field (numbers with no decimal point). The "F" represents a floating point field (numbers with decimal point required). Check the "Domain" column for further restrictions on acceptable entries for each specific field. A "Blank" may also be acceptable if so indicated in the "Domain" column.

User Responsibility

Results from the model can be extremely sensitive to the input data. It is the users responsibility to ensure that all input data (whether it is actually entered or implied through default values for blank data fields) is appropriate for the watershed and watershed conditions being analyzed. Operations data is of particularly importance as it defines the changes that occur in the watershed over the simulation period.

AnnAGNPS Input File Names

This file is optional and if present will define the path to and name of the AnnAGNPS input and climate input files.

Input Parameter Definition

Description	Units	Domain	Format	Line No.	Field No.
AnnAGNPS Input File Name—Path and file name to the AnnAGNPS Input file. If blank, the default "AnnAGNPS.inp" will be used for the filename.		Computer platform acceptable path and filename	A80	1	1-8
Climate Input File Name—Path and file name to the Daily Climate Data Input file. If blank, the default "DayClim.inp" will be used for the filename.		Computer platform acceptable path and filename	A80	2	1-8
Blank Line				Last	

Input File Layout Matrix

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
AnnAGNPS input file name							
Daily Climate Data input file name							

AnnAGNPS Input File

Suggested Order for AnnAGNPS Input File

The AnnAGNPS input header sections can be assembled in any order except that the first record must be the AnnAGNPS ID and the last must be End Data:. To assist the new user of the program, a suggested order is offered.

File ID

AnnAGNPS ID
Watershed Data

Simulation Period Data

Simulation Period Data

Cell Related Data

Cell Data

Field Related Data

Field Data
Management Sequence Data
Management Schedule Data
Management Operation Data
Contour Data
Irrigation Application Data
Fertilizer Application Data
Pesticide Application Data
Strip Crop Data
Tile Drain Data

Reach Related Data

Reach Data
Reach Geometry Coefficients
Reach Nutrient Half-life
Impoundment Data

Other Pollutant Source Data

Aquaculture Pond Data
Aquaculture Pond Management Schedule Data
Feedlot Data
Feedlot Management Data
Field Pond Data
Gully Data
Point Source Data

Reference Data

Crop Data
Fertilizer Reference Data
Non-Crop Data
Pesticide Reference Data
Runoff Curve Number Data
Soil Data

Winter Bouts Data

Winter Bouts Data

Output Related Data

Output Options

End of File

End Data

Input Parameter Definition

ANNAGNPS ID

Required as 1st section

Description	Units	Domain	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters. (Left justified)		**AnnAGNPS: Version 3.5**	A40	1	1-4
Input Units code—Code identifying whether input is in English or metric units. Acceptable values are: 0 = English ,1 = SI (Blank indicates 0)		Blank, 0 or 1; blank defaults to English	I10	1	5
Output Units code—Code identifying whether output is in English or metric units. Acceptable values are: 0 = English ,1 = SI (Blank indicates 0)		Blank, 0 or 1; blank defaults to English	I10	1	6
CCHE1D Output Units code—Code used to identify output units for output file to be used with CCHE1D file. Acceptable values are: 0 = English ,1 = SI (Blank indicates no CCHE1D output desired)		Blank, 0 or 1; blank defaults to English	I10	1	7
Screen Output code—Code indicating whether screen output is desired. To be used when AnnAGNPS is embedded within an preprocess/postprocess code. Leave blank when directly running AnnAGNPS. Accetable codes are: 0 = Screen output 1 = No screen output. (Blank indicates 0)		Blank, 0 or 1; blank defaults to no screen output	I10	1	8
Blank Line				Last	

AQUACULTURE POND DATA

Required only if aquaculture ponds are to be included

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—hard coded section identifier insensitive to upper/lower case letters (left justified).		**Aquaculture Pond Data:**	A40	1	1-4
Number Aquaculture Ponds—total number of aquaculture ponds in the watershed.		1—2000000000	I10	1	5
Blank field			10	1	8
The following line repeats for the number of Aquaculture ponds (specified above).					
Aquaculture Pond identifier—unique alphanumeric string identifying the aquaculture pond. Multiple aquaculture ponds within the same cell may be aggregated and entered as a single pond for simulation convenience.			A10	2	1
Aquaculture Pond-Cell identifier—alphanumeric string identifying cell that contains the aquaculture pond(s). Must be the same as a cell identifier in the CELL DATA section already included within the watershed.			A10	2	2
Aquaculture Pond area—area of aquaculture pond(s). Multiple aquaculture ponds in the same cell may be aggregated together as a single aquaculture pond for convenience. Defaults to cell area.	{acres} [hectares]	Blank, {0.0—10000.0} [0.0— 4000.0]	F10	2	3
Aquaculture Pond depth—Maximum depth of water in the aquaculture pond	{in} [mm]	{0.0 to 393.72} [0.0 to 10000.0]	F10	2	4
Seepage Rate--- Daily water loss due to seepage. If left blank, the seepage loss will be 0.	{in/day} [mm/day]	Blank, {0.0 to 393.72} [0.0 to 10000.0	F10	2	5
Sediment Delivery Ratio— Fraction of pond discharge delivered to the receiving reach. If left blank, the value is assumed to be 1.0.		Blank, 0.0 – 1.0	F10	2	6
Relative Rotation Year—Relative year in the aquaculture pond management rotation for starting simulation for this aquaculture pond. (Example: For a 3 year rotation, starting year can be 1, 2 or 3). Blank defaults to 1.		Blank, or 1 to 100	I10	2	7
Aquaculture Pond Management Schedule Identifier—alphanumeric string identifying the Aquaculture Pond Management Schedule for this aquaculture pond.			A10	2	8

AQUACULTURE POND MANAGEMENT SCHEDULE DATA

Required only if Aquaculture ponds are to be included

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—hard coded section identifier insensitive to upper/lower case letters (left justified).		**Aquaculture Schedule Data:**	A40	1	1-4
Number Aquaculture Pond Events—total number of aquaculture pond management events.		1—2000000000	I10	1	5
Blank field			10	1	8
The following 3 lines repeat for the number of Aquaculture pond events (specified above).					
Aquaculture Pond Management Schedule identifier—unique alphanumeric string identifying the Aquaculture pond management schedule. Multiple aquaculture ponds within the same cell may be aggregated and entered as a single pond for simulation convenience.			A10	2	1
Event Date—Month, day, and relative year (within a set of aquaculture pond operations) water additions and releases. This day will be converted internally from a relative rotation date (mm/dd/ry) to a 2-dimensional variable which will be the rotation year & Julian day for the event. Blank year defaults to 1.	mm/ dd/ yy	mm—1— 12 dd—1— 31 Blank, yy—1—99	I2, "/" I2, "/" I2, "bb" where "b" is a blank character	2	2a-2c
Water Operation code—Code that specifies the type of fill or release. 0 = Fill 1 = Initial Drain 2 = Midseason Drain 3 = Harvest Drain 4 = Other release. Options 1,2,3 for rice only.		Blank, 0 or 1	I10	2	3
Aquaculture Identifier— unique alphanumeric string identifying the aquaculture type. May be entered for the first event in the schedule or when a change occurs. Currently, only "Crawfish" is allowed.		Blank, "Crawfish"	A10	2	4
Crop Identifier—— unique alphanumeric string identifying the crop, if any. Currently only "Rice", "Sorghum", "Native" are allowed. To be entered on the day the crop is planted.		Blank, "Rice", "Sorghum", "Native"	A10	2	5
Planting Type Code – Code that specifies the planting type. Allowable Entries are: 1 – No-till, 2 – Water-seeded with retention, 3 – Clear Water, 4 – Traditional water seeding Currently used for rice only.		Blank, 1-4	I10	2	6
Gate Open/Close—Indicator for whether the filed pond gate is closed (pond exists) or open (pond does not exist).		Blank, "Open", "Close"	A10	2	7
Maximum Pool Depth—Upper limit for depth of water in pond. If the water level exceeds this depth due to filling or precipitation the excess amount will go into the receiving reach of the cell. This maximum will be maintained until reset, or a gate status change occurs.	{in} [mm]	Blank, {0.0 to 393.72} [0.0 to 10000.0]	F10	2	8
Blank field				3	1
Minimum Pool Depth—Lower limit for depth of water in pond. This minimum will be maintained until reset, or a gate status change occurs.	{in} [mm]	Blank, {0.0 to 393.72} [0.0 to 10000.0]	F10	3	2
Volume of fill/release water—amount of water added to or released from the aquaculture pond on this date; depth in linear units. May be left blank if release rate is entered.	{in} [mm]	Blank, {>0. – 99999.} [>0 – 4000.]	F10	3	3
Fill/Drain time—time for the current fill/release. Will be used if the fill/release rate field is blank. A blank in both the fill/drain time & fill/ release rate fields will default to a 24-hr fill/drain time.	hr	Blank, > 0.0— 48.0	F10	3	4
Fill/Release rate—rate of aquaculture pond fill/release as depth in linear units per hour. May be left blank, in which case the rate will be calculated from the values for the volume of fill/release water (and pond area) and fill/drain time. A blank in both the fill/drain time & fill/release rate fields will default to a 24-hr fill/drain time.	{in/hr} [mm/hr]	Blank, {>0. – 99999.} [>0. – 4000.]	F10	3	5
Fill/Drain All—code indicating that the pond is to be filled the maximum depth or drained to the minimum depth Enter "1" for true, or leave blank for false.		Blank, 1	I10	3	6

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Total Sediment Concentration—Concentration of suspended sediment in the fill/release water	ppm	Blank, 0. – 999999.	F10	3	7
blank field				3	8
blank field				4	1
Sediment Clay—Percentage of suspended sediment that is clay in the fill/release water. Default is 0. for fills. For releases, the value is internally calculated based on pond management, if possible; is 0. otherwise.	%	Blank, 0. – 100.	F10	4	2
Sediment Silt— Percentage of suspended sediment that is silt in the fill/release water. Default is 0. for fills. For releases, the value is internally calculated based on pond management, if possible; is 0. otherwise.	%	Blank, 0. – 100.	F10	4	3
Sediment Sand— Percentage of suspended sediment that is sand in the fill/release water. Default is 0. for fills. For releases, the value is internally calculated based on pond management, if possible; is 0. otherwise. Currently not used.	%	Blank, 0. – 100.	F10	4	4
Sediment Small Aggregates— Percentage of suspended sediment that is small aggregates in the fill/release water. Default is 0. for fills. For releases, the value is internally calculated based on pond management, if possible; is 0. otherwise. Currently not used.	%	Blank, 0. – 100.	F10	4	5
Sediment Large Aggregates— Percentage of suspended sediment that is large aggregates in the fill/release water. Default is 0. for fills. For releases, the value is internally calculated based on pond management, if possible; is 0. otherwise.. Currently not used.	%	Blank, 0. – 100.	F10	4	6
blank field				4	7
blank field				4	8
blank field				5	1
Total Nitrogen— Total concentration of nitrogen in water added to or released from the aquaculture pond. Default is 0. for fills. For releases, the value is internally calculated based on pond management, if possible; is 0. otherwise.	ppm	Blank, 0. – 999999.	F10	5	2
Dissolved Nitrogen—total concentration of dissolved nitrogen in water added to or released from the Aquaculture pond. Default is 0. for fills. For releases, the value is internally calculated based on pond management, if possible; is 0. otherwise.	ppm	Blank, 0. – 999999.	F10	5	3
Total Phosphorous—total concentration of phosphorous in water added to or released from the Aquaculture pond. Default is 0. for fills. For releases, the value is internally calculated based on pond management, if possible; is 0. otherwise.	ppm	Blank, 0. – 999999.	F10	5	4
Dissolved Phosphorous—concentration of dissolved phosphorous in water added to or released from the Aquaculture pond. Default is 0. for fills. For releases, the value is internally calculated based on pond management, if possible; is 0. otherwise.	ppm	Blank, 0. – 999999.	F10	5	5
Pesticide Applications—Number of pesticide applications associated with the event (Currently not used)		Blank, 0— 10	I10	5	6
Seasonally Adjust Concentrations — Start/Stop use of seasonal average concentrations Must supply values below, if "Y" is entered. Y = Yes(Start) N = No(Stop) Blank is no change.		Blank, 'Y' or 'N'	A10	5	7
blank field				5	8
blank field				6	1
Sediment Concentration— Winter	ppm	Blank, 0. – 999999.	F10	6	2
Total Nitrogen— Winter	ppm	Blank, 0. – 999999.	F10	6	3
Dissolved Nitrogen— Winter	ppm	Blank, 0. – 999999.	F10	6	4
Total Phosphorous— Winter	ppm	Blank, 0. – 999999.	F10	6	5

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Dissolved Phosphorous— Winter	ppm	Blank, 0. – 999999.	F10	6	6
Sediment Concentration— Spring	ppm	Blank, 0. – 999999.	F10	6	7
Total Nitrogen— Spring	ppm	Blank, 0. – 999999.	I10	6	8
blank field				7	1
Dissolved Nitrogen— Spring	ppm	Blank, 0. – 999999.	F10	7	2
Total Phosphorous— Spring	ppm	Blank, 0. – 999999.	F10	7	3
Dissolved Phosphorous— Spring	ppm	Blank, 0. – 999999.	F10	7	4
Sediment Concentration— Summer	ppm	Blank, 0. – 999999.	F10	7	5
Total Nitrogen— Summer	ppm	Blank, 0. – 999999.	F10	7	6
Dissolved Nitrogen— Summer	ppm	Blank, 0. – 999999.	F10	7	7
Dissolved Phosphorous — Summer	ppm	Blank, 0. – 999999.	I10	7	8
blank field				8	1
Total Phosphorous— Summer	ppm	Blank, 0. – 999999.	F10	8	2
Sediment Concentration— Autumn	ppm	Blank, 0. – 999999.	F10	8	3
Total Nitrogen— Autumn	ppm	Blank, 0. – 999999.	F10	8	4
Dissolved Nitrogen— Autumn	ppm	Blank, 0. – 999999.	F10	8	5
Total Phosphorous— Autumn	ppm	Blank, 0. – 999999.	F10	8	6
Dissolved Phosphorous— Autumn	ppm	Blank, 0. – 999999.	F10	8	7
blank field			I10	8	8
The following line repeats for the number of pesticide applications (specified above).					
blank field				9	1
blank field				9	2
Pesticide reference id—ID of the pesticide in the fill/release. ID must be in the pesticide reference list. ID will be converted to the array index of the pesticide in the pesticide reference list. (Currently not used)			A40	9	3-6
Pesticide concentration—concentration of the pesticide in the fill/release water (Currently not used)	ppm	Blank, 0. – 999999.		9	7
blank field				9	8

CELL DATA

Required

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded data section ID insensitive to upper / lower case letters.. (Left justified)		**Cell Data:**	A40	1	1-4
Number cells—Total cell count for the watershed.		1 to 2147483647	I10	1	5
The following 3 line sets repeat for the number of cells (specified above). For cells with a Cell-Field ID of WATER, only the first line of the set (Line No. 2) is used					
Cell ID—Alphanumeric string identifying the cell.			A10	2	1

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Soil ID—Alphanumeric string identifying the soil type for the cell. Must be the same as a soil ID in the SOIL DATA section. Leave blank if Management Field ID is "WATER".			A10	2	2
Management Field ID—Alphanumeric string identifying the field for the cell. Must be the same as a management field ID in the MANAGEMENT FIELD DATA section. For a cell which is flooded with water throughout the year (such as the pool area behind a dam) enter "WATER",			A10	2	3
Reach ID—Alphanumeric string identifying the receiving reach. Must be the same as a reach ID in the REACH DATA section .			A10	2	4
Reach Location code—Code identifying where runoff is added to the specified reach. (Blank indicates 0) 0—Runoff added at upstream end of reach. 1—Runoff added at downstream end of reach.		Blank, 0, or 1	I10	2	5
Cell Area—Area within the cell.	{acres} [hectares]	{0.000004 to 10000.0} [0.0000016 to 4000.0]	F10	2	6
Cell time of concentration—Time required to concentrate water at outlet from cell. If not a "WATER" cell and blank, AnnAGNPS will compute time of concentration from Sheet flow and concentrated flow variables for the cell.	hr	Blank or 0.01 to 100.0	F10	2	7
Cell average elevation—Representative elevation for the cell.	ft [m]	{-1000.0 to 30000.0} [-300.0 to 10000.0]	F10	2	8
The following two lines are needed for all cells except those designated with a Cell Field ID of WATER.					
Blank field			10	3	1
Cell average land slope—Representative land slope for the cell.	len-vert / len-horz (dimensionless)	0.00001 to 3.0	F10	3	2
Cell aspect—Representative land slope orientation for cell measured from north in a clockwise direction.	decimal ^{o}	Blank or 0.0 to 360.0	F10	3	3
RUSLE/USLE 'ls' factor—RUSLE/USLE erosion equation length-slope factor for normal erosion conditions.		0.00001 to 100.0	F10	3	4
Blank Field			10	3	5
Climate File Number—Climate file number for this cell. Blank or 0 if primary climate station file; values greater than 0 are secondary climate station file numbers.	Integer number	Blank, 0, or 1 to 99	I10	3	6
Sheet flow Manning's "n"— Roughness coefficient for Sheet flow within the cell. Otherwise blank defaults to 0.150. Should be left blank if cell time of concentration (t_c) has been entered. Regardless, the entered value for cell t_c is used in lieu of any value in this field.		Blank, or 0.005 to 1.000	F10	3	7
Blank field			10	4	1
Concentrated flow slope—Slope of concentrated flow path within the cell. Should be left blank if cell time of concentration (t_c) has been entered. Regardless, the entered value for cell t_c is used in lieu of any value in this field.	len-vert / len-horz (dimensionless)	Blank, or 0.00001 to 3.0	F10	4	2
Concentrated flow length—Length of concentrated flow path within the cell after the first 100 meters (328 feet). Blank indicates value is computed from receiving reach length coefficient and exponent. Should be left blank if cell time of concentration (t_c) has been entered. Regardless, the entered value for cell t_c is used in lieu of any value in this field.	{ft} [m]	Blank, or {0.0 to 328080.0} [0.0 to 99999.0]	F10	4	3
Blank field			10	4	4
Blank field			10	4	5
Concentrated flow hydraulic depth—Representative rectangular channel hydraulic depth for concentrated flow path within the cell. Depth is for a 2 year 24-hr storm event runoff as determined by the flow area divided by the top width. Blank indicates value is computed from receiving reach width coefficient and exponent. Should be left blank if cell time of concentration (t_c) has been entered. Regardless, the entered value for cell t_c is used in lieu of any value in this field.	{ft} [m]	Blank, or {0.0 to 131.0} [0.0 to 40.0]	F10	4	6

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Concentrated flow Manning's "n"—Roughness coefficient for concentrated flow within the cell. Blank defaults to 0.040. Should be left blank if cell time of concentration (t_c) has been entered. Regardless, the entered value for cell t_c is used in lieu of any value in this field.		Blank, or 0.005 to 1.000	F10	4	7
Blank field			10	5	1
Sheet flow slope—Slope of Sheet (sheet) flow path within the cell. Should be left blank if cell time of concentration (t_c) has been entered. Regardless, the entered value for cell t_c is used in lieu of any value in this field.	len-vert / len-horz (dimensionless)	Blank, or 0.00001 to 3.0	F10	5	2
Sheet flow length—Length of Sheet (sheet) flow path within the cell. Default value is 50 meters (164 feet). Should be left blank if cell time of concentration (t_c) has been entered. Regardless, the entered value for cell t_c is used in lieu of any value in this field.	{ft} [m]	Blank, or {0.0 to 164.} [0.0 to 50.0]	F10	5	3
Shallow Concentrated flow slope—Slope of shallow concentrated flow path within the cell. Should be left blank if cell time of concentration (t_c) has been entered. Regardless, the entered value for cell t_c is used in lieu of any value in this field.	len-vert / len-horz (dimensionless)	Blank, or 0.00001 to 3.0	F10	5	4
Shallow Concentrated flow length —Length of shallow concentrated flow path within the cell. Default value is 50 meters (164 feet). Should be left blank if cell time of concentration (t_c) has been entered. Regardless, the entered value for cell t_c is used in lieu of any value in this field.	{ft} [m]	Blank, or {0.0 to 164.} [0.0 to 50.0]	F10	5	5
Blank field			10	5	6
Blank field			10	5	7
Blank field			10	5	8

CLASSIC GULLY DATA[1]

Optional

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**CLASSIC GULLY DATA:**	A40	1	1-4
Number Gullies—Total count of gully record sets for the watershed.		1 to 2147483647	I10	1	5
The following two lines repeat for the number of classic gullies (specified above). Multiple gullies within a cell should be consecutive.					
Classic Gully ID—Alphanumeric string identifying the classic gully.			A10	2	1
Cell (1st) ID[2]—Alphanumeric string identifying the cell that contains the gully if the gully is wholly contained within the cell (cell-located); or 1st cell contributing to the reach if the gully is located within a reach (reach-located). Must be the same as a cell ID in the CELL DATA section.			A10	2	2
Soil ID -Alphanumeric string identifying the dominant soil type for the gully or other erosion point source. Must be the same as a soil ID (in the SOIL DATA section). Blank defaults to the Soil ID for the cell that contains the mouth of the gully, or the left-bank cell if the gully is in the cell's receiving reach.			A10	2	3
Cell (1st) Drainage Area—If the gully is cell-located, the drainage area is the contributing cell's drainage area to the mouth of the gully. A blank defaults to the entire cell drainage area. If the gully is reach-located instead of cell-located, the drainage area is only that portion of the drainage from the 1st contributing cell draining to the mouth of the gully. The default is the entire 1st contributing cell's drainage area.	{acres} [hectares]	Blank, or {0.000025 to 9884.} [0.00001 to 4000.0]	F10	2	4

[1] A classic gully is cell-located if only one cell contributes to the flow at the mouth of the gully. A classic gully is reach-located if more than one cell contributes to the flow at the mouth of the gully.
[2] It is recommended that the 1st contributing cell be the left bank cell within a subarea as identified by TopAGNPS.

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Head Cut Depth -Gully (erosion point-source) head cut depth, used to composite the eroded soil layers. Blank defaults to 1st soil.	{in} [mm]	Blank, or {0.00 to 314.} [0.00 to 8000]	F10	2	5
Erosion Coefficient—Coefficient in classic gully erosion power curve (note that the units for both the erosion (Q_s) and the rainfall/runoff (Q_w) may be unit area or totals but must be consistent within a power curve): $Q_s=coef*Q_w^{exp}$ where Q_w = rainfall/runoff volume [unit area–(in or mm[3]); total units–(AF or Mg)] Q_s = sediment discharge [unit area–(T/ac or Mg/ha); total units–(T or Mg)]. A blank is not allowed		[>0.0 to 50. for Q_s in mm][3]	F10	2	6
Erosion Exponent—Exponent in classic gully erosion power curve (note that the units for both the erosion (Q_s) and the rainfall/runoff (Q_w) may be unit area or totals but must be consistent within a power curve): $Q_s=coef*Q_w^{exp}$ where Q_w = rainfall/runoff volume [unit area–(in or mm[3]); total units–(AF or Mg)] Q_s = sediment discharge [unit area–(T/ac or Mg/ha); total units–(T or Mg)]. A blank is not allowed.		Blank or [0.0 to 3.0 for Q_w in mm]	F10	2	7
Delivery Ratio—Delivery ratio of gully erosion to gully yield. Blank defaults to HUSLE delivery ratio algorithm for cell-located gully; one if reach-located.	Non-dimensional	Blank, 0 to 1	F10	2	8
Gully's 2nd Contributing Cell ID			A10	3	1
Management Field ID—Alphanumeric string identifying the field for the classic gully. Must be the same as a management field ID in the Management Field Data section. Blank defaults to no field management effects.			A10	3	1
Reach ID—Alphanumeric string identifying the reach that contains the gully if reach-located. Must be the same as a reach ID in the REACH DATA section. Leave blank if the gully cell-located.			A10	3	2
Cell (1st) Subcell Drainage Area[4]—If gully is cell-located (located wholly within a cell), the drainage area is the drainage area of the subcell within the 1st contributing cell to its receiving reach. A blank is allowed only if the cell has only one discharge point into its receiving reach or the gully is reach-located.	{acres} [hectares]	Blank, or {0.000025 to 9884.} [0.00001 to 4000.0]	F10	3	3
2nd Contributing Cell ID—Alphanumeric string identifying that an additional local cell that is contributing to the reach. Must be the same as a cell ID in the CELL DATA section. Leave blank if there is only one local contributing cell.			A10	3	4
2nd Contributing Cell's Drainage Area—Only **i**f the gully is reach-located, the drainage area is only that portion of the drainage from the 2nd contributing cell draining to the mouth of the gully. The default is the entire 2nd contributing cell's drainage area.	{acres} [hectares]	Blank, or {0.000025 to 9884.} [0.00001 to 4000.0]	F10	3	5
Calibration Factor—calibration factor used to calibrate the classic gully sediment yield to its loading at a known point (usually at a USGS gaging station). Blank defaults to 1.	Non-dimensional	Blank, 0 to ∞	F10	3	6
Rainfall/Runoff Indicator—Code to indicate whether the power curve's volume (Q) is a function of rainfall or runoff. Blank defaults to 1; 0–rainfall, 1–runoff		Blank, 0 or 1	I10	3	7
Units Indicator—Code to indicate whether the regression coefficient and exponents are for unit area or total units. Blank defaults to 1; 0–unit area, 1–totals.			I10	3	8
The following line is the last line in the CLASSIC GULLY DATA section.					
Blank line				Last	

[3] Unit conversion from English to SI is non-linear. Appropriate English ranges would restrict the erosion to less than 136 T/ac.
[4] The subcell drainage area is defined to be the drainage area of the hydrologic unit area associated with the flow path from the mouth of the gully to the gully's receiving reach.

CONTOUR DATA

AnnAGNPS mode only — Required if referenced in Field Data

Description	Units	Domain	Format	Line No.	Field No.
Data Section Name—Hard coded section ID Insensitive to upper / lower case letters.. (Left justified)		**Contour Data:**	A40	1	1
Number Contours—Total count of contour data sets for the watershed.		1 to 2147483647	I10	1	2
The following line repeats for the number of contour sets (specified above).					
Contour ID—Alphanumeric string identifying the Contour Data.			A10	2	1
Ridge Height code—Code indicating the height of the contour ridges. Allowable codes are: 0 = No ridge (non-cropland only) 1 = very low (0.5"-2") ridges 2 = low (2"-3") ridges 3 = moderate (3"-4") ridges 4 = high (4"-6") ridges 5 = very high (>6") ridges 6 = variable ridge heights. Zero value is entered for non-crop landuse where only mechanical disturbance calculation is desired. If blank, 3–moderate ridges will be used.		Blank, or 0 to 6	I10	2	2
Furrow Slope—Slope of the furrow. Can be left blank if the landuse is non-crop and only mechanical disturbance calculation is desired.	len-vert / len-horz (dimensionless)	Blank, or 0.00001 to 1.0	F10	2	3
Disturbed cover code- Code indicating condition of cover related to soil disturbance. Acceptable codes are: <u>Cropland with EI distribution number < 400</u> 1 = C1) established = sod-forming grass 2 = C2) 1st year grass or cut for hay 3 = C3) heavy cover = And/or very rough 4 = C4) moderate cover = and/or rough 5 = C5) light cover = and/or mod = rough 6 = C6) no cover and/or min = rough. 7 = C7) clean tilled, smooth, fallow <u>Cropland with EI distribution number ≥ 400</u> 8 = VR) very rough with stubble <u>Non-cropland</u> 1 = R1) very rough; plant + rock cover > 50% 2 = R2) very rough; plant + rock cover < 50% 3 = R3) rough; plant + rock cover > 50% 4 = R5) moderately rough; plant + rock cover ≤50% 5 = R7) slightly rough; plant + rock cover < 25% A blank defaults to 5.		Blank, or 1 to 8	I10	2	4
Consolidated cover code- Code indicating condition of cover related to soil consolidation. Required only for non-crop landuse. Acceptable codes are: 1 = R3) rough; plant + rock cover > 50% 2 = R4) rough; plant + rock cover < 50% 3 = R6) moderately rough; est = veg.; cover < 40% 4 = R8) slightly rough; est = veg.; cover < 35% 5 = R9) smooth; est. veg.; plant + rock cover < 25% A blank defaults to 3.		Blank, or 1 to 5	I10	2	5
Blank line				Last	

CROP DATA

AnnAGNPS mode only — Required if mentioned in Management Schedule Data

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Crop Data:**	A40	1	1
Number Crops—Total count of crop record sets for the watershed.		1 to 2147483647	I10	1	2
The following 6 lines + up to 24 crop growth parameter lines repeat for Number Crops (specified above).					
Crop ID—Alphanumeric string identifying the crop.			A20	2	1-2
Units Harvested—Number of yield units per unit of area at harvest. (e.g. For a yield of 50 bushels per acre: enter 50.)	yield units / unit area	[0.0 to 40000.0]	F10	2	3
Residue Weight Ratio—Weight ratio of residue to yield.		0.0 to 10.0	F10	2	4
Surface decomposition—Surface residue decomposition coefficient. (Blank defaults to 0.016)		Blank or 0.0 to 1.0	F10	2	5
Sub-surface decomposition—Sub-surface residue decomposition coefficient. (Blank defaults to 0.016)		Blank or 0.0 to 1.0	F10	2	6
Blank field			10	2	7
Moisture Depletion—Rate of moisture depletion, used only for the Pacific Northwest. Only needed for following EI distribution numbers: 6-10, 14-15, 31-40, 58-60, 63 (EI distribution number entered with Simulation Period Data) otherwise leave blank. Blank defaults to 0.0. Example values from RUSLE: w. wheat & other deep rooted crops 1.0 spring wheat & barley 0.75 spring peas & lentils 0.67 shallow rooted crops 0.50 summer fallow 0.0		Blank, or 0.0 to 1.0	F10	2	8
Blank field			10	3	1
Residue Adjust Amount—Minimum residue amount to adjust runoff curve number. (Blank defaults to 0) Currently not used	{lb / acre} [kg / hectare]	Blank, or {0.0 to 99924.} [0.0 to 112000.0]	F10	3	2
Crop Residue—Surface residue from crop. (Three values in order for 30, 60, and 90 percent cover.). At least one of the three values must be >0. (Blank defaults to 0.0)	{lb / acre} [kg / hectare]	Blank, or {0.0 to 99924.} [0.0 to 112000.0]	3F10	3	3-5
Annual crop code. —Acceptable values are: 0 = cool season 1 = Annual 2 = perennial Blank defaults to 0. Currently not used		Blank , 0, 1 or 2	I2	3	6a
Legume code.- Acceptable values are : Y = Yes and N = No (Blank indicates No) Currently not used		Blank, Y or N	A2	3	6b
Senescence code—Code indicating whether crop senescence increases with crop residue. Acceptable values are: Y = Yes N = No (Blank indicates yes.)		Blank, Y or N	A2	3	6c
Blank field			4	3	6d-6e
Yield Unit Name—Yield unit name for crop. (Optional—For user reference only. Not read by AnnAGNPS.)			A10	3	7
Yield Unit Weight—Weight of a yield unit for the crop. (See **Yield Unit Name** for unit description.).	{lb} [kg]	{0.0 to 88105.} [0.0 to 40000.0]	F10	3	8
Blank field			10	4	1
Harvest C-N Ratio—Ratio of Carbon to Nitrogen for crop at harvest.		1.0 to 200.0	F10	4	2
Pre-harvest C-N Ratio—Ratio of Carbon to Nitrogen for crop before harvest. Currently not used		Blank or 1.0 to 200.0	F10	4	3
Harvest Water—Water content of harvested portion of crop Currently not used	wt / wt (dimensionless)	Blank or 0.0 to 1.0	F10	4	4

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
N Uptake—Nitrogen uptake per yield unit	wt-N / wt-harvest unit (dimensionless)	0.0 to 1.0	F10	4	5
P Uptake—Phosphorus uptake per yield unit	wt-P / wt-harvest unit (dimensionless)	0.0 to 1.0	F10	4	6
Harvest C-P Ratio—Ratio of Carbon to Phosphorus for crop at harvest.		50.0 to 400.0	F10	4	7
Pre-harvest C-P Ratio—Ratio of Carbon to Phosphorus for crop before harvest. Currently not used		Blank or 50.0 to 400.0	F10	4	8
Blank field			10	5	1
Growth Time—Accumulated fraction of time from planting to harvest for ending each of 4 growth stages: initial; development; mature; and senescence. Fourth entry must be 1.0.		0.0 to 1.0	4F10	5	2-5
Blank field			10	6	1
Growth N Uptake—Fraction of Nitrogen uptake from planting to harvest for each of 4 growth stages: initial; development; mature; and senescence. Four fractions entered must sum to 1.0.		0.0 to 1.0	4F10	6	2-5
Blank field			10	7	1
Growth P Uptake—Fraction of Phosphorus uptake from planting to harvest for each of 4 growth stages: initial; development; mature; and senescence. Four fractions entered must sum to 1.0.		0.0 to 1.0	4F10	7	2-5
The following line repeats one to 24 times for each crop. One for each 15+ day period in a year for the crop. Time is measured from the planting of crop.					
Blank fields			20	8	1-2
Root Mass—Array representing the live root mass in the top 100 mm (4 inch) of soil. The values start at 0 days of plant growth and increment each 15 days.	{lb / acre} [kg / hectare]	{0.0 to 99924.} [0.0 to 112000.0]	F10	8	3
Canopy Cover—Array representing the ratio of ground covered by the crop canopy to total ground area. The values start at 0 days of plant growth and increment each 15 days.		0.0 to 1.0	F10	8	4
Rain Fall Height—Array representing the average intercepted rain drop fall height from the plant canopy to the ground. The values start at 0 days of plant growth and increment each 15 days.	{ft} [m]	{0.0 to 262.} [0.0 to 80.0]	F10	8	5
Blank line				Last	

END DATA

Required as last section

Description	Units	Domain	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters. (Left justified)		**End Data:**	A40	1	1-4
Blank line				Last	

EPHEMERAL GULLY DATA[5]

Optional

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters. (Left justified)		**EPHEMERAL GULLY DATA:**	A40	1	1-4
Number Gullies—Total count of gully record sets for the watershed.		1 to 2147483647	I10	1	5
The following two lines repeat for the number of ephemeral gullies (specified above). Multiple ephemeral gullies within a cell should be consecutive.					

[5] An ephemeral gully is cell-located if only one cell contributes to the flow at the mouth of the gully. A gully is reach-located if more than one cell contributes to the flow at the mouth of the gully.

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Ephemeral Gully ID—Alphanumeric string identifying the ephemeral gully.			A10	2	1
Cell (1st) ID[6]—Alphanumeric string identifying the cell that contains the ephemeral gully if it is wholly contained within the cell (cell-located); or its 1st cell contributing to the reach (usually the subarea's left-bank cell) if the gully is located within a reach (reach-located). Must be the same as a cell ID in the CELL DATA section.			A10	2	2
Soil ID—Alphanumeric string identifying the dominant soil type for the ephemeral gully. Must be the same as a soil ID in the SOIL DATA section. Blank defaults to the Soil ID for the cell (1st) that contains the mouth of the gully, or the 1st cell identified as contributing to the reach if the gully is reach-reach.			A10	2	3
Cell (1st) Drainage Area—If the gully is cell-located, the drainage area is the contributing cell's drainage area to the mouth of the gully. A blank defaults to the entire cell drainage area. If the gully is reach-located instead of cell-located, the drainage area is only that portion of the drainage from the 1st contributing cell draining to the mouth of the gully. The default is the entire 1st contributing cell's drainage area.	{acres} [hectares]	Blank, or {0.000025 to 9884.} [0.00001 to 4000.0]	F10	2	4
Gully slope—Land slope immediately upstream from the mouth of the gully. Blank defaults to 0.00001.	l-vert / l-horz (dimensionless)	Blank, or 0.00001 to 3.0	F10	2	5
Critical Shear Stress—Critical shear stress at which gully erosion begins. Blank defaults to internal calculation based upon the gully's clay, silt, & sand content as determined using the gully's soil ID.	{lbs/ft^2} [N/m^2]	Blank, or {>0 to 2.05} [>0 to 100.0]	F10	2	6
Erodibility Rate—Rate at which the gully erosion occurs. Blank defaults to internal calculation based upon the gully's clay, silt, & sand content as determined using the gully's soil ID.	{ft^2/sec/lbs} [cm^3/sec/N]	Blank, or {>0 to 0.00016} [>0 to 1.0]	F10	2	7
Delivery Ratio—Delivery ratio of the ephemeral gully erosion as yield which is its sediment contribution to its receiving reach. Blank defaults to HUSLE delivery ratio algorithm for cell-located gully; if reach-located, HULSE is used from the mouth of the gully to the downstream end of the reach.	Non-dimensional	Blank, 0 to 1	F10	2	8
Management Field ID—Alphanumeric string identifying the field for the ephemeral gully. Must be the same as a management field In the MANAGEMENT FIELD DATA section. Blank defaults to Management Field ID for the cell that contains the mouth of the gully, or the 1st cell identified as contributing to the reach if the gully is reach- reach.			A10	3	1
Reach ID—Alphanumeric string identifying the reach that contains the gully. Must be the same as a reach ID in the REACH DATA section. Leave blank if the gully is cell-located.			A10	3	2
Cell (1st) Subcell Drainage Area[7]**—**If the gully is cell-located (located wholly within a cell), the drainage area is the drainage area of the subcell within the 1st contributing cell to its receiving reach. If the gully is reach-located, leave this field blank. A blank is allowed only if the cell has only one discharge point into its receiving reach or the gully is reach-located. The default for a cell-located gully is the entire cell's drainage area..	{acres} [hectares]	Blank, or {0.000025 to 9884.} [0.00001 to 4000.0]	F10	3	3
Gully's 2nd Contributing Cell ID—Alphanumeric string identifying that an additional local cell that is contributing to the reach. Must be the same as a cell ID in the CELL DATA section. Leave blank if there is only one local contributing cell.			A10	3	4
Gully's 2nd Contributing Cell's Drainage Area—Use this field only if the gully is reach-located. The 2nd contributing drainage area is only that portion of the drainage from the 2nd cell's contributing draining area to the mouth of the gully. The default is the entire 2nd contributing cell's drainage area. Leave blank if the gully is cell-located	{acres} [hectares]	Blank, or {0.000025 to 9884.} [0.00001 to 4000.0]	F10	3	5
Calibration Factor—This factor is used to calibrate the ephemeral gully's sediment yield to its loading at a known, or assumed known, point which is usually at a USGS gaging station. Blank defaults to 1.	Non-dimensional	Blank, 0 to ∞	F10	3	6

[6] It is recommended that the 1st contributing cell be the left bank cell within a subarea as identified by TopAGNPS.
[7] The subcell drainage area is defined to be the drainage area of the hydrologic unit area associated with the flow path from the mouth of the gully to the gully's receiving reach.

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Manning's "n"—Roughness coefficient for concentrated flow within the gully. Blank defaults to 0.040.		Blank, or 0.005 to 1.000	F10	3	7
Re-Plant Period —numbers of days between planting and sufficient crop development that, if an ephemeral gully developed, the eroded area would be replanted. Any tillage operation that distributes the surface layer resets any ephemeral gully voids to zero. Blank defaults to 30 days.	{days} [days]	Blank, or 0 to 365	I10	3	8
The following line is the last line in the EPHEMERAL GULLY DATA section.					
Blank line				Last	1-8

FEEDLOT DATA

Optional

Description	Units	Domain	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Omit entire section if there are no feedlots in the watershed.) (Left justified)		**Feedlot Data:**	A40	1	1-4
Number Feedlots—Total count of feedlots in the watershed.		1 to 2147483647	I10	1	5
Number Feedlot Cells—Total count of cells that contain any portion of a feedlot drainage (upslope area, open feedlot, paved feedlot, or buffer area) for all feedlots in the watershed (Note: A specific cell, if used for more than one feedlot should be counted for each feedlot it is associated with..		1 to 2147483647	I10	1	6
The following 4 line sets repeat for the number of feedlots (specified above). Multiple feedlots for a given cell outlet should be entered as consecutive sets.					
Feedlot ID—Alphanumeric string identifying the feedlot.			A10	2	1
Feedlot Manage ID—Alphanumeric string identifying the feedlot management schedule for the feedlot. Must be the same as a feedlot management ID (in Feedlot Management Data). Leave blank to use initial feedlot conditions as steady state values.			A10	2	2
Open Area—Total open (uncovered) area of the feedlot.	{acres} [hectares]	{0.0 to 9884.} [0.0 to 4000.0]	F10	2	3
Paved Ratio—Paved open feedlot area to total open feedlot area ratio.		0.00 to 1.00	F10	2	4
Roof Area—Total roofed area (in all cells) for feedlot.	{acres} [hectares]	{0.0 to 9884.} [0.0 to 4000.0]	F10	2	5
Upslope Area—Total area (in all cells) upslope of feedlot whose runoff drains across the feedlot.	{acres} [hectares]	{0.0 to 9884.} [0.0 to 4000.0]	F10	2	6
Blank field			10	3	1
Feedlot Initial N—Initial daily Nitrogen production for the feedlot expressed on a per unit area basis.	{lb / day / acre} [kg / day / hectare]	{0.0 to 999.} [0.0 to 1120.0]	F10	3	2
Feedlot Initial P—Initial daily Phosphorus production for the feedlot expressed on a per unit area basis.	{lb / day / acre} [kg / day / hectare]	{0.0 to 999.} [0.0 to 1120.0]	F10	3	3
Feedlot Initial OrgC—Initial daily organic Carbon production for the feedlot expressed on a per unit area basis.	{lb / day / acre} [kg / day / hectare]	{0.0 to 9992.} [0.0 to 11200.0]	F10	3	4
Delta N—Daily increase in Nitrogen production for the feedlot expressed on a per unit area basis.	{Δlb / day / acre} [Δkg / day / hectare]	{0.0 to 999.} [0.0 to 1120.0]	F10	3	5
Delta P—Daily increase in Phosphorus production for the feedlot expressed on a per unit area basis.	{Δlb / day / acre} [Δkg / day / hectare]	{0.0 to 999.} [0.0 to 1120.0]	F10	3	6

Description	Units	Domain	Format	Line No.	Field No.
Delta OrgC—Daily increase in organic Carbon production for the feedlot expressed on a per unit area basis.	{Δlb / day / acre} [Δkg / day / hectare]	{0.0 to 999.} [0.0 to 1120.0]	F10	3	7
Blank field			10	4	1
Feedlot Max N—Maximum concentration of Nitrogen in feedlot runoff.	ppm	0.0 to 1000.0	F10	4	2
Feedlot Max P—Maximum concentration of Phosphorus in feedlot runoff.	ppm	0.0 to 1000.0	F10	4	3
Feedlot Max OrgC—Maximum concentration of organic Carbon in feedlot runoff.	ppm	0.0 to 10000.0	F10	4	4
Feedlot Pack N—Initial amount of Nitrogen in the feedlot manure pack expressed on a per unit area basis.	{lb/acre} [kg / hectare]	{0.0 to 9992.} [0.0 to 11200.0]	F10	4	5
Feedlot Pack P—Initial amount of Phosphorus in the feedlot manure pack expressed on a per unit area basis.	{lb / acre} [kg / hectare]	{0.0 to 9992.} [0.0 to 11200.0]	F10	4	6
Feedlot Pack OrgC—Initial amount of organic Carbon in the feedlot manure pack expressed on a per unit area basis.	{lb / acre} [kg / hectare]	{0.0 to 9992.} [0.0 to 11200.0]	F10	4	7
Blank fields			20	5	1-2
Feedlot Cell ID—Alphanumeric string identifying which cell contains the feedlot.			A10	5	3
blank field			10	5	4
blank field			10	5	5
Cell Buffer Length—Flow length of buffer area in this cell. (Blank defaults to 0, i.e., no buffer length thus no buffer area is considered)	{ft} [m]	{0.0 to 984.} [0.0 to 300.0]	F10	5	6
Blank line				Last	

FEEDLOT MANAGEMENT DATA

AnnAGNPS mode only — Optional only if Feedlot Data included

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Omit entire section if there are no feedlots in the watershed.) (Left justified)		**Feedlot Management Data:**	A40	1	1-4
Number Feedlot Managements—Total count of feedlot management schedules for all feedlots in the watershed.		1 to 2147483647	I10	1	5
Number Feedlot Operations—Total count of feedlot operations for all feedlot management schedules in the watershed.		1 to 2147483647	I10	1	6
The following line + appropriate number of operation data sets repeat for the number of feedlot management schedules (specified above).					
Feedlot Management ID—Alphanumeric string identifying the feedlot management schedule.			A10	2	1
Blank field			10	2	2
The following two line set is repeated for each operation in the feedlot management schedule. Multiple operations for a feedlot management schedule must be in sequential time order.					
Blank field			10	3	1
Feedlot Operation Date—Month, day and year the feedlot operation occurs. Year is relative to feedlot management schedule. Blank year defaults to 1.	mm/dd/yyyy	mmm—1 to 12 ddd—1 to 31 yyyy—1 to 1000	2I3,I4	3	2a-2c
Pack Remove Ratio—Ratio of feedlot manure pack removed by scraping operation. (Leave blank for animal operations)		Blank, or 0.0 to 1.0	F10	3	3
Pack Start N—Starting daily rate for Nitrogen produced by all animals changed on the feedlot with this operation. (Leave blank for scraping operation)	{lb / day} [kg / day]	Blank, or {-88105. to 88105.} [-40000.0 to 40000.0]	F10	3	4

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Pack Start P—Starting daily rate for Phosphorus produced by all animals changed on the feedlot with this operation.. (Leave blank for scraping operation)	{lb / day} [kg / day]	Blank, or {-88105. to 88105.} [-40000.0 to 40000.0]	F10	3	5
Pack Start OrgC—Starting daily rate for organic Carbon produced by all animals changed on the feedlot with this operation. (Leave blank for scraping operation)	{lb / day} [kg / day]	Blank, or {-88105. to 88105.} [-40000.0 to 40000.0]	F10	3	6
Blank fields			30	4	1-3
Pack Change N—Daily rate change for Nitrogen produced by all animals changed on the feedlot with this operation. (Leave blank for scraping operation)	{Δ lb / day} [Δkg / day]	Blank, or {-881. to 881.} [-400.0 to 400.0]	F10	4	4
Pack Change P—Daily rate change for Phosphorus produced by all animals changed on the feedlot with this operation. (Leave blank for scraping operation)	{Δ lb / day} [Δkg / day]	Blank, or {-881. to 881.} [-400.0 to 400.0]	F10	4	5
Pack Change OrgC—Daily rate change for organic Carbon produced by all animals changed on the feedlot with this operation. (Leave blank for scraping operation)	{Δ lb / day} [Δkg / day]	Blank, or {-881. to 881.} [-400.0 to 400.0]	F10	4	6
Blank line				Last	

FERTILIZER APPLICATION DATA

Required if referenced in Operations Data

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Fertilizer Application Data:**	A40	1	1
Number Fertilizer Applications—Total count of fertilizer application records for the watershed.		1 to 2147483647	I10	1	2
The following line repeats for the number of fertilizer application sets (specified above).					
Fertilizer Application ID—Alphanumeric string identifying the fertilizer application.			A10	2	1
Fertilizer Name ID—Alphanumeric string that is the name of the fertilizer or type manure. Must be the same as a Fertilizer reference ID (in Fertilizer Reference Data).			A20	2	2-3
Fertilizer Rate—Fertilizer application rate	{lb / acre} [kg /hectare]	{0.0 to 49974.} [0.0 to 56000.0]	F10	2	4
Fertilizer Depth—Fertilizer application depth in the soil. Zero indicates fertilizer is applied to the soil surface. Currently not used	{in} [mm]	Blank or {0.0 to 59.} [0.0 to 1500.0]	F10	2	5
Fertilizer mixing code— Code indicating whether fertilizer is mixed uniformly between the soil surface and the depth of incorporation. Acceptable values are: N—no, Y—yes (Blank indicates yes)		Blank, Y or N	A10	2	6
Blank line				Last	

FERTILIZER REFERENCE DATA

Required if Fertilizer Application Data used

Description	Units	Domain	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Fertilizer Reference Data:**	A40	1	1
Number Fertilizer References—Total count of fertilizer reference record sets for the watershed.		1 to 2147483647	I10	1	2
The following 2 line sets repeat for the number of fertilizer references s (specified above).					
Fertilizer Reference ID—Alphanumeric string that is the name of the fertilizer. Could also be a manure type.			A20	2	1-2
Fertilizer N—Fertilizer fraction which is any form of nitrogen, EXCEPT Nitrate, as elemental N. Currently not used	wt /wt (dimensionless)	Blank or 0.0 to 1.0	F10	2	3
Fertilizer Nitrate—Fertilizer fraction which is nitrate ($N0_3$) to total amount. Currently not used.	wt /wt (dimensionless)	Blank or 0.0 to 1.0	F10	2	4
Fertilizer Inorganic N—Fertilizer fraction which is mineralizable (inorganic) Nitrogen	wt /wt (dimensionless)	0.0 to 1.0	F10	2	5
Fertilizer Organic N—Fertilizer fraction which is organic Nitrogen.	wt /wt (dimensionless)	0.0 to 1.0	F10	2	6
Fertilizer Ammonia—Fertilizer fraction which is ammonia (NH_4). Currently not used.	wt /wt (dimensionless)	Blank or 0.0 to 1.0	F10	2	7
Fertilizer Mineral Ammonia—Fertilizer fraction which is mineralizable ammonia. Currently not used.	wt /wt (dimensionless)	Blank or 0.0 to 1.0	F10	2	8
Blank field			10	3	1
Fertilizer P—Fertilizer fraction which is Phosphorus of any form as elemental P. Currently not used	wt /wt (dimensionless)	Blank or 0.0 to 1.0	F10	3	2
Fertilizer Soluble P—Fertilizer fraction which is soluble Phosphorus to total amount. Currently not used.	wt /wt (dimensionless)	Blank or 0.0 to 1.0	F10	3	3
Fertilizer Inorganic P—Fertilize fraction which is mineralizable (inorganic) Phosphorus	wt /wt (dimensionless)	0.0 to 1.0	F10	3	4
Fertilizer Organic P—Fertilizer fraction which is organic Phosphorous.	wt /wt (dimensionless)	0.0 to 1.0	F10	3	5
Fertilizer Organic Matter—Fertilizer fraction which is organic matter.	wt /wt (dimensionless)	Blank or 0.0 to 1.0	F10	3	6
Fertilizer Consistency code —Fertilizer (or manure) consistency code. Acceptable values are: 1= Liquid, 2 = Slurry, 3 = Solid Currently not used		Blank or 1, 2, or 3	I10	3	7
Blank line				Last	

FIELD POND DATA

Required only if field ponds are to be included

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—hard coded section ID insensitive to upper/lower case letters (left justified).		**Field Pond Data:**	A40	1	1-4
Number Field Ponds—total number of field ponds in the watershed.		1— 2147483647	I10	1	5
Maximum gate operations—Maximum number of field pond gate operations within any rotation period within the watershed.		1- 2147483647	I10	1	6
Total Gate Operations – The total number of gate operations for all rotation periods.		1- 2147483647	I10	1	7
Blank field			10	1	8
The following 3 line sets (lines 2, 3, & 4) repeat for the number of field ponds (specified above).					
Field Pond ID—unique alphanumeric string identifying the field pond. Multiple field ponds within the same cell may be aggregated and entered as a single pond for simulation convenience.			A10	2	1

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Field Pond-Cell ID—alphanumeric string identifying cell that contains the field pond(s). Must be the same as a cell ID in the CELL DATA section already included within the watershed.			A10	2	2
Field Pond area—area of field pond(s). Multiple field ponds in the same cell may be aggregated together as a single field pond for convenience.	{acres} [hectares]	{0.0— 9884.} [0.0— 4000.0]	F10	2	3
Number of rotation years—number of years in rotation for the management of this field pond.		< 10000	I10	2	4
Number gate operations—total number of field pond gate openings & closures within the rotation period for this field pond. For every opening (closing) there has to be a closing (opening).		2— 10000	I10	2	5
Blank field			10	2	6
Blank field			10	2	7
Blank field			10	2	8
Blank field				3	1
Volume of release water—amount of water released from field pond per gate open operation; depth in linear units. May be left blank if release rate is entered.	{in} [mm]	{>0. – 393.} [>0 – 10000.]	F10	3	2
Drain time—time to drain field pond's release. Will be used if the release rate field is blank. A blank in both the drain time & release rate fields will default to a 24-hr drain time.	hr	> 0.0 – 8784.	F10	3	3
Release rate—rate of field pond release as depth in linear units per hour. May be left blank, in which case the rate will be calculated from the values for the volume of release water (and pond area) and drain time. A blank in both the drain time & release rate fields will default to a 24-hr drain time.	{in/hr} [mm/hr]	{>0. – 393.} [>0. – 10000.]	F10	3	4
Sediment concentration—average total sediment concentration in release water. Blank field defaults to 0 ppm.	ppm	0. – 1000000.	F10	3	5
Clay content—percent of clay content in sediment yield from the field pond. Clay plus silt contents must not add up to more than 100 %. Blank fields for both clay & silt contents defaults to 100% clay. A blank field for clay with a silt content greater than 0%, defaults to 0% content for clay. If the sum of clay & silt content adds up to less than 100%, the difference is assumed to be sand.	%	0. – 100.	F10	4	6
Silt content— percent of silt content in sediment yield from the field pond. Clay plus silt contents must not add up to more than 100 %. If sum adds up to less than 100%, the difference is assumed to be sand. Blank field defaults to 0% for silt.	%	0. – 100.	F10	3	7
Nitrogen concentration—total concentration of nitrogen (both dissolved & attached) in release water. Blank defaults to 0. Currently not used.	ppm	Blank or 0. – 1000000.	F10	4	8
blank field				4	1
Phosphorous concentration—total concentration of phosphorous (both dissolved & attached) in release water. Blank defaults to 0. Currently not used.	ppm	Blank or 0. – 1000000.	F10	4	2
Organic carbon concentration—total concentration of organic carbon (both dissolved & attached) in release water. Blank defaults to 0. Currently not used.	ppm	Blank or 0. – 1000000.	F10	4	3
Pesticide reference id—ID of the pesticide in the release water in pesticide reference list. ID must be in the pesticide reference list. ID will be converted to the array index of the pesticide in the pesticide reference list. Only one pesticide per field in each field pond release is allowed. Currently not used.			A40	4	4-7
Pesticide concentration—total concentration of pesticide (both dissolved & attached) in release water. Only one pesticide allowed per field pond. Blank defaults to 0. Currently not used.	ppm	Blank or 0. – 1000000.	F10	4	8
Line 5 repeats for each gate open/close action for its respective field pond (number of gate openings & closures as specified above).					
blank field				5	1
Open/close—gate action as to whether the gate is opened (water release) or closed. The time period (days) during which gate is opened (before it is closed), the field pond will be treated as a part of the homogeneous cell. The time period during which the gate is closed (before it is opened again), will be treated as no runoff; i.e., all rainfall is assumed to be captured within the pond and infiltrates into the ground.		'open' or 'close'	A10	5	2

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Opening/closure rotation day—Month, day, and relative year (within a set of field pond operations) for gate openings & closures. This day will be converted internally from a relative rotation date (mm/dd/ry) to a 2-dimensional variable which will be the rotation year & Julian day for the release/gate closure. If the operation month and day are blank, and this operation is the first in a set of field pond operations grouping, then this operation is used as initial conditions for starting the simulation. Blank year defaults to 1.	mm/ dd/ yy	Blank, or mm—1— 12 dd—1— 31 yy—1— 100	I2, "/" I2, "/" I2, "bb" where "b" is a blank character	5	3a-3c
Blank fields			10	5	4-8
Blank line				Last	

IMPOUNDMENT DATA

Required if referenced in Reach

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Impoundment Data:**	A40	1	1
Number Impoundments—Total count of impoundment records for the watershed.		1 to 2147483647	I10	1	2
The following line repeats for the number of impoundments (specified above).					
Impoundment ID—Alphanumeric string identifying the impoundment.			A10	2	1
Impoundment Infiltration—Infiltration rate for bottom the impoundment. Blank will default to 0.	{in / hr} [mm / hr]	Blank, or {0.0 to 19.} [0.0 to 500.0]	F10	2	2
Impoundment Seepage—Constant value seepage rate through the embankment. Blank will default to 0.	{cfs} {m^3/sec}	Blank, or {0.0 to 105.} [0.0 to 3.0]	F10	2	3
Permanent Pool Depth—Depth used as the base for impoundment temporary storage and spillway discharge. If zero or blank, there is no permanent pool.	{ft} [m]	Blank, or {0.0 to 98.} [0.0 to 30.0]	F10	2	4
Impound Volume Coefficient—Coefficient in power curve describing the volume- depth relationship: Vol = coef (Depth)^{exp} where: Vol = Storage volume above channel bottom elevation. (acre- feet or hectare-meter). Depth = Vertical distance above channel bottom (feet or meters)		[>0.0 to 260.][8]	F10	2	5
Impound Volume Exponent—Exponent in power curve describing the volume-depth relationship: Vol = coef (Depth)^{exp} where: Vol = Storage volume above channel bottom elevation. (acre- feet or hectare-meter). Depth = Vertical distance above channel bottom (feet or meters) Blank defaults to 1.		Blank, or 0. to 10.	F10	2	6
Impound Discharge Coefficient—Coefficient in power curve describing the discharge- depth relationship: Q = coef (Depth)^{exp} where: Q = Principal spillway discharge (cfs or m^3/sec). Depth = Vertical distance above channel bottom (for pressure flow) or above permanent pool (for weir flow) (feet or meters) .		[>0.0 to 2000.0][9]	F10	2	7

[8] Unit conversion from English to SI is non-linear. Appropriate English ranges are: {>0.0 to 642.} for minimum Impound Volume Exponent; and {>0.0 to 59.7} for maximum Impound Volume Exponent.

[9] Unit conversion from English to SI is non-linear. Appropriate English ranges are: {>0.0 to 39000.} for minimum Impound Discharge Exponent; and {>0.0 to 3620.} for maximum Impound Discharge Exponent.

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Impound Discharge Exponent—Exponent in power curve describing the discharge- depth relationship: $Q = coef (Depth)^{exp}$ where: Q = Principal spillway discharge (cfs or m^3/sec). Depth = Vertical distance above channel bottom (for pressure flow) or above permanent pool (for weir flow) (feet or meters) . Use 0.5 for pressure flow and 1.5 for horizontal weir flow and 2.5 for v-notch weir flow. Blank defaults to 0.5		Blank, 0.5 , 1.5, or 2.5	F10	2	8
Sediment Clean Out Depth—- Depth of sediment accumulation before clean out. A blank defaults to the permanent pool depth.	(ft.) m	Blank, or 0 to permenant pool depth	F10	3	2
Sediment Clean Out Year—- Number of years of sediment accum-ulation before clean out. A blank in, "**Permanent Pool Depth"** and **"Sediment Clean Out Depth"** fields and this field **will** default to 5 years. Conversely, a nonblank in either "**Permanent Pool Depth"** or **"Sediment Clean Out Depth"** fields and a blank in this field will default to no clean out.		Blank, or >=0	I10	3	3
Blank line				Last	

IRRIGATION APPLICATION DATA

Required if referenced on Operations Data

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Irrigation Application Data:**	A40	1	1
Number Irrigation Applications—Total count of irrigation application record sets for the watershed.		1 to 2147483647	I10	1	2
The following 2 line sets repeat for the number of Irrigation Applications (specified above).					
Irrigation Application ID—Alphanumeric string identifying the irrigation schedule.			A10	2	1
Irrigation End Date—Month, day and relative operation year automatic or manual interval irrigation ends. Entry requires one (and only one) of Irrigation Trigger, Interval Number or Interval Days be entered. Leave blank for manual single application. Blank year defaults to 1.	Mmm ddd yyyy	mmm—1 to 12 ddd—1 to 31 yyyy—1 to 100	2I3, I4	2	2a-2c
Irrigation Type code—Acceptable values are:: 1 = Furrow—open ends, alternating 2 = Furrow—open ends, adjacent 3 = Furrow—blocked, alternating 4 = Furrow—blocked, adjacent 5 = Surge 6 = Border (level or graded) 7 = Level Basin 8 = Center Pivot (inc LEPA) 9 = Linear Move 10 = Sprinkler (set Move or Solid Set) 11 = Big Gun (Moving or Solid Set) 12 = Trickle (Drip, Micro Spray etc) 13 = Sub-surface		1-13	I10	2	3
Irrigation Duration—Duration of irrigation application. Only used with manual irrigation. Leave blank for automatic irrigation.	Hr	Blank or 0.1 to 24.0	F10	2	4
Irrigation Lost—Portion of irrigation inflow that is expected to be lost to runoff. Blank defaults to 0.0	%	Blank or 0.0 to 100.0	F10	2	5
Irrigation Rate—Irrigation application rate. Only used with manual irrigation. Leave blank for automatic irrigation.	{gpm / acre} [m^3 /sec / hectare]	Blank or {0.064 to 640000.0} [0.00001 to 100]	F10	2	6
Tailwater Recovery—Effectiveness of tailwater recovery	%	0.0 to 100.0	F10	2	7

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Irrigation Trigger—Soil moisture depletion level for automatic irrigation scheduling. Only used with Automatic irrigation and requires Irrigation End Date entry.. Blank implies manual irrigation application.	%	Blank or 0.0 to 100.0	F10	2	8
Blank fields			20	3	1-2
Irrigated Area Fraction- Fraction of field (or cell) area which has irrigation water applied. Blank defaults to 1.0		Blank or 0.0 to 1.0	F10	3	3
Interval Number—Number of fixed interval irrigations during the irrigation period. Only used with fixed interval irrigation where Interval is not specified. Requires Irrigation End Date entry. Leave blank for automatic irrigation or single application irrigation.		Blank or 1 to 100	I10	3	4
Interval Days—Fixed number of days between irrigations. Only used with fixed interval irrigation where Interval Number is not specified. Requires Irrigation End Date entry. Leave blank for automatic irrigation or single application irrigation..	Days	Blank or 1 to 100	I10	3	5
Chemical Multiple—Multiple of manual irrigation applications between irrigation applications with chemicals added to the irrigation water. Requires enrry of Interval Number or Interval Days. Leave blank for automatic irrigation or single application irrigation.		Blank or 1 to 100	I10	3	6
Irrigation Sediment Rate—Sediment yield rate (including all particle sizes) at end of field. (Blank defaults to 0.0)	{tons / acre / in} [metric tons / hectare / mm]	Blank or {0.0 to 6.0} [0.0 to 0.53]	F10	3	7
Blank line				Last	

LANDSLIDE DATA[10]

Optional

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters. (Left justified)		**LANDSLIDE DATA:**	A40	1	1-4
Number Gullies—Total count of gully record sets for the watershed.		1 to 2147483647	I10	1	5
The following two lines repeat for the number of landslides (specified above). Multiple landslide(s) within a cell should be consecutive.					
Landslide ID—Alphanumeric string identifying the landslide.			A10	2	1
Cell ID—Alphanumeric string identifying the cell that contains the landslide(s). More than one landslide may be included in the regression power curve for a cell. Must be the same as a cell ID in the CELL DATA section.			A10	2	2
Soil ID—Alphanumeric string identifying the dominant soil type for the landslide. Must be the same as a soil ID in the SOIL DATA section. Blank defaults to the Soil ID for the cell that contains the landslide(s)..			A10	2	3
Drainage Area—The contributing drainage area above the landslide(s) associated with the landslide erosion regression coefficient and exponent. The default is the entire cell's drainage area.	{acres} [hectares]	Blank, or {0.000025 to 9884.} [0.00001 to 4000.0]	F10	2	4

[10] A cell may include multiple landslides grouped together and associated as a single power curve, or multiple landslides individually indentified with separate power curves, or a combination of individual landslides (separate power curves) and grouped landslides (a single power curve).

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Depth—Average depth of erosion, used to composite the eroded soil layers. Blank defaults to 1st soil layer.	{in} [mm]	Blank, or {0.00 to 314.} [0.00 to 8000]	F10	2	5
Erosion Coefficient—Coefficient in landslide erosion power curve (note that the units for both the erosion (Q_s) and the rainfall/runoff ($Q_{w)}$) may be unit area or totals but must be consistent within a power curve): $Q_s=coef*Q_w^{exp}$ where Q_w = rainfall/runoff volume [unit area–(in or mm^3); total units–(AF or Mg)] Q_s = sediment discharge [unit area–(T/ac or Mg/ha); total units–(T or Mg)]. A blank is not allowed		[>0.0 to 100.]][11]	F10	2	6
Erosion Exponent—Exponent in landslide erosion power curve (note that the units for both the erosion (Q_s) and the rainfall/runoff ($Q_{w)}$) may be unit area or totals but must be consistent within a power curve): $Q_s=coef*Q_w^{exp}$ where Q_w = rainfall/runoff volume [unit area–(in or mm^3); total units–(AF or Mg)] Q_s = sediment discharge [unit area–(T/ac or Mg/ha); total units–(T or Mg)]. A blank is not allowed.		Blank or 0.0 to 3.0	F10	2	7
Delivery Ratio—Delivery ratio of landslide(s) erosion to gully yield. Blank defaults to HUSLE delivery ratio algorithm.	Non-dimensional	Blank, 0 to 1	F10	2	8
Blank field			10	2	8
Management Field ID—Alphanumeric string identifying the field for the ephemeral gully. Must be the same as a management field ID in the MANAGEMENT FIELD DATA section. Blank defaults to (1st) cell's management field.			A10	3	1
Blank field			10	3	2
Blank field			10	3	3
Blank field			10	3	4
Blank field			10	3	5
Calibration Factor—This factor is used to calibrate the landslide's sediment yield to its loading at a known, or assumed known, point which is usually at a USGS gaging station. Blank defaults to 1.	Non-dimensional	Blank, 0 to ∞	F10	3	6
Rainfall/Runoff Indicator—Code to indicate whether the landslide's power curve's rainfall/runoff volume (Q_w) is a function of rainfall or runoff. Blank defaults to zero; 0–rainfall, 1–runoff		Blank, 0 or 1	I10	3	7
Units Indicator—Code to indicate whether the regression coefficient and exponents are for unit area or total units. Blank defaults to 0; 0–unit area, 1–totals.			I10	3	8
The following line is the last line in the LANDSLIDE DATA section.					
Blank line				Last	1-8

[11] Unit conversion from English to SI is non-linear. Appropriate English ranges would restrict the erosion to less than 100 T/ac.

MANAGEMENT FIELD DATA

Required

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Management Field Data:**	A40	1	1-4
Number Fields—Total count of fields in the watershed.		1 to 2147483647	I10	1	5
The following 2 line sets repeat for the number of fields (specified above).					
Field ID—Alphanumeric string identifying the field.			A10	2	1
Field Landuse ID—Alphanumeric string describing the landuse type. Acceptable values are: Cropland, Pasture, Rangeland, Forest, Urban.			A10	2	2
Management Sequence ID—Alphanumeric string identifying the management sequence for the field. Must be the same as a management sequence ID (in Management Sequence Data).			A10	2	3
Relative Rotation Year—Relative year in the field management rotation for the first year in the Gregorian calendar (year 1 C.E./A.D.). (Example: For a 3 year rotation, starting year can be 1, 2 or 3). Blank defaults to 1. The relative rotation year for the first simulation year may change if the starting simulation year changes.		Blank, or 1 to 1000	I10	2	4
USLE P-factor—Average annual USLE P-factor for the field. Required if Erosion code (Simulation Period Data) is 1 (USLE) , otherwise leave blank.		Blank, or 0.0 to 1.0	F10	2	5
Percent Rock Cover—Percent surface area covered by rocks. Blank defaults to 0.0.		Blank, or 0.0 to 100.0	F10	2	6
RUSLE Sub-P factor—RUSLE sub P-factor that accounts for subsurface drainage. A value of 1.0 indicates no erosion reduction due to subsurface drainage. Required if Erosion code (Simulation Period Data) is 0 (RUSLE), otherwise leave blank. Blank defaults to 1.0.		Blank or 0.0 to 1.0	F10	2	7
Inter-rill Erosion code—Beta code indicating the ratio of rill to inter-rill erosion. Acceptable values are: 1 = rill/inter-rill erosion equal for bare soil (ratio = 0.035) 2 = interrill erosion dominant for bare soil (ratio = 0.025) 3 = rill erosion dominant for bare soil (ratio = 0.050) 4 = coarse soil; low ppt.; cover strongly affects runoff (ratio = 0.045) Blank defaults to 3.		Blank or 1—4	I10	2	8
Blank field			10	3	1
Random Roughness— Long term random roughness. Surface random roughness resulting from rocks, roots, or any other vegetative effects on surface at the time the field is left undisturbed for greater than number of years it takes for the soil to fully consolidate. Blank defaults to 1.25 in (32 mm).	{in} [mm]	Blank, or {0.000004 to 19.6} [0.00001 to 500.0]	F10	3	2
Terrace Horizontal Distance—Distance between terraces on the field. Leave blank if there are no terraces on the field.	{ft} [m]	Blank or {0.000033 to 9842.} [0.00001 to 3000.0]	F10	3	3
Terrace grade.—Grade in terrace to outlet Zero or blank indicates a flat bottom detention terrace. Must be blank if Terrace Horizontal Distance is blank.	len-vert / len-horz (dimensionless)	Blank or 0.0 to 10.0	F10	3	4
Tile Drain ID .—Alphanumeric string identifying the tile drainage applied to the field. Leave blank if no tile drains present			A10	3	5
Blank line				Last	

MANAGEMENT OPERATION DATA

AnnAGNPS mode only — Required

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Operations Reference Data:**	A40	1	1
Number Operations—Total count of management operations for the watershed.		1 to 2147483647	I10	1	2
The following 3 line sets repeat for the number of operations references (specified above).					
Management Operation ID—Alphanumeric string identifying the management operation.			A20	2	1-2
Effect codes—Operation effects codes describing field changes. Enter up to 5 codes. Allowable codes are: 1 = no effect 2 = soil surface disturbed 3 = current crop residue added to surface 4 = other residue added to the field 5 = current residue removed from field 6 = current crop harvested 7 = plant crop (growth begins) 8 = current crop killed 9 = call in a new crop growth set 10 = current and previous residue removed from field. Only # 1 can be repeated in the array. Blanks default to #1.		1 to 10	5I2	2	3a-3e
Blank field			10	2	4
Residue Cover Remaining—Percent residue cover remaining on the surface after a soil surface disturbing operation. Only used if an operation effect is 2 and % of residue weight remaining is not available. If the effect code is 2, either "Residue Cover Remaining" or "Residue Weight Remaining" must be >0 while the other is 0.0 or blank. Blank defaults to 0.0. Must be blank or 0.0 for other than effect code 2.	%	Blank, or >0. to 100.0	F10	2	5
Residue Weight Remaining—Percent residue weight remaining on the surface after a soil surface disturbing operation. Only used if an Effect code is 2 and Residue Cover Remaining is not available. If the effect code is 2, either "Residue Cover Remaining" or "Residue Weight Remaining" must be >0 while the other is 0.0 or blank. Blank defaults to 0.0. Must be blank or 0.0 for other than effect code 2.	%	Blank or >0. to 100.0	F10	2	6
Area Disturbed—Percent surface area disturbed by operation. Only used if Effect code is 2. Effect code of 2 requires a value >0. Must be blank or 0.0 for other than effect code 2.	%	Blank or >0. to 100.0	F10	2	7
Initial Random Roughness—Initial random roughness. Only used if Effect code is 2. Effect code of 2 requires a value >0. Must be blank for other than effect code 2.	{in} [mm]	Blank or {>0. to 10.0} [>0. to 254.0]	F10	2	8
Blank field			10	3	1
Final Random Roughness—Final consolidated random roughness. Only used if Effect code is 2. Effect code of 2 requires a value >0. Must be blank for other than effect code 2.	{in} [mm]	Blank or {>0. to 10.0} [>0. to 254.0]	F10	3	2
Operation Tillage Depth—Depth of tillage operation. Only used if Effect code is 2. Effect code of 2 requires a value >0. Must be blank for other than effect code 2.	{in} [mm]	Blank or {>. to 100.} [>0.0 to 2540.}	F10	3	3
Added Surface Residue—Additional residue applied that remains on the surface. Only used if Effect code is 4. Effect code of 4 requires a value >0. Must be blank for other than effect code 4.	%	Blank or >0. to 100.0	F10	3	4
Surface Decomposition—Surface decomposition coefficient for added residue. Only used if Effect code is 4. Effect code of 4 requires a value >0. Must be blank for other than effect code 4.		Blank or >0. to 10.0	F10	3	5
Sub-surface Decomposition—Sub-surface decomposition coefficient for added residue. Only used Effect code is 4. Effect code of 4 requires a value >0. Must be blank for other than effect code 4.		Blank or >0. to 10.0	F10	3	6
Blank field			10	4	1

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Surface Residue—Added surface residue amounts at three cover percentages. The order and value of the cover percentages are: 30%, 60% , and 90% Effect code of 4 requires a value >0. Must be blank for other than effect code 4.	{lb / acre} [kg / hectare]	{>0. to 99924.} [>0. to 112000.0]	3F10	4	2-4
Blank line				Last	

MANAGEMENT SCHEDULE DATA

Required

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Operations Data:**	A40	1	1-4
Number Schedules—Total count of management events for the watershed.		1 to 2147483647	I10	1	5
Number Pesticide Applications—Total count of pesticide application records included as part of management schedule data. Blank defaults to 0		Blank or 0 to 2147483647	I10	1	6
The following 4 line sets repeat for the number of schedules (specified above) within a scheduled grouping. All events within a grouping must be sequential in time. The last line in the set is repeated for the number of pesticides applied in the operation. If no pesticide application then the last line is omitted.					
Management Schedule ID—Alphanumeric string identifying the management schedule..			A10	2	1
Event Date—Complete date (month, day, & relative year within a scheduled grouping) for the **event**. If the **event** month, day, or year is blank, an error message is issued. Blank defaults are not permitted.	mmm ddd yyyy	Blank, or mmm—1 to 12 ddd—1 to 31 yyyy—1 to 100	2I3, I4	2	2a-2c
Event Contour ID—Alphanumeric string identifying contour data. Must be the same as a contour ID (in Contour Data). Only needed for the first **event** involving contours or when a change occurs.			A10	2	3
Event New Crop ID—Alphanumeric string identifying new crop information for the **event**. Must be the same as a crop ID (in Crop Data). Required for one **event** in a cropland **event** set with additional entries if a change occurs.			A20	2	4-5
Event Strip Crop ID—Alphanumeric string identifying strip crop data for the **event**. Must be the same as a strip crop ID (in Strip Crop Data). Only needed for the first **event** involving strip crops in a **management schedule** or when a change occurs.			A10	2	6
Event New Non-crop ID—Alphanumeric string identifying new non-crop landuse data for the event. Must be the same as a non-crop ID (in **Non-Crop** Data). Required for one event of a non-crop **management schedule**.			A20	2	7-8
Blank field			10	3	1
Curve Number ID—A runoff curve number ID that must match a corresponding ID in the **RUNOFF CURVE NUMBER DATA** section and is scheduled to become effective on or shortly after the scheduled date. A curve number ID is required for the first scheduled date for each **Management Schedule** ID and when a change in runoff curve number is to occur. When a Scheduled Curve Number ID is specified alone without a New Crop ID also being specified, the curve number becomes effective that day. When a Scheduled Curve Number ID is specified along with a New Crop ID and a Management Operation ID that includes a planting (7) effect code also being specified, the curve number transitions from the old to the new curve number as a function of the days from planting to harvest. The curve number represents a mature crop when a planting management operation ID is specified.			A40	3	2-5

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Post Event Manning's n—Manning's n value to use after operation occurs. Required for first operation in a **management schedule** and when a change occurs Defaults to cell's current value.		blank, 0.005 to 1.0	F10	3	6
Post Event Surface Constant—Surface condition constant to use after operation occurs. Required for first operation in a **management schedule** and when a change occurs Defaults to cell's current value.		blank, 0.0 to 1.0	F10	3	7
Operation Residue Change—Residue amount added or subtracted for the operation. Amount is always a positive number. Data interpretation depends on the effect codes (in Operation Reference Data) associated with the operation. Blank defaults to 0.0. Actions by effect codes are: 3, (optional). If 0, the current crop potential residue is added otherwise this amount is added to the current crop residue. 4, (required) added as a unique residue. 5, (optional) If 0, then all of the current crop surface residue will be removed otherwise only this amount is subtracted. 10, (optional) If 0, then all surface residues are removed, otherwise this value is divided by the total of all surface residues to determine a fraction to remove from each residue. Not used with other effect codes.	{lb/acre} [kg/hectare]	Blank or {0.0 to 99924.} [0.0 to 112000.0]	F10	3	8
Blank field			10	4	1
Event Fertilizer Application ID—Alphanumeric string identifying the fertilizer information for the operation. Must be the same as a fertilizer application ID (in Fertilizer Application Data). Blank indicates no fertilizer applied with event.			A10	4	2
Event Irrigation Application ID—Alphanumeric string identifying the irrigation information in the irrigation data. Must be the same as a irrigation application ID (in Irrigation Application Data). Blank indicates no irrigation applied with event.			A10	4	3
Management Operation ID—Alphanumeric string identifying the operation information for the operation. Must be the same as an operation ID (in Management Operation Data). Blank indicates a "NO OPERATION". Note– if a "NO OPERATION" ID is not found in the MANAGEMENT OPERATION DATA section, AnnAGNPS inserts one with all effect codes equal to 1.			A20	4	4-5
Tile Drain Status Change—Alphanumeric string indicating a change in tile drain status. "Open" or "close" are acceptable inputs. The initial tile drain status is "Open" when there is a tile drain. Blank should be used when there is no tile drain.		Blank, or "Open" or "Close"	A10	4	6
The following line repeats for the number of pesticides applied with the operation (specified above). If no pesticides are applied in the operation, no pesticide id records should be included.					
Blank fields			20	5	1-2
Event Pesticide Application ID—Alphanumeric string identifying the pesticide application information for operation. Must be the same as a pesticide application ID (in Pesticide Application Data).			A10	5	3
Blank line				Last	

MANAGEMENT SEQUENCE DATA

Required

Description	Units	Domain	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Management Sequence Data:**	A40	1	1-4
Number Sequences—Total count of management sequencesfor the watershed.		1 to 2147483647	I10	1	5
The following line repeats for the number of scheduled groups associated with all management sequences (specified above).					
Management Sequence ID—Alphanumeric string identifying the management sequence.			A10	2	1

Description	Units	Domain	Format	Line No.	Field No.
Management Schedule ID—Alphanumeric string identifying the management schedule associated with the x management sequence. Must be the same as a management schedule ID in the Management Schedule Data section.			A10	2	2
Blank line				Last	

NON-CROP DATA

AnnAGNPS mode only — Required if referenced in Management Schedule Data

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Non-Crop Data:**	A40	1	1
Number Non-Crop Landuses—Total number of non-crop record sets for the watershed.		1 to 2147483647	I10	1	2
The following 2 line set repeats for the number of Non-Crops (specified above).					
Non-Crop ID—Alphanumeric string identifying a non-cropland landuse.			A20	2	1-2
Non-Crop Description —Description of the **non-crop** landuse. (Optional—For user reference only. Not used within AnnAGNPS.)			A60	2	3-8
Blank field			10	3	1
Annual Root Mass—Average annual live root mass in the top 4 in (100 mm) of soil.	{lb / acre} [kg / hectare]	Blank or {0.0 to 99924.} [0.0 to 112000.0	F10	3	2
Annual Cover Ratio—Average annual ratio of ground covered by canopy cover to total ground area.		Blank or 0.0 to 1.0	F10	3	3
Annual Rain Fall Height—Average annual distance rainfall falls after being intercepted by the crop canopy.	{ft} [m]	Blank or {0.0 to 262.0} [0.0 80.0]	F10	3	4
Surface Residue Cover—Percent surface residue cover. Plant basal area is not considered as being part of the ground cover.	%	Blank or 0 to 100.0	F10	3	5
Blank field		Blank or 0.0 to 1.0	F10	3	6
Blank line				Last	

OUTPUT OPTIONS DATA

See Attachment A for a detailed explaination — Optional

Description	Col.	Domain	Format	Line No.	Field No.
Data Section Name—Hard coded section ID (insensitive to upper/lower case letters).	1-40	**Output Options Data:**	A40	1	1-4
Global request for all version 3 comma separated variable format database files (*.csv); default is false.	41.	blank, T, or F	A1	1	5
Global request for all version 3 data preparation verification files (*.dpp); default is false.	42.	blank, T, or F	A1	1	5
Global request for all version 3 input data verification files (*.npt); default is false.	43.	blank, T, or F	A1	1	5
Global request for all version 3 simulation verification files (*.sim); default is false.	44.	blank, T, or F	A1	1	5
Global request for all version 3 formatted individual table files (*.txt); default is false.	45.	blank, T, or F	A1	1	5
Global request for the program execution log file (AnnAGNPS.log); default is true.	46.	blank, T, or F	A1	1	5
Global request for the program execution log to the screen; default is true.	47.	blank, T, or F	A1	1	5
Global request for the warning file; default is true.	48.	blank, T, or F	A1	1	5
Global request for the version 1 & 2 formated table output files; default is false.	49.	blank, T, or F	A1	1	5
Reserved.	50.	blank only	—	1	5
Global request for all cells to be included in the output; default is true.	51.	blank, T, or F	A1	1	6
Global request for all feedlots to be included in the output; default is false.	52.	blank, T, or F	A1	1	6
Global request for all field ponds to be included in the output; default is false.	53.	blank, T, or F	A1	1	6
Global request for all gullies to be included in the output; default is false.	54.	blank, T, or F	A1	1	6
Global request for all point sources to be included in the output; default is false.	55.	blank, T, or F	A1	1	6

Description	Col.	Domain	Format	Line No.	Field No.
Global request for all reaches to be included in the output; default is OUTLET only.	56.	blank, T, or F	A1	1	6
Reserved.	57.	blanks only	—	1	7
Reserved.	58.	blanks only	—	1	6
Global request for all nutrients to be included in the accumulation & average annual output; default is true.	59.	blank, T, or F	A1	1	6
Global request for all pesticides to be included in the accumulation & average annual output; default is true.	60.	blank, T, or F	A1	1	6
Reserved.	61.	blanks only	—	1	7
Reserved.	62.	blanks only	—	1	7
Global request for all sediment to be included in the accumulation & average annual output; default is true.	63.	blank, T, or F	A1	1	7
Global request for all water to be included in the accumulation & average annual output; default is true.	64.	blank, T, or F	A1	1	7
Global request for all nutrients to be included in the event output; default is true.	65.	blank, T, or F	A1	1	7
Global request for all pesticides to be included in the event output; default is true.	66.	blank, T, or F	A1	1	7
Global request for all sediment to be included in the event output; default is true.	67.	blank, T, or F	A1	1	7
Global request for all water to be included in the event output; default is true.	68.	blank, T, or F	A1	1	7
Reserved.	69.	blanks only	—	1	7
Reserved.	70.	blanks only	—	1	7
Global request for version 2 & 3 output to be in total mass units [water & sediment are in tons (English) or Mg (SI), chemicals are in lbs (English) or kg (SI)]; default is false.	71.	blank, T, or F	A1	1	8
Global request for version 2 & 3 output to be in ratio units [total mass from contributing source divided by total mass at reference reach location]; default is false.	72.	blank, T, or F	A1	1	8
Global request for version 2 & 3 output to be in units of total mass divided by contributing area (unit area) [water & sediment are in tons/ac (English) or Mg/ha (SI), chemicals are in lbs/ac (English) or kg/ha (SI)]; default is false.	73.	blank, T, or F	A1	1	8
Reserved.	74.	blank only	—	1	8
Local request for version 2 CCHE1D output; default is false.	75.	blank, T, or F	A1	1	8
Reserved.	76.	blank only	—	1	8
Local request for version 2 average annual formated output file (AnnAGNPS_AA.dat); default is true.	77.	blank, T, or F	A1	1	8
Local request for version 2 event formated output file (AnnAGNPS_EV.dat); default is false.	78.	blank, T, or F	A1	1	8
Local request for version 1 accumulated data output file (AnnAGNPS.acc); default is false.	79.	blank, T, or F	A1	1	8
Local request for version 1 event data output file (AnnAGNPS.evn); default is false.	80.	blank, T, or F	A1	1	8
Data Subsection Name—for local requests of individual version 3 comma separated variable tables; optional line, defaults to global request.	1-10	***.csv**	A10	2	1

Description	Col.	Domain	Format	Line No.	Field No.
AnnAGNPS_CSV_Cell_Input_Data.csv	1.	blank, T, or F	A1	2	2
AnnAGNPS_CSV_Contour_Input_Data.csv	2.	blank, T, or F	A1	2	2
AnnAGNPS_CSV_Crop_Input_Data.csv	3.	blank, T, or F	A1	2	2
AnnAGNPS_CSV_Feedlot_Input_Data.csv	4.	blank, T, or F	A1	2	2
AnnAGNPS_CSV_Feedlot_Management_Input_Data.csv	5.	blank, T, or F	A1	2	2
AnnAGNPS_CSV_Fertilizer_Application_Input_Data.csv	6.	blank, T, or F	A1	2	2
AnnAGNPS_CSV_Fertilizer_Reference_Input_Data.csv	7.	blank, T, or F	A1	2	2
AnnAGNPS_CSV_Field_Input_Data.csv	8.	blank, T, or F	A1	2	2
AnnAGNPS_CSV_Field_Management_Input_Data.csv	9.	blank, T, or F	A1	2	2
AnnAGNPS_CSV_Field_Pond_Input_Data.csv	10.	blank, T, or F	A1	2	2
AnnAGNPS_CSV_Gully_Input_Data.csv	11.	blank, T, or F	A1	2	3
AnnAGNPS_CSV_Impoundment_Input_Data.csv	12.	blank, T, or F	A1	2	3
AnnAGNPS_CSV_Irrigation_Input_Data.csv	13.	blank, T, or F	A1	2	3
AnnAGNPS_CSV_Landuse_Reference_Data.csv	14.	blank, T, or F	A1	2	3
AnnAGNPS_CSV_Nitrogen_(date).csv	15.	blank, T, or F	A1	2	3
AnnAGNPS_CSV_Nitrogen_Input_Data.csv	16.	blank, T, or F	A1	2	3
AnnAGNPS_CSV_Operations_Application_Input_Data.csv	17.	blank, T, or F	A1	2	3
AnnAGNPS_CSV_Operations_Reference_Input_Data.csv	18.	blank, T, or F	A1	2	3
AnnAGNPS_CSV_Organic_Carbon_(date).csv	19.	blank, T, or F	A1	2	3
AnnAGNPS_CSV_Pesticides_(name)_(date).csv	20.	blank, T, or F	A1	2	3
AnnAGNPS_CSV_Pesticides_Input_Data.csv	21.	blank, T, or F	A1	2	4
AnnAGNPS_CSV_Pesticides_Reference_Input_Data.csv	22.	blank, T, or F	A1	2	4
AnnAGNPS_CSV_Phosphorous_(date).csv	23.	blank, T, or F	A1	2	4
AnnAGNPS_CSV_Phosphorous_Input_Data.csv	24.	blank, T, or F	A1	2	4
AnnAGNPS_CSV_Point_Source_Input_Data.csv	25.	blank, T, or F	A1	2	4
AnnAGNPS_CSV_Reach_Input_Data.csv	26.	blank, T, or F	A1	2	4
AnnAGNPS_CSV_Runoff_Curve_Number_Input_Data.csv	27.	blank, T, or F	A1	2	4
AnnAGNPS_CSV_Sediment_Erosion_(date).csv	28.	blank, T, or F	A1	2	4
AnnAGNPS_CSV_Sediment_Loadings_(date).csv	29.	blank, T, or F	A1	2	4
AnnAGNPS_CSV_Sediment_Yield_(date).csv	30.	blank, T, or F	A1	2	4
AnnAGNPS_CSV_Simulation_Period_Input_Data.csv	31.	blank, T, or F	A1	2	5
AnnAGNPS_CSV_Soil_Input_Data.csv	32.	blank, T, or F	A1	2	5
AnnAGNPS_CSV_Strip_Crop_Input_Data.csv	33.	blank, T, or F	A1	2	5
AnnAGNPS_CSV_Tile_Drain_Input_Data.csv	34.	blank, T, or F	A1	2	5
AnnAGNPS_CSV_Water_(date).csv	35.	blank, T, or F	A1	2	5
AnnAGNPS_CSV_Watershed_Input_Data.csv	36.	blank, T, or F	A1	2	5
AnnAGNPS_CSV_xxx_reserved.csv	47-80	blanks only	—	2	5-8
Data Subsection Name—for local requests of individual version 3 data preparation verification files; defaults to global request.	1-10	***.dpp**	A10	3	1

Description	Col.	Domain	Format	Line No.	Field No.
AnnAGNPS_DPP_Accumulation_Setup.dpp	1.	blank, T, or F	A1	3	2
AnnAGNPS_DPP_Cell_Initialization.dpp	2.	blank, T, or F	A1	3	2
AnnAGNPS_DPP_Cell_Time_of_Concentration.dpp	3.	blank, T, or F	A1	3	2
AnnAGNPS_DPP_Crop_Growth.dpp	4.	blank, T, or F	A1	3	2
AnnAGNPS_DPP_Data_Prep_Pointers.dpp	5.	blank, T, or F	A1	3	2
AnnAGNPS_DPP_Normals.dpp	6.	blank, T, or F	A1	3	2
AnnAGNPS_DPP_Operation_Rotation.dpp	7.	blank, T, or F	A1	3	2
AnnAGNPS_DPP_Pesticide_Metabolite_Reordering.dpp	8.	blank, T, or F	A1	3	2
AnnAGNPS_DPP_Process_Flag_Set.dpp	9.	blank, T, or F	A1	3	2
AnnAGNPS_DPP_Quadrature.dpp	10.	blank, T, or F	A1	3	2
AnnAGNPS_DPP_Reach_Geometry.dpp	11.	blank, T, or F	A1	3	3
AnnAGNPS_DPP_Reach_Routing_Order.dpp	12.	blank, T, or F	A1	3	3
AnnAGNPS_DPP_Reach_Time_of_Concentration.dpp	13.	blank, T, or F	A1	3	3
AnnAGNPS_DPP_RUSLE_C_Factors.dpp	14.	blank, T, or F	A1	3	3
AnnAGNPS_DPP_RUSLE_C_Factors_Soil_Consoldation.dpp	15.	blank, T, or F	A1	3	3
AnnAGNPS_DPP_RUSLE_Canopy_Cover.dpp	16.	blank, T, or F	A1	3	3
AnnAGNPS_DPP_RUSLE_Crop_Residue.dpp	17.	blank, T, or F	A1	3	3
AnnAGNPS_DPP_RUSLE_Dead_Roots.dpp	18.	blank, T, or F	A1	3	3
AnnAGNPS_DPP_RUSLE_Det_C_Fact.dpp	19.	blank, T, or F	A1	3	3
AnnAGNPS_DPP_RUSLE_Dominate_Contour.dpp	20.	blank, T, or F	A1	3	3
AnnAGNPS_DPP_RUSLE_EI_Percentages.dpp	21.	blank, T, or F	A1	3	4
AnnAGNPS_DPP_RUSLE_Growth_Days.dpp	22.	blank, T, or F	A1	3	4
AnnAGNPS_DPP_RUSLE_Initialize_Local_Operations.dpp	23.	blank, T, or F	A1	3	4
AnnAGNPS_DPP_RUSLE_K_Factors.dpp	24.	blank, T, or F	A1	3	4
AnnAGNPS_DPP_RUSLE_LS_Factors.dpp	25.	blank, T, or F	A1	3	4
AnnAGNPS_DPP_RUSLE_Non_Cropland_C_Factors.dpp	26.	blank, T, or F	A1	3	4
AnnAGNPS_DPP_RUSLE_Num_Soil_Layers_Soil_Residue.dpp	27.	blank, T, or F	A1	3	4
AnnAGNPS_DPP_RUSLE_P_Factors.dpp	28.	blank, T, or F	A1	3	4
AnnAGNPS_DPP_RUSLE_P_Factors_Contours.dpp	29.	blank, T, or F	A1	3	4
AnnAGNPS_DPP_RUSLE_P_Factors_Strip.dpp	30.	blank, T, or F	A1	3	4
AnnAGNPS_DPP_RUSLE_P_Factors_Strip_Rotation.dpp	31.	blank, T, or F	A1	3	5
AnnAGNPS_DPP_RUSLE_Prior_Landuse.dpp	32.	blank, T, or F	A1	3	5
AnnAGNPS_DPP_RUSLE_Residue_Coefficients.dpp	33.	blank, T, or F	A1	3	5
AnnAGNPS_DPP_RUSLE_Seg_Residue.dpp	34.	blank, T, or F	A1	3	5
AnnAGNPS_DPP_RUSLE_Setup_Prd_Seg.dpp	35.	blank, T, or F	A1	3	5
AnnAGNPS_DPP_RUSLE_Soil_Moisture.dpp	36.	blank, T, or F	A1	3	5
AnnAGNPS_DPP_RUSLE_Surface_Cover.dpp	37.	blank, T, or F	A1	3	5
AnnAGNPS_DPP_RUSLE_Surface_Roughness.dpp	38.	blank, T, or F	A1	3	5
AnnAGNPS_DPP_RUSLE_Unique_Residue.dpp	39.	blank, T, or F	A1	3	5
AnnAGNPS_DPP_Sediment_Particle_Distribution.dpp	40.	blank, T, or F	A1	3	5
AnnAGNPS_DPP_Seg_EI_Prcp.dpp	41.	blank, T, or F	A1	3	6
AnnAGNPS_DPP_Setup_Seg.dpp	42.	blank, T, or F	A1	3	6
AnnAGNPS_DPP_Soil_Composite.dpp	43.	blank, T, or F	A1	3	6
AnnAGNPS_DPP_xxx_reserved.dpp	54-80	blanks only	—	3	6-8
Data Subsection Name—for local requests of individual version 3 input verification files; defaults to global request.	1-10	***.npt**	A10	4	1

Description	Col.	Domain	Format	Line No.	Field No.
AnnAGNPS_NPT_AnnAGNPS_ID.npt	11.	blank, T, or F	A1	4	2
AnnAGNPS_NPT_Cell.npt	12.	blank, T, or F	A1	4	2
AnnAGNPS_NPT_Climate_Header_Information.npt	13.	blank, T, or F	A1	4	2
AnnAGNPS_NPT_Contour.npt	14.	blank, T, or F	A1	4	2
AnnAGNPS_NPT_Crop.npt	15.	blank, T, or F	A1	4	2
AnnAGNPS_NPT_Feedlot_&_Management.npt	16.	blank, T, or F	A1	4	2
AnnAGNPS_NPT_Fertilizer_Application_&_Reference.npt	17.	blank, T, or F	A1	4	2
AnnAGNPS_NPT_Field_&_Management.npt	18.	blank, T, or F	A1	4	2
AnnAGNPS_NPT_Field_Pond.npt	19.	blank, T, or F	A1	4	2
AnnAGNPS_NPT_Global_Output_Options.npt	20.	blank, T, or F	A1	4	2
AnnAGNPS_NPT_Gully.npt	21.	blank, T, or F	A1	4	3
AnnAGNPS_NPT_Hydraulic_Geometry_Coefficients.npt	22.	blank, T, or F	A1	4	3
AnnAGNPS_NPT_Impoundment.npt	23.	blank, T, or F	A1	4	3
AnnAGNPS_NPT_Irrigation_Application.npt	24.	blank, T, or F	A1	4	3
AnnAGNPS_NPT_Landuse_Reference.npt	25.	blank, T, or F	A1	4	3
AnnAGNPS_NPT_Operations_&_Reference.npt	26.	blank, T, or F	A1	4	3
AnnAGNPS_NPT_Output_Options.npt	27.	blank, T, or F	A1	4	3
AnnAGNPS_NPT_Pesticide_Application_&_Reference.npt	28.	blank, T, or F	A1	4	3
AnnAGNPS_NPT_Point_Source.npt	29.	blank, T, or F	A1	4	3
AnnAGNPS_NPT_Reach.npt	30.	blank, T, or F	A1	4	3
AnnAGNPS_NPT_Runoff_Curve_Number_Input.npt	31.	blank, T, or F	A1	4	4
AnnAGNPS_NPT_Simulation_Period.npt	32.	blank, T, or F	A1	4	4
AnnAGNPS_NPT_Soil_Actual.npt	33.	blank, T, or F	A1	4	4
AnnAGNPS_NPT_Strip_Crop.npt	34.	blank, T, or F	A1	4	4
AnnAGNPS_NPT_Tile_Drain.npt	35.	blank, T, or F	A1	4	4
AnnAGNPS_NPT_xxx_reserved.npt	36-80	blank only	—	4	4-8
Data Subsection Name—for local requests of individual version 3 simulation verification files; defaults to global request.	1-10	***.sim**	A10	5	1

Description	Col.	Domain	Format	Line No.	Field No.
AnnAGNPS_SIM_Cell_Components_Accumulation.sim	11.	blank, T, or F	A1	5	2
AnnAGNPS_SIM_Conversion_Units.sim	12.	blank, T, or F	A1	5	2
AnnAGNPS_SIM_Erosion_&_Sediment_Yield.sim	13.	blank, T, or F	A1	5	2
AnnAGNPS_SIM_Feedlots.sim	14.	blank, T, or F	A1	5	2
AnnAGNPS_SIM_Insitu_Nitrogen_Inorganic.sim	15.	blank, T, or F	A1	5	2
AnnAGNPS_SIM_Insitu_Nitrogen_Organic.sim	16.	blank, T, or F	A1	5	2
AnnAGNPS_SIM_Insitu_Nutrients.sim	17.	blank, T, or F	A1	5	2
AnnAGNPS_SIM_Insitu_Organic_Carbon.sim	18.	blank, T, or F	A1	5	2
AnnAGNPS_SIM_Insitu_Phosphorus_Inorganic.sim	19.	blank, T, or F	A1	5	2
AnnAGNPS_SIM_Insitu_Phosphorus_Organic.sim	20.	blank, T, or F	A1	5	2
AnnAGNPS_SIM_Insitu_Soil_Moisture.sim	21.	blank, T, or F	A1	5	3
AnnAGNPS_SIM_Irrigation_Applications.sim	22.	blank, T, or F	A1	5	3
AnnAGNPS_SIM_Pesticide_Application.sim	23.	blank, T, or F	A1	5	3
AnnAGNPS_SIM_Pesticides_Insitu.sim	24.	blank, T, or F	A1	5	3
AnnAGNPS_SIM_Process_Gully.sim	25.	blank, T, or F	A1	5	3
AnnAGNPS_SIM_Reach_Accumulation_(mass).sim	26.	blank, T, or F	A1	5	3
AnnAGNPS_SIM_Reach_Accumulation_(ratios).sim	27.	blank, T, or F	A1	5	3
AnnAGNPS_SIM_Reach_Landscape_Yield.sim	28.	blank, T, or F	A1	5	3
AnnAGNPS_SIM_Reach_Loadings_Nutrients.sim	29.	blank, T, or F	A1	5	3
AnnAGNPS_SIM_Reach_Loadings_Pesticide.sim	30.	blank, T, or F	A1	5	3
AnnAGNPS_SIM_Reach_Loadings_Sediment.sim	31.	blank, T, or F	A1	5	4
AnnAGNPS_SIM_Reach_Loadings_Water.sim	32.	blank, T, or F	A1	5	4
AnnAGNPS_SIM_Reach_Routing_Impoundment.sim	33.	blank, T, or F	A1	5	4
AnnAGNPS_SIM_Reach_Routing_Nutrients.sim	34.	blank, T, or F	A1	5	4
AnnAGNPS_SIM_Reach_Routing_Pesticide.sim	35.	blank, T, or F	A1	5	4
AnnAGNPS_SIM_Reach_Routing_Sediment.sim	36.	blank, T, or F	A1	5	4
AnnAGNPS_SIM_Reach_Routing_Water.sim	37.	blank, T, or F	A1	5	4
AnnAGNPS_SIM_Runoff_Curve_Number.sim	38.	blank, T, or F	A1	5	4
AnnAGNPS_SIM_Selected_Operations.sim	39.	blank, T, or F	A1	5	4
AnnAGNPS_SIM_Soil_Particle_Distribution.sim	40.	blank, T, or F	A1	5	4
AnnAGNPS_SIM_Pond_Release_and_Yield.sim	41.	blank, T, or F	A1	5	5
AnnAGNPS_SIM_Winter_Routines_Thermal_Layers.sim'	42.	blank, T, or F	A1	5	5
AnnAGNPS_SIM_Winter_Routines_Summary.sim	43.	blank, T, or F	A1	5	5
AnnAGNPS_SIM_xxx_reserved.sim	44-80	blanks only	—	5	5-8
Data Subsection Name—for local requests of individual version 3 formated table files; defaults to global request.	1-10	**1st *.txt**	A10	6	1

Description	Col.	Domain	Format	Line No.	Field No.
AnnAGNPS_TXT_AA_Feedlots_(mass).txt	11.	blank, T, or F	A1	6	2
AnnAGNPS_TXT_AA_Feedlots_(ratio).txt	12.	blank, T, or F	A1	6	2
AnnAGNPS_TXT_AA_Feedlots_(unit area).txt	13.	blank, T, or F	A1	6	2
AnnAGNPS_TXT_AA_Field_Ponds_(mass).txt	14.	blank, T, or F	A1	6	2
AnnAGNPS_TXT_AA_Field_Ponds_(ratio).txt	15.	blank, T, or F	A1	6	2
AnnAGNPS_TXT_AA_Field_Ponds_(unit area).txt	16.	blank, T, or F	A1	6	2
AnnAGNPS_TXT_AA_Gullies_(mass).txt	17.	blank, T, or F	A1	6	2
AnnAGNPS_TXT_AA_Gullies_(ratio).txt	18.	blank, T, or F	A1	6	2
AnnAGNPS_TXT_AA_Gullies_(unit area).txt	19.	blank, T, or F	A1	6	2
AnnAGNPS_TXT_AA_Nitrogen_load_(mass).txt	20.	blank, T, or F	A1	6	2
AnnAGNPS_TXT_AA_Nitrogen_load_(ratio).txt	21.	blank, T, or F	A1	6	3
AnnAGNPS_TXT_AA_Nitrogen_load_(unit_area).txt	22.	blank, T, or F	A1	6	3
AnnAGNPS_TXT_AA_Nitrogen_yield_(mass).txt	23.	blank, T, or F	A1	6	3
AnnAGNPS_TXT_AA_Nitrogen_yield_(ratio).txt	24.	blank, T, or F	A1	6	3
AnnAGNPS_TXT_AA_Nitrogen_yield_(unit_area).txt	25.	blank, T, or F	A1	6	3
AnnAGNPS_TXT_AA_Organic_Carbon_load_(mass).txt	26.	blank, T, or F	A1	6	3
AnnAGNPS_TXT_AA_Organic_Carbon_load_(ratio).txt	27.	blank, T, or F	A1	6	3
AnnAGNPS_TXT_AA_Organic_Carbon_load_(unit_area).txt	28.	blank, T, or F	A1	6	3
AnnAGNPS_TXT_AA_Organic_Carbon_yield_(mass).txt	29.	blank, T, or F	A1	6	3
AnnAGNPS_TXT_AA_Organic_Carbon_yield_(ratio).txt	30.	blank, T, or F	A1	6	3
AnnAGNPS_TXT_AA_Organic_Carbon_yield_(unit_area).txt	31.	blank, T, or F	A1	6	4
AnnAGNPS_TXT_AA_Pesticides_load_(mass).txt	32.	blank, T, or F	A1	6	4
AnnAGNPS_TXT_AA_Pesticides_load_(ratio).txt	33.	blank, T, or F	A1	6	4
AnnAGNPS_TXT_AA_Pesticides_load_(unit_area).txt	34.	blank, T, or F	A1	6	4
AnnAGNPS_TXT_AA_Pesticides_yield_(mass).txt	35.	blank, T, or F	A1	6	4
AnnAGNPS_TXT_AA_Pesticides_yield_(ratio).txt	36.	blank, T, or F	A1	6	4
AnnAGNPS_TXT_AA_Pesticides_yield_(unit_area).txt	37.	blank, T, or F	A1	6	4
AnnAGNPS_TXT_AA_Phosphorous_load_(mass).txt	38.	blank, T, or F	A1	6	4
AnnAGNPS_TXT_AA_Phosphorous_load_(ratio).txt	39.	blank, T, or F	A1	6	4
AnnAGNPS_TXT_AA_Phosphorous_load_(unit_area).txt	40.	blank, T, or F	A1	6	4
AnnAGNPS_TXT_AA_Phosphorous_yield_(mass).txt	41.	blank, T, or F	A1	6	5
AnnAGNPS_TXT_AA_Phosphorous_yield_(ratio).txt	42.	blank, T, or F	A1	6	5
AnnAGNPS_TXT_AA_Phosphorous_yield_(unit_area).txt	43.	blank, T, or F	A1	6	5
AnnAGNPS_TXT_AA_Point_Sources_(mass).txt	44.	blank, T, or F	A1	6	5
AnnAGNPS_TXT_AA_Point_Sources_(ratio).txt	45.	blank, T, or F	A1	6	5
AnnAGNPS_TXT_AA_Point_Sources_(unit area).txt	46.	blank, T, or F	A1	6	5
AnnAGNPS_TXT_AA_Sediment_Erosion_(mass).txt	47.	blank, T, or F	A1	6	5
AnnAGNPS_TXT_AA_Sediment_Erosion_(ratio).txt	48.	blank, T, or F	A1	6	5
AnnAGNPS_TXT_AA_Sediment_Erosion_(unit_area).txt	49.	blank, T, or F	A1	6	5
AnnAGNPS_TXT_AA_Sediment_Load_(mass).txt	50.	blank, T, or F	A1	6	6
AnnAGNPS_TXT_AA_Sediment_Load_(ratio).txt	51.	blank, T, or F	A1	6	6
AnnAGNPS_TXT_AA_Sediment_Load_(unit_area).txt	52.	blank, T, or F	A1	6	6
AnnAGNPS_TXT_AA_Sediment_Yield_(mass).txt	53.	blank, T, or F	A1	6	6
AnnAGNPS_TXT_AA_Sediment_Yield_(ratio).txt	54.	blank, T, or F	A1	6	6
AnnAGNPS_TXT_AA_Sediment_Yield_(unit_area).txt	55.	blank, T, or F	A1	6	6
AnnAGNPS_TXT_AA_Water_load_(mass).txt	56.	blank, T, or F	A1	6	6
AnnAGNPS_TXT_AA_Water_load_(ratio).txt	57.	blank, T, or F	A1	6	6
AnnAGNPS_TXT_AA_Water_load_(unit_area).txt	58.	blank, T, or F	A1	6	6
AnnAGNPS_TXT_AA_Water_yield_(mass).txt	59.	blank, T, or F	A1	6	6
AnnAGNPS_TXT_AA_Water_yield_(ratio).txt	60.	blank, T, or F	A1	6	6
AnnAGNPS_TXT_AA_Water_yield_(unit_area).txt	61.	blank, T, or F	A1	6	7
AnnAGNPS_TXT_CCHE1D.txt	62.	blank, T, or F	A1	6	7
AnnAGNPS_TXT_CONCEPTS.txt	63.	blank, T, or F	A1	6	7
AnnAGNPS_TXT_EV_Feedlots_(mass).txt	64.	blank, T, or F	A1	6	7
AnnAGNPS_TXT_EV_Feedlots_(ratio).txt	65.	blank, T, or F	A1	6	7
AnnAGNPS_TXT_EV_Feedlots_(unit area).txt	66.	blank, T, or F	A1	6	7
AnnAGNPS_TXT_EV_Field_Ponds_(mass).txt	67.	blank, T, or F	A1	6	7
AnnAGNPS_TXT_EV_Field_Ponds_(ratio).txt	68.	blank, T, or F	A1	6	7

Description	Col.	Domain	Format	Line No.	Field No.
AnnAGNPS_TXT_EV_Field_Ponds_(unit area).txt	69.	blank, T, or F	A1	6	7
AnnAGNPS_TXT_EV_Gullies_(mass).txt	70.	blank, T, or F	A1	6	7
AnnAGNPS_TXT_EV_Gullies_(ratio).txt	71.	blank, T, or F	A1	6	8
AnnAGNPS_TXT_EV_Gullies_(unit area).txt	72.	blank, T, or F	A1	6	8
AnnAGNPS_TXT_EV_Nitrogen_load_(mass).txt	73.	blank, T, or F	A1	6	8
AnnAGNPS_TXT_EV_Nitrogen_load_(ratio).txt	74.	blank, T, or F	A1	6	8
AnnAGNPS_TXT_EV_Nitrogen_load_(unit_area).txt	75.	blank, T, or F	A1	6	8
AnnAGNPS_TXT_EV_Nitrogen_yield_(mass).txt	76.	blank, T, or F	A1	6	8
AnnAGNPS_TXT_EV_Nitrogen_yield_(ratio).txt	77.	blank, T, or F	A1	6	8
AnnAGNPS_TXT_EV_Nitrogen_yield_(unit_area).txt	78.	blank, T, or F	A1	6	8
AnnAGNPS_TXT_EV_Organic_Carbon_load_(mass).txt	79.	blank, T, or F	A1	6	8
AnnAGNPS_TXT_EV_Organic_Carbon_load_(ratio).txt	80.	blank, T, or F	A1	6	8
Data Subsection Name—for local requests of individual version 3 formated table files; defaults to global request.	1-10	**2nd *.txt**	A10	7	1
AnnAGNPS_TXT_EV_Organic_Carbon_load_(unit_area).txt	11.	blank, T, or F	A1	7	2
AnnAGNPS_TXT_EV_Organic_Carbon_yield_(mass).txt	12.	blank, T, or F	A1	7	2
AnnAGNPS_TXT_EV_Organic_Carbon_yield_(ratio).txt	13.	blank, T, or F	A1	7	2
AnnAGNPS_TXT_EV_Organic_Carbon_yield_(unit_area).txt	14.	blank, T, or F	A1	7	2
AnnAGNPS_TXT_EV_Pesticides_load_(mass).txt	15.	blank, T, or F	A1	7	2
AnnAGNPS_TXT_EV_Pesticides_load_(ratio).txt	16.	blank, T, or F	A1	7	2
AnnAGNPS_TXT_EV_Pesticides_load_(unit_area).txt	17.	blank, T, or F	A1	7	2
AnnAGNPS_TXT_EV_Pesticides_yield_(mass).txt	18.	blank, T, or F	A1	7	2
AnnAGNPS_TXT_EV_Pesticides_yield_(ratio).txt	19.	blank, T, or F	A1	7	2
AnnAGNPS_TXT_EV_Pesticides_yield_(unit_area).txt	20.	blank, T, or F	A1	7	2
AnnAGNPS_TXT_EV_Phosphorous_load_(mass).txt	21.	blank, T, or F	A1	7	3
AnnAGNPS_TXT_EV_Phosphorous_load_(ratio).txt	22.	blank, T, or F	A1	7	3
AnnAGNPS_TXT_EV_Phosphorous_load_(unit_area).txt	23.	blank, T, or F	A1	7	3
AnnAGNPS_TXT_EV_Phosphorous_yield_(mass).txt	24.	blank, T, or F	A1	7	3
AnnAGNPS_TXT_EV_Phosphorous_yield_(ratio).txt	25.	blank, T, or F	A1	7	3
AnnAGNPS_TXT_EV_Phosphorous_yield_(unit_area).txt	26.	blank, T, or F	A1	7	3
AnnAGNPS_TXT_EV_Point_Sources_(mass).txt	27.	blank, T, or F	A1	7	3
AnnAGNPS_TXT_EV_Point_Sources_(ratio).txt	28.	blank, T, or F	A1	7	3
AnnAGNPS_TXT_EV_Point_Sources_(unit area).txt	29.	blank, T, or F	A1	7	3
AnnAGNPS_TXT_EV_Sediment_Erosion_(mass).txt	30.	blank, T, or F	A1	7	3
AnnAGNPS_TXT_EV_Sediment_Erosion_(ratio).txt	31.	blank, T, or F	A1	7	4
AnnAGNPS_TXT_EV_Sediment_Erosion_(unit_area).txt	32.	blank, T, or F	A1	7	4
AnnAGNPS_TXT_EV_Sediment_Load_(mass).txt	33.	blank, T, or F	A1	7	4
AnnAGNPS_TXT_EV_Sediment_Load_(ratio).txt	34.	blank, T, or F	A1	7	4
AnnAGNPS_TXT_EV_Sediment_Load_(unit_area).txt	35.	blank, T, or F	A1	7	4
AnnAGNPS_TXT_EV_Sediment_Yield_(mass).txt	36.	blank, T, or F	A1	7	4
AnnAGNPS_TXT_EV_Sediment_Yield_(ratio).txt	37.	blank, T, or F	A1	7	4
AnnAGNPS_TXT_EV_Sediment_Yield_(unit_area).txt	38.	blank, T, or F	A1	7	4
AnnAGNPS_TXT_EV_Water_load_(mass).txt	39.	blank, T, or F	A1	7	4
AnnAGNPS_TXT_EV_Water_load_(ratio).txt	40.	blank, T, or F	A1	7	4
AnnAGNPS_TXT_EV_Water_load_(unit_area).txt	41.	blank, T, or F	A1	7	5
AnnAGNPS_TXT_EV_Water_yield_(mass).txt	42.	blank, T, or F	A1	7	5
AnnAGNPS_TXT_EV_Water_yield_(ratio).txt	43.	blank, T, or F	A1	7	5
AnnAGNPS_TXT_EV_Water_yield_(unit_area).txt	44.	blank, T, or F	A1	7	5
AnnAGNPS_TXT_Peak_Discharges.txt	45.	blank, T, or F	A1	7	5
AnnAGNPS_TXT_xxx_reserved.txt	46-80	blanks only	—	7	5-8
Data Subsection Name—for local requests of individual version 3 formated table files, sets certain minimum/maximum limits; defaults to global request.	1-10	**1stmn/mx**	A10	8	1
Minimum Event Date—minimum event date to include runoff data into event output files [mm/dd/yyyy]; defaults to begin simulation date.	11-12 /14-15/ 17-20	mm–1-12 dd–1-31 yyyy–1-9999	I2/I2/I4	8	2
Maximum Event Date—maximum event date to include runoff data into event output files [mm/dd/yyyy]; defaults to end simulation date.	21-22 /24-25/ 27-30	mm–1-12 dd–1-31 yyyy–1-9999	I2/I2/I4	8	3

Description	Col.	Domain	Format	Line No.	Field No.
Maximum Number Events—maximum number of events to be included in the event output files; defaults to 3000 events in excess of the minimum runoff at the outlet.	31-40	0— 100000	I10	8	4
Minimum Runoff for Event Output—minimum water runoff at watershed outlet to be included in the event output files, runoff greater than 1mm is always accumulated and included with the average annual data; defaults to 6.35 mm (1/4 in).	41-50	0 – 508 mm (20 in)	I10	8	5
Minimum Runoff for Cell—minimum water runoff for a cell to be included as runoff for the event, accumulated, and included in the average annual data; defaults to 0.10 mm (0.04 in).	51-60	0 – 508 mm (20 in)	I10	8	6
Minimum Runoff at Outlet—minimum water runoff at watershed outlet to be included as runoff for the event, accumulated, and included in the average annual data; defaults to 0.01 mm (0.004 in).	61-70	0 – 508 mm (20 in)	I10	8	7
Reserved.	71-80	blank only	—	8	8
Data Subsection Name—for local requests of individual version 3 formated table files, sets certain minimum/maximum limits; defaults to global request.	1-10	**2nd mn/mx**	A10	9	1
Mimimum Subarea ID—excludes cell & reach data from output files whose subarea ID is outside of this lower limit; defaults to 0. Works only with TopAGNPS generated cell & reach numeric IDs.	11-20	1— 100000	I10	9	2
Maximum Subarea ID—excludes cell & reach data from output files whose subarea ID is outside of this upper limit; defaults to 2^31. Works only with TopAGNPS generated cell & reach numeric IDs.	21-30	1— 100000	I10	9	3
Cell Units Position—includes only those cells whose ID's unit position is listed,;defaults to no exclusion. Works only with TopAGNPS generated cell & reach numeric IDs: 0–same as blank; 1–source cells only; 2–leftside cells only; 3–rightside cells only; & 4–reachs only.	31-40	blank, 0, 1, 2, 3, & 4	I10	9	4
Maximum Number Verification File Accesses—maximum number of write accesses to each verification file; defaults to 1000.	41-50	1— 4000	I10	9	5
Maximum Number Verification File Bytes—maximum number of bytes written to each verification file; defaults to 2^24	51-60	16,777,216	I10	9	6
Reserved.	61-80	blanks only	—	9	7-8
Data Subsection Name—for local requests of individual version 3 formated table files, restricts inclusion of output data to those cell ID's listed; defaults to global request if not present.	1-10	**Cell ID**	A10	10	1
Number of Selected Cells—number of cell IDs to be read in as a part of this restriction; must be a number between 1 and number of cells in the CELL DATA section.	11-21	1 – number of cells	I10	10	2
1st Cell ID—ID for first cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	21-30	must match a cell ID	A10	10	3
2nd Cell ID—ID for second cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	31-40	must match a cell ID	A10	10	4
3rd Cell ID—ID for third cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	41-50	must match a cell ID	A10	10	5
4th Cell ID—ID for fourth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	51-60	must match a cell ID	A10	10	6
5th Cell ID—ID for fifth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	61-70	must match a cell ID	A10	10	7
6th Cell ID—ID for sixth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	71-80	must match a cell ID	A10	10	8
Blank Field for line 10a; only present if number of selected cells exceeds 7.	1-10	must be a blank field	—	10a	1
7th Cell ID—ID for seventh cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	11-21	must match a cell ID	A10	10a	2

Description	Col.	Domain	Format	Line No.	Field No.
8th Cell ID—ID for eighth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	21-30	must match a cell ID	A10	10a	3
9th Cell ID—ID for ninth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	31-40	must match a cell ID	A10	10a	4
10th Cell ID—ID for tenth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	41-50	must match a cell ID	A10	10a	5
11th Cell ID—ID for eleventh cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	51-60	must match a cell ID	A10	10a	6
12th Cell ID—ID for twelth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	61-70	must match a cell ID	A10	10a	7
13th Cell ID—ID for thirteenth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	71-80	must match a cell ID	A10	10a	8
Blank Field for line 10b; only present if number of selected cells exceeds 13.	1-10	must be a blank field	—	10b	1
14th Cell ID—ID for fourteenth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	11-21	must match a cell ID	A10	10b	2
15th Cell ID—ID for fifteenth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	21-30	must match a cell ID	A10	10b	3
16th Cell ID—ID for sixteenth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	31-40	must match a cell ID	A10	10b	4
17th Cell ID—ID for seventeenth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	41-50	must match a cell ID	A10	10b	5
18th Cell ID—ID for eightteenthcell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	51-60	must match a cell ID	A10	10b	6
19th Cell ID—ID for nineteenthcell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	61-70	must match a cell ID	A10	10b	7
20th Cell ID—ID for twentieth cell selected to be included in version 3 output; blank field if number of selected cells is satisfied with previous selected cell ID field.	71-80	must match a cell ID	A10	10b	8
Blank Field for line 10c; only present if number of selected cells exceeds 13. Records keep repeating until the number of selected cells is satisfied.	1-10	must be a blank field	—	10c	1
Data Subsection Name—for local requests of individual version 3 formated table files, restricts inclusion of output data to those feedlot ID's listed; defaults to global request if not present.	1-10	**Feed ID**	A10	11	1
Number of Selected Feedlots—number of feedlot IDs to be read in as a part of this restriction; must be a number between 1 and number of feedlots in Feedlot Data.	11-21	1 – number of feedlots	I10	11	2
1st Feedlot ID—ID for first feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	21-30	must match a feedlot ID	A10	11	3
2nd Feedlot ID—ID for second feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	31-40	must match a feedlot ID	A10	11	4
3rd Feedlot ID—ID for third feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	41-50	must match a feedlot ID	A10	11	5

Description	Col.	Domain	Format	Line No.	Field No.
4th Feedlot ID—ID for fourth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	51-60	must match a feedlot ID	A10	11	6
5th Feedlot ID—ID for fifth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	61-70	must match a feedlot ID	A10	11	7
6th Feedlot ID—ID for sixth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	71-80	must match a feedlot ID	A10	11	8
Blank Field for line 10a; only present if number of selected feedlots exceeds 7.	1-10	must be a blank field	—	11a	1
7th Feedlot ID—ID for seventh feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	11-21	must match a feedlot ID	A10	11a	2
8th Feedlot ID—ID for eighth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	21-30	must match a feedlot ID	A10	11a	3
9th Feedlot ID—ID for ninth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	31-40	must match a feedlot ID	A10	11a	4
10th Feedlot ID—ID for tenth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	41-50	must match a feedlot ID	A10	11a	5
11th Feedlot ID—ID for eleventh feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	51-60	must match a feedlot ID	A10	11a	6
12th Feedlot ID—ID for twelth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	61-70	must match a feedlot ID	A10	11a	7
13th Feedlot ID—ID for thirteenth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	71-80	must match a feedlot ID	A10	11a	8
Blank Field for line 10b; only present if number of selected feedlots exceeds 13.	1-10	must be a blank field	—	11b	1
14th Feedlot ID—ID for fourteenth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	11-21	must match a feedlot ID	A10	11b	2
15th Feedlot ID—ID for fifteenth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	21-30	must match a feedlot ID	A10	11b	3
16th Feedlot ID—ID for sixteenth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	31-40	must match a feedlot ID	A10	11b	4
17th Feedlot ID—ID for seventeenth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	41-50	must match a feedlot ID	A10	11b	5
18th Feedlot ID—ID for eightteenthfeedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	51-60	must match a feedlot ID	A10	11b	6
19th Feedlot ID—ID for nineteenthfeedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	61-70	must match a feedlot ID	A10	11b	7
20th Feedlot ID—ID for twentieth feedlot selected to be included in version 3 output; blank field if number of selected feedlots is satisfied with previous selected feedlot ID field.	71-80	must match a feedlot ID	A10	11b	8
Blank Field for line 10c; only present if number of selected feedlots exceeds 13. Records keep repeating until the number of selected feedlots is satisfied.	1-10	must be a blank field	—	11c	1
Data Subsection Name—for local requests of individual version 3 formated table files, restricts inclusion of output data to those field pond ID's listed; defaults to global request if not present.	1-10	**Fld Pnd ID**	A10	12	1

Description	Col.	Domain	Format	Line No.	Field No.
Number of Selected Field ponds—number of field pond IDs to be read in as a part of this restriction; must be a number between 1 and number of field ponds in Field pond Data.	11-21	1 – number of field ponds	I10	12	2
1st Field pond ID—ID for first field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	21-30	must match a field pond ID	A10	12	3
2nd Field pond ID—ID for second field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	31-40	must match a field pond ID	A10	12	4
3rd Field pond ID—ID for third field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	41-50	must match a field pond ID	A10	12	5
4th Field pond ID—ID for fourth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	51-60	must match a field pond ID	A10	12	6
5th Field pond ID—ID for fifth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	61-70	must match a field pond ID	A10	12	7
6th Field pond ID—ID for sixth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	71-80	must match a field pond ID	A10	12	8
Blank Field for line 10a; only present if number of selected field ponds exceeds 7.	1-10	must be a blank field	—	12a	1
7th Field pond ID—ID for seventh field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	11-21	must match a field pond ID	A10	12a	2
8th Field pond ID—ID for eighth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	21-30	must match a field pond ID	A10	12a	3
9th Field pond ID—ID for ninth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	31-40	must match a field pond ID	A10	12a	4
10th Field pond ID—ID for tenth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	41-50	must match a field pond ID	A10	12a	5
11th Field pond ID—ID for eleventh field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	51-60	must match a field pond ID	A10	12a	6
12th Field pond ID—ID for twelth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	61-70	must match a field pond ID	A10	12a	7
13th Field pond ID—ID for thirteenth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	71-80	must match a field pond ID	A10	12a	8
Blank Field for line 10b; only present if number of selected field ponds exceeds 13.	1-10	must be a blank field	—	12b	1
14th Field pond ID—ID for fourteenth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	11-21	must match a field pond ID	A10	12b	2
15th Field pond ID—ID for fifteenth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	21-30	must match a field pond ID	A10	12b	3
16th Field pond ID—ID for sixteenth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	31-40	must match a field pond ID	A10	12b	4
17th Field pond ID—ID for seventeenth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	41-50	must match a field pond ID	A10	12b	5

Description	Col.	Domain	Format	Line No.	Field No.
18th Field pond ID—ID for eighteenthfield pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	51-60	must match a field pond ID	A10	12b	6
19th Field pond ID—ID for nineteenthfield pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	61-70	must match a field pond ID	A10	12b	7
20th Field pond ID—ID for twentieth field pond selected to be included in version 3 output; blank field if number of selected field ponds is satisfied with previous selected field pond ID field.	71-80	must match a field pond ID	A10	12b	8
Blank Field for line 10c; only present if number of selected field ponds exceeds 13. Records keep repeating until the number of selected field ponds is satisfied.	1-10	must be a blank field	—	12c	1
Data Subsection Name—for local requests of individual version 3 formated table files, restricts inclusion of output data to those gully ID's listed; defaults to global request if not present.	1-10	**Gully ID**	A10	13	1
Number of Selected Gullies—number of gully IDs to be read in as a part of this restriction; must be a number between 1 and number of gullies in Gully Data.	11-21	1 – number of gullies	I10	13	2
1st Gully ID—ID for first gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	21-30	must match a gully ID	A10	13	3
2nd Gully ID—ID for second gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	31-40	must match a gully ID	A10	13	4
3rd Gully ID—ID for third gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	41-50	must match a gully ID	A10	13	5
4th Gully ID—ID for fourth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	51-60	must match a gully ID	A10	13	6
5th Gully ID—ID for fifth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	61-70	must match a gully ID	A10	13	7
6th Gully ID—ID for sixth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	71-80	must match a gully ID	A10	13	8
Blank Field for line 10a; only present if number of selected gullies exceeds 7.	1-10	must be a blank field	—	13a	1
7th Gully ID—ID for seventh gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	11-21	must match a gully ID	A10	13a	2
8th Gully ID—ID for eighth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	21-30	must match a gully ID	A10	13a	3
9th Gully ID—ID for ninth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	31-40	must match a gully ID	A10	13a	4
10th Gully ID—ID for tenth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	41-50	must match a gully ID	A10	13a	5
11th Gully ID—ID for eleventh gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	51-60	must match a gully ID	A10	13a	6
12th Gully ID—ID for twelth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	61-70	must match a gully ID	A10	13a	7
13th Gully ID—ID for thirteenth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	71-80	must match a gully ID	A10	13a	8
Blank Field for line 10b; only present if number of selected gullies exceeds 13.	1-10	must be a blank field	—	13b	1

Description	Col.	Domain	Format	Line No.	Field No.
14th Gully ID—ID for fourteenth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	11-21	must match a gully ID	A10	13b	2
15th Gully ID—ID for fifteenth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	21-30	must match a gully ID	A10	13b	3
16th Gully ID—ID for sixteenth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	31-40	must match a gully ID	A10	13b	4
17th Gully ID—ID for seventeenth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	41-50	must match a gully ID	A10	13b	5
18th Gully ID—ID for eightteenthgully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	51-60	must match a gully ID	A10	13b	6
19th Gully ID—ID for nineteenthgully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	61-70	must match a gully ID	A10	13b	7
20th Gully ID—ID for twentieth gully selected to be included in version 3 output; blank field if number of selected gullies is satisfied with previous selected gully ID field.	71-80	must match a gully ID	A10	13b	8
Blank Field for line 10c; only present if number of selected gullies exceeds 13. Records keep repeating until the number of selected gullies is satisfied.	1-10	must be a blank field	—	13c	1
Data Subsection Name—for local requests of individual version 3 formated table files, restricts inclusion of output data to those impoundment ID's listed; defaults to global request if not present.	1-10	**Impnd ID**	A10	14	1
Number of Selected Impoundments—number of impoundment IDs to be read in as a part of this restriction; must be a number between 1 and number of impoundments in Impoundment Data.	11-21	1 – number of impoundments	I10	14	2
1st Impoundment ID—ID for first impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	21-30	must match a impoundment ID	A10	14	3
2nd Impoundment ID—ID for second impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	31-40	must match a impoundment ID	A10	14	4
3rd Impoundment ID—ID for third impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	41-50	must match a impoundment ID	A10	14	5
4th Impoundment ID—ID for fourth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	51-60	must match a impoundment ID	A10	14	6
5th Impoundment ID—ID for fifth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	61-70	must match a impoundment ID	A10	14	7
6th Impoundment ID—ID for sixth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	71-80	must match a impoundment ID	A10	14	8
Blank Field for line 10a; only present if number of selected impoundments exceeds 7.	1-10	must be a blank field	—	14a	1
7th Impoundment ID—ID for seventh impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	11-21	must match a impoundment ID	A10	14a	2
8th Impoundment ID—ID for eighth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	21-30	must match a impoundment ID	A10	14a	3
9th Impoundment ID—ID for ninth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	31-40	must match a impoundment ID	A10	14a	4

Description	Col.	Domain	Format	Line No.	Field No.
10th Impoundment ID—ID for tenth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	41-50	must match a impoundment ID	A10	14a	5
11th Impoundment ID—ID for eleventh impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	51-60	must match a impoundment ID	A10	14a	6
12th Impoundment ID—ID for twelth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	61-70	must match a impoundment ID	A10	14a	7
13th Impoundment ID—ID for thirteenth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	71-80	must match a impoundment ID	A10	14a	8
Blank Field for line 10b; only present if number of selected impoundments exceeds 13.	1-10	must be a blank field	—	14b	1
14th Impoundment ID—ID for fourteenth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	11-21	must match a impoundment ID	A10	14b	2
15th Impoundment ID—ID for fifteenth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	21-30	must match a impoundment ID	A10	14b	3
16th Impoundment ID—ID for sixteenth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	31-40	must match a impoundment ID	A10	14b	4
17th Impoundment ID—ID for seventeenth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	41-50	must match a impoundment ID	A10	14b	5
18th Impoundment ID—ID for eightteenthimpoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	51-60	must match a impoundment ID	A10	14b	6
19th Impoundment ID—ID for nineteenthimpoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	61-70	must match a impoundment ID	A10	14b	7
20th Impoundment ID—ID for twentieth impoundment selected to be included in version 3 output; blank field if number of selected impoundments is satisfied with previous selected impoundment ID field.	71-80	must match a impoundment ID	A10	14b	8
Blank Field for line 10c; only present if number of selected impoundments exceeds 13. Records keep repeating until the number of selected impoundments is satisfied.	1-10	must be a blank field	—	14c	1
Data Subsection Name—for local requests of individual version 3 formated table files, restricts inclusion of output data to those point source ID's listed; defaults to global request if not present.	1-10	**Pt Src ID**	A10	15	1
Number of Selected Point sources—number of point source IDs to be read in as a part of this restriction; must be a number between 1 and number of point sources in Point source Data.	11-21	1 – number of point sources	I10	15	2
1st Point source ID—ID for first point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	21-30	must match a point source ID	A10	15	3
2nd Point source ID—ID for second point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	31-40	must match a point source ID	A10	15	4
3rd Point source ID—ID for third point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	41-50	must match a point source ID	A10	15	5
4th Point source ID—ID for fourth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	51-60	must match a point source ID	A10	15	6
5th Point source ID—ID for fifth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	61-70	must match a point source ID	A10	15	7

Description	Col.	Domain	Format	Line No.	Field No.
6th Point source ID—ID for sixth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	71-80	must match a point source ID	A10	15	8
Blank Field for line 10a; only present if number of selected point sources exceeds 7.	1-10	must be a blank field	—	15a	1
7th Point source ID—ID for seventh point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	11-21	must match a point source ID	A10	15a	2
8th Point source ID—ID for eighth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	21-30	must match a point source ID	A10	15a	3
9th Point source ID—ID for ninth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	31-40	must match a point source ID	A10	15a	4
10th Point source ID—ID for tenth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	41-50	must match a point source ID	A10	15a	5
11th Point source ID—ID for eleventh point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	51-60	must match a point source ID	A10	15a	6
12th Point source ID—ID for twelth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	61-70	must match a point source ID	A10	15a	7
13th Point source ID—ID for thirteenth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	71-80	must match a point source ID	A10	15a	8
Blank Field for line 10b; only present if number of selected point sources exceeds 13.	1-10	must be a blank field	—	15b	1
14th Point source ID—ID for fourteenth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	11-21	must match a point source ID	A10	15b	2
15th Point source ID—ID for fifteenth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	21-30	must match a point source ID	A10	15b	3
16th Point source ID—ID for sixteenth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	31-40	must match a point source ID	A10	15b	4
17th Point source ID—ID for seventeenth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	41-50	must match a point source ID	A10	15b	5
18th Point source ID—ID for eightteenthpoint source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	51-60	must match a point source ID	A10	15b	6
19th Point source ID—ID for nineteenthpoint source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	61-70	must match a point source ID	A10	15b	7
20th Point source ID—ID for twentieth point source selected to be included in version 3 output; blank field if number of selected point sources is satisfied with previous selected point source ID field.	71-80	must match a point source ID	A10	15b	8
Blank Field for line 10c; only present if number of selected point sources exceeds 13. Records keep repeating until the number of selected point sources is satisfied.	1-10	must be a blank field	—	15c	1
Data Subsection Name—for local requests of individual version 3 formated table files, restricts inclusion of output data to those reach ID's listed; defaults to global request if not present.	1-10	**Reach ID**	A10	16	1
Number of Selected Reachs—number of reach IDs to be read in as a part of this restriction; must be a number between 1 and number of reachs in the REACH DATA section.	11-21	1 – number of reachs	I10	16	2

Description	Col.	Domain	Format	Line No.	Field No.
1st Reach ID—ID for first reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	21-30	must match a reach ID	A10	16	3
2nd Reach ID—ID for second reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	31-40	must match a reach ID	A10	16	4
3rd Reach ID—ID for third reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	41-50	must match a reach ID	A10	16	5
4th Reach ID—ID for fourth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	51-60	must match a reach ID	A10	16	6
5th Reach ID—ID for fifth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	61-70	must match a reach ID	A10	16	7
6th Reach ID—ID for sixth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	71-80	must match a reach ID	A10	16	8
Blank Field for line 10a; only present if number of selected reachs exceeds 7.	1-10	must be a blank field	—	16a	1
7th Reach ID—ID for seventh reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	11-21	must match a reach ID	A10	16a	2
8th Reach ID—ID for eighth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	21-30	must match a reach ID	A10	16a	3
9th Reach ID—ID for ninth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	31-40	must match a reach ID	A10	16a	4
10th Reach ID—ID for tenth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	41-50	must match a reach ID	A10	16a	5
11th Reach ID—ID for eleventh reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	51-60	must match a reach ID	A10	16a	6
12th Reach ID—ID for twelth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	61-70	must match a reach ID	A10	16a	7
13th Reach ID—ID for thirteenth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	71-80	must match a reach ID	A10	16a	8
Blank Field for line 10b; only present if number of selected reachs exceeds 13.	1-10	must be a blank field	—	16b	1
14th Reach ID—ID for fourteenth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	11-21	must match a reach ID	A10	16b	2
15th Reach ID—ID for fifteenth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	21-30	must match a reach ID	A10	16b	3
16th Reach ID—ID for sixteenth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	31-40	must match a reach ID	A10	16b	4
17th Reach ID—ID for seventeenth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	41-50	must match a reach ID	A10	16b	5
18th Reach ID—ID for eightteenthreach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	51-60	must match a reach ID	A10	16b	6

Description	Col.	Domain	Format	Line No.	Field No.
19th Reach ID—ID for nineteenthreach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	61-70	must match a reach ID	A10	16b	7
20th Reach ID—ID for twentieth reach selected to be included in version 3 output; blank field if number of selected reachs is satisfied with previous selected reach ID field.	71-80	must match a reach ID	A10	16b	8
Blank Field for line 10c; only present if number of selected reachs exceeds 13. Records keep repeating until the number of selected reachs is satisfied.	1-10	must be a blank field	—	16c	1
Blank line				Last	

PESTICIDE APPLICATION DATA

Required if referenced on Operations Data

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Pesticide Application Data:**	A40	1	1
Number Pesticide Applications—Total number of pesticide application records for the watershed.		1 to 2147483647	I10	1	2
The following 2 line sets repeat for the number of pesticide application sets (specified above).					
Pesticide Application ID—Alphanumeric string identifying the pesticide application.			A10	2	1
Pesticide ID—Alphanumeric string identifying the pesticide. Must be the same as a pesticide reference ID (in Pesticide Reference Data).			A40	2	2-5
Blank field			10	3	1
Pesticide Rate—Application rate for pesticide active ingredient.	{lb / acre} [kg / hectare]	{0.0 to 100.0} [0.0 to 112.0]	F10	3	2
Pesticide Depth—Soil depth to which is pesticide is applied. Zero depth implies the pesticide was not incorporated in the soil.	{in} [mm]	{0.0 to 60.0} [0.0 to 1500.0]	F10	3	3
Pesticide Mixing code- Indicator of whether pesticide is mixed uniformly between the soil surface and the depth of incorporation: Acceptable values are: Y- yes, N—no (Blank indicates yes)		Blank, Y, or N	A10	3	4
Pesticide Foliage Fraction—Decimal fraction of pesticide applied to the foliage		0.0 to 1.0	F10	3	5
Pesticide Soil Fraction—Decimal fraction of pesticide applied to the ground		0.0 to 1.0	F10	3	6
Blank line				Last	

PESTICIDE REFERENCE DATA

Required if Pesticide Application Data used or pesticide data with Simulation Period Data

Description	Units	Domain	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Pesticide Reference Data:**	A40	1	1
Number Pesticide References—Total count of pesticide reference record sets for the watershed.		1 to 2147483647	I10	1	2
The following 2 line sets repeat for the number of pesticide references (specified above).					
Pesticide Reference ID—Alphanumeric string identifying the pesticide.			A40	2	1-4
Pesticide Solubility—Solubility of the pesticide in water; weight of the pesticide divided by the weight of the total solution (water plus pesticide).	wt / wt (non-dimensional)	0 .0 to 10000000.0	F10	2	5
Pesticide Partition—Soil pesticide partitioning coefficient normalized for organic carbon.		0.0 to 100000000.	F10	2	6

Description	Units	Domain	Format	Line No.	Field No.
Pesticide Soil Half-life—Time it takes half of the pesticide to degrade into or on the soil. This combines all the degradation methods e.g. chemical, biological, photo.	days	0.1 to 50000.0	F10	2	7
Pesticide Foliage Half-life—Time it takes half of the pesticide to degrade on the foliage. This is a combination of all degradation methods e.g. chemical, biological, photo.	days	0.1 to 50000.0	F10	2	8
Blank field			10	3	1
Pesticide Washoff—Fraction of pesticide that washes foliage once a threshold value of 0.1 inch (2.5 mm) of rainfall or spray irrigation is exceeded.		0.0 to 1.0	F10	3	2
Metabolite ID—Common scientific name of the resulting chemical after breakdown of the parent compound. Must be the same as a pesticide reference ID (in Pesticide Reference Data). Leave blank if no metabolite is to be considered.			A40	3	3-6
Metabolite Transformation—Fraction of pesticide that is transformed to the metabolite in one day. Leave blank if no Metabolite ID is provided. Blank (if a Metabolite ID is provided) defaults to 1.0		Blank or 0.0 to 1.0	F10	3	7
Pesticide Reach Half-life—Time it takes half of the pesticide to degrade while in a reach (channel). This combines all the degradation methods e.g. chemical, biological, photo. Blank defaults to no pesticide degradation in the reach.	days	Blank or 0.1 to 50000.0	F10	3	8
Blank line				Last	

POINT SOURCE DATA

Optional

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Point Source Data:**	A40	1	1
Number Point Sources—Total count of point sources in the watershed.		1 to 2147483647	I10	1	2
The following line repeats for the number of point sources (specified above). Multiple point sources for a cell should be consecutive lines here.					
Point Source ID—Alphanumeric string identifying the Point Source.			A10	2	1
Point Cell ID—Alphanumeric string identifying cell that contains the point source. Must be the same as a cell ID in the CELL DATA section.			A10	2	2
Point Flow—Constant runoff flow rate from point source.	{cfs} [m^3 / sec]	{0.0033 to 10000.0} [0.00001 to 300.0]	F10	2	3
Point Nitrogen—Concentration of elemental nitrogen in solution in the discharge	ppm	0.0 to 1000.0	F10	2	4
Point Phosphorus—Concentration of elemental phosphorus in solution in the discharge	ppm	0.0 to 1000.0	F10	2	5
Point Organic Carbon—Concentration of organic Carbon in solution in the discharge	ppm	0.0 to 100000.0	F10	2	6
Blank line				Last	

REACH DATA

Required

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Reach Data:**	A40	1	1-4
Number Reaches—Total count of reaches in the watershed.		1 to 2147483647	I10	1	5
The following 3 line set repeats for the number of reaches (specified above).					
Reach ID—Alphanumeric string identifying the channel reach.			A10	2	1

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Receiving Reach ID—Alphanumeric string identifying the receiving reach. Must be the same as a reach ID in the REACH DATA section or "Outlet". Use "Outlet" for the flow from the downstream most reach in the watershed.			A10	2	2
Reach Vegetation code—Acceptable values are: 0 = Reach is not vegetated. 1 = Reach is vegetated 2 = Reach is submerged due to an impoundment. May be blank if Reach Manning's N is entered for reach. Blank defaults to 1.		Blank, 0,1 or 2	I10	2	3
Reach Elevation—Elevation of the downstream end of the reach	{ft} [m]	{-984. to 32808.} [-300.0 to 10000.0]	F10	2	4
Reach Slope—Average channel slope for the reach.	len-vert / len-horz (dimensionless)	0.00001 to 10.0	F10	2	5
Reach Manning's n—Representative roughness coefficient for reach. Blank defaults to: 0.04—(for Reach Vegetation code of 1) 0.02—(for Reach Vegetation code of 0 or 2) If Reach Vegetation code is blank and Reach Manning's n is blank then this value defaults to 0.04.		Blank, or 0.005 to 1.0	F10	2	6
Reach Infiltration Rate—Infiltration rate of the reach bottom. Currently not used. (Blank defaults to 0.0)	{in / hr} [mm/ hr]	Blank, or {0.0 to 100.0 } [0.0 to 2540.0]	F10	2	7
Blank field			10	3	1
Reach Channel Geometry ID—Alphanumeric string identifying the reach geometry coefficient data. Must be the same as a reach geometry ID (in Reach Geometry Coefficients). Leave blank if the reach length, width, depth and valley width are entered unless required for cells that out fall directly into the reach and cell time of concentration(T_c) is not entered. Blank defaults to the default reach geometry parameter in Simulation Period Data.			A10	3	2
Reach Length—Length of the channel reach. Blank indicates AnnAGNPS computes from geometric relationship based on reach geometry ID specified above.	{ft} [m]	Blank or {0.0 to 99999999.9} [0.0 to 30480000.0]	F10	3	3
Reach Top Width—Top width of the channel at bank full flow. Blank indicates AnnAGNPS computes from geometric relationship based on reach geometry ID specified above.	{ft} [m]	Blank or {0.0 to 984.} [0.0 to 300.0]	F10	3	4
Reach Flow Depth—Flow depth of the channel at bank full flow. Blank indicates AnnAGNPS computes from geometric relationship based on reach geometry ID specified above.	{ft} [m]	Blank or {0.0 to 984.} [0.0 to 300.0]	F10	3	5
Valley Width —Width of the floodplain. The width of the floodplain entered includes the bankfull top width of the channel, which will be subtracted out in AnnAGNPS. Blank indicates AnnAGNPS computes from geometric relationship based on reach geometry ID specified above.	{ft} [m]	Blank or {0.0 to 98425.} [0.0 to 30000.0]	F10	3	6
Valley n—Floodplain Manning's "n" roughness coefficient. Blank defaults to 0.150.		Blank or 0.005 to 1.0	F10	3	7
Blank field			10	4	1
Start Diversion—Reach flow rate above which water is diverted from the reach to a sink/diversion. Water discharged to a sink/diversion is lost from the watershed. Zero or blank signifies no flow is diverted to the sink. Currently not used	{cfs} [m^3 / sec]	Blank or {0.0 to 35287552.} [0.0 to 1000000.0]	F10	4	2

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Stop Diversion—Maximum capacity of the sink/diversion. Flows exceeding the maximum sink capacity continue down the reach. Zero or blank indicates no sink. Currently not used	{cfs} [m^3 / sec]	Blank or {0.0 to 35287552.} [0.0 to 1000000.0]	F10	4	3
Blank field			10	4	4
Clay Scour code—Code indicating if clay sized particles are to be allowed to scour the reach channel. Acceptable codes are : Y = Yes N = No (Blank defaults to N)		Blank, Y, or N	A2	4	5a
Silt Scour code—Code indicating if silt sized particles are to be allowed to scour the reach channel. Acceptable codes are : Y = Yes N = No (Blank defaults to N)		Blank, Y, or N	A2	4	5b
Sand Scour code—Code indicating if sand sized particles are to be allowed to scour the reach channel. Acceptable codes are : Y = Yes N = No (Blank defaults to N)		Blank, Y, or N	A2	4	5c
Small Aggregate Scour code—Code indicating if small aggregate sized particles are to be allowed to scour the reach channel. Acceptable codes are : Y = Yes N = No (Blank defaults to N)		Blank, Y, or N	A2	4	5d
Large Aggregate Scour code—Code indicating if large aggregate sized particles are to be allowed to scour the reach channel. Acceptable codes are: Y = Yes N = No (Blank defaults to N)		Blank, Y, or N	A2	4	5e
Valley Clay Scour code—Code indicating if clay sized particles are to be allowed to scour the reach valley (excluding channel). Acceptable codes are: Y = Yes N = No (Blank defaults to N)		Blank, Y, or N	A2	4	6a
Valley Silt Scour code—Code indicating if silt sized particles are to be allowed to scour the reach valley (excluding channel). Acceptable codes are : Y = Yes N = No (Blank defaults to N)		Blank, Y, or N	A2	4	6b
Valley Sand Scour code—Code indicating if sand sized particles are to be allowed to scour the reach valley (excluding channel). Acceptable codes are : Y = Yes N = No (Blank defaults to N)		Blank, Y, or N	A2	4	6c
Valley Small Aggregate Scour code—Code indicating if small aggregate sized particles are to be allowed to scour the reach valley (excluding channel). Acceptable codes are : Y = Yes N = No (Blank defaults to N)		Blank, Y, or N	A2	4	6d
Valley Large Aggregate Scour code—Code indicating if large aggregate sized particles are to be allowed to scour the reach valley (excluding channel). Acceptable codes are : Y = Yes N = No (Blank defaults to N)		Blank, Y, or N	A2	4	6e
Reach Impoundment ID—Alphanumeric string identifying the impoundment that blocks the outlet of the reach. Blank indicates no impoundment associated with reach.			A10	4	7
blank line				Last	

REACH GEOMETRY COEFFICIENTS (BUILT-IN)

There are several built-in reach geometry coefficient sets. The built in sets are:

Hydraulic Geometry ID	Representing	Channel				Valley Width	
		Width		Depth			
		Coeff. (m)	Exp.	Coeff. (m)	Exp.	Coeff. (m)	Exp.
Curve A	Mediterranean climate of winter rainfall such as San Francisco region at 30 inches annual precipitation	0.5889	.38	0.5889	.38	0.5889	.38
Curve B	High-rainfall areas such as Pennsylvania, with annual accumulation precipitation of 45 inches	0.4901	.39	0.4901	.39	0.4901	.39
Curve C	Mountain areas in the Upper Green River, Wyoming	0.1878	.45	0.1878	.45	0.1878	.45
Curve D	Mountain areas in the Upper Salmon River, Idaho	0.2546	.39	0.2546	.39	0.2546	.39

Hydraulic Geometry ID	Representing	Channel				Valley Width	
		Width		Depth			
		Coeff. (m)	Exp.	Coeff. (m)	Exp.	Coeff. (m)	Exp.
Curve E	Pacific Maritime Mountains (N. Cascades, Puget Lowland, coast range, & Willamette valley)	0.3462	.43	0.3462	.43	0.3462	.43
Curve F	Western Cordillera--Klamath mountains, Cascades, eastern Cascades, Blue mountains, northern Rockies, middle Rockies, and Wasatch & Uinta mountains	0.2777	.42	0.2777	.42	0.2777	.42
Curve G	Western Interior Basin & Ranges--Columbia Basin, Snake River Basin/high Desert, northern Basin range, ands Wyoming Basin	0.0586	.51	0.0586	.51	0.0586	.51
Curve H	Mission Creek, Oregon—eastern slopes of the Umatilla Mountains	0.3008	.378	0.3008	.378	3.1002	.294
Curve I	Seco Creek, Texas--north of San Antonio in the Edwards Aquifer	1.4926	.3151	1.4926	.3151	1.4926	.3151
Curve J	Davis Hollow Basin & Hole Basin, West Virginia--tributaries to the Greenbriar River in karst geomorphology	0.4016	.4193	0.4016	.4193	0.4016	.4193
Curve K	Wrights Brook & Kiff Brook--New York City water supply watersheds in the West Branch of the Delaware River Basin, New York	0.0132	.8033	0.0132	.8033	0.0132	.8033
Curve L	Cole Gully & Wikoff Bayou--subwatersheds within the Bayou Plaquemine Brule in the Mermentau River Basin, southwestern Louisiana	5.9843	.1448	5.9843	.1448	34.7450	.1448
Curve M	Carneros Creek in Monterey & San Benito Counties, central coast, California	1.1985	.7338	1.1985	.7338	2.5476	.5141

All built-in sets use the same Geometry Length Coefficient (79.19) and Exponent (0.60).

REACH GEOMETRY COEFFICIENTS (USER-DEFINED IN INPUT)

If sets other than the built-in ones are desired then enter using format below. Required if referenced on Reach Data

Description	Units	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Reach Geometry Coefficients:**	A40	1	1-4
Number Reach Geometry Sets—Total count of reach geometric coefficient sets for the watershed.		1 to 2147483647	I10	1	5
The following 2 line set repeats for the number of reach geometry coefficient sets (specified above).					
Reach Geometry ID—Alphanumeric string identifying a reach geometric coefficient and exponent set. Blank defaults to what is set in Simulation Period section.			A10	2	1
Geometry Length Coefficient—Geomorphic length coefficient in equation: length = coef * Da^{exp}. Where length = distance from hydraulically most distant point in watershed (ft or m) Da = total drainage area (acres or hectares) at the reach outlet.. Reach length is determined by the difference in two solutions of this relationship. One at the downstream end and the other at the upstream end of the reach.		Blank or {0.00000001 to 99999999.9} [0.00000001 to 99999999.9]	F10	2	2
Geometry Length Exponent—Geomorphic length exponent in equation: length = coef * Da^{exp}. Where length = distance from hydraulically most distant point in watershed (ft or m) Da = total drainage area (acres or hectares) at the reach outlet. Reach length is determined by the difference in two solutions of this relationship. One at the downstream end and the other at the upstream end of the reach		Blank or {0.00000001 to 99999999.9} [0.00000001 to 99999999.9]	F10	2	3

Description	Units	Domain {English} [SI]	Format	Line No.	Field No.
Geometry Width Coefficient—Geomorphic width coefficient in equation: width = coef * Da^{exp}. Where width = channel bank full width (ft or m) Da = total drainage area (acres or hectares) at the reach outlet.		{0.00000001 to 99999999.9} [0.00000001 to 99999999.9]	F10	2	4
Geometry Width Exponent—Geomorphic width exponent in equation: width = coef * Da^{exp}. Where width = channel bank full width (ft or m) Da = total drainage area (acres or hectares) at the reach outlet.		{0.0 to 99999999.9} [0.0 to 99999999.9]	F10	2	5
Geometry Depth Coefficient—Geomorphic depth coefficient in equation: depth = coef * Da^{exp}. Where depth = channel bank full depth (ft or m) Da = total drainage area (acres or hectares) at the reach outlet..		{0.00000001 to 99999999.9} [0.00000001 to 99999999.9]	F10	2	6
Geometry Depth Exponent—Geomorphic depth exponent in equation: depth = coef * Da^{exp}. Where depth = channel bank full depth (ft or m) Da = total drainage area (acres or hectares) at the reach outlet.		{0.0 to 99999999.9} [0.0 to 99999999.9]	F10	2	7
Blank field			10	3	1
Valley Width Coefficient—Geomorphic valley width coefficient in equation: width = coef * Da^{exp}. Where valley width = valley width (ft or m) Da = total drainage area (acres or hectares) at the reach outlet.		{0.00000001 to 99999999.9} [0.00000001 to 99999999.9]	F10	3	2
Valley Width Exponent—Geomorphic valley width exponent in equation: width = coef * Da^{exp}. Where valley width = valley width (ft) Da = total drainage area (acres or hectares) at the reach outlet.		{0.0 to 99999999.9} [0.0 to 99999999.9]	F10	3	3
Blank line				Last	

RUNOFF CURVE NUMBER DATA

Required

Description	Units	Domain	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters..		**Runoff Curve Number Data:**	A40	1	1
Number Curve Numbers—Total count of runoff curve number records for the watershed.		1 to 2147483647	I10	1	2
The following line repeat for the number of runoff curve numbers (specified above).					
Curve Number ID—Alphanumeric string ID for the specific cover (cover type, treatment and hydrologic condition) for Runoff Curve Number data.			A40	2	1-4
Residue Adjustment code—Curve number residue adjustment code. Acceptable values are: Y = yes, adjust curve number for residue; or N = no, do not adjust the curve number. Blank indicates no adjustment. Currently not used.		Blank, Y or N	A10	2	5
Curve Number "A"—Runoff Curve Number for Soil Hydrologic Group "A"		30.0 to 100.0	F5	2	6a
Curve Number "B"—Runoff Curve Number for Soil Hydrologic Group "B"		30.0 to 100.0	F5	2	6b
Curve Number "C"—Runoff Curve Number for Soil Hydrologic Group "C"		30.0 to 100.0	F5	2	7a
Curve Number "D"—Runoff Curve Number for Soil Hydrologic Group "D"		30.0 to 100.0	F5	2	7b
Blank line				Last	

SIMULATION PERIOD DATA

Required

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters. (Left justified)		**Simulation Period Data:**	A40	1	1-4

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Number Initial Pesticides—Total count of initial pesticide records to be included at the end of this data section. Leave blank if no initial pesticide data is included.		Blank, or 1 to 1000	I10	1	5
Simulation Begin Date—Month, day, and year the watershed simulation begins.	mmm ddd yyyy	mmm—1 to 12 ddd—1 to 31 yyyy—1 to 9999	2I3, I4	2	1a-1c
Simulation End Date—Month, day, and year the watershed simulation ends. Leave blank for a single event simulation .	mmm ddd yyyy	Blank, or mmm—1 to 12 ddd—1 to 31 yyyy—1 to 9999	2I3, I4	2	2a-2c
Watershed Storm Type No.—Code indicating one of the preset synthetic or user requested storm types to use with pre-calculated solutions using extended TR-55: Acceptable values are: blank which defaults to Type II, 1=I, 2=Ia, 3=II, 4=III, 5=Uniform, 6 =IIA-60, 7=IIA-65, 8=IIA-70, 9=IIA, 10=II(DMV). 11=III(DMV); other numbers between 12 & 20 require user-defined storm type input for both the rainfall distribution & unit peak discharge regression coefficients		1 to 11	I10	2	3
Rainfall factor—Average annual USLE rainfall factor. Used by both USLE and RUSLE	{100 ft-ton-in / (acre-hr year)} [megajoule-mm / hectare-hr year]	{0.0 to 2000.0} [0.0 to 34100.0]	F10	2	4
10-yr EI—RUSLE energy intensity for 10 year frequency rainfall. Required if Erosion code (Simulation Period Data) is 0 (RUSLE), otherwise leave blank	{100 ft-ton-in / (acre-hr)} [megajoule-mm / hectare-hr]	Blank or {0.000006 to 2000.0} [0.0001 to 34100.0]	F10	2	5
EI Number—Energy Intensity (EI) distribution number identifying the EI distribution curve. For values > 400, the EI curve accounts for frozen soil effects such as in the Pacific Northwest Palouse region. EI distributions from RUSLE automatically entered for EI codes 1-149. Optionally, the user may enter the EI distribution values, To account for frozen soil effects, the user must enter a code value > 400, and enter the EI distribution values. Required if Erosion code (Simulation Period Data) is 0 (RUSLE), otherwise leave blank.		Blank or 1 to 500	I10	2	6
Irrigation Climate code—Code indicating the climate category to use for irrigation. Acceptable values are: 1 = arid; 2 = humid (Blank is 2)		Blank, 1 or 2	I10	2	7
Soil Moisture Steps—Number of soil moisture computation time steps within a day. (Blank defaults to 8 time steps.)		Blank, 1 to 24	I10	2	8
Winter Bouts—not currently used.				3	1
Annual K-factor code—Code indicating whether average annual USLE soil losses are based on nomographs and volcanic soil equations or to use K factors provided with soil data. Acceptable values are: Y = Yes N = No (Blank defaults to Yes).		Blank, Y or N	A10	3	2
Variable K-factor code—Code indicating whether to vary the average annual USLE soil loss throughout the year. Acceptable values are: Y = Yes N = No (Blank defaults to Yes).		Blank, Y or N	A10	3	3
Number Initialization Years— Number of climate data years to run for initializing variables prior to watershed simulation. (Blank defaults to 0)		Blank, 0 to 100	I10	3	4
Initialization Method Code—Code for initialization method; 0 = typical weather, 1 = re-use input weather. (Blank defaults to 0)		Blank, 0 to 1	I10	3	5
Currently not used			F10	3	6
Currently not used			F10	3	7

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Default Reach Geometry—Alphanumeric string identifying the built-in (default) set of reach geometry coefficients and exponents to use when geometry data is needed and no other ID is provided. Blank defaults to Curve B. Curve A—Mediterranean climates (winter rain; 30 " annual); Curve B—High Rainfall (e.g. Penn; 45 " annual): Curve C—Mountain area(e.g. Upper Green River Wy); Curve D—Mountain Area (Upper Salmon River, Idaho).		Blank, Curve A, Curve B, Curve C, or Curve D	A10	3	8
The following 4 line set is entered only if the EI number specified above is > 149 or if replacement percentages for a built-in EI number are desired (Values for EI numbers up to 149 are built-in to the AnnAGNPS model).					
Blank field			10	A	1
Section Sub-header –Hard coded sub header ID. (left justified)		**EI PCT:**	A10	A	2
EI Percentages (Periods 1 to 6)—Cummulative EI percentages for the 1st set of six 15+ day periods in a year for the EI number previously entered.		0.0 to 100.0	6F10	A	3-8
Blank fields			20	B	1-2
EI Percentages (Periods 7 to 12)—Cummulative EI percentages for the 2nd set of six 15+ day periods in a year for the EI number previously entered.		0.0 to 100.0	6F10	B	3-8
Blank fields			20	C	1-2
EI Percentages (Periods 13 to 18)—Cummulative EI percentages for the 3rd set of six 15+ day periods in a year for the EI number previously entered.		0.0 to 100.0	6F10	C	3-8
Blank fields			20	D	1-2
EI Percentages (Periods 19 to 24)—Cummulative EI percentages for the 4th set of six 15+ day periods in a year for the EI number previously entered.		0.0 to 100.0	6F10	D	3-8
The following 3 line set s are entered only if other than the CROPLAND global initialization defaults are desired. Most parameters can also be set using an initialization record in Operations Data					
Blank field			10	4	1
Section Sub-header—Hard coded sub header ID. (left justified)		**Cropland:**	A10	4	2
Crop Initial Inorganic N—Initial soil inorganic Nitrogen to be used for each cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to 0.)	ppm	Blank, or 0.0 to 100000.0	2F10	4	3-4
Crop Initial Inorganic P—Initial soil inorganic Phosphorus to be used for each cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to 0)	ppm	Blank, or 0.0 to 100000.0	2F10	4	5-6
Crop Initial Soil Moisture—Initial soil moisture to be used for each cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to average of field capacity moisture and wilting point moisture.)	ht-H_2O / ht-soil layer (dimensionless)	Blank, or 0.0 to 1.0	2F10	4	7-8
Blank fields			20	5	1-2
Crop Initial Organic Matter—Initial soil organic matter to be used for each cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to 0)	mass—org matter / mass-soil (dimensionless)	Blank, or 0.0 to 1.0	2F10	5	3-4
Crop Initial Organic N—Initial soil organic Nitrogen to be used for each cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to 0)	ppm	Blank, or 0.0 to 100000.0	2F10	5	5-6
Crop Initial Organic P—Initial soil organic Phosphorus to be used for each cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to 0)	ppm	Blank, or 0.0 to 100000.0	2F10	5	7-8
Blank fields			20	6	1-2
Crop Initial Surface Residue —Initial surface residue to be used for each cropland cell. (Blank defaults to 0)	{lb / acre} [kg / hectare]	{0.0 to 100000.0} [0.0 to 112000.0]	F10	6	3
Crop Initial CN II —Initial condition II runoff curve number to be used for each cropland cell if not defined as part of an initial operations data for the first field management. (Blank defaults to 75.)		Blank, or 30.0 to 100.0	F10	6	4
Crop Initial Manning's n—Initial condition overland flow Manning's n to be used for each cropland cell if not defined as part of an initial operations data for the first field management. (Blank defaults to 0.035)		0.005 to 1.0	F10	6	5

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Crop Initial Snow Depth—Initial condition depth of snow on ground to be used for each cropland cell. (Blank defaults to 0.0)	{in} [mm]	Blank or {0.0 to 1000.0} [0.0 to 25400.0]	F10	6	6
Crop Initial Snow Density—Initial condition snow density if any snow is to be on ground for each cropland cell. Must have value if positive snow depth is indicated above. Leave blank if no snow depth is indicated above.	{lb / ft^3} [Mg / m^3]	Blank, or {0.0006 to 62.4} [0.00001 to 1.0]	F10	6	7
Crop Initial Surface Constant—Initial condition surface condition constant to be used for each cropland cell if not defined as part of an initial operations data for the first field management. (Blank defaults to 0.15)		Blank, or 0.0 to 1.0	F10	6	8
The following 3 line set is entered only if other than the global NON-CROPLAND initialization defaults are desired.					
Blank field			10	7	1
Section Sub-header—Hard coded sub header ID. (left justified)		**Non-crop:**	A10	7	2
Non-crop Initial Inorganic N—Initial soil inorganic Nitrogen to be used for each non-cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to 0)	ppm	Blank, or 0.0 to 100000.0	2F10	7	3-4
Non-crop Initial Inorganic P—Initial soil inorganic Phosphorus to be used for each non-cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to 0)	ppm	Blank, or 0.0 to 100000.0	2F10	7	5-6
Non-crop Initial Soil Moisture—Initial soil moisture to be used for each non-cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to average of field capacity moisture and wilting point moisture.)	ht-H_2O / ht-soil layer (dimensionless)	Blank, or 0.0 to 1.0	2F10	7	7-8
Blank fields			20	8	1-2
Non-crop Initial Organic Matter—Initial soil organic matter to be used for each non-cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to 0)	mass—org matter / mass-soil (dimensionless)	Blank, or 0.0 to 1.0	2F10	8	3-4
Non-crop Initial Organic N—Initial soil organic Nitrogen to be used for each non-cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to 0)	ppm	Blank, or 0.0 to 100000.0	2F10	8	5-6
Non-crop Initial Organic P—Initial soil organic Phosphorus to be used for each non-cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to 0)	ppm	Blank, or 0.0 to 100000.0	2F10	8	7-8
Blank fields			20	9	1-2
Non-crop Initial Surface Residue—Initial surface residue to be used for each non-cropland cell. (Blank defaults to 0)	{lb / acre} [kg / hectare]	{0.0 to 100000.0} [0.0 to 112000.0]	F10	9	3
Non-crop Initial CN II —Initial condition II runoff curve number to be used for each non-cropland cell if not defined as part of an initial operations data for the first field management. (Blank defaults to 75.)		Blank, or 30.0 to 100.0	F10	9	4
Non-crop Initial Manning's n—Initial condition overland flow Manning's n to be used for each non-cropland cell if not defined as part of an initial operations data for the first field management. (Blank defaults to 0.035)		0.005 to 1.0	F10	9	5
Non-crop Initial Snow Depth—Initial condition depth of snow on ground to be used for each non-cropland cell. (Blank defaults to 0)	{in} [mm]	Blank or {0.0 to 1000.0} [0.0 to 25400.0]	F10	9	6
Non-crop Initial Snow Density—Initial condition of snow density if any snow is to be on ground for each cropland cell. Must have value if positive snow depth is indicated above. Leave blank if no snow depth is indicated above..	{lb / ft^3} [Mg / m^3]	Blank, or {0.0006 to 62.4} [0.00001 to 1.0]	F10	9	7
Non-crop Initial Surface Constant—Initial condition surface condition constant to be used for each non-cropland cell if not defined as part of an initial operations data for the first field management. (Blank is 0.30)		Blank, or 0.0 to 1.0	F10	9	8
The following record is repeated for the number of pesticides indicated on header record above. Enter only for pesticides that require other than the global initialization defaults.					
Initial Pesticide ID—Alphanumeric string identifying the pesticide initially in the soil profile.			A40	10	1-4

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Crop Initial Pesticide Amount—Initial pesticide amount in soil to be used for each cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to 0)	mass-pest / mass-soil (dimensionless)	Blank, or 0.0 to 1.0	2F10	10	5-6
Non-crop Initial Pesticide Amount—Initial pesticide amount in soil to be used for each non-cropland cell. Two soil layers are used first is top 8 in (200 mm), second is remaining soil profile. (Blank defaults to 0)	mass-pest / mass-soil (dimensionless)	Blank, or 0.0 to 1.0	2F10	10	7-8
Blank line				Last	

SOIL DATA

Required

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters. (Left justified).		**Soil Data:**	A40	1	1-4
Number Soils—Total count of soils for the watershed.		1 to 2147483647	I10	1	5
Number Soil Layers—Total count of soil layers in all soil records		1 to 2147483647	I10	1	6
The following 2 lines repeat for the number of soils (specified above).This two line set is followed with a 3 line set for each soil layer in the soil profile.					
Soil ID—Soil Survey area ID combined with soil survey mapping unit symbol. (e.g., 013Mbac)			A10	2	1
Hydrologic Soil Group—Soil Hydrologic group (see TR-55). Acceptable values are : A, B, C, D		A, B, C, or D	A10	2	2
K-factor—USLE & RUSLE K factor for whole soil: Note this has already been adjusted to add the rock fragments > 2 mm.	{(ton ac hr)/ (100 ac ft tonf in)} [(met. ton hec hr) / (hec Mj mm)	{0.0 to 1.0} [0.0 to .1317]	F10	2	3
Albedo—Solar radiation reflection from the bare soil surface.	Radiation reflected / radiation incoming	Blank or 0.0 to 1.0	F10	2	4
Time to consolidation—Time for 95% of effect of disturbance to have disappeared due to consolidation.	years	0.0 to 100.0	F10	2	5
Impervious Depth—Depth to impervious layer in soil column. (Blank defaults to a depth greater than the soil profile indicating no impervious depth.) Note: RUSLE assumes that residue incorporation cannot occur within a soil depth of less than 2 inches.	{in} [mm]	Blank, or {2.0 to 10000.0} {51.0 to 254000.0]	F10	2	6
Specific Gravity—Average specific gravity for the total mass in the soil column. (Blank defaults to 2.65)	mass-soil / mass-H_2O (dimensionless)	Blank or 0.0 to 4.0	F10	2	7
Soil Name—Full name for the soil			A40	3	1-4
Soil Texture—Unabbreviated soil texture (e.g., clay loam)			A40	3	5-8
The following 3 line set repeats for each soil layer in the soil profile. These records follow directly after the 2 line general data for each soil.					
Blank field			10	4	1
Layer Depth—Depth from the soil surface to the bottom of the soil layer	{in} [mm]	{1.0 to 120.0} [1.0 to 3000.0]	F10	4	2
Bulk Density—Dry bulk density of soil layer (assumed to be the consolidated stage for cropland top layer).	{lb / ft^3} [Mg / m^3]	{60.0 to 168.0} [0.96 to 2.70]	F10	4	3
Clay Ratio—Clay mass ratio to sum total mass of mineral soil (sand, silt, clay) excluding rock for the soil layer.	mass-clay/ mass-mineral soil (dimensionless)	0.0 to 1.0	F10	4	4
Silt Ratio—Silt mass ratio to sum total mass of mineral soil (sand, silt, clay) excluding rock for the soil layer.	mass-silt/ mass-mineral soil (dimensionless)	0.0 to 1.0	F10	4	5

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Sand Ratio—Sand mass ratio to sum total mass of mineral soil (sand, silt, clay) excluding rock for the soil layer.	mass-sand / mass-mineral soil (dimensionless)	0.0 to 1.0	F10	4	6
Rock Ratio—Ratio of rock fragment mass (fraction greater than 2 mm) to sum total mass of mineral soil (sand, silt, clay, & rock)in the soil layer. Blank defaults to 0.0	mass—rock / mass—mineral soil (dimensionless)	Blank or 0.0 to 1.0	F10	4	7
Very Fine Sand Ratio—Ratio of very fine sand (0.05 mm to 0.1mm) to the sum of total mass of mineral soil (sand, silt, clay) excluding rock in the soil layer. Blank defaults to 0.0	mass-very fine sand / mass-mineral soil (dimensionless)	Blank or 0.0 to 1.0	F10	4	8
Blank field			10	5	1
CaCO3—Calcium carbonate content of soil layer.	wt CaCO3 / wt < 2mm soil (dimensionless)	Blank or 0.0 to 1.0	F10	5	2
Saturated Conductivity—-Saturated hydraulic conductivity of the soil layer.	{in / hr} [mm / hr]	{0.0 to 10000.0} [0.0 to 254000.0]	F10	5	3
Field Capacity—Fraction of water volume at field capacity (300 kPa) to the soil volume in the soil layer. Based on whole soil (includes rock fragments).	ht-H_2O / ht-soil layer (dimensionless)	wilting point fraction to 1.0	F10	5	4
Wilting Point—Fraction of water volume at wilting point (1500 kPa) to the soil volume in the soil layer. Based on whole soil (includes rock fragments).	ht-H_2O / ht-soil layer (dimensionless)	0.0 to 1.0	F10	5	5
Volcanic code—Code indicting whether soil layer is from a volcanic parent material. Y = volcanic N = not volcanic (Blank defaults to No)		Blank, Y, or N	A10	5	6
Base Saturation— Base saturation of the soil layer for volcanic soils. This parameter is only used if the Volcanic code is set to Yes and the Annual K-factor code is set to Yes in the Simulation Period Data Section. The use of this parameter should only be considered for those soils that are similar to soils found in Hawaii. (See Equation 3-2 in the RUSLE Handbook, Renard et al., 1997)	%	Blank, 0.0 to 100.0	F10	5	7
Unstable Aggregate Ratio—Ratio of unstable aggregates (< .25 mm) to sum total mass of soil (sand, silt, clay, rock, & organic matter) in the soil layer. Leave blank if soil layer is not from a volcanic parent material	mass-unstable agg / mass-soil (dimensionless)	Blank or 0.0 to 1.0	F10	5	8
Blank field			10	6	1
pH—Representation of the Hydrogen ion concentration (pH) for the soil layer. pH which is the logarithm of the reciprocal of the H concentration (g atoms /l) is a measure of acidity / alkalinity.		1.0 to 14.0	F10	6	2
Organic Matter Ratio—Ratio of organic matter to sum total mass of soil (sand, silt, clay, rock, & organic matter) in the soil layer.	mass-org matter / mass-soil (dimensionless)	0.0 to 1.0	F10	6	3
Organic N Ratio—Ratio of initial amount of organic nitrogen in the soil layer at the start of the simulation. If data is not readily available, enter 500 ppm for the top soil layer and 50 ppm for each subsequent layer.	ppm	0.0 to 100000.0	F10	6	4
Inorganic N Ratio—Ratio of initial amount of inorganic nitrogen in the soil layer at the start of the simulation. If data is not readily available, enter 5 ppm for the top soil layer and 0.5 ppm for each subsequent layer.	ppm	0.0 to 100000.0	F10	6	5
Organic P Ratio—Ratio of initial amount of organic phosphorus in the soil layer at the start of the simulation. If data is not readily available, enter 500 ppm for the top soil layer and 250 ppm for each subsequent layer.	ppm	0.0 to 10000.0	F10	6	6
Inorganic P Ratio—Ratio of initial amount of inorganic phosphorus in the soil layer at the start of the simulation. If data is not readily available, enter 500 ppm for the top soil layer and 250 ppm for each subsequent layer.	ppm	0.0 to 10000.0	F10	6	7

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Soil Structure code—Code indicating average aggregate soil structure size for soil layer. Acceptable values are: 1 = very fine granular (< 1mm) 2 = fine granular (1 to 2mm) 3 = medium or coarse granular (2 to 5mm) 4 = blocky, platey or massive (> 5mm)		1 to 4	I10	6	8
Blank line				Last	

STRIP CROP DATA

AnnAGNPS mode only — Required if referenced on Operations Data

Description	Units	Domain	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Strip Crop Data:**	A40	1	1
Number Strip Crop—Total count of strip crop records for the watershed.		1 to 2147483647	I10	1	2
The following line repeats for the number of strip crop sets (specified above).					
Strip Crop ID—Alphanumeric string identifying the Strip Crop Data.			A10	2	1
Cover Code—Code indicating the type of cover. Acceptable values are: 1 = C1) established = sod-forming grass 2 = C2) 1st year grass or cut for hay 3 = C3) heavy cover = And/or very rough 4 = C4) moderate cover = and/or rough 5 = C5) light cover = and/or mod = rough 6 = C6) no cover and/or min = rough. 7 = C7) clean tilled, smooth, fallow		1 to 7	I10	2	2
Strip Distance—Relative distance from the top of the slope to the bottom of the strip as compared to the total slope distance.	%	0.0 to 100.0	F10	2	3
Blank Line				Last	

TILE DRAIN DATA

AnnAGNPS mode only — Required if referenced on Management Field Data

Description	Units	Domain	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Tile Drain Data:**	A40	1	1
Number of Tile Drain Sets—Total count of Tile drainage schemes for the watershed.		1 to 2147483647	I10	1	2
The following line repeats for the number of strip crop sets (specified above).					
Tile Drain ID—Alphanumeric string identifying the Tile Drainage Scheme.			A10	2	1
Drain Rate — Daily reduction in height of water table. If entered by the user, this Value is used for all tile drainage calculations. Default value is 0.5 inches or 12.5 mm	{in / day} [mm / day]	0.0 to 999999.9	I10	2	2
Tile Drain Spacing — Center to center spacing of tile drains	{ft} [m]	0.0 to 999999.9	F10	2	3
Tile Drain Depth—Depth of tile drains below the surface.	{ft} [m]	0.0 to 999999.9	F10	2	4
Tile Drain Diameter—Diameter of tile drains.	{in} [mm]	0.0 to 999999.9	F10	2	5
Blank Line				Last	

WATERSHED DATA

Required

Description	Units	Domain	Format	Line No.	Field No.
Data Section Name—Hard coded section ID insensitive to upper / lower case letters.. (Left justified)		**Watershed Data:**	A40	1	1-4
Watershed Name—Name of the watershed			A80	2	1-8
Watershed Description—Description of the watershed Currently not used			A80	3	1-8
Watershed Location—Location of the watershed (Optional).			A60	4	1-6
Latitude—Latitude for centroid of watershed.	decimal ^{o}	Blank or -90. To 90.	F10	4	7
Longitude—Longitude for centroid of watershed. Currently not used	decimal ^{o}	Blank or -180. To 180.	F10	4	8
Blank line				Last	

WINTER DATES

Optional

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Data Section Name—Hard coded data section ID insensitive to upper / lower case letters.. (Left justified)		**Winter Dates:**	A40	1	1-4
Number bouts—Total bouts for the watershed.		1 to 999	I10	1	5
The following 3 line sets repeat for the number of winter bouts (specified above).					
Blank field			A10	2	1
Begin date—Beginning date for the winter bout	mmm ddd yyyy	mmm—1 to 12 ddd—1 to 31 yyyy—1 to 9999	2I3, I4	2	2a-2c
Blank field			A10	2	3
End date—Ending date of the winter bout	mmm ddd yyyy	mmm—1 to 12 ddd—1 to 31 yyyy—1 to 9999	2I3, I4	2	4a-4c
Use Code—Code indicating that the bout is to be used. Acceptable values are: Y = Yes N = No (Blank defaults to No)		Blank, Y, or N	A10	2	5
Blank field			A30	2	6-8

Input File Layout Matrix

ANNAGNPS ID

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
AnnAGNPS: Version 3.5				Input Units code	Output Units code	CCHE1D Output Units code	Screen Output code

AQUACULTURE POND DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Aquaculture Pond Data:				Number Aquaculture Ponds			
Aquaculture Pond ID	Aquaculture Pond Cell ID	Aquaculture Pond Area	Aquaculture Pond Depth	Seepage Rate	Sediment Delivery Ratio	Relative Rotation Year	Aquaculture Pond Management ID

AQUACULTURE POND MANAGEMENT SCHEDULE DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Aquaculture Pond Management Schedule Data:				Number Aquaculture Pond Events			
Aquaculture Pond Schedule ID	Event Date	Water Operations Code	Aquaculture ID	Crop ID	Planting Type Code	Gate Open/Close	Maximum Pool Depth
	Minimum Pool Depth	Fill/Release volume	Fill/Release Time	Fill/Release Rate	Fill/Drain All	Sediment Clay Concentration	Sediment Silt Concentration
	Sediment Sand Concentration	Sediment Small Aggregates Concentration	Sediment Large Aggregates Concentration				
	Total Nitrogen Concentration	Dissolved Nitrogen Concentration	Total Phosphorus Concentration	Dissolved Phosphorus Concentration	Pesticide Applications	Seasonal Concentration Code	
	Sediment Concentration— Winter	Total Nitrogen Concentration— Winter	Total Phosphorus Concentration— Winter	Dissolved Nitrogen Concentration— Winter	Dissolved Phosphorus Concentration— Winter	Sediment Concentration— Spring	Total Nitrogen Concentration— Spring
	Total Phosphorus Concentration— Spring	Dissolved Nitrogen Concentration— Spring	Dissolved Phosphorus Concentration— Spring	Sediment Concentration— Summer	Total Nitrogen Concentration— Summer	Total Phosphorus Concentration— Summer	Dissolved Nitrogen Concentration— Summer
	Dissolved Phosphorus Concentration— Summer	Sediment Concentration— Autumn	Total Nitrogen Concentration— Autumn	Total Phosphorus Concentration— Autumn	Dissolved Nitrogen Concentration— Autumn	Dissolved Phosphorus Concentration— Autumn	

CELL DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Cell Data:				Number Cells			
Cell ID	Soil ID	Management Field ID	Reach ID	Reach Location code	Cell Area	Cell Time of Concentration	Cell Average Elevation
	Cell Average Land Slope	Cell Aspect	RUSLE/USLE LS Factor		Climate File Number	Sheet Flow Manning's n	
	Concentrated Flow Slope	Concentrated Flow Length			Concentrated Flow Hydraulic Depth	Concentrated Flow Manning's n	
	Sheet Flow Slope	Sheet Flow Length	Shallow Concentrated Flow Slope	Shallow Concentrated Flow Length			

CLASSIC GULLY DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Classic Gully Data:				Number Gullies			
Classic Gully ID	Cell (1st) ID	Soil ID	Cell (1st) Drainage Area	Head Cut Depth	Erosion Coefficient	Erosion Exponent	Delivery Ratio
Management Field ID	Reach ID	Cell (1st) Subcell Drainage Area	2nd Contributing Cell ID	2nd Contributing Cell's Drainage Area	Calibration Factor	Rainfall/Runoff Indicator	Units Indicator

CONTOUR DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Contour Data:				Number Contours			
Contour ID	Ridge Height code	Furrow Slope	Disturbed Cover code	Consolidated Cover code			

CROP DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Crop Data:				Number Crops			
Crop ID	Units Harvested	Residue Weight Ratio	Surface Decomposition	Sub-surface Decomposition		Moisture depletion	Crop ID
	Residue Adjustment Amount	Crop Residue (30% cover)	Crop Residue (60% cover)	Crop Residue (90% cover)	Annual Crop, Legume, Senescence codes[12]	Yield Unit Name	Yield Unit Weight

[12] Y/N or blank in columns 51-52 for annual crop code, columns 53-54 for legumes, and columns 55-56 for senescence; columns 57-60 are blank.

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
	Harvest C-N Ratio	Pre-harvest C-N Ratio	Harvest Water	N Uptake	P Uptake	Harvest C-P Ratio	Pre-harvest C-P Ratio
	Growth Time (initial)	Growth Time (development)	Growth Time (mature)	Growth Time (senescence)			
	Growth N Uptake (initial)	Growth N Uptake (development)	Growth N Uptake (mature)	Growth N Uptake (senescence)			
	Growth P Uptake (initial)	Growth P Uptake (development)	Growth P Uptake (mature)	Growth P Uptake (senescence)			
		Root Mass	Canopy Cover	Rain Fall Height			

EPHEMERAL GULLY DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Ephemeral Gully Data:				Number Gullies			
Ephemeral Gully ID	Cell (1^{st}) ID	Soil ID	Cell (1^{st}) Drainage Area	Slope	Critical Shear	Erodibility factor	Delivery Ratio
Management Field ID	Reach ID	Cell (1^{st}) Subcell Drainage Area	2^{nd} Contributing Cell ID	2^{nd} Contributing Cell's Drainage Area	Calibration Factor	Manning's "n"	Re-Plant Period

FEEDLOT DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Feedlot Data:				Number Feedlots	Number Feedlot Cells		
Feedlot ID	Feedlot Manage ID	Open Area	Paved ratio	Roof Area	Upslope Area		
	Feedlot Initial N	Feedlot Initial P	Feedlot Initial OrgC	Delta N	Delta P	Delta OrgC	
	Feedlot Max N	Feedlot Max P	Feedlot Max OrgC	Feedlot Pack N	Feedlot Pack P	Feedlot Pack OrgC	
		Feedlot Cell ID	Cell Open Fraction	Cell Upslope Fraction	Cell Buffer Length		

FEEDLOT MANAGEMENT DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Feedlot Management Data:				Number Feedlot Managements	Number Feedlot Operations		
Feedlot Management ID							
	Feedlot Operation Date	Pack Remove Ratio	Pack Start N	Pack Start P	Pack Start OrgC		
	Pack Change N	Pack Change P	Pack Change OrgC				

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8

FERTILIZER APPLICATION DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Fertilizer Application Data:				Number Fertilizer Applications			
Fertilizer Application ID	Fertilizer Name ID		Fertilizer Rate	Fertilizer Depth	Fertilizer Mixing code		

FERTILIZER REFERENCE DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Fertilizer Reference Data:				Number Fertilizer References			
Fertilizer Reference ID	Fertilizer N	Fertilizer Nitrate	Fertilizer Inorganic N	Fertilizer Organic N	Fertilizer Ammonia	Fertilizer Mineral Ammonia	Fertilizer N
	Fertilizer P	Fertilizer Soluble P	Fertilizer Inorganic P	Fertilizer Organic P	Fertilizer Organic Matter	Fertilizer Consistency code	

FIELD POND DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Field Pond Data:				Number Field Ponds	Maximum Gate Operations	Total Gate Operations	
Field Pond ID	Field Pond Cell ID	Field Pond Area	Number of Rotation Years	Gate Operations			
	Volume	Drain Time	Release Rate	Sediment Concentration	Clay Content	Silt Content	Nitrogen Concentration
	Phosphorus Concentration	Organic Carbon Concentration	Pesticide Reference ID				Pesticide Concentration
	"OPEN" or "CLOSE"	date [mm/dd/yyyy][13]					

IMPOUNDMENT DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Impoundment Data:				Number Impoundments			

[13] Date for opening or closing gate operation; 2-digit number for month in columns 21-22, column 23 not read, 2-digit number for day in columns 24-25, column 26 not read, and 4-digit number in columns 27-30 for rotation year.

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Impoundment ID	Impoundment Infiltration	Impoundment Seepage	Permanent Pool Depth	Impound Volume Coefficient	Impound Volume Exponent	Impound Discharge Coefficient	Impound Discharge Exponent
	Sediment Clean Out Depth	Sediment Clean Out Year					

IRRIGATION APPLICATION DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Irrigation Application Data:				Number Irrigation Applications			
Irrigation Application ID	Irrigation End Date	Irrigation Type code	Irrigation Duration	Irrigation Lost	Irrigation Rate	Tailwater Recovery	Irrigation Trigger
		Irrigated Area Fraction	Interval Number	Interval Days	Chemical Multiple	Irrigation Sediment Rate	

LANDSLIDE DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Landslide Data:				Number Gullies			
Landslide Gully ID	Cell ID	Soil ID	Drainage Area	Depth	Erosion Coefficient	Erosion Exponent	Delivery Ratio
Management Field ID					Calibration Factor	Rainfall/Runoff Indicator	Units Indicator

MANAGEMENT FIELD DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Management Field Data:				Number Fields			
Management Field ID	Field Non-Crop ID	Field Manage ID	Relative Rotation Year	USLE P-factor	Percent Rock Cover	RUSLE Sub-P factor	Inter-rill Erosion code
	Random Roughness	Terrace Horizontal Distance	Terrace Grade	Tile Drain ID			

MANAGEMENT OPERATION DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Management Operations Data:				Number Operations			
Management Operation ID	Effect codes		Residue Cover Remaining	Residue Weight Remaining	Area Disturbed	Initial Random Roughness	

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
	Final Random Roughness	Operation Tillage Depth	Added Surface Residue	Surface Decomposition	Sub-surface Decomposition		
	Surface Roughness (30% cover)	Surface Roughness (60% cover)	Surface Roughness (90% cover)				

MANAGEMENT SEQUENCE DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Management Sequence Data:				Number Managements			
Management Sequence ID	Management Schedule ID						

MANAGEMENT SCHEDULE DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Management Schedule Data:				Number Management Schedules	Number Pesticide Applications		
Management Schedule ID	Event Date	Event Contour ID	Event New Crop ID	Event Strip Crop ID	Event New Non-crop ID		
	Event Curve Number ID						Event Residue Change
	Event Fertilizer Application ID	Event Irrigation Application ID	Management Operation ID		Tile Drain Status Change		
		Event Pesticide Application ID					

NON-CROP DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Non-Crop Data:				Number Non-Crops			
Non-Crop ID		Non-Crop Description					
	Annual Root Mass	Annual Cover Ratio	Annual Rain Fall Height	Surface Residue Cover	USLE C-factor		

OUTPUT OPTIONS DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5					Data Field 6					Data Field 7					Data Field 8				
0 column 1 numbers	1 1	2 1	3 1	4 1	3	5	7	9	5 1	3	5	7	9	6 1	3	5	7	9	7 1	3	5	7	9
Output Options Data:[14]				15 16	17 18	19 20	21 22	23 24	25 26	27 28	29 30	31 32	33 34	35 36	37 38	39 40	41 42	43 44	45 46	47 48	49 50	51 52	53 54

[14] Output Options Data section header (left justified)—if this section data is present, only these output requests will be honored, the old "Global Output Specifications", "Reach Output Specifications", & "Source Accounting Output Specifications" data sections will be ignored and the "CONCEPTS Output Units Code" blank default will be interpreted to be a request for English units, which is consistent with the input/output units code requests.
[15] Global output file selection (column 41): "T" (true), "F" (false), or blank (default is false)–for all database (AnnAGNPS_*.csv) files.
[16] Global output file selection (column 42): "T" (true), "F" (false), or blank (default is false)–for all data preparation verification (AnnAGNPS_*.dpp) files.
[17] Global output file selection (column 43): "T" (true), "F" (false), or blank (default is false)–for all input data verification (AnnAGNPS_*.npt) files.
[18] Global output file selection (column 44): "T" (true), "F" (false), or blank (default is false)–for all simulation verification (AnnAGNPS_*.sim) files.
[19] Global output file selection (column 45): "T" (true), "F" (false), or blank (default is false)–for all table (AnnAGNPS_*.txt) files.
[20] Global output file selection (column 46): "T" (true), "F" (false), or blank (default is true)–for program execution log file output (AnnAGNPS.log).
[21] Global output file selection (column 47): "T" (true), "F" (false), or blank (default is true)–for program execution log screen output
[22] Global output file selection (column 48): "T" (true), "F" (false), or blank (default is true)–for the warning file (AnnAGNPS.wrn).
[23] Global output file selection (column 49): "T" (true), "F" (false), or blank (default is false)–for the version 1 & 2 table output files.
[24] Reserved (column 50)
[25] Global output file selection (column 51): "T" (true), "F" (false), or blank (default is true)–for all cells.
[26] Global output file selection (column 52): "T" (true), "F" (false), or blank (default is false)–for all feedlots.
[27] Global output file selection (column 53): "T" (true), "F" (false), or blank (default is false)–for all field ponds.
[28] Global output file selection (column 54): "T" (true), "F" (false), or blank (default is false)–for all gullies.
[29] Global output file selection (column 55): "T" (true), "F" (false), or blank (default is false)–for all point sources.
[30] Global output file selection (column 56): "T" (true), "F" (false), or blank (default is OUTLET only)–for all reaches.
[31] Reserved (column 57)
[32] Reserved (column 58)
[33] Global output file selection (column 59): "T" (true), "F" (false), or blank (default is true)–for nutrient output, if any, to be included in average annual output files.
[34] Global output file selection (column 60): "T" (true), "F" (false), or blank (default is true)–for pesticide output, if any, to be included in average annual output files.
[35] Reserved (column 61)
[36] Reserved (column 62)
[37] Global output file selection (column 63): "T" (true), "F" (false), or blank (default is true)–for sediment output, if any, to be included in average annual output files.
[38] Global output file selection (column 64): "T" (true), "F" (false), or blank (default is true)–for water output (there always has to be water for surface runoff to occur) to be included in average annual output files.
[39] Global output file selection (column 65): "T" (true), "F" (false), or blank (default is true)–for nutrient output, if any, to be included in event output files.
[40] Global output file selection (column 66): "T" (true), "F" (false), or blank (default is true)–for pesticide output, if any, to be included in event output files.
[41] Global output file selection (column 67): "T" (true), "F" (false), or blank (default is true)–for sediment, if any, to be included in event output files.
[42] Global output file selection (column 68): "T" (true), "F" (false), or blank (default is true)–for water output (there always has to be water for surface runoff to occur), if any, to be included in event output files.
[43] Reserved (column 69)

Data Field 1		Data Field 2	Data Field 3	Data Field 4	Data Field 5					Data Field 6					Data Field 7					Data Field 8				
0 column		1	2	3	4					5					6					7				
1 numbers		1	1	1	1	3	5	7	9	1	3	5	7	9	1	3	5	7	9	1	3	5	7	9
	*.csv[55]	Database output files (AnnAGNPS_*.csv) 001–070 in columns 11-80 [56]																						
	*.dpp	Data preparation verification output files (AnnAGNPS_*.dpp) 071–140 in columns 11-80 [57]																						
	*.npt	Input verification output files (AnnAGNPS_*.npt) 141-210 in columns 11-80 [58]																						
	*.sim	Simulation verification output files (AnnAGNPS_*.sim) 211-280 in columns 11-80 [59]																						
	1st *.txt[60]	First set of 70 standardized text output files (AnnAGNPS_*.txt) 281-350 in columns 11-80 [61]																						
	2nd *.txt[62]	Second set of 70 standardized text output files (AnnAGNPS_*.txt) 351-420 in columns 11-80 [63]																						

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[44] Reserved (column 70)

[45] Units Options (column 71): "T" (true), "F" (false), or blank (default is false)–for output in total mass units [water & sediment are in tons or Mg; chemicals are in lbs or kg].

[46] Formatted output units selection (column 72): "T" (true), "F" (false), or blank (default is false)–for output in ratio units (mass loading contributed divided by total mass loading at reach location) [non-dimensional].

[47] Formatted output units selection (column 73): "T" (true), "F" (false), or blank (default is true)–for output in units of total mass divided by contributing area (unit-area) [water & sediment are in tons/ac or Mg/ha; chemicals are in lbs/ac or kg/ha].

[48] Reserved (column 74)

[49] Local request for version 2 CCHE1D output data (column 75): "T" (true) , "F" (false), or blank (default is false)

[50] Reserved (column 76)

[51] Local request for version 2 average annual formatted table (column 77): "T" (true) , "F" (false), or blank (default is true)–"AnnAGNPS_AA.dat" or "(user_specified)_AA.dat" file

[52] Local request for version 2 event formatted table (column 78): "T" (true) , "F" (false), or blank (default is false)–"AnnAGNPS_EV.dat" or "(user_specified)_EV.dat" file

[53] Local request for version 1 accumulation data (column 79): "T" (true) , "F" (false), or blank (default is false)–"AnnAGNPS.acc" file

[54] Local request for version 1 event data (column 80): "T" (true) , "F" (false), or blank (default is false)–"AnnAGNPS.evn" file

[55]Local output file extension character keywords, which include any lead number of record designations and the "*", ".", & the three letter extensions, are in columns 3-8

[56] Local individual comma-separated values file selection (columns 11-80): "T" (true), "F" (false), or blank (defaults to global selection but overrides any global selection if non-blank)–database files (AnnAGNPS_*.csv) are in alphabetic order.

[57] Local individual data preparation file selection (columns 11-80): "T" (true), "F" (false), or blank (defaults to global selection but overrides any global selection if non-blank)–data preparation verification files (AnnAGNPS_*.dpp) are in alphabetic order.

[58] Local individual input verification file selection (columns 11-80): "T" (true), "F" (false), or blank (defaults to global selection but overrides any global selection if non-blank)–input verification files (AnnAGNPS_*.npt) are in alphabetic order.

[59] Local individual simulation file selection (columns 11-80): "T" (true), "F" (false), or blank (defaults to global selection but overrides any global selection if non-blank)–simulation verification files (AnnAGNPS_*.sim) are in alphabetic order.

[60] First set of "*.txt" keyword (columns 2-10), can just be "*.txt" without the leading "1st"–if this record is missing, defaults will be used for local output requests otherwise controlled by this record.

[61] First set of 70 local individual formatted file selection (columns 11-80): "T" (true), "F" (false), or blank (defaults to global selection but overrides any global selection if non-blank)–formatted files (AnnAGNPS_*.txt) are in alphabetic order.

[62]Second set of "*.txt" keyword (columns 2-10), must have leading "2nd" designation–if this record is missing, defaults will be used for local output requests otherwise controlled by this record.

[63] Second set of 70 local individual formatted file selection (columns 11-80): "T" (true), "F" (false), or blank (defaults to global selection but overrides any global selection if non-blank)–formatted files (AnnAGNPS_*.txt) are in alphabetic order.

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
0 column 1 numbers	1 1	2 1	3 1	4 1 3 5 7 9	5 1 3 5 7 9	6 1 3 5 7 9	7 1 3 5 7 9
1st mn/mx[64]	minimum event date[65] mm/dd/yyyy	maximum event date[66] mm/dd/yyyy	maximum number events[67]	minimum runoff for event output[68]	minimum runoff for cell[69]	minimum runoff at outlet[70]	
2nd mn/mx[71]	minimum subarea ID[72]	maximum subarea ID[73]	cell units position[74]	maximum number verification file accesses[75]	maximum number verification file bytes[76]		
Cell ID[77]	number of selected cells[78]	1st cell ID	2nd cell ID	3rd cell ID	4th cell ID	5th cell ID	6th cell ID
	7th cell ID	8th cell ID	9th cell ID	10th cell ID	11th cell ID	etc.	
Feed ID[79]	number of selected feedlots[80]	1st feedlot ID	2nd feedlot ID	3rd feedlot ID	4th feedlot ID	5th feedlot ID	6th feedlot ID
	7th feedlot ID	8th feedlot ID	9th feedlot ID	10th feedlot ID	11th feedlot ID	etc.	

[64] First set of minimum/maximum keyword (columns 2-10), can just be "*.txt" without the leading "1st"–if record is not present, defaults will be used.

[65] Minimum date that an event will be written to event output files, dates are in standard mm/dd/yyyy format (columns 11-20)–if either field is blank, the AnnAGNPS default for the beginning of simulation period will be used.

[66] Maximum date that an event will be written to event output files, dates are in standard mm/dd/yyyy format (columns 21-30)–if either field is blank, the AnnAGNPS default for the end of simulation period will be used.

[67] Maximum number of events to be included in any event-related output file (column 31-40)–when this number of events has been written to a selected output file, no further event output is written to the selected file; if blank, AnnAGNPS default of 3000 is used.

[68] Minimum amount for an event to be written to output event files (column 41-50)–if blank, default of 6.35mm (1/4 in) is used.

[69] Minimum water runoff for a cell to be included as runoff for the event, accumulated, and included in the average annual data; defaults to 0.10 mm (0.04 in).

[70] Minimum water runoff at watershed outlet to be included as runoff for the event, accumulated, and included in the average annual data; defaults to 0.01 mm (0.004 in).

[71] Second set of minimum/maximum keyword (columns 4-10)–if record is not present, defaults are used.

[72] The minimum subarea IDs are only valid for numeric IDs (column 11-20)–if blank, AnnAGNPS defaults to subarea associated with minimum numeric cell ID (designed for use with TopAGNPS generated cell and reach IDs).

[73] The maximum subarea IDs are only valid for numeric IDs (column 21-30)–if blank, AnnAGNPS defaults to subarea associated with maximum numeric cell ID (designed for use with TopAGNPS generated cell and reach IDs).

[74] Controls which cells are included in the output–if blank, AnnAGNPS defaults to all cells, otherwise 1 is source only, 2 is left side only, 3 is right side only, 4 is reach only, only works with numeric cell IDs (column 31-40) (designed for use with TopAGNPS generated cell and reach IDs).

[75] Used only with verification files where temporal output could overwhelm file size limit (32-bit operating systems are limited to 2^32 bytes) (column 41-50): actual maximum file size will vary from file to file–if blank, AnnAGNPS default of 1000 is used.

[76] Used only with verification files where temporal output could overwhelm file size limit (32-bit operating systems are limited to 2^32 bytes) (column 51-60): actual maximum file size will vary from file to file–if blank, AnnAGNPS default of 2^24 bytes is used.

[77] Cell ID keyword (columns 4-10)–if record is not present, AnnAGNPS includes all cells except any excluded by "mn/mx" record.

[78] Default is all cells except any excluded by "mn/mx" record; if any cells are selected, then only those cells selected, in numeric & then alphabetic order, will be included in all output files.

[79] Feedlot ID keyword (columns3-9)–if record is not present, AnnAGNPS includes all of the feedlots in any requested feedlot output files.

[80] Default is the global feedlot field; if any feedlots are selected, then only the feedlots selected, in numeric & then alphabetic order, will be included in any of the requested feedlot output files.

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
0 column numbers 1	1 1	2 1	3 1	4 1 3 5 7 9	5 1 3 5 7 9	6 1 3 5 7 9	7 1 3 5 7 9
Fld Pnd ID[81]	number of selected field ponds[82]	1st field pond ID	2nd field pond ID	3rd field pond ID	4th field pond ID	5th field pond ID	6th field pond ID
	7th field pond ID	8th field pond ID	9th field pond ID	10th field pond ID	11th field pond ID	etc.	
Gully ID[83]	number of selected gullies[84]	1st gully ID	2nd gully ID	3rd gully ID	4th gully ID	5th gully ID	6th gully ID
	7th gully ID	8th gully ID	9th gully ID	10th gully ID	11th gully ID	etc.	
Impnd ID[85]	number of selected impoundments[86]	1st impoundment ID	2nd impoundment ID	3rd impoundment ID	4th impoundment ID	5th impoundment ID	6th impoundment ID
	7th impoundment ID	8th impoundment ID	9th impoundment ID	10th impoundment ID	11th impoundment ID	etc.	
Pt Src ID[87]	number of selected point sources[88]	1st point source ID	2nd point source ID	3rd point source ID	4th point source ID	5th point source ID	6th point source ID
	7th point source ID	8th point source ID	9th point source ID	10th point source ID	11th point source ID	etc.	
Reach ID[89]	number of selected reaches[90]	1st reach ID	2nd reach ID	3rd reach ID	4th reach ID	5th reach ID	6th reach ID
	7th reach ID	8th reach ID	9th reach ID	10th reach ID	11th reach ID	etc.	

PESTICIDE APPLICATION DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Pesticide Application Data:				Number Pesticide Applications			
Pesticide Application ID	Pesticide ID						
	Pesticide Rate	Pesticide Depth	Pesticide Mixing code	Pesticide Foliage Fraction	Pesticide Soil Fraction		

[81] Field pond ID keyword (columns 1-10)–if record is not present, AnnAGNPS includes all of the field ponds in any requested field pond output files.
[82] Default is the global field pond field; if any field ponds are selected, then only the field ponds selected, in numeric & then alphabetic order, will be included in any of the requested field pond output files.
[83] Gully ID keyword (columns 3-10)–if record is not present, AnnAGNPS includes all of the gullies in any requested gully output files.
[84] Default is the gully global field; if any gullies are selected, then only the gullies selected, in numeric & then alphabetic order, will be included in any of the requested gully output files.
[85] Impoundment ID keyword (columns 3-10)–if record is not present, AnnAGNPS includes all of the impoundments in any requested impoundment output files.
[86] Default is the impoundment global field; if any impoundments are selected, then only the impoundments selected, in numeric & then alphabetic order, will be included in any of the requested impoundment output files.
[87] Point source ID keyword (columns 2-10)–if record is not present, AnnAGNPS includes all of the point sources in any requested point source output files.
[88] Default is the global point source field; if any point sources are selected, then only the point sources selected, in numeric & then alphabetic order, will be included in any of the requested point source output files.
[89] Reach ID keyword (columns 3-10)–if record is not present, AnnAGNPS includes only the outlet.
[90] Default is only the outlet; if any reaches are selected, then all of the reaches selected, in numeric & then alphabetic order, will be included with the outlet in all output files.

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8

PESTICIDE REFERENCE DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Pesticide Reference Data:				Number Pesticide References			
Pesticide Reference ID				Pesticide Solubility	Pesticide Partition	Pesticide Soil Half-life	Pesticide Foliage Half-life
	Pesticide Washoff	Metabolite ID				Pesticide Reach Half-life	

POINT SOURCE DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Point Source Data:				Number Point Sources			
Point Source ID	Point Celll ID	Point Flow	Point Nitrogen	Point Phosphorus	Point Organic Carbon		

REACH DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Reach Data:				Number Reaches			
Reach ID	Receiving Reach ID	Reach Vegetation code	Reach Elevation	Reach Slope	Reach Manning's n	Reach Infiltration Rate	
	Reach Channel Geometry ID	Reach Length	Reach Top Width	Reach Flow Depth	Valley Width	Valley Manning's n	
	Start Diversion	Stop Diversion		Reach Scour codes	Valley Scour codes	Reach Impoundment ID	

REACH GEOMETRY COEFFICIENTS

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Reach Geometry Coefficients:				Number Reaches Geometry Sets			
Reach Geometry ID	Geometry Length Coefficient	Geometry Length Exponent	Geometry Width Coefficient	Geometry Width Exponent	Geometry Depth Coefficient	Geometry Depth Exponent	
	Valley Width Coefficient	Valley Width Exponent					

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8

REACH NUTRIENT HALF-LIFE

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Reach Nutrient Half-life:							
	Reach Nitrogen Half-life	Reach Phosphorus Half-life	Reach Organic Carbon Half-life				

RUNOFF CURVE NUMBER DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Runoff Curve Number Data:				Number Curve Numbers			
Curve Number ID				Residue Adjustment code	Curve Numbers (by Hydrologic Soil Group)		

SIMULATION PERIOD DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Simulation Period Data:				Number Initial Pesticides			
Simulation Begin Date	Simulation End Date	Watershed storm type no.	Rainfall factor	10-yr EI	EI Number	Irrigation Climate code	Soil Moisture steps
Erosion Model code	Annual K-factor code	Variable K-factor code	Number Initialization Years	Initialization Method Code	Precipitation Nitrogen	Daily Precipitation	Default Reach Geometry
	EI PCT:	EI Percentage	EI Percentage	EI Percentage	EI Percentage	EI Percentage	EI Percentage
		EI Percentage	EI Percentage	EI Percentage	EI Percentage	EI Percentage	EI Percentage
		EI Percentage	EI Percentage	EI Percentage	EI Percentage	EI Percentage	EI Percentage
		EI Percentage	EI Percentage	EI Percentage	EI Percentage	EI Percentage	EI Percentage
	Cropland:	Crop Initial Inorganic N (Soil Layer 1)	Crop Initial Inorganic N (Soil Layer 2)	Crop Initial Inorganic P (Soil Layer 1)	Crop Initial Inorganic P (Soil Layer 2)	Crop Initial Soil Moisture (Soil Layer 1)	Crop Initial Soil Moisture (Soil Layer 2)
		Crop Initial Organic Matter (Soil Layer 1)	Crop Initial Organic Matter (Soil Layer 2)	Crop Initial Organic N (Soil Layer 1)	Crop Initial Organic N (Soil Layer 2)	Crop Initial Organic P (Soil Layer 1)	Crop Initial Organic P (Soil Layer 2)
		Crop Initial Biomass	Crop Initial CN II	Crop Initial Manning's "n"	Crop Initial Snow Depth	Crop Initial Snow Density	Crop Initial Surface Constant

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
	Non-crop:	Non-crop Initial Inorganic N (Soil Layer 1)	Non-crop Initial Inorganic N (Soil Layer 2)	Non-crop Initial Inorganic P (Soil Layer 1)	Non-crop Initial Inorganic P (Soil Layer 2)	Non-crop Initial Soil Moisture (Soil Layer 1)	Non-crop Initial Soil Moisture (Soil Layer 2)
		Non-crop Initial Organic Matter (Soil Layer 1)	Non-crop Initial Organic Matter (Soil Layer 2)	Non-crop Initial Organic N (Soil Layer 1)	Non-crop Initial Organic N (Soil Layer 2)	Non-crop Initial Organic P (Soil Layer 1)	Non-crop Initial Organic P (Soil Layer 2)
		Non-crop Initial Biomass	Non-crop Initial CN II	Non-crop Initial Manning's n	Non-crop Initial Snow Depth	Non-crop Initial Snow Density	Non-crop Initial Surface Constant
Initial Pesticide ID				Crop Initial Pesticide Amount (Soil Layer 1)	Crop Initial Pesticide Amount (Soil Layer 2)	Non-crop Initial Pesticide Amount (Soil Layer 1)	Non-crop Initial Pesticide Amount (Soil Layer 2)

SOIL DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Soil Data:				Number Soils	Number Soils Layers		
Soil ID	Hydrologic Soil Group	K-factor	Albedo	Time to Consolidation	Impervious Depth	Specific Gravity	
Soil Name				Soil Texture			
	Layer Depth	Bulk Density	Clay Ratio	Sand Ratio	Silt Ratio	Rock Ratio	Fine Sand Ratio
	$CaCO_3$	Saturated Conductivity	Field Capacity	Wilting Point	Volcanic code	Base Saturation	Unstable Aggregate Ratio
	pH	Organic Matter Ratio	Organic N Ratio	Inorganic N Ratio	Organic P Ratio	Inorganic P Ratio	Soil Structure code

STRIP CROP DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Strip Crop Data:				Number Strip Crop			
Strip Crop ID	Cover code	Strip Distance					

TILE DRAIN DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Tile Drain Data:				Number Tile Drains			
Tile Drain ID	Drain Rate	Drain Spacing	Drain Depth	Drain Diameter			

WATERSHED DATA

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Watershed Data:							
Watershed Name							
Watershed Description							
Watershed Location						Latitude	Longitude

WINTER DATES

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8
Winter Dates:				Number Bouts			
	Begin Date		End Date	Use Code			

Daily Climate Data

The daily climate data is in a separate file from other input for AnnAGNPS. The name for this daily climate file is optionally specified in the AnnAGNPS input filenames file or defaults to "DayClim.inp"

All data must be complete and have continuous daily record. Data can be from an actual weather station, a combination of weather stations, synthetically generated data, or a composite of weather stations & synthetically generated data. Note: Longitude, latitude, & wind direction are expressed in decimal degree units—not degrees & minutes for units.

Input Parameter Definition

Required AnnAGNPS mode only

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Climate Station Name—Alphanumeric string identifying the representative climate station name & identification		allowable Fortran characters	A80	1	1
Station Latitude—Representative climate station latitude.	^{O}lat	-90. to 90.	F10	2	1
Station Longitude—Representative climate station longitude.	^{O}long	-180. to 180.	F10	2	2
Station Elevation—Representative climate station elevation.	{ft} [m]	{-1500.0 to 30000.0} [-500.0 to 10000.0]	F10	2	3
Temperature Change—Air temperature change with respect to representative climate station elevation. Default is a decrease of 2°F for every 1000 ft increase in elevation (-0.002 °F/ft.).	{°F / ft} [^{o}C / m]	Blank or {-0.002 to 0.002} [-0.0032 to 0.0032]	F10	2	4
Precipitation Nitrogen—Nitrogen concentration in precipitation. Blank defaults to 0.0.	mass-N / mass-precip (dimensionless)	Blank or 0.0 to 10.0	F10	2	5
Climate Input Units code—Code for climate input in English or SI units: 0 = English, 1 = SI (Blank indicates 0)		Blank, 0 or 1	I10	2	6
Winter Season Storm Type—Storm type during winter months (Dec-Feb) indicating one of the preset synthetic or user requested storm types to use with pre-calculated solutions using extended TR-55: Acceptable values are: blank which defaults to watershed storm type, 1=I, 2=Ia, 3=II, 4=III, 5=Uniform, 6 =IIA-60, 7=IIA-65, 8=IIA-70, 9=IIA, 10=II(DMV). 11=III(DMV); other numbers between 12 & 20 require user input for both the rainfall distribution & unit peak discharge regression coefficients.		Blank, 1 to 11 for synthetic storm types, or 12 to 20 for user requested input.,	I5	2	7a
Spring Season Storm Type—Storm type during spring months (Mar-May) indicating one of the preset synthetic or user requested storm types to use with pre-calculated solutions using extended TR-55: Acceptable values are: blank which defaults to watershed storm type, 1=I, 2=Ia, 3=II, 4=III, 5=Uniform, 6 =IIA-60, 7=IIA-65, 8=IIA-70, 9=IIA, 10=II(DMV). 11=III(DMV); other numbers between 12 & 20 require user input for both the rainfall distribution & unit peak discharge regression coefficients.		Blank, 1 to 11 for synthetic storm types, or 12 to 20 for user requested input.,	I5	2	7b
Summer Season Storm Type—Storm type during summer months (Jun-Aug) indicating one of the preset synthetic or user requested storm types to use with pre-calculated solutions using extended TR-55: Acceptable values are: blank which defaults to watershed storm type, 1=I, 2=Ia, 3=II, 4=III, 5=Uniform, 6 =IIA-60, 7=IIA-65, 8=IIA-70, 9=IIA, 10=II(DMV). 11=III(DMV); other numbers between 12 & 20 require user input for both the rainfall distribution & unit peak discharge regression coefficients.		Blank, 1 to 11 for synthetic storm types, or 12 to 20 for user requested input.,	I5	2	8a
Fall Season Storm Type—Storm type during fall months (Sep-Nov)) indicating one of the preset synthetic or user requested storm types to use with pre-calculated solutions using extended TR-55: Acceptable values are: blank which defaults to watershed storm type, 1=I, 2=Ia, 3=II, 4=III, 5=Uniform, 6 =IIA-60, 7=IIA-65, 8=IIA-70, 9=IIA, 10=II(DMV). 11=III(DMV); other numbers between 12 & 20 require user input for both the rainfall distribution & unit peak discharge regression coefficients.		Blank, 1 to 11 for synthetic storm types, or 12 to 20 for user requested input.,	I5	2	8b

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Climate Begin Date—Beginning month, day, & year for the weather data. Year can be specified as calendar years (e.g., 1960) or as simulation year which must be year 1.	mm/dd/yyyy	mm—1 to 12 dd—1 to 31 yyyy—1 to 9999	A10	3	1
Elevation Difference (1)—1st elevation with respect to representative climate station elevation for rainfall correction relationship. Paired with 1st spatial rainfall factor. Default is no change from representative station rainfall. Blank may be entered if no variation of precipitation with elevation is desired. If blank, then Elevation Rain Factor (1), Elevation Difference (2), and Elevation Rain Factor (2) must also be blank.	{feet} [m]	Blank, or {-1500.0 to 30000.0} [-500.0 to 10000.0	F10	3	2
Elevation Rain Factor (1)—1st average annual rainfall factor with respect to representative climate station precipitation for rainfall correction relationship. Paired with 1st spatial rainfall elevation. Blank may be entered if no variation of precipitation with elevation is desired. If blank, then Elevation Difference (1), Elevation Difference (2), and Elevation Rain Factor (2) must also be blank.	Depth-annual precip at 1st elev/ depth-annual precip at station (dimensionless)	Blank, or 0.00001 to 10.0	F10	3	3
Elevation Difference (2)—2nd elevation with respect to representative climate station elevation for rainfall correction relationship. Paired with 2nd spatial rainfall factor. Blank may be entered if no variation of precipitation with elevation is desired. If blank, then Elevation Difference (1), Elevation Rain Factor (1), and Elevation Rain Factor (2) must also be blank.	{feet} [m]	Blank, or {-1500.0 to 30000.0} [-500.0 to 10000.0	F10	3	4
Elevation Rain Factor (2)—2nd average annual rainfall factor with respect to representative climate station precipitation for rainfall correction relationship. Paired with 2nd spatial rainfall elevation. Blank may be entered if no variation of precipitation with elevation is desired. If blank, then Elevation Difference (1), Elevation Rain Factor (1), and Elevation Difference (2) must also be blank.	Depth-annual precip at 2nd elev/ depth-annual precip at station (dimensionless)	Blank, or 0.00001 to 10.0	F10	3	5
2 Yr 24 Hr Precipitation— Maximum 24 hour precipitation that is expected during a two year period	{in} [mm]	{0.04 to 12.0} [1.0 to 305.0]	F10	3	6
Climate End Date—Ending month, day, & year for the weather data. Year can be specified as calendar years (e.g., 1960) or as simulation year which must be the total number of years for the simulation.	mm/dd/yyyy	mm—1 to 12 dd—1 to 31 yyyy—1 to 9999	A10	4	1
Leap Year Offset—Year of first leap year when using simulation years. Use 0 for historical data. Blank defaults to 4.		Blank, or 0 to 4	I10	4	2
The following line is repeated for each day of the climate record.					
Daily Climate Date—Month, day, & year for the weather data for the day specified. Years can be specified as calendar years (e.g., 1960) or as simulation years which must begin with year 1.	mm/dd/yyyy	mm—1 to 12 dd—1 to 31 yyyy—1 to 9999	A10	5	1
Daily Max Temperature—Maximum air temperature for the day specified.	{°F} [°C]	{-100.0 to 150.0} [-75.0 to 65.0]	F10	5	2
Daily Min Temperature—Minimum air temperature for the day specified.	{°F} [°C]	{-100.0 to 150.0} [-75.0 to 65.0]	F10	5	3
Daily Precipitation—Total precipitation for the day specified.	{in} [mm]	{0.0 to 30.0} [0.0 to 750.]	F10	5	4
Daily Dew Point Temperature—24-hour average dew point temperature for the day specified.	{°F} [°C]	{-100.0 to 150.0} [-75.0 to 65.0]	F10	5	5
Daily Sky Cover—24-hour average total opaque sky cover for the day specified.	%	0.0 to 100.0	F10	5	6
Daily Wind Speed—24-hour average wind speed for the day specified.	{mph} [m / sec]	{0.0 to 200.0} [0.0 to 90.0]	F10	5	7
Daily Wind Direction—24-hour average wind direction for the day specified. Measured clockwise degrees from north.	Decimal °	0.0 to 360.0	F10	5	8
Daily Solar Radiation at Ground Level—solar radiation at ground surface.	(??/sec/ac) [J/sec/m^2]	0.0 to 360.0	F10	5	9

Description	Units {English} [SI]	Domain {English} [SI]	Format	Line No.	Field No.
Daily Storm Type—Storm for this day indicating one of the preset synthetic or user requested storm types to use with pre-calculated solutions using extended TR-55: Acceptable values are: blank which defaults to seasonal storm type, 1=I, 2=Ia, 3=II, 4=III, 5=Uniform, 6 =IIA-60, 7=IIA-65, 8=IIA-70, 9=IIA; other numbers between 12 & 20 require user input for both the rainfall distribution & unit peak discharge regression coefficients.		Blank, 1 to 11 for synthetic storm types, or 12 to 20 for user requested input.,	I5	5	10a

Climate Input File Layout Matrix

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8	Data Field 9	Data Field 10
Col. 1-10	Col. 11-20	Col. 21-30	Col. 31-40	Col. 41-50	Col. 51-60	Col. 61-70	Col. 71-80	Col. 81-90	Col. 91-95
Climate Station Name									
Station Latitude	Station Longitude	Station Elevation	Temperature Change	Precipitation Nitrogen	Climate Input Units code	Winter & Spring Storm Type	Summer & Fall storm Type		
Climate Begin Date	1st Elevation Difference	1st Elevation Rain Factor	2nd Elevation Difference	2nd Elevation Rain Factor	2 Yr 24 Hr Precipitation				
Climate End Date									
Daily Climate Data	Maximum air temperature	Minimum air temperature	Precipitation	Dew point temperature	Sky cover (also called cloud cover)	Wind speed	Wind direction	Solar radiation at ground level	Storm type no.

Storm Type Data

The storm type data is in a separate file from other input for AnnAGNPS. The name for this storm type file is optionally specified in the AnnAGNPS input filenames file or defaults to "Storm_Type.inp"

All data must be complete and is rifidly formatted. Data can be from an actual storm patterns, a combination of patterns, synthetically generated patterns, or a composite of actual patterns & synthetically generated data..

Input Parameter Definition

Description	Units	Domain	Format	Line No.	Field No.
The following line is for the storm type and is repeated for each.					
Storm Type Data Section Name—Hard coded section ID insensitive to upper / lower case letters (left justified) and is repeated for each storm type to be entered..		**"STORM TYPE DATA:"**	A20	1	1
StormType No.—Unique storm type number.		1 to 20	I5	1	2
StormType Name—Storm type name; used for information only.		1 to 20	A75	1	3
The following lines are for the the rainfall distribution for the storm type as specified above.					
Rainfall Distribution—Keyword to indicate that the following data is the rainfall distribution for the specified storm type.		"RAINFALL DISTRIBUTION:"	A40	2	1
Rainfall Distribution Information—indicates that the storm duration must be for a 24-hour period and the time intervals are a constant 0.100 hour.		alphanumeric string		2	2
Fractional time line—descriptive line only, not used internally except as sequencial read check; indicates the hour fraction.		alphanumeric string	A93	3	1
Time Hour—indicates the hour interval for the rainfall amounts.		0-24	A4	4-28	1
Accumulative Rainfall Amount—Monotonically increasing accumulative rainfall amount expressed as the ratio of rainfall at time t_i to the total 24-hr rainfall.	(mm-$t_{i)}$ / (mm-t_{24})	0.0 – 1.0	F9	4-28	2-10
The following lines are for the the unit peak discharge regression coefficients for the storm type as specified above.					
Unit Peak Discharge Regression Coefficient—keyword to indicate that the following data are the regression coefficients for the specified storm type. The regression coefficients must be exactly for a rational polynominal with a 2nd-degree numerator and a 3rd-degree denominator.		"UNIT PEAK DISCHARGE REGRESSION COEFFICIE"	A40	29	1
Descriptive Information—completion of keyword sentence for readability.		"NTS: for qup [mm/hr] & tc [hr]"	A30	29	2
Regression Equation—description of regression equation used within AnnAGNPS; used for sequential read check.		alphanumeric string	A95	30	1
Regression Coefficient ID—indicates coefficient as shown in the regression equation.		alphanumeric string	A95	31	1
Ia/P Value—Value of initial abstraction divided by 24-hour precipitation (Ia/P) for the specified regression.		"Ia/P"	A5	32-51	1
Regression Coefficients—actual regression coefficient indicated by the regression coefficient ID as used in the regression equation.		-∞ to +∞	E15	32-51	2-7
Blank Line				52	1
Additional storm types may be included by repeating the above starting with Storm Type Data Section Name (line 1) and completely duplicating lines 1 through the blank line (line 52).					
End Data—End of file terminator		"END DATA:"	A40	last	1

Storm Type Input File Layout Matrix

Data Field 1	Data Field 2	Data Field 3
Col. 1-20	Col. 21-25	Col. 26-95
STORM TYPE DATA:	Storm Type No.	Storm Type Name

Data Field 1	Data Field 2
Col. 1-40	Col. 31-95
RAINFALL DISTRIBUTION:	DURATION = 24 [hr], TIME INCREMENT = 0.100 [hr]

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data Field 7	Data Field 8	Data Field 9	Data Field 10	
Col. 1-4	Col. 4-12	Col. 13-21	Col. 22-30	Col. 31-39	Col. 40-48	Col. 49-57	Col. 58-66	Col. 67-75	Col. 76-84	
Time	.0	.1	.2	.3	.4	.5	.6	.7	.8	
0	amount at $t_{0.0}$=0.0	amount at t=0.1	amount at t=0.2	amount at t=0.3	amount at t=0.4	amount at t=0.5	amount at t=0.6	amount at t=0.7	amount at t=0.8	amo
1	amount at t=1.0	amount at t=1.1	amount at t=1.2	amount at t=1.3	amount at t=1.4	amount at t=1.5	amount at t=1.6	amount at t=1.7	amount at t=1.8	amo
t_i. . .	amount at t_i	amount at t_i	amount at t_i	amount at t_i	amount at t_i	amount at t_i	amount at t_i	amount at t_i	amount at t_i	amo
23	amount at $t_{23.0}$	amount at $t_{23.1}$	amount at $t_{23.2}$	amount at $t_{23.3}$	amount at $t_{23.4}$	amount at $t_{23.5}$	amount at $t_{23.6}$	amount at $t_{23.7}$	amount at $t_{23.8}$	amo
24	amount at $t_{24.0}$=1.0									

Data Field 1	Data Field 2
Col. 1-40	Col. 41-95
UNIT PEAK DISCHARGE REGRESSION COEFFICIE	NTS: for qup [mm/hr] & tc [hr]

Data Field 1
Col. 1-95
qup = {a+[c*tc]+[e*(tc**2)]}/{1+[b*tc]+[d*(tc**2)]+[f*(tc**3)]}

Data Field 1	Data Field 2	Data Field 3	Data Field 4	Data Field 5	Data Field 6	Data F
Col. 1-5	Col. 6-20	Col. 21-35	Col. 36-50	Col. 51-65	Col. 66-80	Col. 8
Ia/P	co(1)=a	co(2)=b	co(3)=c	co(4)=d	co(5)=e	co(6)=
0.00	Coefficient “a” for Ia/P=0.00	Coefficient “b” for Ia/P=0.00	Coefficient “c” for Ia/P=0.00	Coefficient “d” for Ia/P=0.00	Coefficient “e” for Ia/P=0.00	Coefficient “f
0.05	Coefficient “a” for Ia/P=0.05	Coefficient “b” for Ia/P=0.05	Coefficient “c” for Ia/P=0.05	Coefficient “d” for Ia/P=0.05	Coefficient “e” for Ia/P=0.05	Coefficient “f
Ia/P=0.10 . .	Coefficient “a” for Ia/P=0.10 . .	Coefficient “b” for Ia/P=0.10 . .	Coefficient “c” for Ia/P=0.10 . .	Coefficient “d” for Ia/P=0.10 . .	Coefficient “e” for Ia/P=0.10 . .	Coefficient “f
Ia/P=0.95	Coefficient “a” for Ia/P=0.95	Coefficient “b” for Ia/P=0.95	Coefficient “c” for Ia/P=0.95	Coefficient “d” for Ia/P=0.95	Coefficient “e” for Ia/P=0.95	Coefficient “f
Blank line						

.
.
.

Data Field 1	Data Field 2
Col. 1-40	Col. 31-95
END DATA:	

Appendix A: Output Files

The output for AnnAGNPS has been entirely redesigned. This requires that the Editor be redesigned also. The versions 1 & 2 four output-related Editor menus–"(1) Global Output Specifications"; (2) "Reach Output Specifications"; (3) "Source Accounting Output Specification"; and (4) Verification Data—will be eliminated and a single, well-structured "Output Options" menu with a set of submenus will be its replacement, and more.

Versions 1 & 2 Output-Related Options

Although the original four output-related data sections (five counting the "out-of-pocket" CONCEPTS output file request in the Watershed Data section) will remain within AnnAGNPS for an indefinite time; however, no further coding support will be provided for them. In fact, if any part of the new output options feature is activated by input, AnnAGNPS will ignore entirely any of the versions 1 & 2 output-related data sections during execution. In short, if the new "Output Options Data:" section is activated, then only the logic associated with the new output options will be used during execution.

The older versions of the output-related sections were very difficult to use and the various verification output data were all forced into the same file which made them almost unusable except when only an individual verification file was requested; and they did not always activate as indicted by the Editor. (This latter was due to the uncontrolled manner of the individual programmers in creating verification output.)

The first step for this new version of the Editor is to hide the four old menus ("Global Output Specifications", "Reach Output Specifications", "Source Output Specifications", & "Verification Data") and the CONCEPTS output request from the Watershed Data section for the original output-related Editor specifications from visibly showing on the screen but keep their associated, internal logic so that these old output request data sections will continue to be activated until the user activates the new output options menu with a save command.

Note: The version 1 & 2 CONCEPTS output is actually output for "CCHE1D" and will be so titled in version 3 output.

New Output File Structure

All current & future output will be under positive control of the user through a new, single data section (Output Options Data) that has been added to the watershed input file (AnnAGNPS.inp) and, therefore, will be accessible through the Editor and even a text editor if desired. A single Editor menu with drop-down menus will replace the previous complex, confusing, & clumsy versions 1 & 2 output-related options.

The new data section will be called: "Output Options Data:". It will include drop-down menus as appropriate for ease of use. Common sense, AnnAGNPS-consistent defaults will be implemented in all blank fields.

There are provisions for three file categories with a total of five different file extensions: (1) 70 potential standardized formatted files (*.csv) that are meant to be read by ArcView and database managers; (2) three subsets of verification files of 70 potential files each—input (*.npt), preparation (*.dpp), & simulation (*.sim); and (3) 140 potential formatted, user-friendly, easily readable text files (*.txt) designed to be used with text editors or MSWORD. Several of the output files in all three categories are already activated while several file positions are reserved in each and any of their subsets. However, some of the verification files are not well formatted and are difficult to interpret.

All output will be under user control according to typical AnnAGNPS global & local true (T), false (F), or blank fields.

DATABASE, TEXT, & VERIFICATION FILES

All output files are ASCII formatted. Some are meant to be used with database managers and use a standard comma separated variable format (*.csv). Others are heavily formatted with column headings, page & line counters and are meant to be viewed and interpreted using either MSWORD or a text editor (*.txt). Some are meant for the program coders and scientist to verify and analysis internal calculations for purposes of verification & validation (*.dpp, *.npt, & *.sim). Some of the output restrictions have certain rules and all have defaults.

The user will be able to restrict loadings—water, sediment, nutrients, & pesticides—in the verification and formatted text files. Further restrictions will be allowed to reduce the cell/reach(s) included in these output files. This will be done by allowing the user to explicitly indicate which: (1) reaches, in addition to the "outlet", will be included as a reference location for source accounting; (2) cells will be included, but the default will be all cells; (3) subareas will be included for those cell/reach IDs that are all numeric such as created by TopAGNPS'; (4) event outputs will be included by specifying a minimum/maximum dates that the event must fall

within to be included in the event output; and (5) the minimum event runoff at the outlet before this particular event is included in any event output.

REACH RULES

The reach default is for only the outlet to be included in the output files. If additional reaches are indicated, they will be in included along with the outlet which will always be included.

CELL RULES

The cell default is for all cells to be included in the output files. However, if even only one cell is explicitly indicted, then only those cells indicated will be included; i.e., non-indicated cells will not appear in any of the output files.

SUBAREA RULES

The subarea default is for all subareas to be included in the formatted & verification output files. The subarea restriction is by a minimum & maximum integer subarea ID. Any integer subarea IDs that are included within the minimum to maximum integer number, and any non-numeric IDs, will be included in the output files. A further detail is that for integer cell/reach IDs within any included subarea only, the subarea output can be restricted to include only source cells, left bank cells, right bank cells, or reaches. That is, the subarea output can be restricted to eliminate integer subareas outside of the min/max integer specification and, unless the default is left active, all cells & reaches within the specified integer subareas not specifically requested.

MINIMUM/MAXIMUM EVENT DATE RULES

The minimum/maximum event date default is for all events between the entire simulation period.

MINIMUM EVENT RUNOFF RULES

The minimum event runoff default is ¼ inch at the outlet.

DATABASE (*.CSV) FILES

Standard-formatted database (*.csv) files will contain complete input and all output-generated event-related erosion, yield, & instream loading cell/reach data because the database manager(s) used will have their own macros to perform arithmetical operations, extract, & produce hard copies for reports and subsidiary files that will be used with other software such as ArcView.

TEXT (*.TXT) FILES

Text (*.txt) files are old-fashion designed tables that have been hard-coded in Fortran with fixed formats that show column & row headings & dimension units associated with the output statistics. These files contain output of interest to the normal, non-model development user who is performing the analyses. They are designed to be easily read and viewed by text editors and/or MSWORD.

VERIFICATION (*.DPP, *.NPT, & *.SIM) FILES

Verification files (*.dpp, *.npt, & *.sim) are designed to be used by scientists and programmers to verify & validation the model. These files may also be used to calibrate the input.

Not all processes are available to verify the simulation output yet and the ease of reading any particular currently available verification file varies depending upon the effort of the original coder and any modifications subsequently made. The specific format within any one verification file may change as needs require.

Output File Names & Indices

The file names follow a formal, consistent convention to ensure a logical listing order in their directory. Every output file from AnnAGNPS begins with the "AnnAGNPS" and followed by their type of output grouping—database, formatted, input, preparation, & simulation. The extensions indicate their function. The "*.csv" files are designed to be used as standard database files that can be read by most database managers & also ArcView. The "*.txt" files are for user-friendly, hard copy, output tables that are to be read by text editors and/or MSWORD. The verification files are designed to be used by the more experienced users (usually program developers—scientists and/or programmers) to analyze internal calculations and can be read by text editors. These files can also be used to calibrate input.

Some large datasets can exceed the ability of 32-bit operating systems to complete certain verification files and have an internal fail-safe control that limits access to writing the file.