Biological Variables by Spreadsheet Template

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The biological spreadsheets are organized in columns; this differs from the flux-met templates which are organized in rows. Each spreadsheet contains a brief header followed by one or more data columns. The header includes information identifying the site, investigator, and submission date.

When multiple measurements of the same variable are made, the data are reported in consecutive columns.An example of this is LAI. A single LAI measurement includes entries in the LAI<n>, LAI<n>_DATE, LAI<n>_CLUMP, LAI<n>_TECHNIQUE, and LAI<n>_COMMENT rows. The first measurement is reported in the fourth column (first empty cells) of the submission spreadsheet. The second measurement is reported in the fifth column (next empty cells) and so on.

When submitting data for multiple years, a new BioData sheet should be used for each measurement year.

	Row Text	Units	Explanation
Header			
	SiteID:		FLUXNET six character site identifier. IDs are of the form CC-SSS where CC is the country code (e.g., US, CA, or BR).
	Sitename:		Site name. The site name should be consistent with the one on the AmeriFlux web site. Note that the site name cannot contain any commas.
	Email:		E-mail contact of submitter. The e-mail contact need not be the principal investigator, nor is the e-mail contact expected to be able to answer questions on all subject matters. The e-mail contact can forward questions as appropriate to ensure that questions can be resolved.
	Created:		File creation date. Spreadsheet creation date.
Site Biological Ancillary Data (SiteBioAncData)			
	The site ancillary biological data spreadsheet contains rarely changing site characteristics. This spreadsheet is organized in four columns: variable name, description, units, and entered data.		
	LAND_OWN		Land ownership type. Land ownership code.
	LAND_OWNER		Land owner. If public, name agency (Forest Service, Bureau of Land Management, etc.). If private, name owner if available.
	SITE_DESC		Site description. General information about the site. Use SITE_DESC_HISTORY and/or SITE_DESC_FETCH to report the site history and/or fetch.
	IGBP		Vegetation type. IGBP classification.

	Row Text	Units	Explanation
	IGBP_COMMENT		Vegetation type comments.
Disturbance Data (DisturbanceData)			
	The site disturbance data spreadsheet contains rarely changing site characteristics. This spreadsheet is organized in three or more columns: variable name, description, and entered data. Each new disturbance is entered into a new column		
	DIST\<n\>		Site disturbance history code. Each disturbance code may have up to 3 code-specific qualifiers indicating attributes such as type, depth, percent, or application method.
	DIST\<n\>_QUAL1		Site disturbance code qualifier.
	DIST\<n\>_QUAL2		Site disturbance code qualifier.
	DIST\<n\>_QUAL3		Site disturbance code qualifier.
	DIST\<n\>_DATE		Date of site disturbance.
	DIST\<n\>_DATE_QUAL		Date of site disturbance qualifier.
	DIST\<n\>_COMMENT		Disturbance comments.
Biological Data (AncBio)			
	The biological data spreadsheet is used to submit periodically sampled biological variables. These variables may be annual averages, annually sampled, or sampled multiple times during the year. This spreadsheet is organized in four or more columns: variable name, description, units, and entered data. Each repeated sample is entered into the next consecutive column.		
	ASA	years	Average stand age. Years.
	ASA_SIGMA	years	ASA error estimate. Plot variability of ASA expressed as standard deviation. If estimated rather than computed, the ASA_COMMENT field should indicate the estimation method.
	ASA_DATE	YYYY	Mean stand age measurement year.
	ASA_COMMENT		Mean stand age comments.
	MSA	years	Maximum stand age. Calculated as the mean age of the oldest 10% of trees.
	MSA_SIGMA	years	MSA error estimate. Plot variability of MSA expressed as standard deviation. If estimated rather than computed, the MSA_COMMENT field should indicate the estimation method.
	MSA_DATE	YYYY	Maximum stand age measurement year.
	MSA_COMMENT		Maximum stand age comments.
	SPP_O\<n\>		Overstory dominant species.
	SPP_O\<n\>_PERC	%	Overstory dominant species percent. Percent of overstory (tree stems) that SPP_O\<n\> represents. The reported SPP_O\<n\>_PERC values should sum to no more than 100% and at least 50%.
	SPP_O\<n\>_PERC_SIGMA	%	SPP_O\<n\>_PERC error estimate. Plot variability of SPP_O\<n\>_PERC expressed as standard deviation. If estimated rather than computed, the SPP_COMMENT field should indicate the estimation method.
	SPP_U\<n\>		Understory dominant species.

	Row Text	Units	Explanation
	SPP_U\<n>_PERC	%	Understory dominant species percent. Percent of understory that SPP_U\<n> represents. The reported SPP_U\<n>_PERC values should sum to no more than 100% and at least 50%.
	SPP_U\<n>_PERC_SIGMA	%	SPP_U\<n>_PERC error estimate. Plot variability of SPP_U\<n>_PERC expressed as standard deviation. If estimated rather than computed, the SPP_COMMENT field should indicate the estimation method.
	SPP_DATE	DOY/YYYY	Dominant species measurement date.
	SPP_COMMENT		Dominant species comments.
	LAI_DO\<n>	m2/m2	Deciduous overstory Leaf Area Index. Averaged over the tower footprint. Calculated as m2 half-surface area leaf per m2 ground. Report deciduous green leaf LAI and not total leaf LAI. If measured multiple times during the year, the associated LAI_DATE, LAI_CLUMP, LAI_TECHNIQUE, and LAI_COMMENT for each measurement are entered into consecutive columns.
	LAI_DO\<n>_SIGMA	m2/m2	LAI_DO\<n> error estimate. Plot variability of LAI_DO\<n> expressed as standard deviation. If estimated rather than computed, the LAI\<n>_COMMENT field should indicate the estimation method.
	LAI_EO\<n>	m2/m2	Evergreen overstory Leaf Area Index. Averaged over the tower footprint. Calculated as m2 half-surface area leaf per m2 ground. Report evergreen leaf LAI and not total leaf LAI. If measured multiple times during the year, the associated LAI_DATE, LAI_CLUMP, LAI_TECHNIQUE, and LAI_COMMENT for each measurement are entered into consecutive columns.
	LAI_EO\<n>_SIGMA	m2/m2	LAI_EO\<n> error estimate. Plot variability of LAI_EO\<n> expressed as standard deviation. If estimated rather than computed, the LAI\<n>_COMMENT field should indicate the estimation method.
	LAI_U\<n>	m2/m2	Understory Leaf Area Index. Averaged over the tower footprint. Calculated as m2 half-surface area leaf per m2 ground. Report understory green leaf LAI and not total leaf LAI. If measured multiple times during the year, the associated LAI_DATE, LAI_CLUMP, LAI_TECHNIQUE, and LAI_COMMENT for each measurement are entered into consecutive columns.
	LAI_U\<n>_SIGMA	m2/m2	LAI_U\<n> error estimate. Plot variability of LAI_U\<n> expressed as standard deviation. If estimated rather than computed, the LAI\<n>_COMMENT field should indicate the estimation method.
	LAI\<n>	m2/m2	Leaf Area Index. Averaged over the tower footprint. Calculated as m2 half-surface area leaf per m2 ground. Report green leaf LAI and not total leaf LAI. If measured multiple times during the year, the LAI, LAI_CLUMP, and LAI_TECHNIQUE should be reported for each date.
	LAI\<n>_SIGMA	m2/m2	LAI\<n> error estimate. Plot variability of LAI\<n> expressed as standard deviation. If estimated rather than computed, the LAI\<n>_COMMENT field should indicate the estimation method.
	LAI\<n>_DATE	DOY/YYYY	Leaf Area Index measurement date.

		Row Text	Units	Explanation
		LAI\<n\>_CLUMP		Foliage element clumping index. Used to correct LAI-2000 optical data estimate of LAI\<n\>. Needle clumping within shoot for conifers. See Chen and Law protocols \<GET A WEB LINK\>.
		LAI\<n\>_TECHNIQUE		Leaf Area Index measurement technique. Sampling or measurement technique used for LAI\<n\>.
		LAI\<n\>_COMMENT		Leaf Area Index comments.
		HEIGHTC	m	Canopy height.
		HEIGHTC_SIGMA	m	HEIGHTC error estimate. Plot variability of HEIGHTC expressed as standard deviation. If estimated rather than computed, the HEIGHTC_COMMENT field should indicate the estimation method.
		HEIGHTC_DATE	DOY/YYYY	Mean canopy height measurement date.
		HEIGHTC_COMMENT		Mean canopy height comments.
		AG_BIOMASS_TF	gC/m2 (ground) /y	Aboveground biomass of tree foliage. Dry weight of live foliage. Grassland, crops, and tundra sites do not report this variable.
		AG_BIOMASS_TF_SIGMA	gC/m2 (ground) /y	AG_BIOMASS_TF error estimate. Plot variability of AG_BIOMASS_TF expressed as standard deviation. If estimated rather than computed, the AG_BIOMASS\<n\>_COMMENT field should indicate the estimation method.
		AG_BIOMASS_TW	gC/m2 (ground) /y	Aboveground biomass of tree wood. Dry weight of live stems and branches. Grassland, crops, and tundra sites do not report this variable.
		AG_BIOMASS_TW_SIGMA	gC/m2 (ground) /y	AG_BIOMASS_TW error estimate. Plot variability of AG_BIOMASS_TW expressed as standard deviation. If estimated rather than computed, the AG_BIOMASS\<n\>_COMMENT field should indicate the estimation method.
		AG_BIOMASS_TT	gC/m2 (ground) /y	Aboveground biomass trees total. Dry weight live foliage, stems, and branches. Grassland, crops, and tundra sites do not report this variable. Sites should report AG_BIOMASS_TT only if AG_BIOMASS_TF and AG_BIOMASS_TW cannot be separated.
		AG_BIOMASS_TT_SIGMA	gC/m2 (ground) /y	AG_BIOMASS_TT error estimate. Plot variability of AG_BIOMASS_TT expressed as standard deviation. If estimated rather than computed, the AG_BIOMASS\<n\>_COMMENT field should indicate the estimation method.
		AG_BIOMASS_SF	gC/m2 (ground) /y	Aboveground biomass of shrub foliage. Dry weight of live foliage.
		AG_BIOMASS_SF_SIGMA	gC/m2 (ground) /y	AG_BIOMASS_SF error estimate. Plot variability of AG_BIOMASS_SF expressed as standard deviation. If estimated rather than computed, the AG_BIOMASS\<n\>_COMMENT field should indicate the estimation method.
		AG_BIOMASS_SW	gC/m2 (ground) /y	Aboveground biomass of shrub wood. Dry weight of stems and branches.

		Row Text	Units	Explanation
		AG_BIOMASS_SW_SIGMA	gC/m2 (ground) /y	AG_BIOMASS_SW error estimate. Plot variability of AG_BIOMASS_SW expressed as standard deviation. If estimated rather than computed, the AG_BIOMASS<n>_COMMENT field should indicate the estimation method.
		AG_BIOMASS_ST	gC/m2 (ground) /y	Aboveground biomass of shrubs total. Dry weight of foliage, stems, and branches. Sites should report AG_BIOMASS_ST only if AG_BIOMASS_SF and AG_BIOMASS_SW cannot be separated.
		AG_BIOMASS_ST_SIGMA	gC/m2 (ground) /y	AG_BIOMASS_ST error estimate. Plot variability of AG_BIOMASS_ST expressed as standard deviation. If estimated rather than computed, the AG_BIOMASS<n>_COMMENT field should indicate the estimation method.
		AG_BIOMASS_NWT	gC/m2 (ground) /y	Aboveground biomass of non-woody plants. Dry weight of plants including plants and forbs. Grassland sites report the total above ground biomass. Forest sites report any non-woody plants.
		AG_BIOMASS_NWT_SIGMA	gC/m2 (ground) /y	AG_BIOMASS_NWT error estimate. Plot variability of AG_BIOMASS_NWT expressed as standard deviation. If estimated rather than computed, the AG_BIOMASS<n>_COMMENT field should indicate the estimation method.
		AG_BIOMASS_CF<n>	gC/m2 (ground)	Aboveground biomass of crops foliage. Dry weight of foliage. If measured multiple times during the year, the AG_BIOMASS CF and AG_BIOMASS_CH should be reported for each date.
		AG_BIOMASS_CF<n>_SIGMA	gC/m2 (ground) /y	AG_BIOMASS_CF<n> error estimate. Plot variability of AG_BIOMASS_CF<n> expressed as standard deviation. If estimated rather than computed, the AG_BIOMASS<n>_COMMENT field should indicate the estimation method.
		AG_BIOMASS_CH<n>	gC/m2 (ground)	Aboveground biomass of crops harvest. Dry weight of harvest materials such as fruit. If measured multiple times during the year, the AG_BIOMASS CF and AG_BIOMASS_CH should be reported for each date.
		AG_BIOMASS_CH<n>_SIGMA	gC/m2 (ground) /y	AG_BIOMASS_CH<n> error estimate. Plot variability of AG_BIOMASS_CH<n> expressed as standard deviation. If estimated rather than computed, the AG_BIOMASS<n>_COMMENT field should indicate the estimation method.
		AG_BIOMASS_CT<n>	gC/m2 (ground)	Aboveground biomass of crops total. Includes live foliage and harvest materials. Sites should report AG_BIOMASS_CT only if AG_BIOMASS_CF and AG_BIOMASS_CH cannot be separated.
		AG_BIOMASS_CT<n>_SIGMA	gC/m2 (ground) /y	AG_BIOMASS_CT<n> error estimate. Plot variability of AG_BIOMASS_CT<n> expressed as standard deviation. If estimated rather than computed, the AG_BIOMASS<n>_COMMENT field should indicate the estimation method.
		AG_BIOMASS<n>_DATE	DOY/YYYY	Aboveground biomass measurement date.
		AG_BIOMASS<n>_COMMENT		Aboveground biomass comments.

		Row Text	Units	Explanation
		LIT_MASS<n>	gC/m2 (ground)	Litter mass. Dry weight including litter and twigs < 1 cm diameter.
		LIT_MASS<n>_SIGMA	gC/m2 (ground)	LIT_MASS<n> error estimate. Plot variability of LIT_MASS<n> expressed as standard deviation. If estimated rather than computed, the LIT_MASS<n>_COMMENT field should indicate the estimation method.
		LIT_MASS<n>_DATE	DOY/YYYY	Litter mass measurement date.
		LIT_MASS<n>_COMMENT		Litter mass comments.
		CROP_RESID	gC/m2 (ground) /y	Crop residue. Dead mass dry weight.
		CROP_RESID_SIGMA	gC/m2 (ground) /y	CROP_RESID error estimate. Plot variability of CROP_RESID expressed as standard deviation. If estimated rather than computed, the CROP_RESID_COMMENT field should indicate the estimation method.
		CROP_RESID_DATE	DOY/YYYY	Crop residue measurement date.
		CROP_RESID_COMMENT		Crop residue comments.
		CWD	gC/m2 (ground)	Coarse woody debris. Includes debris with diameter > 10 cm.
		CWD_SIGMA	gC/m2 (ground)	CWD error estimate. Plot variability of CWD expressed as standard deviation. If estimated rather than computed, the CWD_COMMENT field should indicate the estimation method.
		CWD_DATE	DOY/YYYY	Coarse woody debris measurement date.
		CWD_COMMENT		Coarse woody debris comments.
		FWD	gC/m2 (ground)	Fine woody debris. Includes debris with diameter 1 cm – 10 cm.
		FWD_SIGMA	gC/m2 (ground)	FWD error estimate. Plot variability of FWD expressed as standard deviation. If estimated rather than computed, the FWD_COMMENT field should indicate the estimation method.
		FWD_DATE	DOY/YYYY	Fine woody debris measurement date.
		FWD_COMMENT		Fine woody debris comments.
		ST_MASS	gC/m2 (ground)	Stump mass. Dry weight; estimated from mean stump diameter and species-specific allometric equations.
		ST_MASS_SIGMA	gC/m2 (ground)	ST_MASS error estimate. Plot variability of ST_MASS expressed as standard deviation. If estimated rather than computed, the ST_MASS_COMMENT field should indicate the estimation method.
		ST_MASS_COMMENT		Stump mass comments.
		SNAG	gC/m2 (ground)	Mass of standing dead trees. Dry weight.
		SNAG_SIGMA	gC/m2 (ground)	SNAG error estimate. Plot variability of SNAG expressed as standard deviation. If estimated rather than computed, the SNAG_COMMENT field should indicate the estimation method.
		SNAG_DATE	DOY/YYYY	Mass of standing dead trees measurement date.
		SNAG_COMMENT		Mass of standing dead trees comments.

		Row Text	Units	Explanation
		CR_BIOMASS	gC/m2 (ground) /y	Coarse root biomass (live). Calculated from allometric equations.
		CR_BIOMASS_SIGMA	gC/m2 (ground) /y	CR_BIOMASS error estimate. Plot variability of CR_BIOMASS expressed as standard deviation. If estimated rather than computed, the R_BIOMASS_COMMENT field should indicate the estimation method.
		CR_BIOMASS_DEPTH	m	Coarse root biomass (live) measurement depth.
		CR_BIOMASS_HORIZON		Coarse root biomass (live) horizon.
		FR_BIOMASS	gC/m2 (ground) /y	Fine root biomass (live). Sampled at 0-0.1m, 0.1-0.2m, 0.2-0.5m, 0.5-1.0 meter depth and aggregated.
		FR_BIOMASS_SIGMA	gC/m2 (ground) /y	FR_BIOMASS error estimate. Plot variability of FR_BIOMASS expressed as standard deviation. If estimated rather than computed, the R_BIOMASS_COMMENT field should indicate the estimation method.
		FR_BIOMASS_DEPTH	m	Fine root biomass (live) measurement depth.
		FR_BIOMASS_HORIZON		Fine root biomass (live) horizon.
		RT_BIOMASS	gC/m2 (ground) /y	Total root biomass. Includes coarse and fine root mass. Sites should report RT_BIOMASS only if CR_BIOMASS and FR_BIOMASS cannot be separated.
		RT_BIOMASS_SIGMA	gC/m2 (ground) /y	RT_BIOMASS error estimate. Plot variability of RT_BIOMASS expressed as standard deviation. If estimated rather than computed, the R_BIOMASS_COMMENT field should indicate the estimation method.
		RT_BIOMASS_DEPTH	m	Total root biomass measurement depth.
		RT_BIOMASS_HORIZON		Total root biomass horizon.
		R_BIOMASS_DATE	DOY/YYYY	Root biomass measurement date.
		R_BIOMASS_COMMENT		Root biomass comments.
		WOOD_INCR<n>	mm	Wood radial increment. Provide multiple years (past 20-30 yrs), not an average of years. Each WOOD_INCR is reported with the year of the WOOD_INCR.
		WOOD_INCR<n>_SIGMA	mm	WOOD_INCR<n> error estimate. Plot variability of WOOD_INCR<n> expressed as standard deviation. If estimated rather than computed, the WOOD_INCR<n>_COMMENT field should indicate the estimation method.
		WOOD_INCR<n>_YEAR	YYYY	Year of wood radial increment.
		WOOD_INCR<n>_COMMENT		Wood radial increment comments.
		AG_PROD_TF	gC/m2 (ground) /y	Aboveground production of tree foliage. Includes overstory foliage only. Grassland, crops, tundra sites do not report this variable.
		AG_PROD_TF_SIGMA	gC/m2 (ground) /y	AG_PROD_TF error estimate. Plot variability of AG_PROD_TF expressed as standard deviation. If estimated rather than computed, the AG_PROD_COMMENT field should indicate the estimation method.

		Row Text	Units	Explanation
		AG_PROD_TW	gC/m2 (ground) /y	Aboveground production of tree wood. Includes overstory stems and branches. Grassland, crops, tundra sites do not report this variable.
		AG_PROD_TW_SIGMA	gC/m2 (ground) /y	AG_PROD_TW error estimate. Plot variability of AG_PROD_TW expressed as standard deviation. If estimated rather than computed, the AG_PROD_COMMENT field should indicate the estimation method.
		AG_PROD_TT	gC/m2 (ground) /y	Aboveground production of tree total. Includes overstory foliage, stems, and branches. Grassland, crops, tundra sites do not report this variable. Sites should report AG_PROD_TT only if AG_PROD_TF and AG_PROD_TW cannot be separated.
		AG_PROD_TT_SIGMA	gC/m2 (ground) /y	AG_PROD_TT error estimate. Plot variability of AG_PROD_TT expressed as standard deviation. If estimated rather than computed, the AG_PROD_COMMENT field should indicate the estimation method.
		AG_PROD_SF	gC/m2 (ground) /y	Aboveground production of shrub foliage. Includes foliage only.
		AG_PROD_SF_SIGMA	gC/m2 (ground) /y	AG_PROD_SF error estimate. Plot variability of AG_PROD_SF expressed as standard deviation. If estimated rather than computed, the AG_PROD_COMMENT field should indicate the estimation method.
		AG_PROD_SW	gC/m2 (ground) /y	Annual aboveground production of shrub wood. Includes stems and branches.
		AG_PROD_SW_SIGMA	gC/m2 (ground) /y	AG_PROD_SW error estimate. Plot variability of AG_PROD_SW expressed as standard deviation. If estimated rather than computed, the AG_PROD_COMMENT field should indicate the estimation method.
		AG_PROD_ST	gC/m2 (ground) /y	Aboveground production of shrub total. Includes shrub foliage, stems, and branches. Sites should report AG_PROD_ST only if AG_PROD_SF and AG_PROD_SW cannot be separated.
		AG_PROD_ST_SIGMA	gC/m2 (ground) /y	AG_PROD_ST error estimate. Plot variability of AG_PROD_ST expressed as standard deviation. If estimated rather than computed, the AG_PROD_COMMENT field should indicate the estimation method.
		AG_PROD_NWT	gC/m2 (ground) /y	Aboveground production of non-woody plants. Dry weight of plants including plants and forbs. Grass sites report the total above ground biomass. Forest sites report any non-woody plants.
		AG_PROD_NWT_SIGMA	gC/m2 (ground) /y	AG_PROD_NWT error estimate. Plot variability of AG_PROD_NWT expressed as standard deviation. If estimated rather than computed, the AG_PROD_COMMENT field should indicate the estimation method.
		AG_PROD_CF	gC/m2 (ground) /y	Aboveground production of crops foliage. Includes live foliage only.

	Row Text	Units	Explanation
	AG_PROD_CF_SIGMA	gC/m2 (ground) /y	AG_PROD_CF error estimate. Plot variability of AG_PROD_CF expressed as standard deviation. If estimated rather than computed, the AG_PROD_COMMENT field should indicate the estimation method.
	AG_PROD_CH	gC/m2 (ground) /y	Aboveground production of crops harvest. Includes agricultural crops harvest materials such as fruit.
	AG_PROD_CH_SIGMA	gC/m2 (ground) /y	AG_PROD_CH error estimate. Plot variability of AG_PROD_CH expressed as standard deviation. If estimated rather than computed, the AG_PROD_COMMENT field should indicate the estimation method.
	AG_PROD_CT	gC/m2 (ground) /y	Annual aboveground production of crops total. Includes foliage and harvest materials. Sites should report AG_PROD_CT only if AG_PROD_CF and AG_PROD_CH cannot be separated.
	AG_PROD_CT_SIGMA	gC/m2 (ground) /y	AG_PROD_CT error estimate. Plot variability of AG_PROD_CT expressed as standard deviation. If estimated rather than computed, the AG_PROD_COMMENT field should indicate the estimation method.
	AG_PROD_DATE	DOY/YYYY	Aboveground production measurement date.
	AG_PROD_COMMENT		Aboveground production comments.
	CR_PROD	gC/m2 (ground) /y	Coarse root production. Includes coarse root production only.
	CR_PROD_SIGMA	gC/m2 (ground) /y	CR_PROD error estimate. Plot variability of CR_PROD expressed as standard deviation. If estimated rather than computed, the R_PROD_COMMENT field should indicate the estimation method.
	CR_PROD_DEPTH	m	Coarse root production measurement depth.
	CR_PROD_HORIZON		Coarse root production horizon.
	FR_PROD	gC/m2 (ground) /y	Fine root production. Includes fine root production only.
	FR_PROD_SIGMA	gC/m2 (ground) /y	FR_PROD error estimate. Plot variability of FR_PROD expressed as standard deviation. If estimated rather than computed, the R_PROD_COMMENT field should indicate the estimation method.
	FR_PROD_DEPTH	m	Fine root production measurement depth.
	FR_PROD_HORIZON		Fine root production horizon.
	RT_PROD	gC/m2 (ground) /y	Total root production. Includes coarse and fine root mass. Sites should report RT_PROD only if CR_PROD and FR_PROD cannot be separated.
	RT_PROD_SIGMA	gC/m2 (ground) /y	RT_PROD error estimate. Plot variability of RT_PROD expressed as standard deviation. If estimated rather than computed, the R_PROD_COMMENT field should indicate the estimation method.
	RT_PROD_DEPTH	m	Total root production measurement depth.
	RT_PROD_HORIZON		Total root production horizon.
	R_PROD_DATE	DOY/YYYY	Root production measurement date.
	R_PROD_COMMENT		Root production comments.

		Row Text	Units	Explanation
		NEP	gC/m2 (ground) /y	Net ecosystem production. Computed from biological measurements. NEP can be computed as a mean over NEP_DUR years with NEP_YEAR as the central year. For example, if NEP is averaged over 1995-2000, NEP_DUR = 5 and NEP_YEAR = 1998.
		NEP_SIGMA	gC/m2 (ground) /y	NEP error estimate. Plot variability of NEP expressed as standard deviation. If estimated rather than computed, the NEP_COMMENT field should indicate the estimation method.
		NEP_YEAR	YYYY	Net ecosystem year.
		NEP_DUR		Net ecosystem duration.
		NEP_COMMENT		Net ecosystem production comments.
		LIT_PROD	gC/m2 (ground) /y	Litterfall. Leaf litter and twigs < 1cm diameter. Sampled periodically through the year, dried and weighed and summed over year.
		LIT_PROD_SIGMA	gC/m2 (ground) /y	LIT_PROD error estimate. Plot variability of LIT_PROD expressed as standard deviation. If estimated rather than computed, the LIT_PROD_COMMENT field should indicate the estimation method.
		LIT_PROD_COMMENT		Litterfall comments.
		LMA<n>	gC/m2 (leaf)	Leaf mass per unit leaf area. Report each significant (overstory or understory) species separately. In forests, LMA should represent the canopy mean for a given species.
		LMA<n>_SIGMA	gC/m2 (leaf)	LMA<n> error estimate. Plot variability of LMA<n> expressed as standard deviation. If estimated rather than computed, the LMA<n>_COMMENT field should indicate the estimation method.
		LMA<n>_DATE	DOY/YYYY	Leaf mass per unit leaf area measurement date.
		LMA_SPP<n>	(NRCS code)	Leaf mass per unit leaf area species.
		LMA<n>_COMMENT		Leaf mass per unit leaf area comments.
		FOL_N<n>	gN/100g foliar mass	Foliage nitrogen concentration. Report each significant (overstory or understory) species separately. In forests, FOL_N should represent the canopy mean for a given species.
		FOL_N<n>_SIGMA	gN/100g foliar mass	FOL_N<n> error estimate. Plot variability of FOL_N<n> expressed as standard deviation. If estimated rather than computed, the FOL_N<n>_COMMENT field should indicate the estimation method.
		FOL_N<n>_DATE	DOY/YYYY	Foliage nitrogen concentration measurement date.
		FOL_N_SPP<n>	(NRCS code)	Foliage nitrogen concentration species.
		FOL_N<n>_COMMENT		Foliage nitrogen concentration comments.
		FOL_C<n>	gC/100g foliar mass	Foliage carbon concentration. Report each significant (overstory or understory) species separately. In forests, FOL_C should represent the canopy mean for a given species.
		FOL_C<n>_SIGMA	gC/100g foliar mass	FOL_C<n> error estimate. Plot variability of FOL_C<n> expressed as standard deviation. If estimated rather than computed, the FOL_C<n>_COMMENT field should indicate the estimation method.

		Row Text	Units	Explanation
		FOL_C<n>_DATE	DOY/YYYY	Foliage carbon concentration measurement date.
		FOL_C_SPP<n>	(NRCS code)	Foliage carbon concentration species.
		FOL_C<n>_COMMENT		Foliage carbon concentration comments.
		WOOD_N<n>	gN/100g dry weight	Woody tissue nitrogen concentration. Report each significant (overstory or understory) species separately. In forests, WOOD_N should represent the canopy mean for a given species.
		WOOD_N<n>_SIGMA	gN/100g dry weight	WOOD_N<n> error estimate. Plot variability of WOOD_N<n> expressed as standard deviation. If estimated rather than computed, the WOOD_N<n>_COMMENT field should indicate the estimation method.
		WOOD_N<n>_DATE	DOY/YYYY	Woody tissue nitrogen concentration measurement date.
		WOOD_N_SPP<n>	(NRCS code)	Woody tissue nitrogen concentration species.
		WOOD_N<n>_COMMENT		Woody tissue nitrogen concentration comments.
		WOOD_C<n>	gC/100g dry weight	Woody tissue carbon concentration. Report each significant (overstory or understory) species separately. In forests, WOOD_C should represent the canopy mean for a given species.
		WOOD_C<n>_SIGMA	gC/100g dry weight	WOOD_C<n> error estimate. Plot variability of WOOD_C<n> expressed as standard deviation. If estimated rather than computed, the WOOD_C<n>_COMMENT field should indicate the estimation method.
		WOOD_C<n>_DATE	DOY/YYYY	Woody tissue carbon concentration measurement date.
		WOOD_C_SPP<n>	(NRCS code)	Foliage carbon concentration species.
		WOOD_C<n>_COMMENT		Woody tissue carbon concentration comments.
		LIT_N	gN/100g litter	Litter nitrogen concentration.
		LIT_N_SIGMA	gN/100g litter	LIT_N error estimate. Plot variability of LIT_N expressed as standard deviation. If estimated rather than computed, the LIT_N_COMMENT field should indicate the estimation method.
		LIT_N_DATE	DOY/YYYY	Litter nitrogen concentration measurement date.
		LIT_N_COMMENT		Litter nitrogen concentration comments.
		LIT_C	gC/100g litter	Litter carbon concentration.
		LIT_C_SIGMA	gC/100g litter	LIT_C error estimate. Plot variability of LIT_C expressed as standard deviation. If estimated rather than computed, the LIT_C_COMMENT field should indicate the estimation method.
		LIT_C_DATE	DOY/YYYY	Litter carbon concentration measurement date.
		LIT_C_COMMENT		Litter carbon concentration comments.
		ROOT_N<n>	gN/100g	Root nitrogen concentration. If measured multiple times during the year, the ROOT_N and ROOT_N_DATE for each measurement are entered into consecutive columns.
		ROOT_N<n>_SIGMA	gN/100g	ROOT_N<n> error estimate. Plot variability of ROOT_N<n> expressed as standard deviation. If estimated rather than computed, the ROOT_N<n>_COMMENT field should indicate the estimation method.

		Row Text	Units	Explanation
		ROOT_N<n>_DATE	DOY/YYYY	Root nitrogen concentration measurement date.
		ROOT_N<n>_COMMENT		Root nitrogen concentration comments.
		ROOT_C<n>	gC/100g	Root carbon concentration. If measured multiple times during the year, the ROOT_C and ROOT_C_DATE for each measurement are entered into consecutive columns.
		ROOT_C<n>_SIGMA	gC/100g	ROOT_C<n> error estimate. Plot variability of ROOT_C<n> expressed as standard deviation. If estimated rather than computed, the ROOT_C<n>_COMMENT field should indicate the estimation method.
		ROOT_C<n>_DATE	DOY/YYYY	Root carbon concentration measurement date.
		ROOT_C<n>_COMMENT		Root carbon concentration comments.
		SOIL_BD	g/cm3	Soil bulk density. Percent by mass.
		SOIL_BD_SIGMA	g/cm3	SOIL_BD error estimate. Plot variability of SOIL_BD expressed as standard deviation. If estimated rather than computed, the SOIL_BD_COMMENT field should indicate the estimation method.
		SOIL_BD_PROFILE_MIN	m	Soil bulk density profile minimum depth.
		SOIL_BD_PROFILE_MAX	m	Soil bulk density profile maximum depth.
		SOIL_BD_HORIZON		Soil bulk density horizon. (Optional) horizon associated with SOIL_BD profile.
		SOIL_BD_DATE	DOY/YYYY	Soil bulk density measurement date.
		SOIL_BD_COMMENT		Soil bulk density comments.
		SOIL_C	kgC/m2	Soil organic carbon. Percent by mass. Preferably measured at 0-0.1m, 0.1-0.2m, 0.2-0.5m, 0.5-1.0m.
		SOIL_C_SIGMA	kgC/m2	SOIL_C error estimate. Plot variability of SOIL_C expressed as standard deviation. If estimated rather than computed, the SOIL_C_COMMENT field should indicate the estimation method.
		SOIL_C_PROFILE_MIN	m	Soil carbon content profile minimum depth.
		SOIL_C_PROFILE_MAX	m	Soil carbon content profile maximum depth.
		SOIL_C_HORIZON		Soil organic carbon horizon. (Optional) horizon associated with SOIL_C profile.
		SOIL_C_DATE	DOY/YYYY	Soil carbon content measurement date.
		SOIL_C_COMMENT		Soil carbon content comments.
		SOIL_N	kg/m2	Soil nitrogen content. Preferably measured at 0-0.1m, 0.1-0.2m, 0.2-0.5m, 0.5-1.0m.
		SOIL_N_SIGMA	kg/m2	SOIL_N error estimate. Plot variability of SOIL_N expressed as standard deviation. If estimated rather than computed, the SOIL_N_COMMENT field should indicate the estimation method.
		SOIL_N_PROFILE_MIN	m	Soil nitrogen content profile minimum depth.
		SOIL_N_PROFILE_MAX	m	Soil nitrogen content profile maximum depth.
		SOIL_N_HORIZON		Soil nitrogen content horizon. (Optional) horizon associated with SOIL_N profile.
		SOIL_N_DATE	DOY/YYYY	Soil nitrogen content measurement date.
		SOIL_N_COMMENT		Soil nitrogen content comments.

	Row Text	Units	Explanation
	SOIL_PH	kg/m2	Soil PH. Total soil PH as CaCl2. Preferably measured at 0-0.1m, 0.1-0.2m, 0.2-0.5m, 0.5-1.0m.
	SOIL_PH_SIGMA	kg/m2	SOIL_PH error estimate. Plot variability of SOIL_PH expressed as standard deviation. If estimated rather than computed, the SOIL_PH_COMMENT field should indicate the estimation method.
	SOIL_PH_PROFILE_MIN	m	Soil PH profile minimum depth.
	SOIL_PH_PROFILE_MAX	m	Soil PH profile maximum depth.
	SOIL_PH_HORIZON		Soil PH horizon. (Optional) horizon associated with SOIL_PH profile.
	SOIL_PH_DATE	DOY/YYYY	Soil PH measurement date.
	SOIL_PH_COMMENT		Soil PH comments.
	SAND_PERC	%	Sand content. Percent by mass.
	SAND_PERC_SIGMA	%	SAND_PERC error estimate. Plot variability of SAND_PERC expressed as standard deviation. If estimated rather than computed, the SOIL_PERC_COMMENT field should indicate the estimation method.
	SAND_PERC_PROFILE_MIN	m	Sand content profile minimum depth.
	SAND_PERC_PROFILE_MAX	m	Sand content profile maximum depth.
	SAND_PERC_HORIZON		Sand content horizon. (Optional) horizon associated with SAND_PERC.
	SILT_PERC	%	Silt content. Percent by mass.
	SILT_PERC_SIGMA	%	SILT_PERC error estimate. Plot variability of SILT_PERC expressed as standard deviation. If estimated rather than computed, the SOIL_PERC_COMMENT field should indicate the estimation method.
	SILT_PERC_PROFILE_MIN	m	Silt content profile minimum depth.
	SILT_PERC_PROFILE_MAX	m	Silt content profile maximum depth.
	SILT_PERC_HORIZON		Silt content horizon. (Optional) horizon associated with SILT_PERC.
	CLAY_PERC	%	Clay content. Percent by mass.
	CLAY_PERC_SIGMA	%	CLAY_PERC error estimate. Plot variability of CLAY_PERC expressed as standard deviation. If estimated rather than computed, the SOIL_PERC_COMMENT field should indicate the estimation method.
	CLAY_PERC_PROFILE_MIN	m	Clay content profile minimum depth.
	CLAY_PERC_PROFILE_MAX	m	Clay content profile maximum depth.
	CLAY_PERC_HORIZON		Clay content horizon. (Optional) horizon associated with CLAY_PERC.
	ROCK_PERC	%	Rock content. Percent by mass.
	ROCK_PERC_SIGMA	%	ROCK_PERC error estimate. Plot variability of ROCK_PERC expressed as standard deviation. If estimated rather than computed, the SOIL_PERC_COMMENT field should indicate the estimation method.
	ROCK_PERC_PROFILE_MIN	m	Rock content profile minimum depth.
	ROCK_PERC_PROFILE_MAX	m	Rock content profile maximum depth.

		Row Text	Units	Explanation
		ROCK_PERC_HORIZON		Rock content horizon. (Optional) horizon associated with ROCK_PERC.
		SOIL_PERC_COMMENT		Soil (sand/silt/clay) content comments.
		SOIL_DEPTH	m	Soil depth. Depth to bedrock; limit to root penetration.
		SOIL_DEPTH_SIGMA	m	SOIL_DEPTH error estimate. Plot variability of SOIL_DEPTH expressed as standard deviation. If estimated rather than computed, the SOIL_DEPTH_COMMENT field should indicate the estimation method.
		SOIL_DEPTH_COMMENT		Soil depth comments.
		SOIL_WATER_CAP	%	Soil water holding capacity. Percent by mass.
		SOIL_WATER_CAP_SIGMA	%	SOIL_WATER_CAP error estimate. Plot variability of SOIL_WATER_CAP expressed as standard deviation. If estimated rather than computed, the SOIL_WATER_CAP_COMMENT field should indicate the estimation method.
		SOIL_WATER_CAP_DEPTH	m	Soil water holding capacity measurement depth.
		SOIL_WATER_CAP_HORIZON		Soil water holding capacity horizon.
		SOIL_WATER_CAP_COMMENT		Soil water holding capacity comments.
		SWC<n>	m3/m3	Soil water content. Manual measurement based on time-domain measurement methods sensitive to dielectric permittivity over a depth profile. The profile should have several entries.
		SWC<n>_SIGMA	m3/m3	Soil water content error estimate.
		SWC<n>_HORIZON		Soil water content horizon. (Optional) horizon associated with SWC measurements.
		SWC<n>_DEPTH	cm	Soil water content measurement depth.
		SWC<n>_DATE	DOY/YYYY	Soil water content measurement date.
		SWC<n>_COMMENT		Soil water content comments.
		Rs<n>_MEAN	umol/m2 (ground) /s	Site-specific mean soil CO_2 efflux. Plot/site level means should be reported hourly. A value of Ts should be reported for each.
		Rs<n>_MEAN_SIGMA	umol/m2 (ground) /s	Site-specific mean soil CO_2 efflux error estimate.
		Rs<n>_HOUR	HHHH	Site-specific mean soil CO_2 efflux measurement hour.
		Rs<n>_DATE	DOY/YYYY	Site-specific mean soil CO_2 efflux measurement date.
		Ts<n>	deg C	Soil temperature. Site-specific mean soil temperature as measured next to the soil respiration collars preferably at 8 cm depth. A value of Rs should be reported for each.
		Ts<n>_SIGMA	deg C	Soil temperature error estimate.
		Rs<n>_COMMENT		Site-specific mean soil CO_2 efflux and soil temperature comments.
		BUDBK<n>_DATE	DOY/YYYY	Budbreak date. Date budbreak or first opening of leaves was observed. For each significant species (SPP_O or SPP_U) present in the reporting area, the BUDBK_DATE and BUDBK_SPP are entered into consecutive columns. For crops or grasses, use COT_DATE rather than BUDBK_DATE.

	Row Text	Units	Explanation
	BUDBK<n>_DATE_SIGMA	DOY/YYYY	BUDBK<n>_DATE error estimate. Plot variability of BUDBK<n>_DATE expressed as standard deviation. If estimated rather than computed, the BUDBK_SPP<n>_COMMENT field should indicate the estimation method.
	BUDBK_SPP<n>	(NRCS code)	Budbreak species. Uses the same NIMS forestry inventory codes as SPP_O<n> and SPP_U<n>.
	BUDBK<n>_COMMENT		Budbreak comments.
	COT<n>_DATE	DOY/YYYY	Cotyledons date. Date first cotyledons present. For each significant species (SPP_O or SPP_U) present in the reporting area, the COT_DATE and COT_SPP are entered into consecutive columns.
	COT<n>_DATE_SIGMA	DOY/YYYY	COT<n>_DATE error estimate. Plot variability of COT<n>_DATE expressed as standard deviation. If estimated rather than computed, the COT_SPP<n>_COMMENT field should indicate the estimation method.
	COT_SPP<n>	(NRCS code)	Cotyledons species. Uses the same NIMS forestry inventory codes as SPP_O<n> and SPP_U<n>.
	COT<n>_COMMENT		Cotyledons comments.
	FLOWER<n>_DATE	DOY/YYYY	Flowering date. Date on which the first flowers have opened completely in at least three places on individual plants. For each significant species (SPP_O or SPP_U) present in the reporting area, the FLOWER_DATE and FLOWER_SPP are entered into consecutive columns.
	FLOWER<n>_DATE_SIGMA	DOY/YYYY	FLOWER<n>_DATE error estimate. Plot variability of FLOWER<n>_DATE expressed as standard deviation. If estimated rather than computed, the FLOWER_SPP<n>_COMMENT field should indicate the estimation method.
	FLOWER_SPP<n>	(NRCS code)	Flowering species. Uses the same NIMS forestry inventory codes as SPP_O<n> and SPP_U<n>.
	FLOWER<n>_COMMENT		Flowering comments.
	LEAFFULL<n>_DATE	DOY/YYYY	Maximum leaf expansion date. Date of maximum leaf expansion. For each significant species (SPP_O or SPP_U) present in the reporting area, the LEAFFUL_DATE and LEAFFUL_SPP are entered into consecutive columns.
	LEAFFULL<n>_DATE_SIGMA	DOY/YYYY	LEAFFULL<n>_DATE error estimate. Plot variability of LEAFFULL<n>_DATE expressed as standard deviation. If estimated rather than computed, the LEAFFULL_SPP<n>_COMMENT field should indicate the estimation method.
	LEAFFULL_SPP<n>	(NRCS code)	Maximum leaf expansion species. Uses the same NIMS forestry inventory codes as SPP_O<n> and SPP_U<n>.
	LEAFFULL<n>_COMMENT		Maximum leaf expansion comments.
	LEAFSEN<n>_DATE	DOY/YYYY	Date of leaf senescence. Date when approximately 50% of the leaves of individual plants observed, including leaves that have fallen to the ground, have taken on the colors of autumn. For each significant species (SPP_O or SPP_U) present in the reporting area, the LEAFSEN_DATE and LEAFSEN_SPP are entered into consecutive columns.

		Row Text	Units	Explanation
		LEAFSEN<n>_DATE_SIGMA	DOY/YYYY	LEAFSEN<n>_DATE error estimate. Plot variability of LEAFSEN<n>_DATE expressed as standard deviation. If estimated rather than computed, the LEAFSEN_SPP<n>_COMMENT field should indicate the estimation method.
		LEAFSEN_SPP<n>	(NRCS code)	Leaf senescence species. Uses the same NIMS forestry inventory codes as SPP_O<n> and SPP_U<n>.
		LEAFSEN<n>_COMMENT		Leaf senescence comments.
		LEAFOFF<n>_DATE	DOY/YYYY	Date of total leaf-off. Date at which in conifers and some deciduous trees, most brown needles/leaves have fallen. For each significant species (SPP_O or SPP_U) present in the reporting area, the LEAFOFF_DATE and LEAFOFF_SPP are entered into consecutive columns.
		LEAFOFF<n>_DATE_SIGMA	DOY/YYYY	LEAFOFF<n>_DATE error estimate. Plot variability of LEAFOFF<n>_DATE expressed as standard deviation. If estimated rather than computed, the LEAFOFF_SPP<n>_COMMENT field should indicate the estimation method.
		LEAFOFF_SPP<n>	(NRCS code)	Total leaf-off species. Uses the same NIMS forestry inventory codes as SPP_O<n> and SPP_U<n>.
		LEAFOFF<n>_COMMENT		Total leaf-off comments.
Site Metadata Biological Data (SiteBioMetaData)				
The site metadata biological data spreadsheet contains rarely changing descriptive text documenting the biological variable measurement practices and annotations. This spreadsheet is organized in three columns: variable name, description, and entered text.				
		SPP_O_METHOD		Overstory dominant species measurement methodology. Descriptive text documenting SPP_O<n> measurement methodology.
		SPP_U_METHOD		Understory dominant species measurement methodology. Descriptive text documenting SPP_U<n> measurement methodology.
		AG_BIOMASS_TF_METHOD		Aboveground biomass of tree foliage measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_BIOMASS_TW_METHOD		Aboveground biomass of tree wood measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_BIOMASS_TT_METHOD		Aboveground biomass of tree total measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_BIOMASS_SF_METHOD		Aboveground biomass of shrub foliage measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_BIOMASS_SW_METHOD		Aboveground biomass of shrub wood measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_BIOMASS_ST_METHOD		Aboveground biomass of shrub total measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.

		Row Text	Units	Explanation
		AG_BIOMASS_NWT_METHOD		Aboveground biomass of non-woody plants measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_BIOMASS_CF_METHOD		Aboveground biomass of crops foliage measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_BIOMASS_CH_METHOD		Aboveground biomass of crops harvest measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_BIOMASS_CT_METHOD		Aboveground biomass of crops total measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		CR_BIOMASS_METHOD		Belowground coarse root biomass measurement method. Descriptive text including coring or allometric method; if allometric, include algorithm and other attributes such as number and area of plots.
		FR_BIOMASS_METHOD		Belowground fine root biomass measurement method. Descriptive text including coring or allometric method; if allometric, include algorithm and other attributes such as number and area of plots.
		RT_BIOMASS_METHOD		Belowground total root biomass measurement method. Descriptive text including coring or allometric method; if allometric, include algorithm and other attributes such as number and area of plots.
		AG_PROD_TF_METHOD		Aboveground production of tree foliage measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_PROD_TW_METHOD		Aboveground production of tree wood measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_PROD_TT_METHOD		Aboveground production of tree total measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_PROD_SF_METHOD		Aboveground production of shrub foliage measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_PROD_SW_METHOD		Aboveground production of shrub wood measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_PROD_ST_METHOD		Aboveground production of shrub total measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_PROD_NWT_METHOD		Aboveground production of non-woody (total) measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_PROD_CF_METHOD		Aboveground production of crops foliage measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
		AG_PROD_CH_METHOD		Aboveground production of crops harvest measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.

	Row Text	Units	Explanation
	AG_PROD_CT_METHOD		Aboveground production of crops total measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
	CR_PROD_METHOD		Coarse root production measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
	FR_PROD_METHOD		Fine root production measurement method. Descriptive text including algorithm and other attributes such as number and area of plots.
	RT_PROD_METHOD		Total root production measurement method. Descriptive text including technique (e.g., minirhizotron, periodic sampling) and algorithm, and other attributes such as number and area of plots.
	NEP_METHOD		Net ecosystem production method. Specific text indicating the net ecosystem production method.
	Rs_METHOD		Soil CO2 efflux measurement method. Descriptive text including the methods, instruments (e.g., LI8100) and number of sample locations used to obtain Rs<n>_MEAN.
	SAPFLOW_METHOD		Sapflow measurement method. Descriptive text indicating the sap flow method (e.g., Granier, heat pulse), instruments (e.g., Dynamax, homemade), probe length (e.g., 1, 2, 3, or 10 cm length), probe installation (stem diameter at point of probe installation in cm and sapwood thickness in cm) and corrections applied (e.g., according to Clearwater et al. 1999). Identify the tree and shrub species sampled and provide the number of trees or shrubs measured and used to produce the mean for the site.

Completed spreadsheets should be sent to the appropriate regional network. Please copy fluxdata-support@fluxdata.org on any spreadsheet submitted by email.