

1) CWEM_Veg_Cover

Field 1 (authorObsCode): This is the code or name that the author uses to identify this plot observation event. Where a plot has only one observation, this will often equal plot.authorPlotCode.

Field 2 (currentTaxonName): Species/taxon concept identification, using the following reference: Weakley, A.S. 2012 or 2015. Flora of the southern and Mid-Atlantic states. University of North Carolina Herbarium, North Carolina Botanical Garden, University of North Carolina, Chapel Hill, NC.

Fields 3, 5, 7, and 9 (1, 1, 1, 1): Nested quadrat depths for corners 1, 2, 3, and 4, respectively.

Field 4 (C): Cover class values

Fields 6, 8, and 10 (2, 3, 4): Null

2) CWEM_Veg_Stems

Field 1 (Author Observation Code): This is the code or name that the author uses to identify this plot observation event. Where a plot has only one observation, this will often equal plot.authorPlotCode.

Field 2 (currentTaxonName): Species/taxon concept identification, using the following reference: Weakley, A.S. 2012 or 2015. Flora of the southern and Mid-Atlantic states. University of North Carolina Herbarium, North Carolina Botanical Garden, University of North Carolina, Chapel Hill, NC.

Field 3 (min DBH): lower cutoff of stem size class

Field 4 (max DBH): upper cutoff of stem size class

Field 5 (stemDiameter): The diameter of the stem in centimeters. When diameter classes are used, the stemDiameter is the midpoint between the low end and high end for the diameter class; the offset between this and the endpoints is stored in the stemDiameterAccuracy attribute.

Field 6 (stemDiameterAccuracy): The accuracy of the stem diameter measurements in centimeters. This represents the distance between the diameter class midpoint and endpoint.

Field 7 (stem_count): Count of stems of this size.

Field 8 (basedOnLandArea): (m²)Stem data was collected based on this size land area, which may be a subsample or supersample of the plot.

Field 9 (subsampling factor): number factor of subsample used, which should be reflected in stemTaxonArea (1=100%, 1.5=150%, 0.2=20%, etc.)

Field 10 (sppFamily): Representative plant family of the taxon.

Field 11 (moduleArea): The area of the module (in m²) where the stem is located.

3) CWEM_Veg_Plots

Field 1 (Author Observation Code): This is the code or name that the author uses to identify this plot observation event. Where a plot has only one observation, this will often equal plot.authorPlotCode.

Field 2 (Station_ID): Unique code given to a Coastal Wetland Elevation Monitoring plot.

Field 3 (Observation Start Date): The date of the observation, or the first day if the observation spanned more than one day.

Field 4 (Observation End Date): If the observation event spanned more than a single day, this is the last day on which observations were made.

Field 5 (plotLeader): Team leader, responsible for overseeing the sampling on an individual plot.

Field 6 (plotContributors): Full list of individuals who assisted with sampling on an individual plot and their roles.

Field 7 (Effort Level): This is the effort spent making the observations as estimated by the party that submitted the data (e.g., Very thorough, Average, Hurried description).

Field 8 (Floristic Quality): Subjective assessment of floristic quality by the party that submitted the plot (e.g., Highest, High, High but incomplete, Moderate, Moderate and incomplete, Low).

Field 9 (Bryophyte Quality): Subjective assessment of the taxonomic quality of the bryophyte data by the party that submitted the plot (e.g., Highest, High, High but incomplete, Moderate, Moderate and incomplete, Low, Very incomplete, absent).

Field 10 (Lichen Quality): Subjective assessment of the taxonomic quality of the lichen data by the party that submitted the plot (e.g., Highest, High, High but incomplete, Moderate, Moderate and incomplete, Low, Very incomplete, absent).

Field 11 (NVC Association Scientific): Subjective assignment of plant community type found within the plot to an NVC vegetation association, nominal is the scientific name of the community concept.

Field 12 (NVC Association Translated): Subjective assignment of plant community type found within the plot to an NVC vegetation association, nominal is the common named the community concept.

Field 13 (CEGL Code): Four-digit code unique to an NVC Association.

Field 14 (Fit): Indicates the degree of fit with the community concept being assigned. Values derive from Gopal, S., and Woodcock, C. (1994), Theory and methods for accuracy assessment of thematic maps using fuzzy sets. Photogrammetric Engineering and Remote Sensing 60(2):181-188 (e.g., 5=absolutely correct, 4=good answer, 3=fair, 2=poor, 1=wrong)

Field 15 (Confidence): Indicates the degree of confidence of the interpreter(s) in the interpretation made. This can reflect the level of familiarity with the classification or the sufficiency of information about the plot (e.g., High, Moderate, Low).

Field 16 (Classifier Date): Date for the application of a vegetation class to a plot observation by one or more parties.

Field 17 (Classifier): Names of people participating in a classification effort.

Field 18 (Comm_Tier2): Vegetation of the Carolinas project community type known as the Ecological Group and is based on combinations of topographic, edaphic, physiognomic and floristic structural and broad-scale composition similarities. Within the Vegetation of the Carolinas project hierarchy, NVC Associations nest under this type.

Field 19 (Comm_Tier3): Vegetation of the Carolinas project community type known as the Form Group and is based on broad climatic, geographic, and edaphic similarities. Within the Vegetation of the Carolinas project hierarchy, Ecological Groups nest under this type.

Field 20 (Comm_Tier4): Vegetation of the Carolinas project community type known as the Physiognomic Group and is based on broad geographic and hydrologic similarities. Within the Vegetation of the Carolinas project hierarchy, Form Groups nest under this type.

Field 21 (Taxon Standard): Reference of taxonomic authority used for species/taxon names.

Field 22 (Author Location): Original location as described by author (e.g. Town-Range-Section)

Field 23 (state): state where the plot is located

Field 24 (countyName): county where the plot is located

Field 25 (Place Names): other local place description of where the plot is located

Field 26 (Land Owner): Person, organization, corporation, or government owning the land in which the plot is located.

Field 27 (Confidentiality Status): Are the data to be considered confidential? 0=no, 1= 1km radius, 2=10km radius, 3=100km radius, 4=location embargo, 5=public embargo on all plot data, 6=full embargo on all plot data. This applies also to region.

Field 28 (Location Source): How was the location of the plot determined (i.e. GPS, Topographic Map)

Field 29 (GPS Position within Plot (x)): X coordinate in plot where GPS was while recording position, in meters

Field 30 (GPS Position within Plot (y)): Y coordinate in plot where GPS was while recording position, in meters

Field 31 (Coordinate System): Type of coordinate system used, e.g. Lat/Long, UTM, State Plane, etc.

Field 32 (Coordinate Units): Units of the coordinate system in AuthorE and AuthorN, e.g. meters, feet, decimal degrees

Field 33 (Geocoordinate Datum): Original datum reported by the author

Field 34 (UTM Zone): Original UTM zone reported by the author

Field 35 (Longitude or UTM-E): Original E-W coordinate as recorded by the author

Field 36 (Latitude or UTM-N): Original N-S coordinate as recorded by the author

Field 37 (Location Accuracy): Estimated accuracy of the location of the plot. Plot origin has a 95% or greater probability of being within this many meters of the reported location.

Field 38 (Elevation meters): Elevation derived from using web application: TopoZone

Field 39 (Slope): Representative inclination of slope in degrees; if too irregular to determine, = -1.

Field 40 (Aspect): Representative azimuth of slope gradient (0-360 degrees); if too flat to determine = -1; if too irregular to determine = -2.

Field 41 (Compass Type): What type of direction was used in defining plot aspect and other direction fields (such as bearing of the center line): based on magnetic or true bearings

Field 42 (Bearing of X-Axis): This element stores the azimuth of the x-axis used to describe the relative coordinate system for plot shape (dsgpoly) and other spatial information about the plot. Typically the azimuth is parallel to the long axis of the plot (in the case of a rectangle).

Field 43 (Plot Dimension X (modules)): How many modules long is the plot (1-5)?

Field 44 (Plot Dimension Y (modules)): How many modules high is the plot (1-2)?

Field 45 (Module Dimension X): Width of module, in meters, almost always 10, but occasionally 20 or 5

Field 46 (Module Dimension Y): Height of module, in meters, almost always 10, but occasionally 20 or 5

Field 47 (Plot Size (Cover)): Plot Size for Cover Data (Herbs), in ares

Field 48 (Plot Size (Stems)): Plot Size for Stems (Trees), in ares

Field 49 (Depth (Intensive Modules)): How many nested subplots are used within a module? Or otherwise stated, what is the highest presence value that was used for a plot? This is generally 5 (starting at 10cm x 10cm resolution), unless nested subplots were not used, in which case it would be 1 (only 10m x 10m resolution).

Field 50 (Intensive Module List): list of intensive modules, one letter per module, like so: 1234 or 3490, using 0 for 10.

Field 51 (Photo Identifiers): Information useful in identifying how many photos were taken of the plot, and where those photos exist (ie digital camera, who owns it, film roll/frames, etc.)

Field 52 (Canopy Height in meters): Height of canopy vegetation in meters.

Field 53 (Tree Stratum Cover): Areal cover value, in percent, of the tree stratum

Field 54 (Tree Stratum Height min): Minimum height (meters) of tree stratum

Field 55 (Tree Stratum Height max): Maximum height (meters) of tree stratum

Field 56 (Shrub Stratum Cover): Areal cover value, in percent, of the shrub stratum

Field 57 (Shrub Stratum Height min): Minimum height (meters) of shrub stratum

Field 58 (Shrub Stratum Height max): Maximum height (meters) of shrub stratum

Field 59 (Herb Stratum Cover): Areal cover value, in percent, of the herb stratum

Field 60 (Herb Stratum Height min): Minimum height (meters) of herb stratum

Field 61 (Herb Stratum Height max): Maximum height (meters) of herb stratum

Field 62 (Layout Narrative): Notes on shape, size, and overall layout design of the plot.

Field 63 (Location Narrative): Text description that provides information useful for plot relocation.

Field 64 (Observation Narrative): Additional unstructured observations useful for understanding the ecological attributes and significance of the plot observations.

Field 65 (Soil Modules Sampled): List of soil modules sampled. Can be formatted without commas if each character represents a sample, using 0 for module 10 (1290S for modules 1,2,9,10 and S for deep sample), or with commas if not (1A,1B,2,S).

Field 66 (Homogeneity): How homogeneous was the community (e.g., homogeneous, compositional trend across plot, conspicuous inclusions, irregular mosaic or pattern).

Field 67 (Stand Size): The extent of this community occurrence in relation to the plot size: very extensive (>1000x plot), extensive (>100x plot), large (10-100x plot), small (3-10x plot), very small (1-3x plot).

Field 68 (Topographic Position): Position of the plot on land surface (e.g., Summit, shoulder, upper slope, middle slope, lower slope, toeslope, no slope, channel bed, dune swale, pond).

Field 69 (Phenologic Aspect): Season expression of the community (e.g., typical growing season, vernal, aestival, wet, autumnal, winter, dry, irregular ephemerals present).

Field 70 (Physiognomic Class): The Physiognomic Class representing the structure of the vegetation on this plot (e.g., I=Forest, II=Woodland, III=Shrubland, IV=Dwarf Shrubland, V=Herbaceous, VI=Nonvascular, VII=Sparsely Vegetated, VIII=Barrens)

Field 71 (Percent Histosol): Percent of the plot's Earth Surface covered by Histosol. Histosols are wet soils comprised of significant amounts of organic matter and are poorly drained, such as peat and muck. All earth surface categories should sum to 100% for a plot, and each may be exposed or covered by ground cover material.

Field 72 (Percent Mineral Soil): Percent of the plot's Earth Surface covered by mineral (inorganic) soil. All earth surface categories should sum to 100% for a plot, and each may be exposed or covered by ground cover material.

Field 73 (Percent Gravel/Cobble): Percent of the plot's Earth Surface covered by gravel or cobble, that is rocks with their largest diameters ranging from roughly 2 to 250 mm (10 in.). All earth surface categories should sum to 100% for a plot, and each may be exposed or covered by ground cover material.

Field 74 (Percent Boulder): Percent of the plot's Earth Surface covered by boulders, that is rocks with their largest diameters exceeding roughly 250 mm (10 in.). All earth surface categories should sum to 100% for a plot, and each may be exposed or covered by ground cover material.

Field 75 (Percent Bedrock): Percent of the plot's Earth Surface covered by bedrock. All earth surface categories should sum to 100% for a plot, and each may be exposed or covered by ground cover material.

Field 76 (Percent Coarse Woody Debris): Percent of the plot that is covered in Coarse Woody Debris. This ground cover category is independent of others and may cover other categories or be covered.

Field 77 (Percent Fine Woody Debris): Percent of the plot that is covered in Fine Woody Debris. This ground cover category is independent of others and may cover other categories or be covered.

Field 78 (Percent Litter): Percent of the plot that is covered in Litter. The Organic Layer ("O" Horizon) is typically comprised of this category, the Litter (L) Layer, as well as Fermentation (F) and Humus (H) layers. This ground cover category is independent of others and may cover other categories or be covered.

Field 79 (Percent Duff): Percent of the plot that is covered in Duff. The Organic Layer ("O" Horizon) is typically comprised the Litter (L) Layer, as well as Fermentation (F) and Humus (H) layers. This category represents the combination of the F and H layers. This ground cover category is independent of others and may cover other categories or be covered.

Field 80 (Percent Nonvascular Vegetation): Percent of the plot that is covered by nonvascular vegetation, such as lichens and bryophytes. This ground cover category is independent of others and may cover other categories or be covered.

Field 81 (Percent Water): Percent of the plot that is covered by standing water when the plot was sampled. This ground cover category is independent of others and may cover other categories or be covered.

Field 82 (Percent Other): Percent of the plot that is covered by something other than the standard categories, if significant. Name of the category is specified in a separate field. This ground cover category is independent of others and may cover other categories or be covered.

Field 83 (Name or "Percent Other" Category): If some category of ground cover is significant on this plot, yet is not one of the standard ground cover and earth surface categories, its name may be recorded in this field and its percent in another field.

Field 84 (Hydrologic Regime): What is the hydrologic regime, which is a reflection of frequency and duration of flooding?

Field 85 (Water Salinity): How saline is the water, if a flooded community?

Field 86 (Soil Drainage): Identifies the natural drainage conditions of the soil and refers to the frequency and duration of wet periods. The soil drainage classes are defined in terms of (1) actual moisture content (in excess of field moisture capacity) and (2) the extent of the period during which excess water is present in the plant-root zone. Soil drainage class categories conform to the FGDC Soil Geographic Data Standards, September 1997.

(<http://www.fgdc.gov/standards/documents/standards/soils/soil997.PDF>.) Definitions are derived from Grossman et al. (1998) and Sims et al. (1997).

Field 87 (Disturbance_Animal): Scale (High, Medium, or Low), Coverage (percent), Time, and Type of animal disturbance that has observably occurred within the plot.

Field 88 (Disturbance_Fire): Scale (High, Medium, or Low), Coverage (percent), Time, and Type of fire disturbance that has observably occurred within the plot.

Field 89 (Disturbance_Human): Scale (High, Medium, or Low), Coverage (percent), Time, and Type of human disturbance that has observably occurred within the plot.

Field 90 (Disturbance_Natural): Scale (High, Medium, or Low), Coverage (percent), Time, and Type of natural disturbance that has observably occurred within the plot.

Field 91 (Disturbance_Other): Scale (High, Medium, or Low), Coverage (percent), Time, and Type of other disturbance that has observably occurred within the plot.

Field 92 (Disturbance_TimberHarvest): Scale (High, Medium, or Low), Coverage (percent), Time, and Type of timber harvest disturbance that has observably occurred within the plot.

4) CWEM_Veg_Soils

Field 1 (Author Observation Code): This is the code or name that the author uses to identify this plot observation event. Where a plot has only one observation, this will often equal plot.authorPlotCode.

Field 2 (Horizon): This is the soil horizon from which the sample was taken (A=top 10 cm mineral or amorphous organic soil; B=approximately 50 cm depth; C=approximately 100 cm depth).

Field 3 (Lab): This is the lab that performed the analysis, and the specific type of testing that was used (e.g., BSL-M3=Brookside Lab with Mehlich III).

Field 4 (TEC): Total Exchange Capacity (ME/100 g).

Field 5 (pH): pH (H₂O 1:1).

Field 6 (OrganicMatter): Humus, organic matter (%) (values of "0.05" represent reported value of "<0.10").

Field 7 (ENR): Estimated nitrogen release (ppm) (values of "70" represent reported value of ">130 lbs/acre").

Field 8 (SolubleSulfur): Soluble Sulfur (ppm).

Field 9 (P): Phosphorus, Mehlich III (ppm) (values of "0.5" represent reported value of "<1").

Fields 10, 11, 12, and 13 (Ca_ppm, Mg_ppm, K_ppm, Na_ppm): Exchangeable cations—Calcium, Magnesium, Potassium, and Sodium, respectively (ppm) (Potassium values of “1” represent reported value of “<3”).

Fields 14, 15, 16, 17, 18, and 19 (Ca_pct, Mg_pct, K_pct, Na_pct, Other_pct, H_pct): Base Saturation Percent—Calcium, Magnesium, Potassium, Sodium, Other Bases, and Hydrogen, respectively (%) (Potassium values of “0.01” represent reported value of “negative value”).

Fields 20, 21, 22, 23, 24, and 25 (B_ppm, Fe_ppm, Mn_ppm, Cu_ppm, Zn_ppm, Al_ppm): Extractable minors—Boron, Iron, Manganese, Copper, Zinc, Aluminum (ppm) (Boron values of “0.10” represent reported value of “<0.20”; Manganese values of “1” represent reported value of “<1”; Copper values of “0.1” represent reported value of “<0.2”; Zinc values of “0.2” represent reported value of “<0.4”; Aluminum values of “0.5” represent reported value of “<1”).

Field 26 (PercentBaseSaturation): Percent base saturation (%) (=100 – H_pct – Other_pct).

Field 27 (exCa/exMg): Exchangeable Calcium: Magnesium (=Ca_ppm/Mg_ppm).

Fields 28, 29, and 30 (Clay, Silt, Sand): Physical analysis (Clay %, Silt %, Sand %).