accuracy: the extent to which a measurement approaches the true value of the measured quantity

aerial photography: the practice of taking photographs from an airplane, helicopter, or other aviation device while it is airborne

allocation, Neyman: stratified sampling in which the cost of sampling each stratum is in proportion to the size of the stratum but variability between strata changes

allocation, proportional: stratified sampling in which the variability and cost of sampling for each stratum are in proportion to the size of the stratum

allowable error: the level of error acceptable for the purposes of a study

ANOVA: see test, analysis of variance

assumptions: characteristics of a population of a sampling method taken to be true without proof

bar graph: a representation of data wherein data is grouped and represented as vertical or horizontal bars over an axis

best professional judgement: an informed opinion made by a professional in the appropriate field of study or expertise

best management practice: a practice or combination of practices that are determined to be the most effective and practicable means of controlling point and nonpoint pollutants at levels compatible with environmental quality goals

bias: a characteristic of samples such that when taken from a population with a known parameter, their average does not give the parametric value

binomial: an algebraic expression that is the sum or difference of two terms

camera format: refers to the size of the negative taken by a camera. 35mm is a small camera format

chi-square distribution: a scaled quantity whose distribution provides the distribution of the sample variance

coefficient of variation: a statistical measure used to compare the relative amounts of variation in populations having different means; the standard deviation divided by the mean

confidence interval: a range of values about a measured value in which the true value is presumed to lie

consistency: conforming to a regular method or style; an approach that keeps all factors of measurement similar from one measurement to the next to the extent possible

cumulative effects: the total influences attributable to numerous individual influences

degrees of freedom: the number of residuals (the difference between a measured value and the sample average) required to completely determine the others

design, balanced: an ANOVA where all cells have equal numbers of samples

distribution: the allocation or spread of values of a given parameter among its possible values

e-mail: an electronic system for correspondence

erosion potential: a measure of the ease with which soil can be carried away in storm water runoff or irrigation runoff

error: the fluctuation that occurs from one repetition to another; also *experimental error*

estimate, baseline: an appraisal of initial, or actual conditions

estimate, pooled: a single estimate obtained from grouping individual estimates and using the latter to obtain a single value

finite population correction term: a correction term used when population size is small relative to sample size

hydrologic modification: the alteration of the natural circulation or distribution of water by the placement of structures or other activities

hypothesis, alternative: the hypothesis which is contrary to the null hypothesis

hypothesis, null: the hypothesis or conclusion assumed to be true prior to any analysis

Internet: an electronic data transmission system

management measure: an economically achievable measure for the control of the addition of pollutants from existing and new categories and classes of nonpoint sources of pollution, which reflect the greatest degree of pollutant reduction achievable through the application of the best available nonpoint pollution control practices, technologies, processes, siting criteria, operating methods, or other alternatives

mean, estimated: a value of population mean arrived at through sampling

mean, overall: the measured average of a population

mean, stratum: the measured average within a sample subgroup or stratum

measurement bias: a consistent under- or overestimation of the true value of something being measured, often due to the method of measurement

measurement error: the deviation of a measurement from the true value of that which is being measured

median: the value of the middle term when data are arranged in order of size; a measure of central tendency

monitoring, baseline: monitoring conducted to establish initial knowledge about the actual state of a population

monitoring, compliance: monitoring conducted to determine if those who must implement programs, best management practices, or management measures, or who must conduct operations according to standards or specifications are doing so

monitoring, project: monitoring conducted to determine the impact of a project, activity, or program

monitoring, validation: monitoring conducted to determine how well a model accurately reflects reality

navigational error: errors in determining the actual location (altitude or latitude/longitude) of an airplane or other aviation device due to instrumentation or the operator

nominal: referred to by name; variables that cannot be measured but must be expressed qualitatively

nonparametric method: distribution-free method; any of various inferential procedures whose conclusions do not rely on assumptions about the distribution of the population of interest

normal approximation: an assumption that a population has the characteristics of a normally-distributed population

normal deviate: deviation from the mean expressed in units of σ

nutrient management plan: a plan for managing the quantity of nutrients applied to crops to achieve maximum plant nutrition and minimum nutrient waste

ordinal: ordered such that the position of an element in a series is specified

parametric method: any statistical method whose conclusions rely on assumptions about the distribution of the population of interest

physiography: a description of the surface features of the Earth; a description of land forms

pie chart: a representation of data wherein data is grouped and represented as more or less triangular sections of a circle and the total is the entire circle

population, sample: the members of a population that are actually sampled or measured

population, target: the population about which inferences are made; the group of interest, from which samples are taken

population unit: an individual member of a target population that can be measured independently of other members

power: the probability of correctly rejecting the null hypothesis when the alternative hypothesis is true

precision: a measure of the similarity of individual measurements of the same population

question, dichotomous: a question that allows for only two responses, such as "yes" and "no"

question, double-barreled: two questions asked as a single question

question, multiple-choice: a question with two or more predetermined responses

question, open-ended: a question format that requires a response beyond "yes" or "no"

remote sensing: methods of obtaining data from a location distant from the object being measured, such as from an airplane or satellite

resolution: the sharpness of a photograph

sample size: the number of population units measured

sampling, cluster: sampling in which small groups of population units are selected for sampling and each unit in each selected group is measured

sampling, simple random: sampling in which each unit of the target population has an equal chance of being selected

sampling, stratified random: sampling in which the target population is divided into separate subgroups, each of which is more internally similar than the overall population is, prior to sample selection

sampling, systematic: sampling in which population units are chosen in accordance with a predetermined sample selection system

sampling error: error attributable to actual variability in population units not accounted for by the sampling method

scale (aerial photography): the proportion of the image size of an object (such as a land area) to its actual size, e.g., 1:3,000; the smaller the second number, the larger the scale

scale system: a system for ranking measurements or members of a population on a scale, such as 1 to 5

significance level: in hypothesis testing, the probability of rejecting a hypothesis that is correct, that is, the probability of a Type I error

standard deviation: a measure of spread; the positive square root of the variance

standard error: an estimate of the standard deviation of means that would be expected if a collection of means based on equal-sized samples of *n* items from the same population were obtained

statistical inference: conclusions drawn about a population using statistics

statistics, descriptive: measurements of population characteristics designed to summarize important features of a data set

stratification: the process of dividing a population into internally similar subgroups

stratum: one of the subgroups created prior to sampling in stratified random sampling

streamside management area: a designated area that consists of a water body (e.g., stream) and an adjacent area of varying width where management practices that might affect water quality, fish, or other aquatic resources are modified to protect the water body and its adjacent resources and to reduce the pollution effect of an activity on the water body

subjectivity: a characteristic of analysis that requires personal judgement on the part of the person doing the analysis

target audience: the population that a monitoring effort is intended to measure

test, analysis of variance: a statistical test used to determine whether two or more sample means could have been obtained from populations with the same parametric mean

test, Friedman: a nonparametric test that can be used for analysis when two variables are involved

test, Kruskal-Wallis: a nonparametric test recommended for the general case with a samples and n_i variates per sample

test, Mann-Whitney: a nonparametric test for use when a test is only between two samples

test, student's t: a statistical test used to test for significant differences between means when only two samples are involved

test, Tukey's: a test to ascertain whether the interaction found in a given set of data can be explained in terms of multiplicative main effects

test, Wilcoxon's: a nonparametric test for use when a test is only between two samples

total maximum daily load: a total allowable addition of pollutants from all affecting sources to an individual water body over a 24-hour period

transformation, data: manipulation of data such that it will meet the assumptions required for analysis

unit sampling cost: the cost of attributable to sampling a single population unit

variance: a measure of the spread of data around the mean

waterbar: a diversion ditch and/or hump installed across a trail or road to divert runoff from the surface before the flow gains enough volume and velocity to cause soil movement and erosion

watershed assessment: an investigation of numerous characteristics of a watershed in order to describe its actual condition