



GLOSSARY

ATTRIBUTE

The physical condition of natural or man-made features (e.g., vegetative structure, soil condition, water regime, or topography). These are collected in the field using the ESII Field App.

ALTERNATIVES ANALYSIS

A comparison of different landscape or natural resource management situations for the purposes of understanding the consequences of each situation.

BASE MAP

A basic set of map data that indicates the principal outstanding physical characteristics of an area, on which information may be placed for purposes of comparison or geographical correlation.

BAYESIAN BELIEF NETWORK (BBN)

A probabilistic model that represents a set of random variables and their conditional dependencies. The ecological models within the ESII Tool are housed within a BBN structure.

DATA COLLECTION EFFORT (DCE)

The portion of the Site that will be evaluated. In some cases, this could be the entire Site, in other cases this boundary may be defined by the boundaries of a specific project.

ECOLOGICAL FUNCTION

The physical, chemical and biological processes that contribute to the self-maintenance of a natural ecosystem. These processes, such as filtration and nitrogen storage, contribute to ecosystem services.

ECOSYSTEM SERVICE

The beneficial outcomes resulting from ecological functions that contribute to survival and quality of life, and maintenance of biodiversity.

ENGINEERING UNIT

An output from the ESII Tool that is a magnitude of a physical quantity, such as gallons per year and milligrams per liter.

ESII FIELD APP (ESII APP)

The remote interface of the ESII Tool that allows the user to collect spatially explicit ecological data.

ESII PROJECT WORKSPACE

The web-based interface of the ESII Tool that contains a series of ecological models that enable the user to inventory a site and run calculations to learn about the benefits (ecosystem services) provided by your site.

FUNCTIONAL ACRE

An area-based measure of the potential percent performance of an ecological function.

HEAT MAP

A map-based, graphical representation of how well a given portion of an area is performing a particular ecological function or ecosystem service. This is useful for examining performance details and for incorporating important spatial considerations such as location, area, or juxtaposition into planning efforts.

MAP UNIT

An individual parcel of land where data collection will take place. It encompasses relatively homogeneous natural features (e.g., grassy fields, forests, shrub/scrub, etc.) or man-made structures (e.g., buildings, roads, etc.).

PERCENT PERFORMANCE

A measure of the total potential for an ecological function and/or ecosystem service to be performed in a given area, relative to the area's full potential. This measure is based on the contribution provided by sets of attributes which are significant to the performance of an ecological function and/or ecosystem service.

SCENARIO

An assessment of conditions within a Data Collection Effort (DCE) used to generate or compare analysis results between alternative landscape management options. A Scenario may refer to an assessment phase, such as "baseline", "current condition", or "post-design", or a specific development design label such as "brownfield redesign" or "new parking lot".

SERVICE ACRE

An area-based measure of the potential percent performance of an ecosystem service.

SITE

The overall location where an assessment will take place.

SPATIAL DATA

Information regarding the attributes that were collected for the Data Collection Effort (DCE).

STANDARD DEVIATION

A statistical measure of the spread of the numbers in a data set and how close individual data points are to the average value of the data set.

SURVEY DATA

Attribute information that was collected using the ESII Field App or input directly into the ESII Project Workspace.

ECOSYSTEM SERVICES

AESTHETICS - NOISE ATTENUATION

A measure of a site or landscape's potential to attenuate sound from anthropogenic sources as it travels across a site to a potential recipient.

AESTHETICS - VISUAL SCREENING

A measure of the landscape's potential to obstruct a line of vision between man-made objects, buildings, or structures and likely off-site vantage points.

AIR QUALITY - NITROGEN REMOVAL

A measure of the landscape's potential to improve air quality through the removal of airborne nitrogen.

AIR QUALITY - PARTICULATES REMOVAL

A measure of the landscape's potential to improve air quality through the removal of airborne particulate matter.

EROSION CONTROL

A measure of the ability of the soils on a site to resist the forces of wind and water.

MASS WASTING

Geomorphic process by which soil, sand, and rock move downslope typically as a mass, largely under the force of gravity, but frequently affected by water and water content.

WATER QUALITY CONTROL – NITROGEN

A measure of the landscape's potential to improve water quality through removal of dissolved or suspended nitrogen and moderation (cooling) of water temperature. In the ESII Tool outputs, this is reported as "Total (Water) Nitrogen".

WATER QUALITY CONTROL - SEDIMENT REMOVAL

A measure of the landscape's potential to improve water quality through removal of dissolved or suspended contaminants and moderation (cooling) of water temperature. In the ESII Tool outputs, this is reported as "Water Filtration".

WATER PROVISIONING

A measure of the landscape's potential to provide water necessary for use, storage, or discharge during the course of normal operations for a facility.

WATER QUANTITY CONTROL

A measure of the landscape's ability of to adequately manage and convey a 25-year storm event. This service includes elements that predict both water storage and water transport potential.

ECOLOGICAL FUNCTIONS

AIR FILTRATION

A measure of the ability of vegetative structures to passively remove solid particles (e.g. dust, smoke) from the air as it moves across terrestrial or aquatic habitats.

AIR TEMPERATURE REGULATION

A measure of the ability to help moderate extreme ambient air temperatures. The function focuses primarily on moderating high temperatures.

CARBON UPTAKE

A measure of the landscape's potential to uptake and store carbon compounds, both above ground and below ground, in vegetative structures and soil.

CHANNEL EQUILIBRIUM

A measure of the degree to which forces acting upon a stream channel are balanced by geomorphic changes to that channel.

DENITRIFICATION

A measure of the ability to remove nitrogen from the water cycle due to plant uptake, filtration of sediments, or gaseous volatilization.

EVAPORATION

A measure of the potential to lose water to the atmosphere (from open bodies of water, exposed soil, ground cover and canopy cover).

INFILTRATION

A measure of the ability of free-standing water on the ground surface to move vertically downward through the soil.

INTERCEPTION

A measure of the ability to capture and accumulate precipitation falling on foliage, stems, branches, organic litter and inorganic surfaces such as rock, pavement, structures, etc. This function is viewed in terms of the ability to make precipitation available for evaporation.

NITROGEN STORAGE

A measure of the ability of a landscape to store nitrogen.

SOIL MOBILITY

A measure of the ability of the landscape to provide and mobilize sediment through aeolian or fluvial erosive processes.

SOIL QUALITY

A measure of the ability of soil to support the dynamic processes necessary to promote terrestrial plant growth.

TRANSPIRATION

A measure of the landscape's ability to transfer soil moisture into the atmosphere as a function of photosynthesis.

WATER CONVEYANCE

A measure of the landscape's ability to convey water from one location to another through overland transport.

WATER FILTRATION

A measure of the ability of vegetative or soil structures to filter particulate matter from water.

WATER TEMPERATURE REGULATION

A measure of the landscape's ability to maintain cool surface water temperatures.