

ESII TOOL MEASUREMENT UNITS

The Ecosystem Services Identification & Inventory (ESII) Tool provides outputs in a variety of units of measure, to support different ways of understanding the natural benefits being measured. The current units of measure provided by the tool include:

- Percent performance of functions and services – a relative measure of how close a specified area is to optimal functional performance or service production
- Functional/service acres – a measure of the total amount of functional performance or service benefit being provided by a specified area
- Engineering units – an absolute measure of benefits in units specific to the benefit; e.g., gallons/minute, BTUs/day, tons/year, etc.

The percent performance measure provides information about how well each map unit is performing particular ecological functions or ecosystem services relative to its full potential. This information is very useful for identifying potential restoration opportunities. Knowing which areas on the site could potentially increase in performance enables the user to focus on those areas during the planning process.

By providing outputs in a variety of measurement units, the ESII Tool becomes a flexible, versatile method to support decision makers and other stakeholders in a variety of planning and decision contexts.



Land management decisions take place in a variety of contexts, and require a variety of measurement types.

Providing information on functional acre and service acre production enables the user to understand and quantify the total amount of benefit provided by natural areas. This unit of measure is also very well suited for understanding trade-offs between services associated with various proposed activities. In many instances, enhancing natural areas will improve the production of some natural benefits but may actually decrease the production of other benefits. This type of measure is very effective for helping the user understand the relative change in benefits from each proposed scenario.

Engineering units provide a measure of the benefit being produced in the same units an engineer would use to measure the benefit. For instance, for a service such as water quantity regulation, an engineer may want to know how many gallons per minute will be treated by the map unit or site, as well as the change in gallons per minute coming from the site under various scenarios. This type of measurement unit is particularly useful for comparing costs between grey and green infrastructure solutions.