



2007 National Resources Inventory

Glossary of Selected Terms

Terms in italics within a definition refer to terms defined elsewhere in this glossary.

Aerial photograph. A photograph of the earth's surface taken from airborne equipment. Sometimes called aerial photo or air photograph.

Barren land. A *Land cover/use* category used to classify lands with limited capacity to support life and having less than 5 percent vegetative cover. Vegetation, if present, is widely spaced. Typically, the surface of barren land is sand, rock, exposed subsoil, or salt-affected soils. Subcategories include *salt flats; sand dunes; mud flats; beaches; bare exposed rock; quarries, strip mines, gravel pits, and borrow pits; riverwash; oil wasteland; mixed barren lands; and other barren land.*

Beach. A *Barren land* subcategory. Includes the area adjacent to the shore of an ocean, sea, large river, or lake that is washed by the tide or waves.

Built-up land. See Urban and built-up areas.

C factor (USLE). See Cover and management factor.

C factor (WEQ). See Climatic factor.

Climatic factor (C factor - WEQ). Characterizes climatic erosivity, specifically wind speed and surface soil moisture. The factor for any given locality is expressed as a percentage of the C factor for Garden City, Kansas, which has a value of 100.

Close-grown crops. Crops that are generally drill-seeded or broadcast, such as wheat, oats, rice, barley, and flax.

Conservation practice. A specific treatment, such as a structural or vegetative measure or management technique commonly used to meet specific needs in planning and conservation, for which standards and specifications have been developed. Conservation practices are in the NRCS Field Office Technical Guide, Section IV, which is based on the National Handbook of Conservation Practices. *The practices recorded for NRI have been applied to the area of land in which the NRI point falls or the portion of the field that would be used in conservation planning. The point need not fall on a specific practice.*

Conservation Reserve Program (CRP). A Federal program established under the Food Security Act of 1985 to assist private landowners to convert highly erodible cropland to vegetative cover for 10 years.

Conservation Reserve Program (CRP) land. A *Land cover/use* category that includes land under a CRP contract.

Cover and management factor (C factor - USLE). The ratio of soil loss from an area with specific cover

and management to that from an identical area in tilled continuous fallow.

Cowardin system. A classification system of *wetlands* and deepwater habitats of the United States, officially adopted by the U.S. Fish and Wildlife Service (FWS) used to develop wetland data bases. The system was developed by Lewis M. Cowardin of the U.S. Fish and Wildlife Service and others. The five major systems are Estuarine, Lacustrine, Marine, Palustrine, and Riverine. (Cowardin, L.M., V. Carter, F.C. Golet, E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. FWS/OBS-79/31. U.S. Department of the Interior, Fish and Wildlife Service.

Cropland. A *Land cover/use* category that includes areas used for the production of adapted crops for harvest. Two subcategories of cropland are recognized: cultivated and noncultivated. Cultivated cropland comprises land in *row crops* or *close-grown crops* and also other cultivated cropland, for example, hayland or pastureland that is in a rotation with row or close-grown crops. Noncultivated cropland includes permanent *hayland* and *horticultural cropland*.

Cropping history. A record of the crop that was on the land during each of the 3 years preceding the current inventory year. These data are recorded on *cropland*, *pastureland*, and CRP land cover/uses only. Data are used to determine some of the values used to calculate water and wind erosion rates.

Cultivated cropland. See Cropland.

Deepwater habitat. Any open water area in which the mean water depth exceeds 6.6 feet in nontidal areas or at mean low water in freshwater tidal areas, or is covered by water during extreme low water at spring tides in salt and brackish tidal areas, or covers the deepest emerging vegetation, whichever is deeper.

Developed land. A combination of land cover/use categories, *Large urban and built-up areas*, *Small built-up areas*, and *Rural transportation land*.

Erodibility index (EI). A numerical expression of the potential of a soil to erode, considering the physical and chemical properties of the soil and climatic conditions where it is located. The higher the index, the greater the investment needed to maintain the sustainability of the soil resource base if intensively cropped. EI scores of 8 or above are equated to highly erodible land.

Erosion. The wearing away of the land surface by running water, waves, or moving ice and wind, or by such processes as mass wasting and corrosion (solution and other chemical processes). The term "geologic erosion" refers to natural erosion processes occurring over long (geologic) time spans. "Accelerated erosion" generically refers to erosion that exceeds what is presumed or estimated to be naturally occurring levels, and which is a direct result of human activities (e.g., cultivation and logging).

Estuarine Wetland. Wetlands occurring in the Estuarine System, one of five systems in the classification of wetlands and deepwater habitats (see Wetlands, Cowardin et al. 1979). Estuarine wetlands are tidal wetlands that are usually semienclosed by land but have open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The most common example is where a river flows into the ocean.

Farmsteads and ranch headquarters. A *Land cover/use* category that includes dwellings, outbuildings, barns, pens, corrals and feedlots next to buildings, farmstead or feedlot windbreaks, and family gardens associated with operating farms and ranches. (Commercial feedlots, greenhouses, poultry facilities, overnight pastures for livestock, and field windbreaks are not considered part of farmsteads.)

Federal land. See Ownership.

Field. A cultivated area of land that is marked out for a particular crop or cropping sequence.

Forest land. A *Land cover/use* category that is at least 10 percent stocked by single-stemmed woody species of any size that will be at least 4 meters (13 feet) tall at maturity. Also included is land bearing evidence of natural regeneration of tree cover (cut over forest or abandoned farmland) and not currently developed for nonforest use. Ten percent stocked, when viewed from a vertical direction, equates to an areal canopy cover of leaves and branches of 25 percent or greater. The minimum area for classification as forest land is 1 acre, and the area must be at least 100 feet wide.

Growing season. The period and/or number of days between the last freeze in the spring and the first frost in the fall for the freeze threshold temperature of the crop or other designated temperature threshold.

Hayland. A subcategory of *Cropland* managed for the production of forage crops that are machine harvested. The crop may be grasses, legumes, or a combination of both. Hayland also includes land in set-aside or other short-term agricultural programs.

Horticultural cropland. A subcategory of *Cropland* used for growing fruit, nut, berry, vineyard, and other bush fruit and similar crops. Nurseries and other ornamental plantings are included.

I factor (WEQ). See Soil erodibility index.

Irrigated land. Land that shows evidence of being irrigated during the year of the inventory or of having been irrigated during 2 or more of the last 4 years. Water is supplied to crops by ditches, pipes, or other conduits. For the purposes of the NRI, *water spreading* is not considered irrigation.

K factor (USLE). See Soil erodibility factor (USLE).

K factor (WEQ). See Ridge roughness factor (WEQ).

L factor (USLE). See Slope-length factor (USLE).

L factor (WEQ). See Unsheltered distance factor (WEQ).

Lacustrine System. Wetlands and deepwater habitats occurring in the Lacustrine System, one of five systems in the classification of wetlands and deepwater habitats (see Wetlands, Cowardin et al. 1979). The Lacustrine System includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergent plants, emergent mosses or lichens with greater than 30% areal coverage; and (3) total area exceeding 20 acres. Similar habitats totaling less than 20 acres are included if an active wave-formed or bedrock shoreline feature makes up all or part of the boundary, or if the water depth in the deepest part of the basin exceeds 6.6 feet at low water.

Lake. A natural inland body of water, fresh or salt, extending over 40 acres or more and occupying a basin or hollow on the earth's surface, which may or may not have a current or single direction of flow.

Land capability classification (class and subclass). Land capability classification is a system of grouping soils primarily on the basis of their capability to produce common cultivated crops and pasture plants without deteriorating over a long period. Land capability classification is subdivided into capability class and capability subclass nationally.

Capability class. The broadest category in the system. Class codes I to VIII indicate progressively

greater limitations and narrower choices for agriculture. The numbers are used to represent both irrigated and nonirrigated land capability.

Capability subclass. The second category in the system. Class codes **e** (*erosion problems*), **w** (*wetness problems*), **s** (*root zone limitations*), and **c** (*climatic limitations*) are used for land capability subclasses.

Land cover/use. A term that includes categories of land cover and categories of land use. Land cover is the vegetation or other kind of material that covers the land surface. Land use is the purpose of human activity on the land; it is usually, but not always, related to land cover. The NRI uses the term land cover/use to identify categories that account for all the surface area of the United States.

Large urban and built-up areas. A *Land cover/use* category composed of developed tracts of at least 10 acres—meeting the definition of *Urban and built-up areas*.

Margins of Error. Margins of error are reported for each NRI estimate. The margin of error is used to construct the 95 percent confidence interval for the estimate. The lower bound of the interval is obtained by subtracting the margin of error from the estimate; the upper bound is obtained by adding the margin of error to the estimate. Confidence intervals can be created for various levels of significance which is a measure of how certain we are that the interval contains the true value we are estimating. A 95 percent confidence interval means that in repeated samples from the same population, 95 percent of the time the true underlying population parameter will be contained within the lower and upper bounds of the interval.

Marine System. The open ocean overlying the continental shelf and its associated high energy coastline. Marine habitats are exposed to the waves and currents of the open ocean and the water regimes are determined primarily by the ebb and flow of oceanic tides. One of the five systems in the classification of wetlands and deepwater habitats. (See Wetlands, Cowardin et al. 1979.)

Marshland. A subcategory of the *Land cover/use* category Other rural land, described as a nonforested area of land partly or intermittently covered with water and usually characterized by the presence of such monocotyledons as sedges and rushes. These areas are usually in a wetland class and are not placed in another NRI land cover/use category, such as *rangeland* or *pastureland*.

Mines, quarries, and pits. Uses of land for extraction of ores, minerals, and rock materials; a subcategory of the *Land cover/use* category *Barren land*.

Mud flat. A *Land cover/use* subcategory under *Barren land*. A mud area with less than 5 percent vegetative cover.

Noncultivated cropland. See Cropland.

Other aquatic habitats. Includes wetlands and deepwater habitats occurring in the Riverine, Lacustrine, or Marine Systems, and deepwater habitats occurring in the Estuarine System as defined by Cowardin et al. 1979 (see Wetlands).

Other rural land. A *Land cover/use* category that includes farmsteads and other farm structures, field windbreaks, *barren land*, and *marshland*.

Ownership. The separation of Federal and non-Federal lands and the distinction between administrative units of land. Water areas are not classified according to ownership. The six categories of ownership are:

Private. A type of ownership pertaining to land belonging to an individual person or persons, a partnership, or a corporation (all of which are persons in the legal sense), as opposed to the public or the government; private property.

Municipal. A type of ownership pertaining to land belonging to the local government of a town or city.

County or parish. A type of ownership pertaining to land belonging to an administrative subdivision of a State in the United States, which is identified as a county or an equivalent administrative unit in areas where counties do not exist; examples are parishes in Louisiana and boroughs in Alaska.

State. A type of ownership pertaining to land belonging to one of the States, commonwealths, or territories of the United States of America.

Federal land. A land ownership category designating land that is owned by the Federal Government. It does not include, for example, trust lands administered by the Bureau of Indian Affairs or Tennessee Valley Authority (TVA) land. No data are collected for any year that land is in this ownership.

Indian tribal and individual Indian trust lands. A type of ownership of land administered by officially constituted Indian tribal or individual Indian trust entities.

P factor. See Practice factor.

Palustrine Wetland. Wetlands occurring in the Palustrine System, one of five systems in the classification of wetlands and deepwater habitats (see Wetlands, Cowardin et al. 1979). Palustrine wetlands include all nontidal wetlands dominated by trees, shrubs, persistent emergent plants, or emergent mosses or lichens, as well as small, shallow open water ponds or potholes. Palustrine wetlands are often called swamps, marshes, potholes, bogs, or fens.

Pastureland. A *Land cover/use* category of land managed primarily for the production of introduced forage plants for livestock grazing. Pastureland cover may consist of a single species in a pure stand, a grass mixture, or a grass-legume mixture. Management usually consists of cultural treatments: fertilization, weed control, reseeding or renovation, and control of grazing. For the NRI, includes land that has a vegetative cover of grasses, legumes, and/or forbs, regardless of whether or not it is being grazed by livestock.

Perennial stream. A stream or reach of a stream that normally flows continuously throughout the year.

Photographic interpretation. The act of examining photography images for the purpose of identifying objects and judging their significance.

Practice factor (P factor - USLE). The ratio of soil loss with a support practice like contouring, stripcropping, or terracing, to soil loss with straight-row farming up and down the slope.

Prime farmland. Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses.

Railroads. A category of *Rural transportation* areas that includes all operational rail systems and their rights-of-way. Abandoned railroad beds are not included as railroad areas.

Rainfall and runoff (R factor - USLE). The number of rainfall erosion index units, plus a factor for runoff

from snowmelt or applied water where such runoff is significant.

Rangeland. A *Land cover/use* category on which the climax or potential plant cover is composed principally of native grasses, grasslike plants, forbs or shrubs suitable for grazing and browsing, and introduced forage species that are managed like rangeland. This would include areas where introduced hardy and persistent grasses, such as crested wheatgrass, are planted and such practices as deferred grazing, burning, chaining, and rotational grazing are used, with little or no chemicals or fertilizer being applied. Grasslands, savannas, many wetlands, some deserts, and tundra are considered to be rangeland. Certain communities of low forbs and shrubs, such as mesquite, chaparral, mountain shrub, and pinyon-juniper, are also included as rangeland.

Remote sensing. The science and art of obtaining information about an object, area, or phenomenon through the analysis of data acquired by a device that is not in contact with the object, area, or phenomenon under investigation.

Reservoir. A pond, lake, basin, or other space, created in whole or in part by the building of engineering structures, that is used for the storage, regulation, and control of water.

Ridge roughness (K factor - WEQ). A measure of the effect of ridges made by tillage and planting implements. It is expressed as a decimal from 0.5 to 1.0. Ridges, especially those at right angles to the prevailing wind direction, absorb and deflect wind energy and trap moving soil particles. See *Wind erosion equation (WEQ)*.

Riverine System. All wetland and deepwater habitats contained within a channel, with two exceptions (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens; and (2) habitats with water containing ocean derived salts. One of the five systems in the classification of wetlands and deepwater habitats. (See *Wetlands*, Cowardin et al. 1979.)

Riverwash. A subcategory of *Barren land*. Barren alluvial areas, usually coarse-textured, exposed along streams at low water and subject to shifting during normal high water.

Row crops. A subset of the *Land cover/use* category *Cropland* (subcategory, Cultivated) comprising land in row crops, such as corn, soybeans, peanuts, potatoes, sorghum, sugar beets, sunflowers, tobacco, vegetables, and cotton.

Rural transportation land. A *Land cover/use* category which consists of all highways, roads, railroads and associated right-of-ways outside *urban and built-up areas*; also includes private roads to *farmsteads or ranch headquarters*, logging roads, and other private roads (field lanes are not included).

S factor. See Slope-steepness factor.

Sample point. The second-stage sample unit in the NRI two-stage sampling scheme. See also *Segment*.

Sand dunes. A *Land cover/use* subcategory under *Barren land*. A sand area with less than 5 percent *vegetative cover*. An accumulation of loose sand heaped by the wind, commonly found along low-lying seashores above high-tide level, more rarely on the border of large lakes or river valleys, as well as in various desert regions, where there is abundant dry surface sand during some part of the year.

Segment. An area of land, typically square to rectangular in shape, that is approximately 40, 100, 160, or 640 acres in size. Within the segment, *sample points* are assigned. Certain data elements are collected for the entire segment, while others are collected at the segment points. The size of the segment is based on the

shape, size, and complexity of the resources being inventoried. In 34 States, segments are often 160-acre square parcels measuring 0.5 mile on each side. In the western United States, segments are often 40-acre or 640-acre square areas; the 40-acre units are used in most irrigated areas, and the larger segments are used in relatively homogeneous areas containing large tracts of *rangeland*, *forest land*, or *barren land*. In the 13 northeastern States, segments are defined to be 20 seconds of latitude by 30 seconds of longitude, ranging from 97 acres in Maine to 114 acres in southern Virginia. In Louisiana and parts of northwestern Maine, segments are 0.5 kilometer squares (61.8 acres).

Sheet and rill erosion. The removal of layers of soil from the land surface by the action of rainfall and runoff. It is the first stage in water erosion.

Silviculture. A branch of forestry dealing with the management and cultivation of forest trees.

Slope. The inclination of the soil surface from the horizontal. Slope percent is the vertical distance divided by the horizontal distance, then multiplied by 100.

Slope length. The distance from the point of origin of overland flow to the point where either the slope gradient decreases enough that deposition begins, or the runoff water enters a well-defined channel that may be part of a drainage network or a constructed channel. For the NRI, length of slope is taken through the *sample point*.

Slope-length factor (L factor - USLE). The ratio of soil loss from the field slope length to that from a 72.6-foot length under identical conditions.

Slope-steepness factor (S factor - USLE). The ratio of soil loss from the field slope gradient to that from a 9 percent slope under otherwise identical conditions. Used in *Universal soil loss equation* (USLE) calculations of *sheet and rill erosion*.

Small built-up areas. A *Land cover/use* category consisting of developed land units of 0.25 to 10 acres, which meet the definition of *Urban and built-up areas*.

Soil erodibility factor (K factor - USLE). An erodibility factor which quantifies the susceptibility of soil particles to detachment and movement by water. This factor is used in the *Universal soil loss equation* (USLE) to calculate soil loss by water.

Soil erodibility index (I factor - WEQ). The potential soil loss, in tons per acre per year, from a wide, level, unsheltered, isolated field with a bare, smooth, loose, and noncrusted surface, under climatic conditions like those in the vicinity of Garden City, Kansas.

Soil loss tolerance factor (T factor - USLE). The maximum rate of annual soil loss that will permit crop productivity to be sustained economically and indefinitely on a given soil.

Soil survey. The systematic examination, description, classification, and mapping of soils in an area. The USDA- NRCS Soil Survey Program produces Soil Survey Reports, which generally consist of four principal parts: (1) maps, (2) a map legend, (3) a description of the soils in the survey area, and (4) a use and management report. The survey area commonly is a single county but may comprise parts of counties, physiographic regions, or other management areas.

Stream. A flow of water in a channel or bed, as a brook, rivulet, or small river.

T factor (USLE). See *Soil loss tolerance factor*.

Universal soil loss equation (USLE). An erosion model designed to predict the long-term average soil losses in runoff from specific field areas in specified cropping and management systems. The equation is: $A = RKLSCP$ where

A = Computed soil loss per unit area
 R = *Rainfall and runoff* factor
 K = *Soil erodibility* factor
 L = *Slope-length* factor
 S = *Slope-steepness* factor
 C = *Cover and management* factor
 P = *Support practice* factor

The NRI calculations use location-specific data for the field in which the NRI *sample point* falls or that portion of the field surrounding the point that would be considered in conservation planning.

Unsheltered distance (L factor - WEQ). The unsheltered distance along the prevailing wind erosion direction across the field or area to be evaluated. For the NRI, the unsheltered distance is expressed in feet, measured through the *sample point*, parallel to the prevailing wind direction during the critical wind erosion period.

Uplands. All land not classified as wetland or deepwater habitat (see Wetlands, Cowardin et al. 1979).

Urban and built-up areas. A *Land cover/use* category consisting of residential, industrial, commercial, and institutional land; construction sites; public administrative sites; railroad yards; cemeteries; airports; golf courses; sanitary landfills; sewage treatment plants; water control structures and spillways; other land used for such purposes; small parks (less than 10 acres) within urban and built-up areas; and highways, *railroads*, and other transportation facilities if they are surrounded by urban areas. Also included are tracts of less than 10 acres that do not meet the above definition but are completely surrounded by Urban and built-up land. Two size categories are recognized in the NRI: areas of 0.25 acre to 10 acres, and areas of at least 10 acres.

V factor. See Vegetative cover.

Vegetative cover (V factor - WEQ). The effect of vegetative cover in the *Wind erosion equation* is expressed by relating the kind, amount, and orientation of vegetative material to its equivalent in pounds per acre of small grain residue in reference condition (small grain equivalent).

Water areas. A *Land cover/use* category comprising water bodies and streams that are permanent open water.

Water body. A type of (permanent open) water area that includes ponds, *lakes*, reservoirs, bays or gulfs, and estuaries.

Water spreading. Diverting or collecting runoff from natural channels, gullies, or streams with a system of dams, dikes, ditches, or other means, and spreading it over a relatively flat area. (See *Irrigated land*.)

Wetlands. Lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year. (Cowardin, L.M., V. Carter, F.C. Golet, E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. FWS/OBS-79/31. U.S. Department of the Interior, Fish and Wildlife Service.)

Wetland losses. Wetland losses are described in terms of gross and net. Net change is defined as the gross gain minus the gross loss, and can be either positive (net gain) or negative (net loss) for a given region. Wetland losses were attributed to one of the following categories:

- a. Development. Loss occurring on land cover/use category of urban and built-up or rural transportation.
- b. Agriculture. Loss occurring on land cover/use category of cropland, pastureland, CRP land, farmsteads or other farmland.
- c. Silviculture. Loss occurring on forest land.
- d. Miscellaneous. Loss occurring on all other land cover/use categories including mined land, rangeland, and other barren lands. Natural variations in climatic cycles and hydrology are responsible for the majority of these losses.

Wind erosion. The process of detachment, transport, and deposition of soil by wind.

Wind erosion equation (WEQ). An erosion model designed to predict long-term average annual soil losses from a field having specific characteristics. The equation is: $E = f(IKCLV)$ where

E = Estimated average annual soil loss expressed in tons per acre per year

I = *Soil erodibility index*

K = *Soil ridge roughness factor*

C = *Climatic factor*

L = Equivalent *unsheltered distance* across the field along the prevailing wind erosion direction

V = Equivalent *vegetative cover*