GLOSSARY OF TERMS

Agricultural Pollution: Wastes, emissions, and discharges arising from farming activities. Causes include runoff and leaching of pesticides and fertilizers; pesticide drift and volatilization; erosion and dust from cultivation; and improper disposal of animal manure and carcasses. Some agricultural pollution is point source (e.g., large feedlots), but much is nonpoint source, meaning that it derives from dispersed origins.

Agricultural Services: Includes establishments primarily engaged in supplying soil preparation services, crop services, landscape and horticultural services, veterinary and other animal services, and farm labor and management services.

Algal Bloom: Rapid and flourishing growth of algae in and on a body of water.

Alkaline: Having a pH of 7.0 or above.

Alluvium: Material transported and deposited on land by flowing water, such as clay, silt, and sand.

Anaerobic: Devoid of gaseous or dissolved molecular oxygen; organisms that are able to live without oxygen.

Approved Conservation Plan: A plan that covers: approved cover, other required practices necessary for establishing and maintaining cover, and a schedule for installing conservation practices to provide adequate environmental benefits on eligible cropland.

Aquifer: An underground formation capable of storing and yielding significant quantities of water; usually composed of sand, gravel, or permeable rock.

Benthic Organisms: Bottom-dwelling aquatic organisms.

Bioaccumulation: The uptake and retention of nonfood substances by a living organism from its environment, resulting in a build-up of the substances in the organism.

Biomass: Any biological material. In reference to alternative energy sources, mainly plants or parts of plants, such as harvested trees, leaves, limbs, etc. In ecological studies, the dry mass of living organisms in a specified area.

Biosphere: The entire planetary ecosystem, including all living organisms and the parts of the earth in which they live or that support them. The term is also used to refer to only the living organisms on earth and not to their physical and chemical environments.

Carbon Sequestration: The net removal or fixation of carbon dioxide (CO_2) from the atmosphere or in a carbon sink into long-lived pools of carbon through biological or physical processes. These pools can be living, aboveground biomass (e.g., trees), products with a long, useful life created from biomass (e.g., lumber), living biomass in soils (e.g., roots and microorganisms), or recalcitrant organic and inorganic carbon in soils and deeper subsurface environments.

Carbon Sink: A process or an activity that absorbs or takes up released carbon (greenhouse gases) from another part of the carbon cycle. The four sinks, which are ecosystem-based, within which carbon behaves in a systematic manner are the *atmosphere*, *terrestrial biosphere* (including freshwater systems), *oceans*, and *sediments* (including fossil fuels).

Coliform: Bacteria common to the intestinal tract of warm-blooded animals, including humans.

Conservation: The management of human and natural resources to provide maximum benefits over a sustained period of time. In farming, conservation entails matching cropping patterns and the productive potential and physical limitations of agricultural lands to ensure long-term sustainability of profitable production. Conservation practices focus on conserving soil, water, energy, and biological resources.

Conservation Easement: Acquisition of rights and interest to a property to protect identified conservation or resource values, using a reserved interest deed.

Conservation Plan: A combination of land uses and farming practices to protect and improve soil productivity and water quality, and to prevent deterioration of natural resources on all or part of a farm. Plans must meet technical standards.

Conservation Practice: Any technique or measure used to protect soil and water resources for which standards and specifications for installation, operation, or maintenance have been developed.

Cost-Sharing: Payments to producers to cover a specified portion of the cost of installing, implementing, or maintaining a conservation practices.

Deposition: The washout or settling of material from the atmosphere to the ground or to surface waters.

Dissolved Oxygen (DO): Amount of free oxygen found in water; most commonly used measurement of water quality.

Easement: A landowner sells or surrenders the right to develop a portion of the property, usually in return for a payment or some other benefit.

Ecosystem: A level of organization within the living world that includes both the total array of biological organisms present in a defined area and the chemical-physical factors that influence the plants and animals in it; all biological and non-biological variables within a defined area.

Ecotone: A zone of transition between two well-defined vegetated areas.

Emergent Plant: A plant that grows in shallow water with the root system submerged under the water and the upper vegetation rising about the water.

Endangered Species: A species that is threatened with extinction throughout all or a significant portion of its range.

Erodibility Index (EI): Created by dividing potential erosion (from all sources except gully erosion) by the T value, which is the rate of soil erosion above which long term productivity may be adversely affected. The erodibility index is used in conservation compliance and CRP. One of the eligibility requirements for the CRP is that land have an EI greater than 8.

Erosion: The removal and loss of soil by the action of water, ice, gravity, or wind.

Estuary: Regions of interaction between rivers and near-shore ocean waters, where tidal action and river flow mix fresh and salt water. Such areas include bays, mouths of rivers, salt marshes, and lagoons. These brackish water ecosystems shelter and feed marine life, birds, and wildlife.

Eutrophication: A process where more organic matter is produced than existing biological oxidization processes can consume.

Farmed Wetland: Wetlands that have been partially drained or are naturally dry enough to allow crop production in some years, but otherwise meet the soil, hydrological, and vegetative criteria defining a wetland.

Farm Income: The earnings of a farming operation over a given period of time, measured by several factors:

> *Gross cash income* is the sum of all receipts from the sale of crops, livestock, and farm related goods and services as well as all forms of direct payments from the government.
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> *Gross farm income* is the same as gross cash income with the addition of nonmoney income, such as the value of home consumption of self-produced food and the imputed gross rental value of farm dwellings.
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> *Net cash income* is gross cash income less all cash expenses such as for feed, seed, fertilizer, property taxes, interest on debt, wages to hired labor, contract labor and rent to nonoperator landlords.
>
> *Net farm income* is gross farm income less cash expenses and noncash expenses, such as capital consumption, perquisites to hired labor, and farm household expenses. Net farm income is a longer-term measure of the ability of the farm to survive as a viable income-earning business, while net cash income is a shorter-term measure of cash flow.

Fauna: All animals associated with a given habitat, area, or period.

Filter Strip: An area of vegetation, generally narrow and long, that slows the rate of runoff, allowing sediments, organic matter, and other pollutants that are being conveyed by the water to be removed. Filter strips reduce erosion and the accompanying stream pollution, and can be a best management practice.

Floodplain: The lowland that borders a stream or river and is found outside of the floodway. It is usually dry, but subject to flooding.

Flora: All plant life associated with a given habitat, country, or period, including bacteria.

Flyways: A general term used to describe common migrating patterns among different bird species, based on definite geographic regions.

Forestland: A land cover/land use category that is at least 10 percent stocked by single-stemmed woody species of any size that will be at least 13 feet tall at maturity. Also included, for the NRI, is land bearing evidence of natural regeneration of tree cover and not currently developed for nonforest use.

Forest-use land: Forest-use land excludes special-use areas in forest cover, such as parks, wilderness, and wildlife areas, to avoid double counting. To eliminate overlap with other uses that exist is not feasible, but this reduced area is a more realistic approximation of the land that they may be expected to serve normal forest uses.

Fossil Fuel: Crude oil, natural gas, peat, coal, or other hydrocarbons that are derived from the remains of plants and/or animals that were converted to other forms by biological, chemical, or physical forces of nature.

Gleaning: The placing of livestock on fields after harvesting to use the excess crop residue and grains that remain in the field.

Groundwater: Water in the porous rocks and soils of the earth's crust; a large proportion of the total supply of fresh water.

Harvested Acres: The cropland actually harvested for a particular crop, usually somewhat smaller at the national level than planted acres due to weather damage or abandonment because of low market prices.

Hydric: Containing an abundance of water.

Hydrology: The study of the distribution, movement, and chemical makeup of surface and ground waters.

Hydrophyte: Plants that live in water or that have adapted to hydric conditions.

Hypoxia: A low oxygen condition in the water that may occur where a nutrient-laden free-flowing body of water (like a river) enters a lake or ocean. The high nutrient content promotes rapid growth of plankton/phytoplankton that subsequently die and, in the process, consume large amounts of oxygen.

Infiltration: The flow of a liquid into a substance through small openings.

Introduced Species: Species that have evolved elsewhere and have been transported and purposely or accidentally disseminated by humans. Many terms describe these species: alien, exotic, non-native, and nonindigenous.

Invasive Species: A species that is 1) non-native (or alien) to the ecosystem under consideration, and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health (Executive Order 13112). Invasive species generally tend to progress into communities that posses a few general communal characteristics, including, but not limited to: climatically similar to original habitat of invader; low diversity of native species present; recently disturbed (early successional); absence of predators on invading species; and previously disturbed by humans.

Lacustrine: Pertaining to lakes.

Land Capability (Classification): The quality of soil resources for agricultural use is commonly expressed as land capability classes and subclasses, which show, in a general way, the suitability of soils for most kinds of field crops. Soils are grouped according to their limitations when they are used to grow field crops, the risk of damage when they are used, and the way they respond to treatment. Capability classes, the broadest groups, are designated by Roman numerals I through VIII, with I being the best soils and VIII being the poorest.

Mangrove Swamp: A tidal swamp forest populated by plant species capable of growth and reproduction in areas that experience periodic tidal submergence in seawater with a resulting increase in saline conditions. They develop along coastal regions in tropical climates.

Market Price: The price per bushel (or pound or hundredweight) of an agricultural commodity paid in the private sector. It can sometimes refer to the price paid at domestic seaports or large inland terminal markets (such as daily cash prices listed in newspapers).

Marsh: A coastal region where the soil has high moisture content because of periodic flooding caused by the tides. The vegetation is normally dominated by grasses.

Median Household Income: The income level which divides the income distribution of all of the households in a given area into two equal groups, half of the households having incomes above the median, half having incomes below the median.

Migrational Homing: Term used to describe the behavior of birds that return to the same nesting grounds year after year.

Mitigation: A method or action to reduce or eliminate adverse program impacts.

Native Grasses: Various regional and national grasses that were original to particular areas of the United States; they are regional with regards to soils, acidity or alkalinity, climate, diseases, and symbiotic coexistence with other plants in the surrounding area.

Neotropical Migrants: Bird species that annually migrate to the tropics during the northern winter months.

Nitrate: The nitrogen ion, NO_3^-, is derived from nitric acid and is an important source of nitrogen in fertilizers. Nitrate pollution of drinking water, shallow wells being particularly vulnerable, is of concern because infants are especially sensitive.

Nitrogen: An element found in the air and in all plant and animal tissues. For many crops, nitrogen fertilizer is essential for economic yields. However, nitrogen can also be a pollutant when nitrogen compounds are mobilized in the environment (e.g., leach from fertilized or manured fields), are discharged from septic tanks or feedlots, volatilize to the air, or are emitted from combustion engines. As pollutants, nitrogen compounds can have adverse health effects (see nitrate) and contribute to degradation of waters.

Nonpoint Source: A pollution source, which comes from diffuse sources (the origin of the pollutant cannot be easily defined), such as land runoff, precipitation, atmospheric deposition, or percolation. Nonpoint source pollution occurs when moving water, either from precipitation or irrigation, runs over the land or through the ground, picks up pollutants, and deposits them into a body of water or into the groundwater.

Nutrient Pollution: Contamination by excessive inputs of nutrient: a primary cause of eutrophication of surface waters, in which excess nutrients, usually nitrogen or phosphorus, stimulate algal growth. Sources of nutrient pollution include runoff from fields and pastures, discharges from septic tanks and feedlots, and emissions from combustion.

Organic: Chemically, a compound or molecule containing carbon bound to hydrogen. Organic compounds make up all living matter. The term organic frequently is used to distinguish "natural" products or processes from man-made "synthetic" ones. Thus, natural fertilizers include manures or rock phosphate, as opposed to fertilizers synthesized from chemical feedstocks.

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

Ozone (O_3): A highly reactive molecule composed of three oxygen atoms. Environmentally, ozone is important in two completely separate contexts—one, as a naturally occurring screen of harmful radiation in the outer atmosphere (i.e., stratospheric ozone), and two, as a component of polluting smog formed from emissions resulting from human activities (i.e., urban smog). In the stratosphere 7 to 10 miles above the Earth, naturally occurring ozone acts to shield the Earth from harmful radiation.

Palustrine: Describing marsh or wetlands.

Particulate Matter: Air pollutants, including dust, soot, dirt, smoke, and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires, and natural windblown dust.

Pastureland: A land use/land cover category of land managed primarily for the production of introduced forage plants for livestock 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.

Peat: The residue of partly decomposed plant material in which various plant parts, such as stems, can easily be discerned.

Per Capita Income: The average income computed for every person in a given area, excluding patients or inmates in institutional quarters. Per capita income is derived by dividing the total income of every person in a given area by the total population within that area.

Permanent Vegetative Cover: Trees, or perennial grasses, legumes, or shrubs with an expected life span of at least 5 years. Permanent cover is required on cropland entered into the CRP.

pH: A numerical indicator of the acidity or alkalinity of a substance; ranges from 0.0 (acidic) to 14.0 (basic or alkaline); pure water is neutral, with a pH of 7.0.

Photosynthesis: Process occurring in the cells of green plants that converts carbon dioxide and water into food and oxygen in the presence of sunlight.

Playa Lake: A temporary lake created in a flat-floored center of an undrained desert basin.

Point Source Pollution: Pollutants that are discharged or emitted from discrete "point" sources, such as pipes and smokestacks. While much agricultural pollution is nonpoint source, some agricultural activities are affected (e.g., feedlots of over 1,000 animal units).

Porosity: A description of the total volume of soil, rock, or other material that is occupied by pore spaces. A high porosity does not equate to a high permeability, in that the pore spaces may be poorly interconnected.

Poverty Thresholds: For statistical purposes (e.g., counting the poor population), the U.S. Census Bureau uses a set of annual income levels (poverty thresholds) that represent a Federal Government estimate of the point below which a household of a given size has cash income insufficient to meet minimal food and other basic needs. They were developed in the 1960s, based largely on estimates of the minimal cost of food needs, to measure changes in the poor population. The thresholds differ by household size and are adjusted annually for overall inflation.

Rangeland: A land cover/land use category on which the climax or potential plant cover is composed principally of native grasses, grass-like plants, forbs, or shrubs suitable for grazing and browsing, and introduced forage species that are managed like rangeland. For the NRI, grasslands, savannas, many wetlands, some deserts, and tundra were considered to be rangeland.

Riparian Areas: Lands adjacent to rivers and streams that are influenced by flooding. They are considered transition zones between the aquatic and terrestrial ecosystem that are connected by direct land-water interaction.

Runoff: Non-infiltrating water entering a stream or other conveyance channel shortly after a rainfall.

Sediment: Any finely divided organic and/or mineral matter derived from rock or biological sources that have been transported and deposited by water or air.

Sedimentation: The process of depositing sediment from suspension in water.

Sign-Up Period: A USDA-prescribed time period, usually lasting several months, when farmers can enroll in a crop price support or other farm program.

Slippage: Occurs when the amount of land an owner enrolls in the CRP is partially or wholly offset by additional land that is brought into production.

Sodbuster: A program created by Title 12 of the Food Security Act of 1985 designed to discourage the plowing up of erosion-prone grasslands for use as cropland. If such highly erodible land is used for crop production without proper conservation measures as laid out in a conservation plan, a producer may lose eligibility to participate in farm programs. Sodbuster provisions remain in effect under the FAIR Act of 1996.

Soil Quality: The capacity of a specific kind of soil to function, within natural or managed ecosystem boundaries, to sustain plant and animal productivity, maintain or enhance water and air quality, and support human health and habitation.

Swampbuster: A provision of the Food Security Act of 1985 that discourages the conversion of wetlands to cropland use. Producers converting a wetland area to cropland lose eligibility for several federal farm program benefits. Benefits are lost from when water levels are lowered to facilitate agricultural production until they have been restored. Several types of wetlands and wetlands in specified situations are exempt. Exceptions include conversions that began before December 23, 1985, conversions of wetlands that had been created artificially, crop production on wetlands that became dry through drought, and conversions that USDA has determined have minimal effect on wetland values. Swampbuster provisions were amended in the FAIR Act of 1996 to provide greater flexibility for producers and landowners.

Threatened Species: A species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Topsoil: The topmost layer of soil, usually containing organic matter.

Total Cropland: Includes five components: cropland harvested, crop failure, cultivated summer fallow, cropland used only for pasture, and idle cropland.

Cropland harvested includes row crops and closely sown crops; tree fruits, small fruits, and tree nuts; vegetables; other minor crops and hay.

Crop failure consists mainly of the acreage on which crops failed because of weather, insects, and diseases, but includes some land not harvested due to lack of labor, low market prices, or other factors.

Cultivated summer fallow refers to cropland in sub-humid regions of the Western United States cultivated for a season or more to control weeds and accumulate moisture before small grains are planted.

Cropland used only for pasture generally is considered in the long-term crop rotation, as being tilled, planted in field crops, and then re-seeded to pasture at varying intervals. However, some cropland pasture is marginal for crop uses and may remain in pasture indefinitely. This category also includes land that was used for pasture before crops reach maturity and some land used for pasture that could have been cropped without additional improvement.

Total Maximum Daily Load (TMDL): A TMDL identifies the amount of a specific pollutant or property of a pollutant, from a point source ("end of the pipe"), a nonpoint source (from runoff), and natural background sources, including a margin of safety, that may be discharged to a water body and still ensure that the water body attains water quality standards.

Vegetative Cover: is planted vegetation that has an expected lifespan to sufficiently protect the land for the life of CRP-1 and includes: trees, perennial grasses, legumes, and forbs or shrubs.

Velocity: The distance moved in a given direction per unit time (such as meters per second).

Vistas: An overlook or narrow break in vegetation that allows a wide or distant view of the landscape.

Watershed: The land across and under which water flows on its way to a stream, river, lake, or other water body; the surface drainage area above a specified point on a stream.

Water Table: The uppermost level of the belowground, geological formation that is saturated with water.

Wellhead Protection Area: A surface and subsurface land area regulated to prevent contamination of a well or well-field supplying a public water system. This program, established under the Safe Drinking Water Act, is implemented through state governments.

Wetlands: Areas that are inundated or saturated with surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil, including swamps, marshes, bogs, and other similar areas.

Wildlife Corridor: is a strip of land, 1 to 3 chains in width, which includes woody vegetation as determined by STC, in consultation with the State Technical Committee, that connects existing wildlife cover and provides travel lanes for wildlife through a nonprotective cover area.