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MLRA Definitions

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The USDA land resource categories used at state and national levels are land resource units (LRUs), major land resource areas (MLRAs), and land resource regions (LRRs).

Land Resource Region (LRR)

Land resource regions (LRRs) are geographically associated major land resource areas (MLRAs) which approximate broad agricultural market regions.

Land resource regions (LRRs) are designated by capital letters identified by a descriptive name. For example, the descriptive name for Land Resource Region **A** is the **Northwestern Forest, Forage, and Specialty Crop Region.**

There are 28 land resource regions, and A through U, with the exception of Q, are found in the conterminous 48 states. Land resource region Q is the Pacific Basin Region, and V is the Hawaiian Region. W1 is the Southern Alaska Region, W2 is the Aleutian Alaska Region, X1 is the Interior Alaska Region, X2 is the Western Alaska Region, and Y is the Northern Alaska Region. The numbers were required for new Alaska regions since all the letters in the alphabet were already used. Z is the Caribbean Region, which covers Puerto Rico, the U.S. Virgin Islands, and a few outlying islands.

Major Land Resource Area (MLRA)

Major land resource areas (MLRAs) are geographically associated land resource units (LRUs). Identification of these large areas is important in statewide agricultural planning and has value in interstate, regional, and national planning.

The 278 major land resource areas are designated by Arabic numbers and identified by a descriptive geographic name in Agriculture Handbook 296. For example, MLRA 1 (Northern Pacific Coast Range, Foothills, and Valleys) is on the west coast; MLRA 157 (Arid and Semiarid Low Mountain Slopes) is in Hawaii; MLRA 227 (Copper River Basin) is in Alaska; MLRA 270 (Humid Mountains and Valleys) is in Puerto Rico; and MLRA 190 (Stratovolcanoes of the Mariana Islands) is in the Pacific Basin. Where preexising MLRAs have been revised, an alphabetic suffix is often added to the original Arabic number (e.g., MLRA 102A, MLRA 102B, and MLRA 102C).

The dominant physical characteristics of the major land resource areas are described briefly in Agriculture Handbook 296 The first paragraph lists the extent of each MLRA in each state and the total area. Major cities, highways, and culturally significant Federal- and state-owned lands within each MLRA are also listed. The remaining headings for each MLRA include, physiography, geology, climate, water, soils, biological resources, and land use.

Physiograph.-Fenneman's physiographic section, province, and major division (for the conterminous 48 states) making up the MLRA are listed first in this section. The topography of the area, including natural and cultural features, is described. A range in height above sea level and topographic relief, including significant exceptions, if applicable, are provided for the area as a whole. The extent of four-digit Hydrologic Unit Areas and the major rivers in the MLRA are listed.

Geology.-Bedrock and surficial geology of each MLRA is described.

Climate.-Climatic data for each MLRA was derived by joining digital spatial maps of the MLRA boundaries with 1961-1991 climate data generated using PRISM (Parameter-elevation Regressions on Independent Slopes Model). Climate data provided include: (1) a range of the average annual precipitation for the driest to the wettest parts of the area, (2) the shortest distribution of precipitation, (3) a range of the average annual air temperature, and (4) the shortest, longest, and average length of the frost-free period for each resource area.

Water.-United States Geological Survey publications of estimated surface and ground water use and the location of surface and ground water resources in each state were used to prorate water use to each MLRA. The distribution was based on the availability of surface and ground water resources across a State, the quality of the water, and the location of potential users. The total amount of water used is reported as well as the percent

supplied from surface and ground water and the percent used for public supply, livestock water, irrigation, and other purposes (domestic, municipal and industrial, mining, and cooling of thermoelectric power plants). Major land resource areas dependent on other areas for water supply and those that furnish water to other areas are also specified.

Soils.-Dominant soil moisture and temperature regimes, mineralogy, and texture of the dominant soils within each MLRA were primarily determined by querying SSURGO (Soil Survey Geographic Database). Soils are identified according to the principal suborders, great groups, and representative soil series. Landscape position for the representative soils is typically included.

Biological Resources.-Plant species that the major land resource area can support are identified by their common names. Significant fish and wildlife species are also listed.

Land use.-National Resources Inventory (NRI) staff used 1997 data to determine land use for most of the major land resource areas. The relative extent of the Federally or privately owned land is indicated. The extent of the land used for cropland (including hayland, range, forest, industrial and urban developments, water, and other special purposes is indicated. These fractions or percentages are for the entire resource area unless specifically stated otherwise. Also included is a list of the principal crops grown and the type of farming practiced. Some of the major soil resource concerns and common conservation practices used to mitigate soil resource land management concerns also are listed for each MLRA.

Land Resource Unit (LRU) / Common Resource Area (CRA)

Land resource units (LRUs) are the basic units from which major land resource areas (MLRAs) are determined. They are also the basic units for State land resource maps. They are typically coextensive with State general soil map units, but some general soil map units are subdivided into land resource units because of significant geographic differences in climate, water resources, or land use.

Common Resource Areas (CRAs) are created by subdividing MLRAs by resource concerns, soil groups, hydrologic units, resource use, topography, other landscape features, and human considerations affecting use and treatment needs. The database for the Digital General Soil Map of the U.S. (formerly STATSGO) is considered useful in subdividing the MLRA. The naming convention for CRAs is the MLRA symbol, followed by a dot and a numeric code (e.g., 102C.3 or 72.6). CRA symbols are correlated across State boundaries to ensure a Nationally consistent CRA legend. A national, digital geographic coverage for CRAs is presently under development and in some portions of the Nation is associated with the Development of a Common Spatial Framework of Ecological Units, an interagency effort involving eight Federal agencies.

LRUs have historically only had wide use in the southwestern portion of the U.S., whereas CRAs are more widely accepted across the nation.