



LAND-USE CLASSIFICATION OF THE FRONT RANGE URBAN CORRIDOR

The Front Range Urban Corridor of Colorado, from Fort Collins on the north through Fountain on the south, is an area of rapid population growth and expanding land development. At present, no land-use policy exists for the Front Range region in Colorado, although many individuals and groups are concerned about environmental stresses caused by population pressures. A land-classification map is the first step toward implementing such a policy.

Planning rational land use. — Inasmuch as the use and value of any parcel of land are affected by the uses of neighboring parcels, a land-use policy for the Front Range Urban Corridor, in which compatible land uses are taken into account, could lead to overall improvements in land values. For example, a high-value residential area can be devalued if the zoning allows a rendering plant or freeway to be built nearby. Three steps must be taken to plan for rational land use. First, determine present land use in order to inventory the environments of the area, learn what uses are compatible, and roughly assess the value of the land. Second, determine the limitations and potentials of the land so that harmonious uses can be planned. Third, predict future land use, based on the known limitations and potentials of the land.

Using the map. — This map provides for the Colorado Springs-Castle Rock area the first step toward compatible land uses in the future—a comprehensive picture of the distribution of different land classes and an implication about the proportions of various uses. If used with maps showing resources, soil types, geology, water availability, topography, demography, and other attributes, this land-classification map helps to set limitations on use of the land. Once the limitations are known, zoning can help assure land uses that are compatible with the natural environment—for example, the zoning of flood plains for greenbelt or recreational use.

Land-classification data are presented at two levels in two forms, by color and by symbol. Color is used to show six major categories of general land use; symbols are used to show subcategories within the major categories. Thus, an area with a red tint and an upper-case "U" is urban land (first level), and the symbol U within the red color indicates industrial use (second level). Color enhances readability and provides a general perspective of the entire region, whereas the symbols yield more detailed information.

Levels of land classification. — Land-classification maps tend to be oriented toward user needs. Maps can portray man's activities on the land—for example, hunting and camping in a forested area—or they can portray land cover, such as vegetation and artificial constructions on the land's surface. Some activities, such as agriculture and industrialization, are related to the type of land cover and can be inferred from photographic imagery. Other activities, such as recreation, can be related to land cover only with difficulty. "Land cover is therefore the basis for categorization at the first and second level, and the activities dimension of land use will appear at the third and fourth levels of categorization" (Anderson and others, 1972, p. 2).

The classification by Anderson and others (1972) uses only the two levels of detail cited above and shown on the accompanying map. Regional and local agencies may later develop more detailed systems at the third and fourth levels to fill specific needs. This two-level classification, employing aerial photography as the data base at the first and second levels, is used by the U.S. Geological Survey, the National Aeronautics and Space Administration, the Soil Conservation Service, the Association of American Geographers, and the International Geographical Union, to produce a timely and accurate inventory of the Nation's land resources.

High-altitude color infrared photographs made during flights by the National Aeronautics and Space Administration in October 1972 at a scale of 1:121,000 were the chief data source for the accompanying map. The minimum level of accuracy in the interpretation of the imagery is about 90 percent. But the categories at Level II cannot all be interpreted with equal reliability; therefore, multiple land uses within a single area are not shown. However, this classification and mapping process allows for rapid mapping of extensive areas, and it can be repeated often to monitor land-use changes. The procedure is particularly worthwhile for the Front Range Urban Corridor of Colorado, where land-use maps are quickly outdated by rapid land development.

REFERENCES

- Anderson, J. R., Hardy, E. E., and Roach, J. T., 1972. A land-use classification system for use with remote-sensor data: U.S. Geol. Survey Circ. 671, 16 p.
- Driscoll, L. B., 1974. Land-use classification map of the Boulder-Fort Collins-Greeley area, Front Range Urban Corridor, Colorado: U.S. Geol. Survey Misc. Inv. Map I-855-B.

EXPLANATION

AGRICULTURAL LAND

- Ac Cropland, fallow and cultivated, some irrigated
- Ap Pasture — Either permanent or in rotation with cropland

BARE LAND

- Bf Foothills, nonforested — May be brushy or grassy
- Br Exposed rock — Sparse vegetation

FOREST LAND

- Fbc Coniferous, intermittent crown
- Fcc Coniferous, solid crown
- Fbd Deciduous, intermittent crown

RANGE LAND

- Rc Chaparral — Mostly scrub oak and associated shrubs
- Rg Grassland — Mostly short native grasses

URBAN AND BUILT-UP LAND

- Uc Commercial and service area
- Ue Extraction — Pit, quarry
- Uf Recreational — Park, golf course, drive-in theater, race-track, stadium
- Ug Cemetery
- Ui Industrial
- Uo Open land — Vacant land in built-up area
- Up Public and institutional — School, governmental, military, medical, religious
- Ur Residential — High and low density
- Ut Transport area — Airport, railroad yard, right-of-way at interchange, cloverleaf
- Uu Utility — Sewage plant, power plant, antenna field
- Uw Solid-waste dump, land fill

WATER

- Lakes and reservoirs

ROADS AND HIGHWAYS

- Primary highway — Freeway, divided 4 lanes or more
- Secondary highway — Numbered routes, 2 lanes
- All streets and other paved roads
- All-weather road, graveled, drained, and graded
- Dirt road
- Trail — Jeep or truck trail

RAILROADS

- Main line
- Siding

ELECTRIC UTILITY

- Powerline



MAP SHOWING AREA OF FRONT RANGE URBAN CORRIDOR

Base compiled by U.S. Geological Survey in 1972 from 1:24,000 quadrangles dated 1954-1966. Limited revision from aerial photographs taken 1969.

50,000-foot grid based on Colorado coordinate system, central zone.

5000-meter Universal Transverse Mercator grid ticks, zone 13, shown in blue.

Metric elevations are shown in parentheses.



LAND-USE CLASSIFICATION MAP OF THE COLORADO SPRINGS-CASTLE ROCK AREA, FRONT RANGE URBAN CORRIDOR, COLORADO

By
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For sale by U.S. Geological Survey
Denver, Colo. 80225 and Reston, Va. 22092, price \$1.00

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