

# ***Current Use Inventory Classification System Definitions (May 1981)***

Division of Land Resource Programs

Department of Natural Resources

## **1 URBAN AND BUILT UP LANDS**

The Urban classification is comprised of areas of intensive use with much of the land covered by structures. Included in this category are cities, villages, strip developments along highways, transportation, power, and communications facilities, and areas such as those occupied by mines and quarries, shopping centers, industrial and commercial complexes, and institutions that may, in some instances, be isolated from urban areas.

As development progresses, land having less intensive use may be located in the midst of urban areas and are generally included in this category. Agricultural land, forest, wetland or water areas on the fringe of Urban areas are not generally included. The Urban category takes precedence over others when the criteria for more than one category are met. For example, residential areas that have sufficient tree cover to meet Forest Land criteria will be placed in a residential category.

The following categories of Urban and Built Up Lands should be delineated by current use inventory participants for their community. Within those delineations, label each with the corresponding two, three or four-digit code.

- 111            Multi-Family: High Rise  
This category includes all multi-family and apartment structures of four or more stories and generally contains an average gross density of 20 or more dwelling units per acre. Included are apartments, condominiums, and the like, whether in complexes or as single structures. This category includes lawns, parking areas, and small area recreational facilities such as basketball or tennis courts built on the site.
  
- 112            Multi-Family: Low Rise  
This is similar to 111 except that it is for structures of three or less stories and contains an average gross density of up to 19 dwelling units per acre. Duplexes are not included in this category, but townhouses are.
  
- 113            Single Family, Duplex  
This category includes areas having detached single and two-family structures generally containing an average gross

density of no more than six dwelling units per acre. Lawns, driveways, and associated structures such as garages, tool sheds, garden sheds, etc are included in the 113 category.

- 115 Mobile Home Park  
Groupings of three or more mobile homes and related service structures and recreational spaces belong in this category.

## **12 Commercial, Services and Institutional**

This 12 category should be used to identify the main commercial service center in the community. The uses included in this class are retail establishments and the business, financial, professional and repair services of the area. The 121 category often contains institutional uses such as governmental offices, churches and schools. These should not be separated out unless they exceed approximately one-third of the area.

- 121 Primary/Central Business District  
The 121 category is used to identify the main commercial service center in the community. The uses included in this class are retail establishments and the business, financial, professional, and repair services of the area. The 121 category often contains institutional uses such as governmental offices, churches, and schools. These should not be separated unless they exceed approximately one-third of the area.
- 122 Shopping Center/Malls  
This is usually a structure or closely packed group of structures that contain a large amount of floor space and a variety of commercial and service establishments. Shopping centers/malls have large common parking lots, usually larger in area than the structure grouping itself.
- 124 Secondary/Neighborhood Business District  
These areas are composed of relatively compact groups of stores, institutional structures, and service providers outside of the central business district category. The 124 classes are usually located on major streets and are surrounded by noncommercial uses. Parking is scattered throughout the area.

126 Institutional  
Education, government, religious, health, correctional, and military facilities are found in this category. All buildings, grounds, and parking lots that compose the facility are included within the institutional class. Small institutional units in developed areas that do not meet the 2.5 to 5.0 acre minimum size standards should be placed within the adjacent categories, which are usually residential or commercial.

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### **Industrial**

Industrial areas include a wide array of uses from light manufacturing and industrial parks to heavy manufacturing plants. Identification of light industries – those focused on design, assembly, finishing, and packaging of products – can often be based on the type of building, parking, and shipping arrangements. Light industrial areas may be, but are not necessarily, directly in contact with urban areas; many are now found at airports or in relatively open country. Heavy industries use raw materials such as iron ore, lumber, or coal. Included are steel mills, pulp or lumber mills, oil refineries and tank farms, chemical plants and brick making plants. Stockpiles of raw materials, large power sources, and waste product disposal areas are usually visible, along with transportation facilities capable of handling heavy materials.

138 Industrial Park  
The 138 category should be used to map those areas set aside within the community and specifically provided with the necessary community facilities such as roads, water and sewer lines, and power to support industrial growth and development.

141 Air Transportation  
This category includes all facilities directly connected with air transportation, whether commercial, municipal, military, or private. The area delineated as 141 on the inventory should contain the runways, terminals, service buildings, hangars, navigation aids, fuel storage areas, parking lots, and a limited buffer area.

- 142            Rail Transportation  
Includes all facilities connected with rail transportation such as overland track (that has a width that can be delineated at a scale of 1:60,000), roundhouses, switching yards, and related areas. Accompanying and necessary rights-of-way are also included in this category.
- 143            Water Transportation  
This category includes those areas related to water transportation, excluding the water. The major components of this category are port areas, docks, shipyards, and locks. Recreationally owned marinas and yacht basins should be mapped under the 19 category.
- 144            Road Transportation  
This category includes those areas related to road transportation. The major components of this category are pavements, interchanges, rest areas, and rights of way.
- 145            Communication  
Those areas associated with radio, radar, television, telegraph, telephone, etc. are included in this category. Smaller facilities or those associated with industrial, commercial, or other uses should be included within those categories. Long distance transmission facilities rarely constitute the dominant use of land over which they pass. If these uses are dominant and can be recognized from the imagery alone, they may be identified as a communication land use.
- 146            Utilities, Waste Disposal  
Those areas associated with the transport or storage of gas, oil, water, electricity, and waste products are included in this category. Small facilities or those associated with an industrial, commercial, or extractive use should be included in those categories. Long distance pipelines, etc. rarely constitute the dominant use of land over or under which they pass. If these uses are dominant and can be recognized from the imagery alone, they may be identified as a utility use.
- 1467    Waste Injection Wells

**Extractive**

Extractive mineral land encompasses both surface and subsurface mining operations, such as sand and gravel pits, stone quarries, oil and gas wells, and metallic and non-metallic mines. In size, these mineral activities range from the large open pit mines covering thousands of acres to the often-unidentified oil and gas wells less than a foot square. Surface structures and equipment operations utilizing large power shovels and production trucks, installed primary crushers, concentrating or processing plants, stockpiles, maintenance buildings, waste dumps, tailings basins, and parking lots. The waste dumps and tailing basins are located generally within relatively short distances from the mining and processing facilities. Uniform identification of all of the diverse mineral extraction facilities may be difficult from remote sensor data alone.

Generally the concentrating, agglomeration or smelting and refining facilities are located near the source of the minerals and are included as a part of the primary facilities for classification and for taxation. In some instances there may be further processing that may be classified as an industrial facility. Areas of future reserves are included in the appropriate present-use category, agricultural or forest land, regardless of the expected future use. Unused pits or quarries that have been flooded are placed in the water category if the water body is larger than 2.5 to 5.0 acres (1 to 2 hectares). Areas of tailing, waste dumps and abandoned or unused pits and quarries, that are not flooded, generally are subject to reclamation as provided for in Michigan's Act 92, P.A. 1970, as amended, and are vegetated and otherwise reclaimed.

- 171            Open Pit  
 Extractive activities are primarily carried out upon the surface of the earth through the creation of a large pit.
- 1711            Metallic Mineral Quarry  
 1712            Nonmetallic Mineral Quarry  
 1713            Coal Strip Mine  
 1714            Sand and Gravel Pit  
 1719            Other Open Pit
- 172            Underground  
 Extractive activities primarily carried out underground; portions of this activity covered the barren land category include disturbed land and development waste rock.
- 1721            Metallic Mineral Mine

1722 Nonmetallic Mineral Mine  
1723 Coal Mine  
1729 Other Underground Mine

173 Wells  
This category includes the areas used for the extraction of oil and natural gas and other minerals from the sub-strata. In the case of one individual well, the area immediately surrounding the well is all that is placed, with the code number, into this category. Take care not to confuse these wells with water wells.

1731 Oil Well  
1732 Gas Well  
1733 Brine Well  
1734 Waste Disposal Well  
1739 Other Well

179 Other Extractive  
Extractive uses not covered in the above categories

## **19 Open Land and Other**

Open land consists of land and structures used for outdoor cultural, public assembly and recreational purposes. Examples would be zoos, botanical gardens, fairgrounds, golf courses, athletic fields and amusements parks.

193 Outdoor Recreation  
This category includes recreation facilities and areas which are on open land. This category may contain on these park lands incidental buildings such as shelters, toilets, beach change areas, etc. Do not, however, map forest, water, wetland and barren lands within these areas as 193, map them in their respective 4, 5, 6, or 7 classification.

193 Cemeteries  
Include chapels, mausoleums and maintenance buildings.

## **2 AGRICULTURAL**

Agricultural land is defined broadly as land used for production of food and fiber. The agricultural land class is divided into five subcategories for the purposes of the current use inventory. If problems arise during interpretation and it is difficult to distinguish between the categories, it is acceptable for the sake of accuracy to numerically label agricultural lands simply as a "2".

### **21 Cropland**

Land used to produce crops such as small grains, hay, or row crops including vegetables.

### **22 Orchard, Vineyard, Ornamental**

This category is used to map areas that produce various fruit and berry crops. Horticulture areas including nurseries, floricultural areas, and seed and sod areas used perennially should be included in this category.

### **23 Confined Feeding**

Feeding operations are large, specialized livestock-production enterprises, chiefly beef cattle feedlots and large poultry farms, but also including large hog, dairy, and fur-bearing animal farms. These operations have large animal populations restricted to relatively small areas. The result is a concentration of waste material that is an environmental concern. Feeding operations in conjunction with another farm enterprise are not included. Shipping corrals and other temporary holding facilities are also excluded from this category. Game farms and zoos do not meet the animal population densities to be placed in this subcategory.

### **24 Permanent Pasture**

This category produces grasses and certain types of legumes that are grazed by animals. The land is continuously used for pasture with tillage only to re-establish the grasses and legumes. This category will be at times difficult to distinguish with some of the non-forested categories. The interpreter should try to spot

evidence of tillage or animal activity in order to affirm category 24 identification.

**29 Other Agricultural**

Farmsteads, greenhouses, and noncommercial training areas primarily for racehorses should be placed in this category.

**3 NONFORESTED LANDS**

Non-forested land (open land, rangeland) is defined as areas supporting early stages of plant succession consisting of plant communities characterized by grasses or shrubs. In cases where there is obvious evidence of seeding, fertilizing or other cultural practices, these areas are mapped as cropland or permanent pasture (Agricultural Land 21 and 24, respectively).

**31 Herbaceous Openland**

Grasslands are dominated by grasses and forbs. Such areas are often subjected to continuous disturbance such as mowing, grazing, or burning to maintain the herbaceous character. Typical plant species are quackgrass, Kentucky bluegrass, upland and lowland sedges, reed canary grass, and clovers.

**32 Shrubland**

Shrublands are dominated by native shrubs and low woody plants. If left undisturbed, such areas are soon dominated by young tree growth. Typical shrub species include blackberry and raspberry briars, dogwood, willow, sumac, and tag alder.

**33 Pine or Oak Opening (Savannah)**

This category should be used to classify those openings in oak or pine forestland where grass cover is so thick that seeds cannot germinate. Oak savannahs primarily occur in the sandy plains through Muskegon, Oceana, Newaygo, and Mecosta counties, although some may still exist in some of the more southern counties. The pine savannahs can be found in the jack pine forestland between Gaylord and Grayling.

#### **4 FOREST LAND**

Forest lands that are at least 10 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for non-forest use.

Forest Land can generally be identified rather easily from high altitude imagery. On some lands there may be large areas that have little or no visible forest growth. Lands such as these on which there is forest rotation (involving clear cutting and regeneration) are classified under the Forest Land Category. Lands that meet the criteria for Forest Land and also are being used for a higher category are placed in the higher category (Urban and Built Up, Agricultural, and Non-forested).

#### **41 Broadleaved Forest (generally deciduous)**

In Michigan, typical broad-leaved species include oak, maple, beech, birch, ash, hickory, aspen, cottonwood, and yellow poplar. The 41 classification should be subdivided to the maximum extent feasible into the following groupings:

- 411            Northern Hardwood  
Areas in northern Michigan where the following species predominate or are intermixed—sugar and red maple, elm, beech, yellow birch, cherry, basswood, and white ash
  
- 412            Central Hardwood  
This category of beech/maple and oak/hickory forestlands is found primarily south of the tension zone (the line between Bay City-Muskegon where soil types and plant species are different). Species found in the 412 category also include sugar and red maple, beech, basswood, cherry, and ash. For those species located north of the tension zone, place them in the 411 category.
  
- 413            Aspen-Birch Association  
The 413 category should be used to map the trembling aspen, bigtooth aspen, white birch, and related species.
  
- 414            Lowland Hardwoods  
Ash, elm, and soft maple along with cottonwood, balm-of-Gilead, and other lowland hardwoods are mapped through this category.

## 42

### Coniferous

Coniferous forests include forested land in which the trees are predominantly those with needle foliage. In Michigan, these would include such species as pine, spruce, balsam, larch, hemlock, and cedar. The 42 classification should be subdivided to the maximum extent feasible into the following groupings:

- 421            Pine  
Those forests where white, red, jack, and scotch pine dominate.
- 422            Other Upland Conifer  
The 422 category should be used to map white or black spruce, balsam, or Douglas fir along with areas covered by larch and hemlock.
- 423            Lowland Conifer  
This lowland species category includes areas of predominately cedar, tamarack, black and white spruce and balsam fir stands.
- 429            Managed Christmas Tree Plantation  
The 429 category should be used to map those lands specifically managed for the short-term growth and harvesting of Scotch pine, Douglas fir, and black or white spruce.

## 5

### WATER BODIES

The water category includes all areas that are predominately or persistently water covered. Water bodies that are vegetated are placed in the Wetland category. Sewage treatment or water supply facilities are a basic part of the urban pattern and should be included in the Urban and Built Up category even where the unit is large enough to be separately identified.

## **51 Streams and Waterways**

This category includes rivers, streams, creeks, canals, drains, and other linear bodies of water. Intermittent streams which flow in wet seasons but are dry during dry seasons should be classified as streams if they are water covered the majority of the time. Ephemeral streams which carry surface runoff during and immediately after periods of precipitation or snow melt should not be classified as streams. These areas generally have no permanent or well-defined channels but follow slight depressions in the natural contour of the ground surface. Where the watercourse is interrupted by a control structure that creates an impoundment, the impounded area should be classified as a reservoir. The boundary between streams and lakes, or reservoirs, is the straight line across the mouth of the stream. The St. Mary's, St. Clair, and Detroit rivers, are classified as Great Lakes connecting waterways.

## **52 Lakes**

Lakes are nonlinear water bodies, excluding reservoirs. A water body should be classified as a lake if a structure has been installed primarily to regulate or stabilize lake levels without significantly increasing the water area. The delineation of a lake will be based on the areal extent of water at the time the data is collected. Islands within lakes that are too small to delineate will be included in the water area.

## **53 Reservoirs**

Reservoirs are artificial impoundments of water, whether used for irrigation, flood control, municipal, and/or industrial water supply, hydroelectric power, or recreation. The reservoir category should not include lakes that have had control structures built to stabilize lake levels without significantly increasing the water area. Reservoirs can usually be identified by the presence of dams, levees, or other water control structures.

## Great Lakes

The Great Lakes are the waters of Lake Superior, Lake Michigan, Lake Huron, Lake St. Clair, and Lake Erie. Connecting waterways are the St. Clair, St. Mary's, and Detroit rivers. Bays and estuaries of these lakes and waterways should be included under this heading.

## 6 WETLAND

Wetlands are those areas between terrestrial and aquatic systems where the water table is at, near, or above the land surface for a significant part of most years. The hydrologic regime is such that it permits the formation of hydric soils or it supports the growth of hydrophytic vegetation.

Hydrophytes are usually established on wetlands, although some alluvial deposits and mud flats may be non-vegetated. Examples of wetlands include marshes, mudflats, wooded swamps, and floating vegetation situated on the shallow margins of bays, lakes, rivers, ponds, streams, and manmade impoundment's such as reservoirs. They include wet meadows or perched bogs and seasonally wet or flooded basins or potholes with no surface water outflow. Open water areas deeper than two meters (6.7 feet), and permanently or semi-permanently flooded shallower water areas with less than 30 percent vegetative cover are classed as Water.

Wetland areas drained for any purpose and that no longer support hydrophytes belong to other land use categories, whether it be Agriculture Land, Non-forested Land, Forest Land, or Urban and Built Up Land. When the drainage is discontinued and such use ceases, classification reverts to Wetland after characteristic vegetation is re-established. Areas that have been dredged, dammed, or otherwise altered by man to create wetland conditions, with its resultant hydrophytic vegetation, are classified as Wetlands.

The Wetland category is one of the more difficult ones to map strictly from aerials. It is best that the interpreter check soil surveys for the community, especially when delineating wetland boundaries in forested areas.

The Wetland classification is divided into two main categories - Forested and Nonforested. Those two main ones are further divided into five categories. If the interpreter has difficulty in distinguishing between the five refined areas, classify the wetlands into one of the two main categories to maintain accuracy.

## **61 Wooded Wetland**

Forested wetlands include seasonally flooded bottomland hardwoods, shrub swamps, and wooded swamps including those around bogs. Because forested wetlands can be detected and mapped using seasonal (winter/summer) imagery, and because delineation of forested wetland is needed for many environmental planning activities, they are separated from other forestland (i.e. 414 Lowland Hardwoods and 423 Lowland Conifers). Wooded swamps and flood plains contain primarily oaks, red maple, elm, ash, alder, and willow. Bogs typically contain larch, black spruce, and heath shrubs. Shrub swamp vegetation includes alder, willow, and buttonbush. If possible, the 61 category should be divided into 611 Wooded and 612 Shrub/scrub categories.

**611 Forested Wetland**  
This class applies to wetlands dominated by trees more than 20 feet tall. The soil surface is seasonally flooded with up to 12 inches of water. Several levels of vegetation are usually present, including trees, shrubs, and herbaceous plants. Some of the predominant tree species include ash, elm, red maple, cedar, black spruce, tamarack, and balsam fir.

**612 Shrub/Scrub Wetland**  
This class applies to wetlands dominated by woody vegetation less than six meters tall. Vegetation includes shrub and small or stunted trees. This class includes both stable shrub wetlands and areas in a successional stage leading to wooded wetlands. Some of the predominant tree species include alder, dogwood, sweetgate, leatherleaf, willow-buttonbush associations, and water willow. Any standing dead trees, shrubs, and stumps have been placed in the 612 category.

## **62 Non-wooded Wetland**

Non-forested wetlands are dominated by wetland herbaceous vegetation or are non-vegetated. These wetlands include inland non-tidal fresh marshes, fresh-water meadows, wet prairies, and open bogs. The following are examples of vegetation associated with non-forested wetland. Narrow-leafed emergents such as cordgrass and rush are dominant in coastal marshes. Both narrow-leafed emergents such as cattail, bulrush, sedges, and other grasses and broad-leafed emergents such as water lily,

pickerelweed, arrow arum, and arrowhead, are typical of fresh water locations. Mosses and sedges grow in wet meadows and bogs. The 62 category should be divided into 621 Aquatic beds, 622 Emergent, and 623 Flats to the maximum extent feasible.

- 621            Floating Aquatic Bed  
The 621 category is to be used to map an area that generally has 30 percent or more vegetation cover of submerged, floating leafed, or floating plants and is less than two meters (6.7 feet) deep. Typical plant species are yellow water lily, duckweed, and pond weeds.
- 622            Emergent Wetland  
These are wetland areas dominated (30 percent or more cover) by erect, rooted herbaceous hydrophytic plants, which are present for most of the growing season in most years. Perennial plants usually dominate Emergent Wetlands, although annuals are often present, too. Typical species include cattail, bulrush, sedges, reeds, wild rice, pickerelweed, arrowhead, etc.
- 623            Flats  
These are level or nearly level deposits of unconsolidated (sand, mud, organic) sediments with less than 75 percent aerial coverage of stones, boulders, or bedrock; and less than 30 percent aerial coverage of vegetation other than pioneering plants.

## **7            BARREN**

Barren land is land of limited ability to support life and little or no vegetation. Land, temporarily barren owing to man's activities and where it may be reasonably inferred that the land will be returned to its former use, is included in one of the other categories. Agricultural land temporarily without vegetation because of tillage practices is still classified as Agricultural Land. Sites for urban development stripped of cover before construction begins should be classified as urban and built up. Areas of extractive and industrial land having waste and tailings dumps should be placed in the respective extractive and industrial category. Three main categories will be used to represent barren lands.

### **72            Beach, Riverbank**

The 72 category should be used to map sloping accumulations of exposed sand and gravel along shorelines.

**73 Sand Dune**

The 73 category should be placed on the delineation of hills, mounds, or ridges of wind blown sand in a primarily non-vegetated condition.

**74 Exposed Rock**

The bare exposed rocks category includes areas of bedrock exposure, scarps, talus, slides, and other accumulations or rock without vegetative cover.