

# **Metropolitan Council's Land Use Data**

## **NOTES FOR COMPARING HISTORIC GENERALIZED LAND USE**

### **General Information**

The Metropolitan Council has routinely developed generalized land use data for the Twin Cities region to support its statutory responsibilities and assist in long range planning for the seven-county, Twin Cities metropolitan area. The Council uses land use information to monitor growth and to evaluate changing trends in land consumption for various purposes. The Council uses the land use trend data, in combination with its forecasts of households and jobs, to plan for the future needs and financing of Metropolitan services (i.e. Transit, Wastewater Services, etc.). Also, in concert with individual local units of government, the land use and forecast data have been used to evaluate expansions of the Metropolitan Urban Service Area (MUSA).

Prior to 1997, the Metropolitan Council had manually interpreted aerial photos on mylar tracing paper into a 13-category land-use classification system to aggregate and depict changing land use data. In 1997, with technological advances in GIS and improved data, the Metropolitan Council was able to delineate land uses from digital aerial photography overlaid with counties' parcel and assessor data. The information was captured with on-screen digitizing with GIS software which improved the overall accuracy of the land use data. However, even though the overall accuracy has improved with these enhancements, it is important to understand that the support data (i.e., parcels) have limitations that affect the accuracy of the resulting land use data. The accuracy of the land use data is also dependent on other factors such as image quality, interpretation and thoroughness. See Data Collection Methodology for more information about data accuracies.

Also in 1997, acknowledging that land use data collected and maintained at the county and city level are collected at different resolutions using different classification schemes, the Metropolitan Council worked with local communities and organizations to develop a cooperative solution to integrate the Council's land use interpretation with a generally agreed upon regional classification system. By 2000, the Metropolitan Council had not only expanded their Generalized Land Use Classification system to include 22 categories, but had refined how they categorized land (removing all ownership categories) to reflect actual usage.

Data for individual communities is based on the politically recognized municipal and township boundaries for the given year. Over the years, some communities have grown in area through annexations (e.g., Belle Plaine), while others have diminished (e.g., Minneapolis). Some communities have been completely dissolved into neighboring communities (e.g., Chaska Township into Chaska), some have "partnered" (e.g., Norwood – Young America). These changes contribute to changes in total land use numbers for changing communities. If any community's land use table shows zero total acres for a given year, it means that it has been incorporated into another neighboring community.

Although, in general, the accuracy of the land use data has improved, it is also important to understand that 'improvements' in data accuracy also contribute to apparent changes in measured land uses between inventory years (following 1997) that may be largely due to more precise delineation or realignment or changes in the land use categories (i.e., renaming or restructuring) than actual land use change.

The Council does not specifically survey the rights-of-way of minor highways, local streets, parking lots, minor railways, or other utility easements. The area occupied by these uses is included with the adjacent land uses, whose boundaries are extended to the centerline of the adjacent rights-of way or easements. The Council also does not attempt to survey wetlands or other lands not suitable for development (i.e., steep slopes), therefore these land types are not part of the land use categories. The accuracy of Council land use data is suitable for regional planning purposes, but should not be used for specific site planning, nor for engineering work.

### **Comparative Analysis**

The following information describes changes between land use inventory years and how to compare 2010 Generalized Land Use data to historical datasets. For full land use category definitions for the 2010 Generalized Land Use dataset

or for the Generalized Land Use – Historic dataset (1984, 1990, 1997, 2000, 2005, 2010 and 2016), please refer to <https://gisdata.mn.gov/dataset/us-mn-state-metc-plan-generl-lduse-historical>

### **Data Capture Methodology**

Beginning in 1997, enhancements to the data collection methodology have contributed to an overall improvement of the accuracy of the land use data. More specifically, better resolution of air photos between 1900 and 1997, the incorporation of property information from county assessors and the use of more accurate political boundaries (particularly on the exterior boundaries of the region) all had positive impacts on the accuracy of new land use delineations between 1997 and 2000. With the improved data, a greater effort began in 2000 to realign previous land use boundaries to correspond with property boundaries (county parcels) where appropriate. However, any improvements to the land use data through such a method are dependant on the accuracies of the source data (i.e., county parcels, assessor information and imagery):

- The positional accuracy of the parcel boundaries has varied greatly between county datasets since 1997, as well as the documentation of that accuracy. Furthermore, positional accuracy within the same county has varied dramatically across the dataset.
- County assessor's land use attributes vary greatly from county to county. In many cases, land type or use attribute are classified and recorded by assessors for tax-assessment purposes and do not match land use categories used in the Council's land use datasets. This is evident in areas where an activity may be occurring on a small segment of the parcel land yet this activity has larger implication for assessors than the activities of larger segments of the parcel. For example, a large community park (a single parcel) is recorded as a 'Commercial' use because there is a small commercial kiosk on a part of the land selling snacks or beverages. Another area where the assessor's land use designation doesn't always reflect all of the land uses present on the entire parcel is in rural areas where a residence (the house and surrounding yard) may exist on a large parcel of land that is dominated by non-residential uses. This also occurs in industrial areas where buildings and support activities exist only on a portion of a much larger tract of land not being used by its occupant.

Data accuracies are also influenced by data collection methodologies:

- Due to the way assessor information is defined in the county parcel data, in rural areas, parcel boundaries were often not used for the land use interpretation. Rural residential land use boundaries were defined by the mowed lawns or used areas around the dwellings as viewed on the Metropolitan Council digital orthophotos.
- Data accuracy is also subject to the degree to which Metropolitan Council staff matched the land use delineation with the parcel boundaries in its digitizing procedures ("snapping" to lines was used minimally until 2005 due to software limitations). The scale at which lines were digitized varied as staff zoomed in and out while digitizing, however most lines were digitized at an on-screen scale of no smaller than 1:3000. In highly urbanized areas, 1:1500 was more common.
- The physical environment also contributes to the ability to accurately classify land use information. For example, water feature boundaries in 1997 were based on digital orthophotos taken in April of that year - the height of a major flood on the three major metro rivers. Therefore the water boundaries for the rivers were taken from the 1990 land use in many cases. Lake boundaries were taken from the 1997 orthophotos. We do not have an estimate as to what degree the wet spring influenced any of the lake levels in the metro area. In 2000 (non-flood year), the boundaries of the rivers were taken directly from the aerial photography. For 2005 – 2016, minimal changes were made to the lake boundary changes unless new waterbodies were created through dredging or significant open water was lost due to vegetative growth. Other physical features such as shadows, leaf coverage and vegetative growth all affect the accuracy of the land use delineation.

Additionally, as mentioned previously, beginning in 2000, the land use categories were modified to more accurately reflect the use of the land rather than ownership. Although this has minimal effect on associating categories between 1997 and 2000, it may have had an effect on some particular land use. For example, land owned by a community or county but with no apparent active use, could have been classified as 'Public/ Semi-Public' in 1997, while in 2000, land with no apparent use, regardless of who owns it, is classified as 'Undeveloped.'

Overall, as a result of these data enhancements and changes in data collection methodology, changes in land use totals will exist in the data that do NOT necessarily represent actual land use change. These occurrences can be found throughout the region.

### Land Use Classifications

In general, land use inventories prior to 1997 were conducted following the same basic procedures with the same 13 land use categories. In 1997, a need to refine the Industrial information led to the addition of 2 new categories (see Table 1: Generalized Land Use Categories, by Year): Public Industrial and Extractive. The 'Public Industrial' category was created to extract public utilities, such as wastewater treatment plants, from 'Public/Semi-Public' category, predominantly representing things like schools and churches. The 'Extractive' category was identified as a subcategory within the 'Industrial' category to give a better understanding of active sand and gravel mining that is occurring in the region. Sand and gravel are important natural resources vital for construction.

In 2000, several changes were implemented: new land use categories were added (i.e., 'Mixed-Use', 'Railway'); some categories were further subdivided (i.e., 'Single-Family Residential', 'Multifamily Residential', and the park and recreation category), and many of the categories were renamed (i.e., 'Major Four Lane Highways' to 'Major Highway') (see Table 1). In addition, the 'Vacant/Agriculture' category was separated into active ('Agricultural') and non-active ('Undeveloped') farming activities. 'Agricultural' land uses included land activities such as pasture lands, land in cultivation, or other activities that support farming not associated with a residential 'Farmstead' (see definition), while 'Undeveloped' included lands no longer in agricultural production, woodlots, river and stream riparian areas (grassy buffers), or other non-classified lands. 'Undeveloped' also includes land in more urban environments with no discernable use and no noticeable buildings.

It is also important to note that a significant reorganization of how land use is classified was implemented starting in 2000. This reorganization impacted the land use categories. Previous to 2000, several land use categories more precisely define ownership rather than 'use' (i.e., 'Public Industrial', 'Public Semi-Public', 'Public & Semi-Public Vacant', and even to some extent, 'Airports'). In an effort to more accurately classify land by its 'use' rather than ownership, these categories were discarded and new categories were established ('Airport' being the exception, see below). In most cases, this transition is fairly seamless (i.e., 'Public Industrial' (i.e., Utilities) in 1997 translates to 'Industrial and Utility' in 2000, 'Public & Semi-Public Vacant' in 1997 translates to 'Undeveloped' in 2000, 'Public/Semi-Public' in 1997 translates to 'Institutional' in 2000). For safety and noise consideration, 'Airport' owned lands include large areas of inactive use. However, in recent years, more and more subsequent activities are being allowed on portions of 'Airport' owned lands that have limited effect on general 'Airport' activities and are subject to limited safety threats (i.e., recreational facilities including baseball, tennis, and golf). Previous to 2005, most, if not all land owned by the airport, was classified as "Airport." In an effort to classify land based on activity and not ownership (or even rights to land), these subsequent activities become the predominant activity of the land and therefore dictate a more appropriate land use designations (i.e., 'Parks, Recreation, or Preserve'). This translates into an apparent loss in airport land that in fact is NOT true. Although changes in land use from 'Airport' to some other active land use may represent an actual land use change, changes from 'Airport' to 'Undeveloped' typically do not.

New categories in the 2000 Generalized Land Use were 'Mixed Use', 'Railway', and as noted above, 'Undeveloped' and 'Agricultural.' In addition, there are many new sub-categories in the 2000 Generalized Land Use data set that are rolled into a generalized category for use on the web. The sub-categories are as follows (with the corresponding generalized category in parenthesis): 'Seasonal/Vacation' ('Single Family Residential'), 'Single Family, Detached' ('Single Family Residential'), 'Manufactured Housing Park' ('Single Family Residential'), 'Single Family, Attached' ('Multifamily Residential'), 'Office' ('Retail and Other Commercial'), 'Mixed Use Residential' ('Mixed Use'), 'Mixed Use Industrial' ('Mixed Use'), 'Mixed Use Commercial' ('Mixed Use'), and 'Golf Course' ('Parks, Recreation, and Preserves'). These categories have been maintained since 2000.

**Table 1: Generalized Land Use Categories, by Year Since 1990\***

- A correlation table between land use inventories -

# TABLE LEGEND

## **Residential**

Single-Family Residential

*Single-Family, Detached*

Major Land Use Grouping

Generalized Land Use Categories (see interactive map)

Specific Sub-Categories (see 2010 Generalized Land Use data set)

1990	1997	2000, 2005, 2010 & 2016
<b>Residential</b> Single-Family Residential <i>(included all Single-Family Res., including Single-Family, Attached)</i>  Multifamily Residential  Farmsteads	<b>Residential</b> Single-Family Residential <i>(included all Single-Family Res., including Single-Family, Attached)</i>  Multifamily Residential  Farmsteads	<b>Residential</b> Single-Family Residential <i>Seasonal/Vacation</i> <i>Manufactured Housing Parks</i> <i>Single-Family, Detached</i> Multifamily Residential <i>Single-Family, Attached</i> <i>Multifamily</i> Farmstead
<b>Commercial</b>	<b>Commercial</b>	<b>Commercial</b> <i>Retail and Other Commercial</i> <i>Office</i>
<b>Industrial</b> Industrial <i>(included Extractive)</i>	<b>Industrial</b> Industrial <i>Industrial (included Major Railway)</i> <i>Public Industrial (Utility)</i> Extractive	<b>Industrial</b> Industrial and Utility Major Railway  Extractive
<b>Institutional</b> Public Semi-Public <i>(included Utility)</i>	<b>Institutional</b> Public Semi-Public	<b>Institutional</b> Institutional
<b>Mixed Use</b> <i>No Category in 1990</i>	<b>Mixed Use</b> <i>No Category in 1997</i>	<b>Mixed Use</b> <i>Mixed Use Residential</i> <i>Mixed Use Industrial</i> <i>Mixed Use Commercial and Other</i>
<b>Parks &amp; Recreation</b> Parks & Recreation Areas	<b>Parks &amp; Recreation</b> Parks & Recreation Areas	<b>Parks &amp; Recreation</b> Park, Recreation or Preserve Area <i>Park, Recreational, or Preserve</i> <i>Golf Course</i>
<b>Major Vehicular Rights-of-Way</b> Major Four Lane Highways	<b>Major Vehicular Rights-of-Way</b> Major Four Lane Highways	<b>Major Vehicular Rights-of-Way</b> Major Highway
<b>Airports</b> Airports <i>(included all airport owned land)</i>	<b>Airports</b> Airports <i>(included all airport owned land)</i>	<b>Airports</b> Airport <i>(inc. only lands w/ airport activity)</i>
<b>Agriculture &amp; Undeveloped</b> Vacant/Agriculture Industrial Parks not Developed Public & Semi-Public Vacant	<b>Agriculture &amp; Undeveloped</b> Vacant/Agriculture Industrial Parks not Developed Public & Semi-Public Vacant	<b>Agriculture &amp; Undeveloped</b> Undeveloped <i>(includes Ind. Parks not Developed)</i> <i>(includes Public/ Semi-Public Vacant)</i> <i>(includes some previous Airport land)</i> Agricultural <i>(inc. only land w/ ag. Activities)</i>
<b>Open Water</b> Open Water Bodies	<b>Open Water</b> Open Water Bodies	<b>Open Water</b> Water

\*Land use categories varied little from 1970 to 1990. Therefore, 1990 categories can serve as a surrogate for prior inventory years.

### *Specific Category Comparison between 1997 and 2000 data*

Undeveloped and Agricultural. Previously combined in one category, these two categories were delineated into their own categories. NOTE: It is not possible to discern all agricultural lands based on the available data (aerial photography and county assessors' data) and community input. Some agricultural land may still be placed in the 'Undeveloped' category. To compare previous years, 2000, 2005, 2010 and 2016 'Undeveloped' and 'Agricultural' categories need to be combined, as do the 1990, 1997 and 2000 categories, 'Industrial Not Developed' and 'Public/Semi-Public Not Developed', need to be combined with the Vacant category.

Mixed Use. Mixed Use consists of land containing a building with mixed uses that include the following: 'Mixed Use Residential', 'Mixed Use Commercial', and 'Mixed Use Industrial.' During the interpretation process, this category was collected using the three sub-categories based on available data (aerial photography and county assessors' data) and community input. For mapping purposes, we have combined these categories into one generalized category. To compare to previous years, the sub-categories would be needed ('Mixed Use Residential' combine with 'Multifamily', 'Mixed Use Commercial' combine with 'Commercial', and 'Mixed Use Industrial' combine with 'Industrial').

Multifamily, Commercial, and Industrial. There are discrepancies from previous years when comparing 'Multifamily', 'Commercial', and 'Industrial and Utility' categories in the 2010, 2005 and 2000 data. The Mixed Use category is comprised of 'Mixed Use Residential', 'Mixed Use Industrial', and 'Mixed Use Commercial' (see above) that would have historically been classified in the 'Multifamily', 'Commercial', and 'Industrial' categories, respectfully. The tables on the web do not show a comparison in these areas.

Railway. 'Major Railway' was collected as a separate category in the 2000 Generalized Land Use data. Previously in 1990 and 1997, this land was put in the 'Industrial' category. To compare historically, 'Major Railway' should be included with the 'Industrial and Utility' category for 2000 data.

The 1997 Public Industrial category is not a separate category in the 1990 or 2000-2016 data. To compare historically, 'Public Industrial' should be included with the 'Industrial' category for 1997 data.

Water. During the interpretation process for the 2000 Generalized Land Use, the guideline for the delineated open water area was changed to 3 acres or greater (approximately). This has been maintained since 2000. Historically, the area of open water was delineated at approximately 5 acres or greater. There is no way to compare this change to previous years; therefore, there will be a noticeable increase from the total water acreage found in 2000 versus 1997 and earlier.

Parks, Recreation, and Preserves. During the interpretation process for the 2000 Generalized Land Use, this category was broadened to include recreational passive activities or land use areas, such as park preserves, wildlife refuges, habitat areas, public plazas, river walks, DNR or US Fish and Wildlife owned land, and greenways. This category also includes a small number of 'non-developable' areas based on Planned Unit Developments (PUD). Areas designated as PUD represent open areas within or adjacent to urban development (i.e. housing) which together fulfill or meet overall density guidelines for such urban developments as outlined by the city. There is no way to compare this change to previous years. The change in this category will be most noticeable in the 'Undeveloped' category (or 1990 and 1997 'Vacant/Agriculture' category), since historically these areas would have been classified as 'Vacant/Agriculture.'

### **Known Deficiencies**

Known deficiencies in all datasets include:

- The only delineated roads are those with at least 4 lanes, controlled access and a 200 ft. right-of-way (and beginning in 1997, all 4-lane roads with a Metropolitan Council functional class designation of 'Principal Arterial'). All other roads are incorporated into the adjacent land use category.
- Horticultural specialty land uses (the growing of nursery stock, flowers, seeds, sod, and food crops grown indoors) are included in the 'Industrial' category where they could be delineated (e.g. large greenhouses). However, most of these facilities that are outdoors are included in the 'Vacant/Agriculture' lands class in 1990 and 1997,

‘Agricultural’ in 2000. In 2005, this category was further refined. See Known deficiencies in the 2005 dataset below.

- The interpretation of the ‘Public & Semi-Public’ (‘Institutional’ in 2000-2016) and ‘Parks & Recreation’ (‘Park, Recreation, or Preserve’ in 2000-2016) classes can be fuzzy. For example, ball fields adjacent to a school are classed as ‘Public/Semi-Public’ (‘Institutional’), while ballfields in other areas are classified as ‘Park & Recreation’ if they are not owned by a school district.
- The interpretation of a discernable shoreline for a body of open water or flowing waterway may vary. In many cases, the shoreline was taken to the treeline.

Known deficiencies in the 1990 dataset include:

- Gravel pits are classified as ‘Industrial.’
- Publicly owned lands that have been left in a natural state but have not been dedicated as parks have been classified as ‘Vacant/Agriculture’ lands. Additionally, some publicly-owned dedicated park lands may have also been classified as ‘Vacant/Agriculture’ lands.
- Distinguishing between ‘Single-Family’ and ‘Multifamily’ residential land uses were generally very difficult to delineate from photography alone. General areas of ‘Multifamily’ residential land use are designated.

Known deficiencies in the 1997 dataset include:

- The only delineated railroads are those with at least 2 tracks side-by-side and they are classified as ‘Industrial.’ All single track railroads are incorporated into the adjacent land use category. However, in some instances, a single track railroad may have been included in ‘Industrial’ or classified as ‘Vacant/Agriculture.’
- Although the inclusion of county assessor’s attribution help more precisely delineate between ‘Single-Family’ and ‘Multifamily’ residential land use, the distinction between the two is somewhat blurred in lower density multifamily residential and single-family, attached housing.

Known deficiencies in the 2000, 2005, 2010 & 2016 dataset include:

- The only delineated railroads are those with at least 2 tracks side-by-side and they are classified as ‘Major Railway.’ All single track railroads are incorporated into the adjacent land use category. However, in some instances, a single track railroad may have been included in ‘Major Railway’ or classified as ‘Undeveloped’
- In general, horticultural activities are classified as ‘Agricultural.’ Exceptions include commercial nurseries that have portions open for retail sales. These portions should be coded as ‘Retail and Other Commercial,’ and nurseries with large greenhouse facilities (buildings) that indicate larger traffic volumes (e.g. paved surfaces, etc) and/or intricate irrigation and fertilization systems should be coded as ‘Industrial.’
- Although additional ‘Single-Family’ residential definitions and more precisely articulated definitions were incorporated into the 2000 dataset, some discrepancies remain between attached housing and low-density multifamily residential.
- Although most ‘Office’ land use was extracted from ‘Retail and Other Commercial’ lands, some ‘Public/ Semi-Public’ or ‘Institutional’ land uses are included in the ‘Office’ category. Public buildings such as the State Capital or the Washington County Government Center include ‘Office’ use, are owned by the government and therefore are classified as ‘Institutional.’ Buildings leased by governments from private entities for office purposes are to be classified as ‘Office.’
- Country clubs having a ‘Golf Course’ are included in ‘Golf Course’ even though not all land use is for golfing.
- Mixed Use buildings or land with any combination including a residence is classified as ‘Mixed Use Residential.’ Any mixed use consisting of an industrial use but no residential use is classified as ‘Mixed Use Industrial.’ Any mixed use not including a residence or industrial use is classified as ‘Mixed Use Commercial and Other.’
- In 2000, Funeral Homes were classified as ‘Institutional.’ Before 2000 and since 2005, they are classified as ‘Commercial.’
- Group homes (dormitories, nursing homes, orphanages, prisons, workhouses, etc) generally are included in ‘Institutional.’

## Other

The acreage totals within communities, counties, and region have changed throughout the years based on updated boundaries received from the seven counties in the region. Thus, there will be variations when comparing to total historic acreage.

## Definition of Land Use Categories

The land use categories used prior to 2000 were based on original categories established in 1962 and have been subject to only minor modifications over the years (1966, 1975, 1984, 1990, and 1997 -- NOTE: 1962, 1966 and 1975 are not in electronic form). In 2000, the classification scheme change significantly.

#### CLASSES FOR 1984, 1990 AND 1997 LAND USE (LUSE1984, LUSE1990 & LUSE1997)

##### 00 - No Data

The exterior boundary of the seven county metro area was different for the 1984 and 1990 land use layers than it was for the 1997 and 2000 layers. The more accurate 2000 boundary is used in this combined dataset. For this reason a number of small sliver polygons exist around the boundary with no land use values in 1997 and earlier.

##### 01 - Single Family Residential

Includes all individual, free standing single family housing (including manufactured housing). Within the MUSA (metropolitan urban service area) and in residential developments outside the MUSA, the lot lines visible on the photos were used for determining residential land use boundaries. Where residential developments were visibly not complete, the undeveloped area was classified as vacant. For the scattered, rural residential areas outside the MUSA, only the portion of lots used for residences was assigned to the residential category.

##### 02 - Multi-Family Residential

Includes all multiple dwelling units such as duplexes, bungalows, twin homes, townhouses, quad homes and apartment complexes. Also, buildings that are primarily apartments that have some group dining facilities are included (however, not those buildings that fit the census definition of 'Group Quarters', such as, dormitories, nursing homes or medical care facilities).

##### 03 - Commercial

Includes all retail sales, services, hotels and motels, health care facilities (e.g. medical and dental clinics and offices and medical laboratories, but not hospitals and nursing homes) and recreational services that are predominantly privately owned and operated for profit (e.g. theaters, bowling alleys, equestrian ranches) except golf courses. Hospitals and nursing homes are included in the 'Public & Semi-Public' category and golf courses are in the 'Parks & Recreation Areas' class. For large shopping centers, only actual developed areas are shown. This is done so that over the years new development can be shown (e.g. restaurants or gas stations on perimeter roads).

##### 04 - Industrial

Includes the Federal Standard Industrial Classification (SIC) codes 14 through 50. This includes manufacturing, transportation, construction, communications, utilities, and wholesale trade. Also included in the 'Industrial' category are some horticultural specialty land uses (e.g. large greenhouses that do not sell to the public). As of 1997, gravel pits and quarrying have been placed in a new category called 'Extractive' and all publicly owned areas that are predominantly of industrial nature have been placed in a new category called 'Public Industrial.'

##### 05 - Public Semi-Public

Includes the land under and adjacent to schools (public and private), hospitals, churches, cemeteries, ice arenas and all facilities of local, state and federal governments, including convalescent homes, mental institutions and penal facilities maintained by any level of government. All lands within the boundaries of these institutions and facilities are included in this category. However, in certain instances unused lands were included in the 'Public & Semi-Public Vacant' category (e.g. the University of Minnesota's property in Rosemount, or part of the land adjacent to the Minnesota Veterans Home in Hastings).

##### 06 – Airports

All types of airports.

##### 07 - Parks & Recreation Areas

Includes all parks (city, regional and state), wildlife refuges, playgrounds, zoos, gun clubs, golf courses and similar areas (this includes DNR wildlife management areas and scientific and natural areas). Parks are delineated using their actual boundaries taken directly off comprehensive plans, park maps or county parcel data.

##### 08 - Vacant/Agricultural

Includes land identifiable from aerial photos as open and in agriculture uses, other uses where no buildings are present or unused land. Please note that indoor horticultural specialty land uses (the growing of nursery stock, flowers, seeds, sod and food crops in large greenhouses that do not sell to the public; and large concentrations of agricultural buildings (e.g., barns, sheds and silos)) are included in the 'Industrial' category where they can be delineated. Where residential uses are on larger lots, the residential land use category may include only the house and mowed portion of the parcel, with the rest being placed in this Vacant and Agricultural category.

#### 09 - Major Four Lane Highways

Includes only the major interstate freeways and 4 lane divided highways with rights-of-way of 200 feet or greater. Also included in 1997 are all 4-lane roads with a Metropolitan Council functional class designation of 'Principal Arterial.'

#### 10 - Open Water Bodies

Includes lakes of 5 or more acres and rivers 200 feet or wider.

#### 11 - Farmsteads

Includes only that portion of land that encompasses the buildings on the farmstead.

#### 12 - Extractive

New category in 1997. Includes all gravel pits and quarries.

#### 41 - Industrial Parks not Developed

Parcels of land in a designated (named) industrial park but not developed.

#### 51 - Public & Semi-Public Vacant

A government or university owned parcel of land that is undeveloped (e.g. part of arsenal site in Arden Hills or the University property in Rosemount).

#### 54 - Public Industrial

New category in 1997. Includes all publicly owned areas that are predominantly of an industrial nature (e.g. waste water treatment plants, city bus garages, and Dept. of Transportation sand and salt stockpiling areas). In the past, some of these have been coded as industrial and others as public.

### CLASSES FOR 2000, 2005, 2010 and 2016 LAND USE (LUSE2000, LUSE2005, LUSE2010 & LUSE2016)

(NOTE: not in numeric order):

#### SINGLE FAMILY RESIDENTIAL

Land used exclusively for residential purposes and containing a single dwelling unit. Includes the following four codes:

##### 111 - FARMSTEAD

Land that encompasses the single family residential dwelling and associated buildings of a farm. Associated buildings of a farm may include buildings used for animal husbandry (barns, chicken coops, grain solos, etc.) along with accessory uses, provided that such accessory uses are incidental to the agricultural activities.

##### 112 - SEASONAL/VACATION

Land meeting the general definition of single-family residential containing a dwelling unit occupied seasonally or used as vacation property.

##### 113 - SINGLE FAMILY DETACHED

Land meeting the general definition of single-family residential and detached from any other residential dwelling unit (i.e., with open space on all four sides, includes detached town homes).

##### 116 - MANUFACTURED HOUSING PARK



Land meeting the general definition of Single-Family, Detached dwelling and designated for the placement of multiple manufactured housing structures. Note: this classification IS NOT used for an individual manufactured home.

#### MULTIFAMILY RESIDENTIAL

Land used exclusively for residential multiple-family dwellings containing a building or multiple buildings. Includes the following two codes:

##### 114 - SINGLE FAMILY ATTACHED

Land meeting the general definition of multifamily residential containing two or more attached dwelling units (share a common wall, each with primary ground floor access to the outside regardless of the number of units or size. Ex: Attached townhouse, double bungalow, triplex, etc.

##### 115 - MULTIFAMILY

Land meeting the general definition of multifamily residential containing two or more attached dwelling units, one or more not having primary ground floor access to the outside. Ex: Apartment building, condominiums or elderly housing - with minimal assisted living facilities - with a main entrance for all residents.

Note: Where it was not possible to differentiate between these two categories based on aerial photography and assessors data, the next criteria for differentiation was the number of units. If an indistinguishable parcel contained two to four units, it was coded Single Family Attached. If it had 5 or more units, it was coded Multifamily. If the number of units also was not available, then the final distinction was made using the house like test. If it looked like a house from the photo (e.g. large house split into apartments), it was classified as Single Family Attached, otherwise it became Multifamily.

#### COMMERCIAL

Includes the following two codes:

##### 120 - RETAIL AND OTHER COMMERCIAL

Land used for the provision of goods or services. This category is for general sales and services that comprise the vast majority of establishments typically associated with commercial land use. This category is used as the default for commercial/retail land uses. Examples include: store, restaurant, hotel, bank, Metrodome, Excel Center - large commercial stadiums or arenas, mini-storage, Canterbury Downs, YMCA, seasonal RV-Parks, American Legion, thrift stores (e.g. Goodwill, Salvation Army, etc) skeet clubs and outdoor gun ranges (large game/gun clubs (80+ acres) should be Park, Recreation or Preserve).

##### 130 - OFFICE

Land used predominantly for administrative, professional, or clerical services. Examples are: law offices, accounting firms, clinics (but not hospitals), and veterinarian clinic or hospital.

#### INDUSTRIAL

Includes the following two codes:

##### 151 - INDUSTRIAL AND UTILITY

Land containing manufacturing, transportation, construction companies, communications, utilities (including water towers) or wholesale trade. This category includes publicly owned industrial lands (e.g. waste water treatment plant, warehouses (including commercial warehouses), automotive junk yards, and some special horticultural uses (large greenhouses that do not sell to the public).

##### 153 - EXTRACTIVE

Land containing extractive industry (Ex: Gravel Pits and Quarries).

##### 160 - INSTITUTIONAL

Land used primarily for religious, governmental, educational, social, cultural or major health care facilities - patients with overnight stays (Ex: hospitals, schools, places of worship, cemeteries, city halls, museums, and county and state fairgrounds).

NOTE: All land should be classified based on use NOT ownership! If land is owned by a church but appears to be Single-Family, Detached housing, say for the minister, or clergy, then the land use should be Single-Family, Detached residential NOT Institutional.

Institutional category includes all publicly owned land that is not clearly in any other category (e.g. not in office, parks, or industrial, etc.). Clinics and health care facilities where there are only out-patient procedures will be classified as Office NOT Institutional.

#### MIXED USE

Land containing a building with mixed uses. Includes the following three codes:

##### 141 - MIXED USE RESIDENTIAL

Land containing a building with multiple uses in combination with at least a residential unit(s). Examples include: Galtier Plaza in St. Paul, a mom & pop bakery with living space above it.

##### 142 - MIXED USE INDUSTRIAL

Land containing a building with multiple uses in combination with industrial uses and NO residential units. An example would be a building containing a warehouse, offices, and stores.

##### 143 - MIXED USE COMMERCIAL AND OTHER

Land containing a building with multiple uses but with NO residential units or industrial uses. An example would be a building containing commercial shops, childcare facility, offices, and/or restaurants. Downtown areas usually have buildings where the first and/or second floor is commercial and the rest is office (e.g. Lawson Software Building). These types of buildings would be coded under this category.

#### PARK AND RECREATION

Includes the following two codes:

##### 170 - PARK, RECREATIONAL OR PRESERVE

Land used for park and recreational assembly (Ex: community level ball fields, regional or small urban parks - public or private, playgrounds, rest areas, and other venues - indoors or outdoors - for sporting events or like purposes). Also includes passive activity uses such as park preserves, wildlife refuges, habitat area, public plazas, river walk, DNR owned land, greenways, and other public or private preserved land.

##### 173 - GOLF COURSE

Land used for golfing, including driving range and practice areas and in most cases includes all land belonging to a country club if the predominant land use is golf course.

#### TRANSPORTATION

Includes the following three codes:

##### 201 - MAJOR HIGHWAY

Major roadway strips of land or area, on which a vehicular rights-of-passage exists under the following conditions: all interstate highways; all 4-lane divided highways with rights-of-way of 200 feet or greater in width; or all 4-lane roads with a Metropolitan Council functional class designation of 'Principal Arterial.'

NOTE: Where closely aligned frontage roads exist along vehicular rights-of-way which meet the preceding criteria, these frontage roads will be included in the total rights-of-way. Additionally, land uses occurring within a Major Highway rights-of-way, as specified above, but which clearly have a different use (i.e., agriculture - row crops) are to be classified by its actual use. In addition, for consistency, if some major roadways that don't meet the above criteria yet have been classified as a Major Highway in past land use dataset, will remain Major Highway.

#### 202 - RAILWAY

Land used and occupied or intended to be occupied by multiple railroad track lines or similar use including railroad classification, storage and repair yards, intermodal containerized freight and transload facilities, depots, etc. that could be classified under an industrial land use.

#### 203 - AIRPORT

Land used for the operation of aircraft and any related uses that are on the airport property (Ex: parking lot or car rental) Uses such as ball fields on the airport property would not be included in this category.

#### 100 - AGRICULTURAL

Land used for agricultural purposes. Includes discernable cultivation (Ex: ground tillage or crop rows) horticulture, floriculture (exotic flowers), viticulture (grapes) activities, pasture, and a broad range of other agricultural activities (Ex: horse boarding and training, kennels, sod farms, tree farms, fish production and processing, storage areas or buildings). Agricultural buildings (including feedlots) that are not part of the farmstead (see definition below) are included in this category. Note: Not all agricultural lands are discernable based on available data (aerial photography and assessors data). Thus, a significant amount of agricultural land may be placed in the Undeveloped category. Previously, large feedlots were put in the industrial category.

#### 210 - UNDEVELOPED

Land not currently used for any defined purpose that may or may not contain buildings or other structures or has no discernable use based upon the aerial photos or available data. Undeveloped may include non-protected wetlands or lands currently under development. NOTE: These lands are NOT necessarily available for development.

#### 220 - WATER

A body of open water or flowing waterway inclusive within a discernable shoreline. This typically does not include wetlands or periodically flooded areas. Generally only features three acres or greater in size are to be delineated. Areas definable as another land use type will not be depicted as in the Water category (e.g. major highway bridge over a river and marina).