Chapter Two: Land Use Plan

Chapter Two: Land Use Plan

This chapter defines the different land uses that presently exist in Andover and describes the growth management strategies that guide future development. Specific goals, policies and objectives are provided in Chapter One: Foundation of the Comprehensive Plan.

Metropolitan Council Planning Area Designations

The Metropolitan Council provides generalized geographic planning designations in the 2040 Regional Development Framework. As shown in Figures 2.1 and 2.1A, Andover contains three such designations: Emerging Suburban Edge, Rural Residential and Diversified Rural. The Metropolitan Council defines these designations as follows:

Emerging Suburban Edge – communities include cities, townships and portions of both that are in the early stages of transitioning into urbanized levels of development. Emerging Suburban Edge communities are expected to plan for forecasted population and household growth at average densities of at least 3-5 units per acre for new development and redevelopment. It is important to note that density is calculated after land that cannot be developed is deducted from the total acreage. These deductions include wetlands, floodplains, water bodies, open spaces, arterial road right-of way and other areas that are restricted from development by applicable land use regulations. In addition, Emerging Suburban Edge communities are expected to target opportunities for more intensive development near regional transit investments at densities and in a manner articulated in the 2040 Transportation Policy Plan.

Rural Residential – lands that are currently developed at one unit per 2 to 2½ acres or less, with no plans to provide urban infrastructure such as centralized wastewater treatment.

Diversified Rural – communities are home to a variety of farm and nonfarm land uses including large-lot residential, clustered housing, hobby farms and agricultural uses. Diversified Rural communities are expected to plan for growth not to exceed forecasts and in patterns that do not exceed 4 units per 40 acres. In addition, Diversified Rural communities are expected to manage land uses to prevent premature demand on extension of urban services so that existing service levels will meet service needs.

Land Use Maps

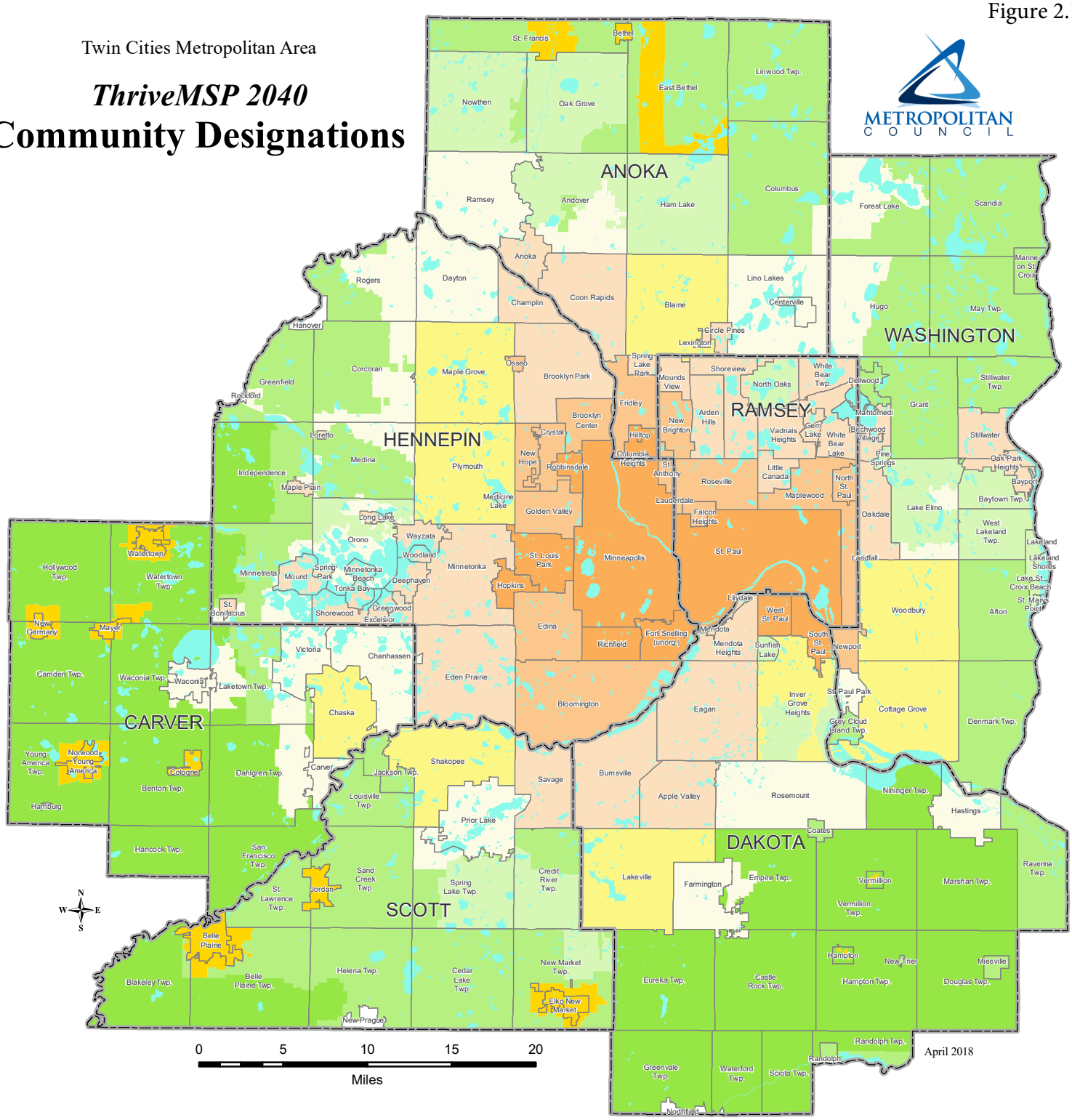
Figure 2.2 illustrates how properties are presently used based on land use categories provided by the Metropolitan Council. This map is intended to illustrate present land use conditions and does not regulate land use or assign land use designations to properties. Figure 2.3 is the Existing Land Use Map. This map provides the land use designation for each property in the city. Figure 2.4 is the Future Land Use Map. This map will become the official land use map of the city when the 2018 Comprehensive Plan Update is adopted. The city's land use designations guide how each property can be developed as defined in the City of Andover Land Use Districts. Changes in land use designations require a public hearing and approval by the City Council and Metropolitan Council; a process referred to as a Comprehensive Plan Amendment. The criteria for reviewing land use changes are provided in the land use goals, objectives and policies of Chapter One: Foundation of the Comprehensive Plan.

Figure 2.1

Twin Cities Metropolitan Area

ThriveMSP 2040
Community Designations

METROPOLITAN COUNCIL



Community Designations

Urban Service Areas

- Urban Center
- Urban
- Suburban
- Suburban Edge
- Emerging Suburban Edge

Rural Service Areas

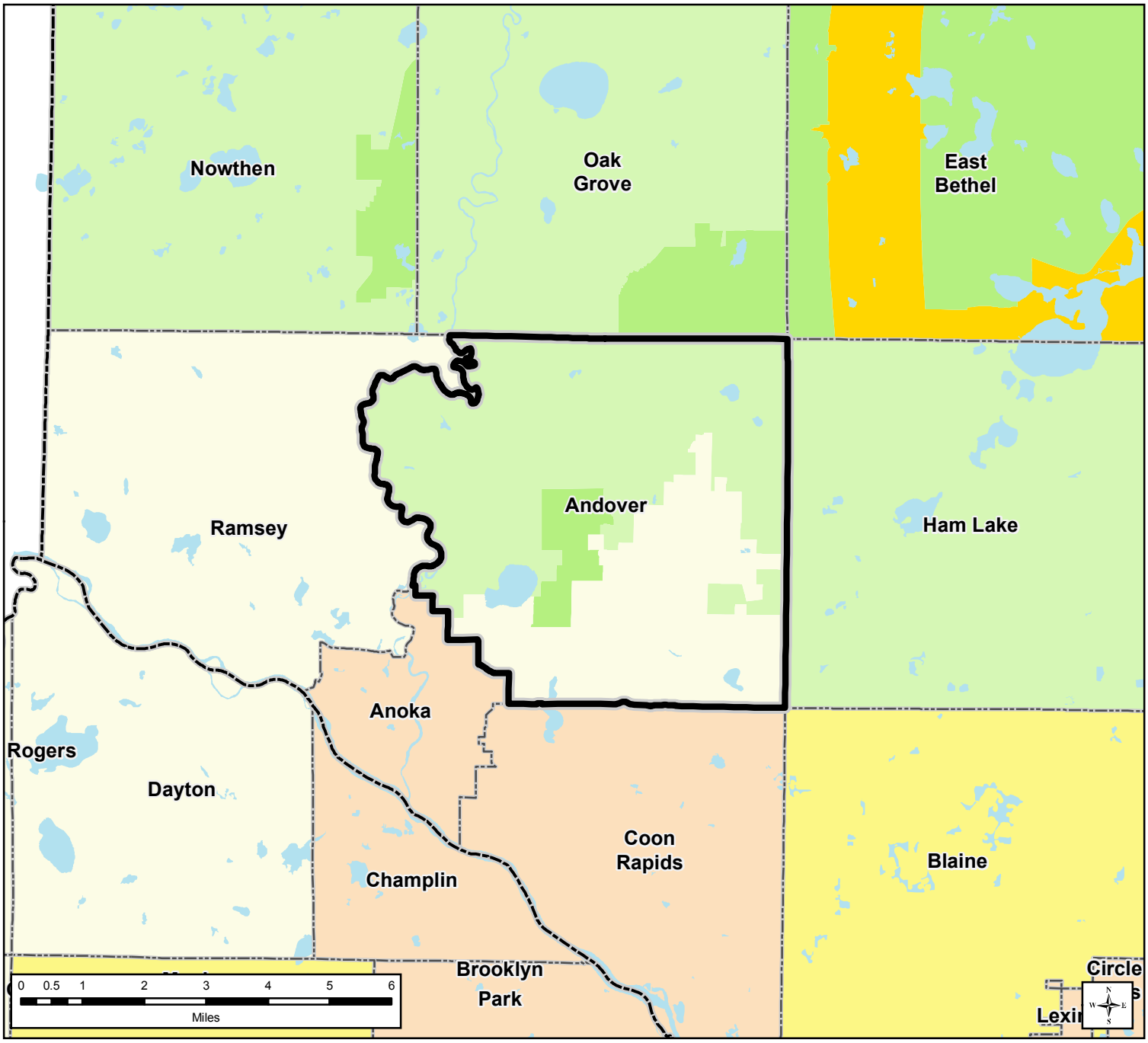
- Rural Center
- Diversified Rural
- Rural Residential
- Agricultural

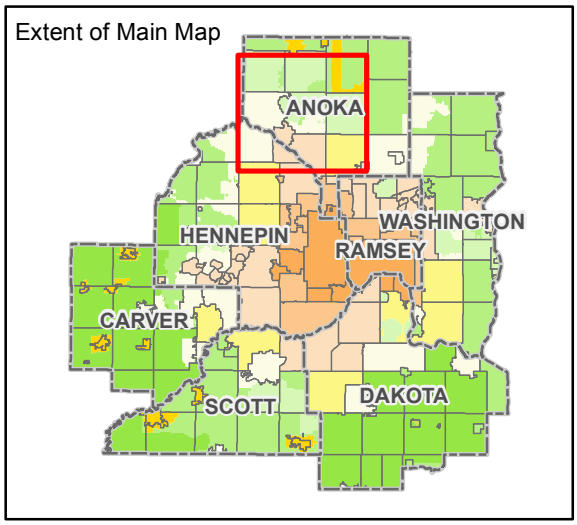
- County Boundaries
- City and Township Boundaries
- Lakes and Rivers

Hanover, New Prague, Northfield, and Rockford are outside the Council's planning authority.

Community Designations
City of Andover, Anoka County

Figure 2.1A





Community Designations

- Outside Council planning authority
- Agricultural
- Rural Residential
- Diversified Rural
- Rural Center
- Emerging Suburban Edge
- Suburban Edge
- Suburban
- Urban
- Urban Center

- County Boundaries
- City and Township Boundaries
- Lakes and Major Rivers

City of Andover Land Use Districts
Land use districts are established to ensure compatible development and to protect natural resources and amenities. The district definitions provided below are intended to state their purpose, provide location criteria, and describe the relationship of each district with other land uses.

2016 Generalized Land Use Breakdown

Land Use	Acres	Percent of Total
Agriculture	2,554	11%
Farmstead	74	0%
Golf Course	97	0%
Industrial and Utility	173	1%
Institutional	436	2%
Mixed Use Industrial	24	0%
Mixed Use Residential	4	0%
Multifamily	30	0%
Office	21	0%
Open Water	531	2%
Park, Recreational or Preserve	1,247	6%
Retail and Other Commercial	185	1%
Single Family Attached	115	1%
Single Family Detached	7,913	36%
Undeveloped Land	8,888	40%
Total	**22,291**	**100%**

Source: Metropolitan Council Local Planning Handbook

RESIDENTIAL LAND USE DISTRICTS

Rural Reserve Residential (RRR) district was designated as an area of approximately one thousand acres in size, within which approximately 380 acres appears to be developable but further study of the suitability, feasibility, and timing for the development of the Rural Reserve Residential district is needed. This area is reserved to accommodate future urban growth beyond the previously planned Municipal Urban Service Area (MUSA). This area is restricted from urban development until a master plan has been approved and municipal sewer and water can be constructed to serve the area. The city prohibits lot splits and subdivisions of less than one parcel per ten acres to prevent this area from rural residential development that would preclude orderly MUSA expansion.

The minimum lot size in the Rural Reserve area is 10 acres. There are opportunities to allow for rural residential lot splits into a minimum size of 5 acres in situations which ensure that much of the residual land be preserved for future economical urban development. Provisions in the ordinance must be addressed at the time of the lot split or subdivision. Planning tools that would need to be considered in the ordinance include requirements of build-out plans (ghost platting), the location of the building pads that allow for future subdivision of the land into urban lots, the location of topographical and hydrological encumbrances, and the use of deed restrictions, easements, and/or

covenants to protect the remaining land for future development. The intent of the ordinance is to allow subdivision of land while preserving residual land for future economical urban development.

In the future, a new trunk sewer line which would provide service to the Rural Reserve area will connect to the Coon Rapids Interceptor, a regional trunk sewer line located near the intersection of Crooked and Bunker Lake Boulevards. The city has reached agreement with the Metropolitan Council that areas designated for residential development in the Rural Reserve will be developed at three units per net acre once MUSA becomes available (subtracting parks, wetlands, floodplain, water bodies, arterial road right-of-way, and other areas restricted from development) by applicable land use regulations.

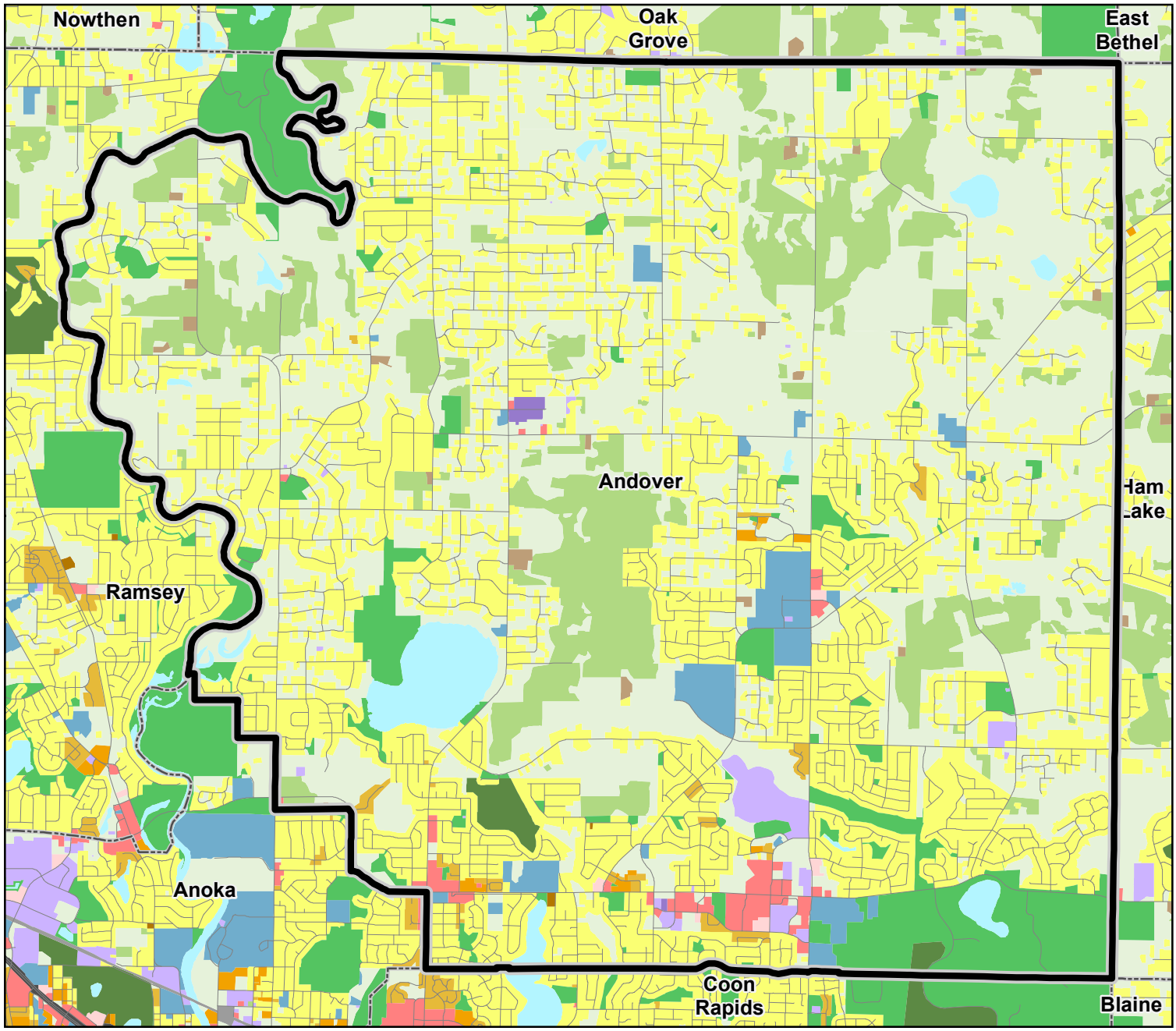
Minimum Lot Size	10 acres, 5 acres with compliance of ordinance provisions that preserve land for future economical urban development
Density	1 unit per 10 acres
City Utilities	None
Corresponding Zoning Districts	RRR Rural Reserve Residential
Type of Development	Single Family Detached Housing

Rural Residential (RR) district provides an area for low intensity residential development in areas outside of the Municipal Urban Service Area (MUSA) that will not be served by municipal sewer and water. The minimum lot size is 2.5 acres to provide sufficient space for onsite sewer and water facilities and to prevent dense development that would create an adverse impact on municipal and regional infrastructure. However, smaller acreage lots exist in areas subdivided prior to 1978 and in the two previously approved rural planned unit developments: Nightingale Preserve and Timber River Estates. Planned Unit Developments (PUD) may be allowed. PUD review is used to establish standards that are specifically designed for each development. This district must be protected from higher intensity land uses, including the Urban Residential Low-Density Land Use District, with appropriate transitions. This district also accommodates agricultural land uses.

Minimum Lot Size	2.50 acres
Density	0.00 to 0.4 units per acre
City Utilities	None
Corresponding Zoning Districts	R-1 - Single Family Rural Residential R-2 - Single Family Estate R-3 - Single Family Suburban AP – Agricultural Preserve
Type of Development	Single Family Detached Housing, Agriculture

2016 Generalized Land Use
City of Andover, Anoka County

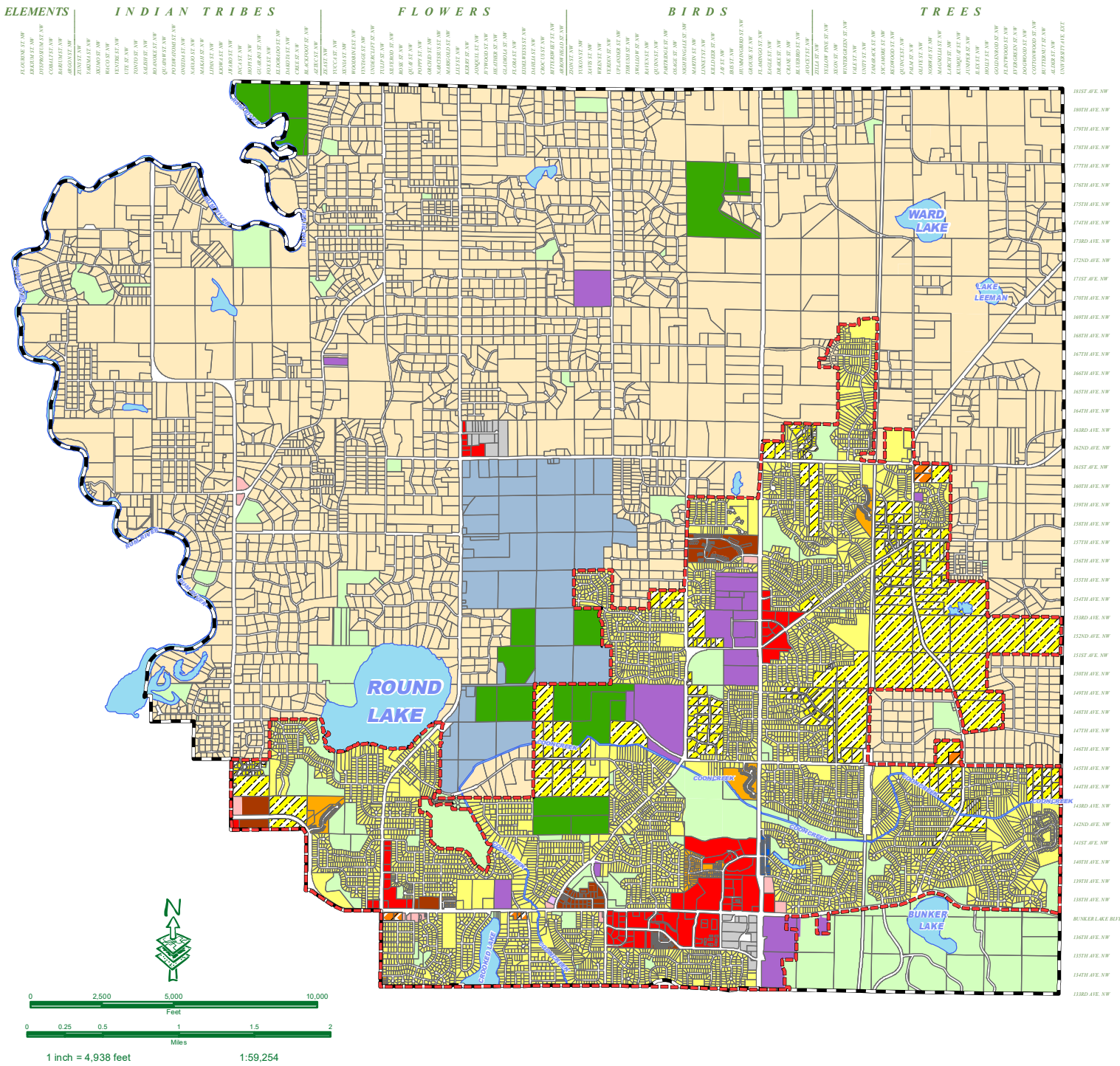
Figure 2.2



2016 Generalized Land Use

- Farmstead
- Seasonal/Vacation
- Single Family Detached
- Manufactured Housing Park
- Single Family Attached
- Multifamily
- Retail and Other Commercial
- Office
- Mixed Use Residential
- Mixed Use Industrial
- Mixed Use Commercial and Other
- Industrial and Utility
- Extractive
- Institutional
- Park, Recreational or Preserve
- Golf Course
- Major Highway
- Railway
- Airport
- Agricultural
- Undeveloped
- Water

- County Boundaries
- City and Township Boundaries
- NCompass Street Centerlines



CITY OF ANDOVER

Incorporated 1974

Comprehensive Plan Figure 2.3

EXISTING LAND USE MAP

The information represented on this map displays the contents of the City of Andover Existing Land Use Map. This map is a graphical depiction. The Planning Office should be referenced for specific question concerning the content of the map. Land use designations are subject to change. For questions or comments please contact the City of Andover

City of Andover - Planning Department 1685 Crosstown Blvd. NW Andover, MN 55304 (763) 755-5100

Map Date: Sept 2018

LEGEND

Land Use	Gross Acres	% of Total
RR - Rural Residential	11472.72	51.29%
URL - Urban Residential Low	3185.70	14.20%
URM - Urban Residential Medium	89.30	.40%
URH - Urban Residential High	111.99	.50%
TR - Transitional Residential	1231.37	5.50%
LC - Limited Commercial	1.461	.0006%
LC/MD - Limited Commercial/Medium Density	7.77	.0003%
NC - Neighborhood Commercial	28.486	.12%
GC - General Commercial	292.67	1.31%
TC - Transitional Commercial	21.01	.0009%
LI - Light Industrial	65.35	.29%
P - Public	344.52	1.54%
RRR - Rural Reserve Residential	856.13	3.83%
OS - Open Space	1572.12	7.03%
AG - Agricultural	535.29	2.39%
Water	468.93	2.10%
Right of Way	2,189.53	9.79%
MUSA Boundary		
City Limits	22,369.36	100%

Gross Residential Density Range by Land Use

Land Use	Density Range
RRR - Rural Reserve Residential	1 unit per 10 acres with developable land reserved for future urban development
RR - Rural Residential	0.0 to 0.4 units per acre
URL - Urban Residential Low	1.75 to 3.6 units per acre
URM - Urban Residential Medium	3.6 to 6 units per acre
URH - Urban Residential High	6 to 12 units per acre

Figure 2.3

Document Path: H:\Gisdata\Planning\Projects\Land Use 8.5 x 11.mxd

CITY OF ANDOVER

Figure 2.4

FUTURE LAND USE MAP

The information represented on this map displays the contents of the City of Andover Proposed Land Use Map.
This map is a graphical depiction.The Planning Office should be referenced for specific question concerning the content of the map.
Land use designations are subject to change. For questions or comments please contact the City of Andover

City of Andover - Planning Department 1685 Crosstown Blvd. NW Andover, MN 55304 (763) 755-5100

Map Date: September 2020

L E G E N D

Land Use	Gross Acres	% of Total
RR - Rural Residential	11461.30	51.24%
URL - Urban Residential Low	3241.56	14.49%
URML - Urban Residential Medium Low	112.35	.50%
A - Designates 7.5 Acres of URML		
B - Designates 11 Acres of URML		
C - Designates 3.5 Acres of URML		
D - Designates 7 Acres of URML		
E - Designates 5 Acres of URML		
URM - Urban Residential Medium	44.6	.20%
URHL - Urban Residential High Low	10.3	.05%
URH - Urban Residential High	114.46	.51%
TR - Transitional Residential	1170.65	5.23%
LC/MD - Limited Commercial/Medium Density	7.94	.035%
NC - Neighborhood Commercial	26.0	.12%
GC - General Commercial	278.7	1.25%
TC - Transitional Commercial	7.54	.034%
LI - Light Industrial	65.49	.29%
P - Public	402.24	1.80%
RRR - Rural Reserve Residential	1002.59	4.48%
OS - Open Space	1555.72	6.95%
AG - Agricultural	100.6	.45%
Water	729.06	4.23%
Right of Way	1630.14	7.89%
MUSA Boundary		
City Limits	22,369.36	100%

Gross Residential Density Range by Land Use

Land Use	Density Range
RRR - Rural Reserve Residential	1 unit per 10 acres with developable land reserved for future urban development
RR - Rural Residential	0.0 to 0.4 units per acre

Net Residential Density Range by Land Use

Land Use	Density Range	Net Developable Acres
URL - Urban Residential Low	2.4 to 4 units per acre	738.9
URML - Urban Residential Medium Low	4 to 8 units per acre	70.8
URM - Urban Residential Medium	8 to 12 units per acre	24.7
URHL - Urban Residential High Low	12 to 20 units per acre	8.8
URH - Urban Residential High	20 to 25 units per acre	10.0

* Areas within musa are calculated at Net Density vs. Gross Density

0 2,500 5,000 10,000
Feet
0 0.25 0.5 1 1.5 2
Miles
1 inch = 3,271 feet 1:39,254

Document Path: H:\Gisdata\Planning\Projects\Figure 2.4 Future Land Use V4 11x17.mxd

Urban Residential Low Density (URL) district is established to create cohesive neighborhoods of single-family detached housing within the MUSA and with access to municipal sewer and water. Residential lots within this district are sized to allow efficient utilization of municipal infrastructure as well as to provide an area large enough to accommodate housing market demands. These neighborhoods must be protected from higher intensity uses with appropriate transitions. These transitions include natural features such as trees, wetlands, streams or major changes in topography. Man-made elements such as streets, parks or earth berms in combination with landscaping are also appropriate. When adjacent to arterial roadways, additional setback distance, landscaping and berms are required. Facilities that generate noise, traffic, and/or glare also require major separation from these neighborhoods.

Minimum Lot Size	Variable
Density	2.4 to 4 units per acre
PUD Density	4 units per acre
City Utilities	Required
Corresponding Zoning Districts	R-4 Single Family Urban Residential
Type of Development	Single-Family Detached Housing

**Areas within the Metropolitan Urban Service Area (MUSA) are calculated using net density, areas outside of the MUSA are calculated using gross density.*

Urban Residential Medium-Low Density (URML) district provides areas suitable for a variety of attached and detached dwelling units. The URML district helps to address the need for life cycle housing with increased density and smaller lot sizes. This district, with appropriate transitions, can serve as a buffer between lower density residential and commercial districts and may also be appropriate along higher volume transportation corridors, such as collector and arterial streets. These neighborhoods are created as part of a Planned Unit Development (PUD) that ensures efficient distribution of density and to achieve appropriate transitions between uses of different intensity and transportation corridors. These transitions are achieved with a combination of landscaping, berms, physical separation and preservation of natural features.

Minimum Lot Size	Variable
PUD Density	4 to 8 units per acre
City Utilities	Required
Corresponding Zoning Districts	R-4 Single Family Urban Residential. *(new district)* Multiple Dwelling Medium-Low Density
Type of Development	Single-Family Detached, Two-Family Residences, Townhomes and Condominiums with private entrances

**Areas within the Metropolitan Urban Service Area (MUSA) are calculated using net density, areas outside of the MUSA are calculated using gross density.*

Planned Development Areas
These planned development areas would incorporate a mix of residential development at Urban Residential Low (URL) densities and Urban Residential Medium-Low (URML) densities. These areas will be subject to future platting and development review by the City, ensuring consistency with the comprehensive plan. The planned development areas are identified on the Future Land Use plan with a letter and an outline around the development area. The following indicates the required acreage breakdown of URML within each of the planned development areas, the balance of the area would be developed as URL. The City will not require a comprehensive plan amendment for residential development proposals that meet these expected breakdowns or overall density, if the proposed development meets the following:

Area A: Located North of Andover Blvd. and West of the Railroad tracks.
- 7.5 acres at URML density (4 to 8 units per acre)

Area B: Located West of Prairie Road and North of Andover Boulevard
- 11 acres at URML density (4 to 8 units per acre)

Area C: Located West of Crooked Lake Boulevard and North of Bunker Lake Boulevard
- 3.5 acres at URML density (4 to 8 units per acre)

Area D: Located West of Crooked Lake Boulevard and South of Bunker Lake Boulevard
- 7 acres at URML density (4 to 8 units per acre)

Area E: Located South of Andover Boulevard and West of Prairie Road
- 5 acres at URML density (4 to 8 units per acre)

Urban Residential-Medium Density (URM) district provides areas suitable for a variety of attached and detached dwelling units. The URM district helps to address the need for life cycle housing with increased density and smaller lot sizes. This district, with appropriate transitions, can serve as a buffer between lower density residential and commercial districts and may also be appropriate along higher volume transportation corridors, such as collector and arterial streets. These neighborhoods are created as part of a Planned Unit Development (PUD) that ensures efficient distribution of density and to achieve appropriate transitions between uses of different intensity and transportation corridors. These transitions are achieved with a combination of landscaping, berms, physical separation and preservation of natural features.

Minimum Lot Size	Variable
PUD Density	8 to 12 units per acre
City Utilities	Required
Corresponding Zoning Districts	M-1 Multiple Dwelling Medium Density
Type of Development	Single-Family Detached, Two-Family Residences Townhomes and Condominiums with private entrances

**Areas within the Metropolitan Urban Service Area (MUSA) are calculated using net density, areas outside of the MUSA are calculated using gross density.*

Urban Residential High-Low Density (URHL) district provides areas suitable for a variety of attached and detached dwelling units. The URHL district helps to address the need for life cycle housing with increased density and smaller lot sizes. This district, with appropriate transitions, can serve as a buffer between lower density residential and commercial districts and may also be appropriate along higher volume transportation corridors, such as collector and arterial streets. This district allows for higher densities than URM and may be developed in close connection with abutting Neighborhood Commercial uses. These URHL neighborhoods are created as part of a Planned Unit Development (PUD) that ensures efficient distribution of density and to achieve appropriate transitions between uses of different intensity and transportation corridors. These transitions are achieved with a combination of landscaping, berms, physical separation and preservation of natural features. PUD review is used to establish standards that are specifically designed for each development. This district also accommodates agricultural land uses.

Minimum Lot Size	Variable
PUD Density	12-20 units per acre
City Utilities	Required
Corresponding Zoning Districts	M-1 Multiple Dwelling Medium Density, (new district) Multiple Dwelling High-Low Density M-2 Multiple Dwelling High Density
Type of Development	Single-Family Dwellings, Two-Family Residences Townhomes and Condominiums with private entrances, Multiple Dwellings

**Areas within the Metropolitan Urban Service Area (MUSA) are calculated using net density, areas outside of the MUSA are calculated using gross density.*

Urban Residential - High Density (URH) district provides additional affordable housing choices for all stages of the life cycle. Owner occupied as well as rental housing is permitted. These URH neighborhoods are created as part of a Planned Unit Development (PUD) that ensures efficient distribution of density and to achieve appropriate transitions between uses of different intensity and transportation corridors. These transitions are achieved with a combination of landscaping, berms, physical separation and preservation of natural features. PUD review is used to establish standards that are specifically designed for each development. Potential sites for this district must be evaluated to ensure enough capacity of municipal infrastructure can be provided. Locations near higher volume transportation corridors, such as collector and arterial streets is necessary to accommodate the increased level of traffic generated by this land use. Location near shopping, service, transit and park facilities is also desirable. Appropriate transitions between this district and other districts or transportation corridors are necessary. These transitions are achieved with a combination of landscaping, berms, physical separation and preservation of natural features.

Minimum Lot Size	Variable
PUD Density	20 to 25 units per acre
City Utilities	Required
Corresponding Zoning Districts	M-2 Multiple Dwelling High Density
Type of Development	Single Family Dwellings, Two Family Dwellings, Multiple Dwellings
Location Criteria	Must abut collector or arterial street Best located near shopping, service, transit and parks

**Areas within the Metropolitan Urban Service Area (MUSA) are calculated using net density, areas outside of the MUSA are calculated using gross density.*

COMMERCIAL, OFFICE, AND INDUSTRIAL LAND USE DISTRICTS

Commercial, Office, and Industrial Land Uses are generally located adjacent to the collector or arterial roadways in the community. These land uses have their own customized maximum limits set on building footprint / land coverage ratio. In a typical office or commercial district, the building footprint / land coverage ratio is limited to 0.4, maximum for office or commercial land. In a typical industrial district, the building footprint / land coverage ratio is limited to 0.5, maximum, for industrial land. These land use districts are discussed in more detail below.

Neighborhood Commercial (NC) land use district is designated for businesses that provide services and retail goods to meet local neighborhood needs. The trade area and size of these businesses are smaller than those found in General Commercial areas. Site design and architecture is carefully reviewed to create a cohesive center that complements adjacent land uses. Linear design with storefronts and blank walls is prohibited. Special care is taken to provide appropriate transitions to residential neighborhoods with landscaping, berms, physical separation, and preservation of natural features. This district requires location along a collector or arterial street and convenient pedestrian access. Neighborhood commercial locations are separated from more intense commercial land uses to avoid pressure to expand intensity beyond a neighborhood scale.

Area Requirements	1-5 acres
City Utilities	Required within MUSA
Corresponding Zoning	NB Neighborhood Business
Type of Development	Retail trade and services serving immediate area
Location Criteria	Must abut intersection of collector or arterial streets
Development Criteria	Design to complement surrounding land uses. Limit to development nodes. Strip development prohibited. Special care for transitions to residential. Convenient pedestrian access.

General Commercial (GC) is intended to be the focal point of commercial activity in the

city on a larger scale than the Neighborhood Commercial District and may serve a trade area that extends beyond the City limits. This district provides a complementary mix of uses, including retail, service, office, entertainment, and civic facilities. Site design must provide convenient access for both pedestrian and vehicular traffic. The architecture of structures must complement an overall architectural theme for that district. General Commercial districts that are located adjacent to residential properties must provide extensive berms, landscaping and physical separation to ensure an appropriate transition is created.

Area Requirements	5 acres or more
City Utilities	Required
Corresponding Zoning Districts	SC Shopping Center GB General Business
Type of Development	Variety of commercial uses with large market area
Location Criteria	Must abut intersection of collector or arterial streets Must be located within the MUSA
Development Criteria	Design to compliment surrounding land uses. Limit to development nodes. Strip development prohibited. Special care for transitions to residential. Convenient pedestrian access.

Light Industrial (LI) District is intended to provide a location for a variety of work processes such as manufacturing, warehousing, wholesaling, and distributing. These uses typically involve intensive use of properties and necessitate separation from residential zoning districts. Where existing Light Industrial Districts are located adjacent to residential neighborhoods, extensive berms, landscaping and screening are necessary to mitigate potential adverse impacts. This district requires convenient access to collector and arterial streets.

Area Requirements	5 acres or more
City Utilities	Required within MUSA
Corresponding Zoning Districts	I Industrial
Type of Development	Manufacturing, warehousing, wholesaling, Distributing
Location Criteria	Must abut collector or arterial streets Must be located within the MUSA[1]
Development Criteria	Separation from residential land uses necessary.

[1] Except the Hughs/Westview Industrial Park that presently exists outside the MUSA

TRANSITIONAL LAND USE DISTRICTS

Transitional land use districts encompass areas where future land use may differ from that of the designated zoning district. Transitional districts recognize the possibility for land use to change in the future with the arrival of municipal sewer and water.

Transitional Commercial (TC) District contains properties within the MUSA that are currently zoned for residential development but may potentially become commercial because of their proximity to existing commercial development or location at the intersection of major transportation corridors. When municipal sewer and water are available, properties in this district may develop as either residential or commercial under the requirements of the Zoning Ordinance and Comprehensive Plan. A Rezoning requires a contract as specified in the City Code.

Transitional Residential (TR) District contains properties within the MUSA that are currently zoned for rural residential uses (R-1, R-2, and R-3). These properties are guided for urban development in 5-year stages as shown in Figure 2.5. Property designated Transitional Residential may only be platted under urban residential guidelines and served by municipal utilities. Lot splits may only occur without municipal services under the requirements of the City Code. Any subdivision of property that results in lots less than 2.5 acres in size must be served with municipal sewer and water.

OTHER LAND USE DISTRICTS

Limited Commercial/Medium Density (LC/MD) District contains properties within the MUSA that have site characteristics conducive to either low intensity commercial or medium density residential development. This designation is used to provide a carefully planned transition from a major transportation corridor to residential neighborhoods. Site design and building architecture are required to complement adjacent residential neighborhoods. A combination of landscaping, berms, physical separation, and preservation of natural features is necessary to provide an appropriate transition.

Public (P) District identifies areas for present and future civic, government, school, or other publicly owned and operated facilities.

Open Space (OS) District identifies areas that are protected from development through public ownership or agreement with private property owners. This designation is used for public parks and other areas designated for preservation of natural areas, water and air quality and wildlife habitat.

Agricultural (AG) District identifies areas that are cultivated for raising crops and farming as well as feeding, breeding, and raising of livestock. These areas are typically enrolled in the Agricultural Preserve or Green Acres programs as defined by the State of Minnesota.

SEWER STAGING PLAN

Undeveloped land within the MUSA is divided into five-year growth stages based primarily on the proximity of municipal sewer and water. The growth stages are intended to provide a reasonable estimate of urban growth to the year 2040. Property owners may choose not to develop even if their property is shown within the current growth stage. Property owners seeking to develop sooner than shown on the Staging Plan may petition the city to change the growth stage designation. These changes are at the discretion of the City Council. The Staging Plan Map is represented on Figure 2.5. Figure 2.6 summarizes the map by providing the amount of acreage within each land use district in each of the five-year stages. The Metropolitan Council also requests information that summarizes the density of future development in each residential land use district. This information is provided in Figure 2.7.

URBAN AND RURAL GROWTH FORECAST

Figure 2.8 describes historical and projected growth within both sewered and unsewered areas of the city. The forecasts were generated using information from transportation analysis zones, a comparison of net buildable acreage to the city's subdivision ordinance, the Sewer Staging Plan and the Metropolitan Council forecast submitted to the City as part of the System Statement in September 2015 and revised by Metropolitan Council in 2018. The revised forecast below shows lower population and household figures but greater levels of employment. This is a revision based on discussions with the Metropolitan Council staff as part of the Comprehensive Plan Update.

Figure 2.8 Urban and Rural Growth Forecast

City of Andover Forecast Table

	2016	2018	2020	2030	2040
Total Population	32,335	32,758	33,500	36,500	39,800
Sewered	22,250	23,100	23,900	26,700	29,800
Unsewered	10,085	9,658	9,600	9,800	10,000
Total Households	10,391	10,550	10,800	12,150	13,500
Sewered	7,175	7,450	7,700	8,900	10,100
Unsewered	3,216	3,100	3,100	3,250	3,400
Total Employment	5,100	6,259	6,300	6,700	7,100
Sewered	3,700	4,800	4,800	5,100	5,400
Unsewered	1,400	1,459	1,500	1,600	1,700

ELEMENTS

FLORINE ST. NW
ERRUM ST. NW
DYSPROSIUM ST. NW
COBALT ST. NW
BARIUM ST. NW
ARGON ST. NW

INDIAN TRIBES

ZUNI ST. NW
YAKIMA ST. NW
XEMO ST. NW
WACO ST. NW
VENTRE ST. NW
UTE ST. NW
TONTO ST. NW
SALISH ST. NW
ROANOKE ST. NW
QUAPAW ST. NW
POTAWATOMI ST. NW
ONEIDA ST. NW
NAVAJO ST. NW
MICMAC ST. NW
LIPAN ST. NW
KIOWA ST. NW
JUAREZ ST. NW
INCA ST. NW
HOPI ST. NW
GUARANI ST. NW
FOX ST. NW
ELDORADO ST. NW
DACOTA ST. NW
CREE ST. NW
BLACKFOOT ST. NW
AZTEC ST. NW

FLOWERS

ZEA ST. NW
YUCCA ST. NW
XENIA ST. NW
WOODBINE ST. NW
VINTAGE ST. NW
UNDERCLIFF ST. NW
TULIP ST. NW
SILVERDOL ST. NW
ROSE ST. NW
QUAY ST. NW
POPPY ST. NW
ORCHID ST. NW
NARCISSUS ST. NW
MARIGOLD ST. NW
LILY ST. NW
KERRY ST. NW
JONQUIL ST. NW
IVYWOOD ST. NW
HEATHER ST. NW
GLADIOLA ST. NW
EDELWEISS ST. NW
DAHLIA ST. NW
CROCUS ST. NW
BITTERSWEET ST. NW
ARROWHEAD ST. NW

BIRDS

ZION ST. NW
YUKON ST. NW
XAVIS ST. NW
WREN ST. NW
VERBIN ST. NW
UPLANDER ST. NW
THRUSH ST. NW
SWALLOW ST. NW
RAVEN ST. NW
QUINN ST. NW
PARTRIDGE ST. NW
OSAGE ST. NW
NIGHTINGALE ST. NW
MARTIN ST. NW
LINNET ST. NW
KILLDEER ST. NW
JAY ST. NW
IRIS ST. NW
HUMMINGBIRD ST. NW
GROUSE ST. NW
FLAMINGO ST. NW
EAGLET ST. NW
DRAKE ST. NW
CRANE ST. NW
BLUEBIRD ST. NW
AVOCET ST. NW

TREES

ZELLAST. NW
YELLOW PINE ST. NW
XEON ST. NW
WINTERGREEN ST. NW
VALE ST. NW
UNIT ST. NW
TAMARACK ST. NW
SYCAMORE ST. NW
REDWOOD ST. NW
QUINCE ST. NW
PALM ST. NW
OLIVE ST. NW
NORWAY ST. NW
MAGNOLIA ST. NW
LARCH ST. NW
KUMQUAT ST. NW
JUNIPER ST. NW
ILEX ST. NW
HOLLY ST. NW
GOLDENROD ST. NW
FLINTWOOD ST. NW
EVERGREEN ST. NW
DOGWOOD ST. NW
COTTONWOOD ST. NW
BUTTERNUT ST. NW
ALDER ST. NW
UNIVERSITY AVE. EXT.

181ST AVE. NW
180TH AVE. NW
179TH AVE. NW
178TH AVE. NW
177TH AVE. NW
176TH AVE. NW
175TH AVE. NW
174TH AVE. NW
173RD AVE. NW
172ND AVE. NW
171ST AVE. NW
170TH AVE. NW
169TH AVE. NW
168TH AVE. NW
167TH AVE. NW
166TH AVE. NW
165TH AVE. NW
164TH AVE. NW
163RD AVE. NW
162ND AVE. NW
161ST AVE. NW
160TH AVE. NW
159TH AVE. NW
158TH AVE. NW
157TH AVE. NW
156TH AVE. NW
155TH AVE. NW
154TH AVE. NW
153RD AVE. NW
152ND AVE. NW
151ST AVE. NW
150TH AVE. NW
149TH AVE. NW
148TH AVE. NW
147TH AVE. NW
146TH AVE. NW
145TH AVE. NW
144TH AVE. NW
143RD AVE. NW
142ND AVE. NW
141ST AVE. NW
140TH AVE. NW
139TH AVE. NW
138TH AVE. NW
BUNKER LAKE BLVD.
136TH AVE. NW
135TH AVE. NW
134TH AVE. NW
133RD AVE. NW

RUM RIVER
181ST AVE
ROUND LAKE BLVD
PALM ST
177TH AVE
WARD LAKE
HANSON BLVD
LAKE LEEMAN
ROANOKE ST
VERDIN ST
WARD LAKE DR
CROSSTOWN BLVD
165TH AVE
TULIP ST
VALLEY DR
161ST AVE
CONSTANCE BLVD
159TH AVE
157TH Ave
7TH AVE
NIGHTINGALE ST
PRAIRIE RD
ROUND LAKE
ROUND LAKE
S COON CREEK DR
COON CREEK
ANDOVER BLVD
CROSSTOWN BLVD
HANSON BLVD
ROUND LAKE BLVD
BUNKER LAKE BLVD
BUNKER LAKE BLVD
BUNKER LAKE
CROOKED LAKE

CITY OF ANDOVER

Figure 2.5 (4.4)

SEWER STAGING PLAN

The Sewer Staging Plan divides undeveloped land within the Municipal Urban Service Area into five year growth stages based primarily on the proxmimity of municipal sewer and water. The growth stages are intended to provide a reasonable estimate of urban growth to the year 2040.

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(763) 755-5100

Map Date: September 2020

LEGEND

- MUSA Boundary
- 2020-2025
- 2026-2030
- 2031-2035
- 2036-2040
- Rural Reserve

N

0 2,500 5,000
Feet

0 0.25 0.5 1 1.5
Miles

Document Path: H:\Gisdata\Planning\Projects\MUSA_Figure_4_4_11x17.mxd

OPTION 3.4

Figure 2.6
Sewer Staging and Land Use by Acreage

Within Urban Service Area (MUSA)	Allowed Density Housing Units / Net Acre		2019 (Current Developed)	2020-2025	2026-2030	2031-2035	2036-2040	Change 2020 - 2040
	Minimum	Maximum	Acres	Acres	Acres	Acres	Acres	Acres
Residential Land Uses								
Urban Residential Low Density (URL) (R4)	2.4	4	3,136.6	3,309.2	3,501.5	3,722.0	3,875.5	738.9
Transitional Residential	1.75	3.6	783.7	678.3	478.4	341.4	187.9	-595.8
Urban Residential Medium-Low Density (URML) (M1)	4	8	93.8	102.8	118.3	144.9	164.6	70.8
Urban Residential Medium Density (URM) (M2)	8	12	13.5	22.0	35.5	38.2	38.2	24.7
Urban Residential High-Low Density (URHL) (H1)	12	20	45.8	54.6	54.6	54.6	54.6	8.8
Urban Residential High Density (URH) (H2)	20	25	0.0	0.0	5.0	10.0	10.0	10.0
Agricultural Preserve	N/A	N/A	100.0	100.0	100.0	0.0	0.0	-100.0
C/I Land Uses	**Est. Employees / Acre**							
Commercial (GB, SC, NB)	variable		253.8	268.3	281.4	281.4	281.4	27.6
Transitional Commercial	variable		4.1	4.1	4.1	4.1	4.1	0.0
Industrial	variable		39.6	39.6	39.6	39.6	39.6	0.0
Public/Semi Public Land Uses								
Public (Institutional)	N/A	N/A	306.2	306.2	306.2	306.2	306.2	0.0
Subtotal Sewered			4,777.0	4,885.0	4,924.5	4,942.3	4,962.0	185.0

Outside Urban Service Area (MUSA) - RURAL RESERVE	Allowed Density Housing Units / Acre		2019 (Current Developed)	2020-2025	2026-2030	2031-2035	2036-2040	Change 2019 - 2040
Not part of sewer staging plan - Information Only	Minimum	Maximum	Acres	Acres	Acres	Acres	Acres	Acres
Urban Residential Low Density (URL) (R4)	3	4	0.0	17.1	117.1	217.1	277.1	277.1
Urban Residential Medium Low (URML) (M1)	4	8	0.0	0.0	15.0	30.0	45.0	45.0
Urban Residential Medium Density (URM) (M2)	8	12	0.0	0.0	15.0	30.0	45.0	45.0
Urban Residential High Low (URHL) (H1)	12	20	0.0	0.0	0.0	5.0	10.0	10.0
Urban Residential High Density (URH) (H2)	20	25	0.0	0.0	0.0	0.0	0.0	0.0
Commercial (GB, SC, NB)	variable		0.0	0.0	10.0	15.0	20.0	20.0
Subtotal Sewered			0.0	17.1	157.1	297.1	397.1	397.1

*Note: All areas, current and future, are net acreages (does not include floodplain or wetland)

Figure 2.7
Net Residential Density Worksheet (using average of density range/acre)

Table Calculating Net Density of Future Sewer Residential Development

Residential Land Uses	Single Family Units	Multi Family Units	Net Residential Acres	Net Density/Acre
Urban Residential Low Density (URL) (R4)	1,810	0	738.9	2.45
Urban Residential Medium-Low Density (URML) (M1)	0	425	70.8	6.00
Urban Residential Medium Density (URM) (M2)	0	247	24.7	10.00
Urban Residential High-Low Density (URHL) (H1)	0	141	8.8	16.00
Urban Residential High Density (URH) (H2)	0	230	10.0	23.00
Limited Commercial / Medium Density	0	0	0	0.00
TOTAL	1,810	1,043	853.2	3.34

.

Notes:
1. 2020-2040 Sewer Staging

Figure 2.7A
Net Residential Density Worksheet using Met Council Calculation (lowest end of density range)

Table Calculating Net Density of Future Sewer Residential Development

Residential Land Uses	Single Family Units	Multi Family Units	Net Residential Acres	Net Density/Acre
Urban Residential Low Density (URL) (R4)	1,773	0	738.9	2.40
Urban Residential Medium-Low Density (URML) (M1)	0	283	70.8	4.00
Urban Residential Medium Density (URM) (M2)	0	198	24.7	8.00
Urban Residential High-Low Density (URHL) (H1)	0	106	8.8	12.00
Urban Residential High Density (URH) (H2)	0	200	10.0	20.00
Limited Commercial / Medium Density	0	0	0	0.00
TOTAL	1,773	786	853.2	3.00

Notes:
1. 2020-2040 Sewer Staging

Agricultural Preserve
A portion of the agricultural land in the city is enrolled in the Agricultural Preserve Program. Minnesota Statute 473H, known as the Metropolitan Agricultural Preserves Act, establishes a program to encourage preservation of land for the production of agricultural products by valuing agricultural property in the metropolitan area in a manner similar to out-state Minnesota. To qualify, the property must be zoned long-term agricultural by the city, with a maximum residential density of one house per forty acres. The parcel must (normally) be forty acres in size. However, smaller tracts may qualify in certain instances.

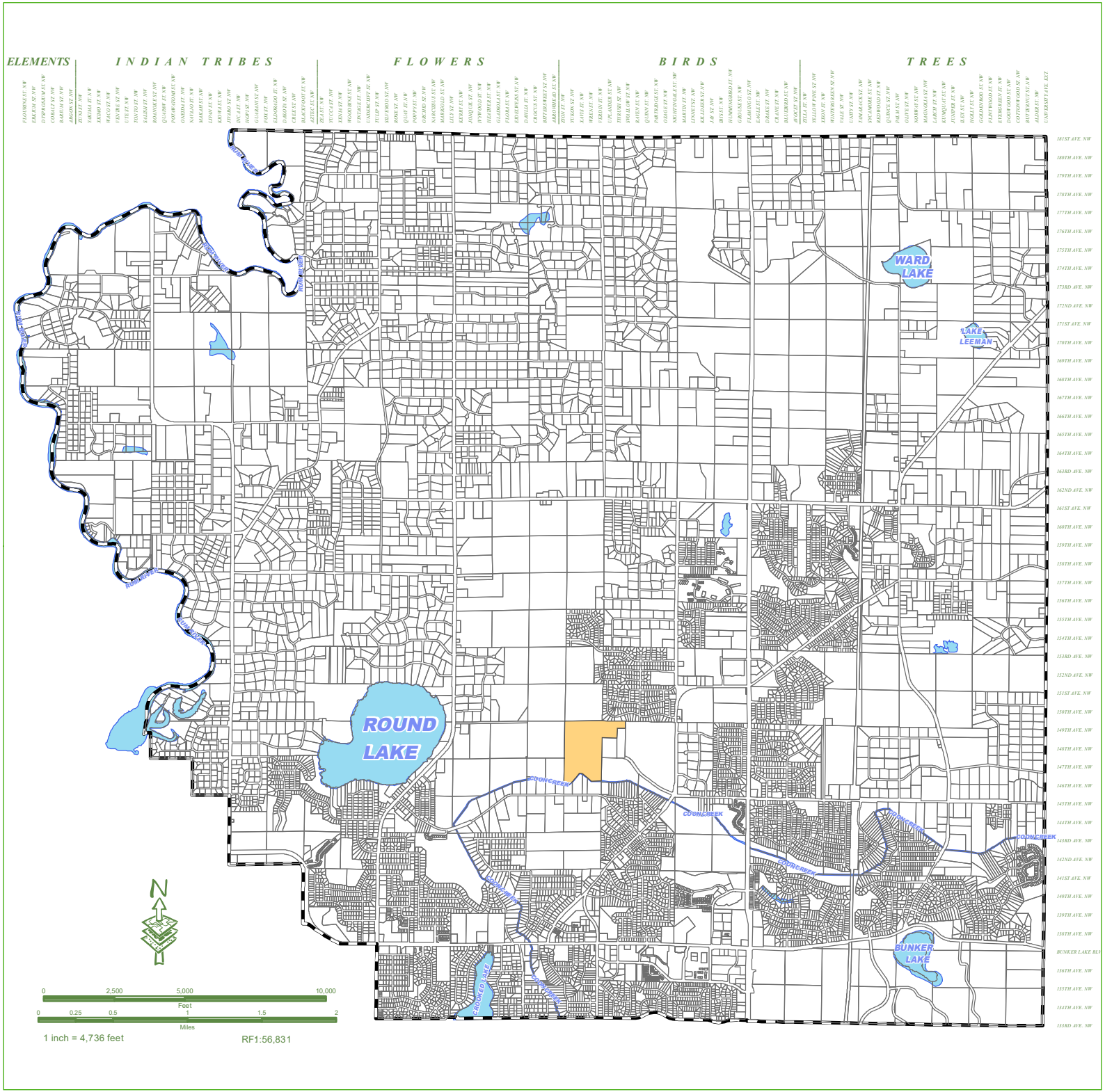
To enroll in the program, the owner obtains city approval and records a covenant with the County Recorder to leave the property in agricultural use. To remove property from the program the owner files an "Expiration Notice" with the County Recorder. Eight years after the Expiration Notice is filed, the property is released from Agricultural Preserve. A waiver of the eight-year requirement may be granted only by action of the Governor due to some emergency. Figure 2.9 shows the land enrolled in the Agricultural Preserve program.

Floodplain and Wetlands
Land within the city is encumbered by wetlands and Floodplain is shown on Figure 2.10. These features have affected the city's development pattern and provide a corridor of natural areas throughout most of the city. Floodplain and wetlands are further refined to locations at the time of development. Wetlands and floodplain areas provide one of the basic building blocks for the city's open space preservation efforts more fully described in Chapter 5: Parks and Open Space Plan.

HOUSING PLAN
The housing goals, objectives and policies described in Chapter One provide an overview of the Housing Plan. This section evaluates the City's housing stock, housing trends, programs, strategies for providing affordable housing and the implementation plan.

Housing Activity
Andover was a rural, agricultural community for most of its early existence. Suburban development began in the 1960's, primarily in the western sections of the City. Lot sizes varied from less than an acre on up and were served by private well and septic systems. Municipal sewer service arrived in 1976, contributing to tremendous growth in the southern quarter of the City. Sewer line extension spurred new home development throughout the 1990's.

From 2000 to 2006 the city and development community shifted to accommodate demand for different types of housing. During that period more than 40% of approved housing units were townhouses, smaller lot single family or condominium units. Some of these approved units remain in the city's lot supply as demand has shifted back to



CITY OF ANDOVER
Incorporated 1974

Comprehensive Plan Figure 2.9

Agricultural Preserve

The highlighted properties on this map are enrolled in the Agricultural Preserve Program through the State of Minnesota.

The legend indicates when the properties participation in this program will expire. A notice of expiration has not been filed for propeties indicated with 'None Filed' in the legend.

For questions or comments please contact the City of Andover.

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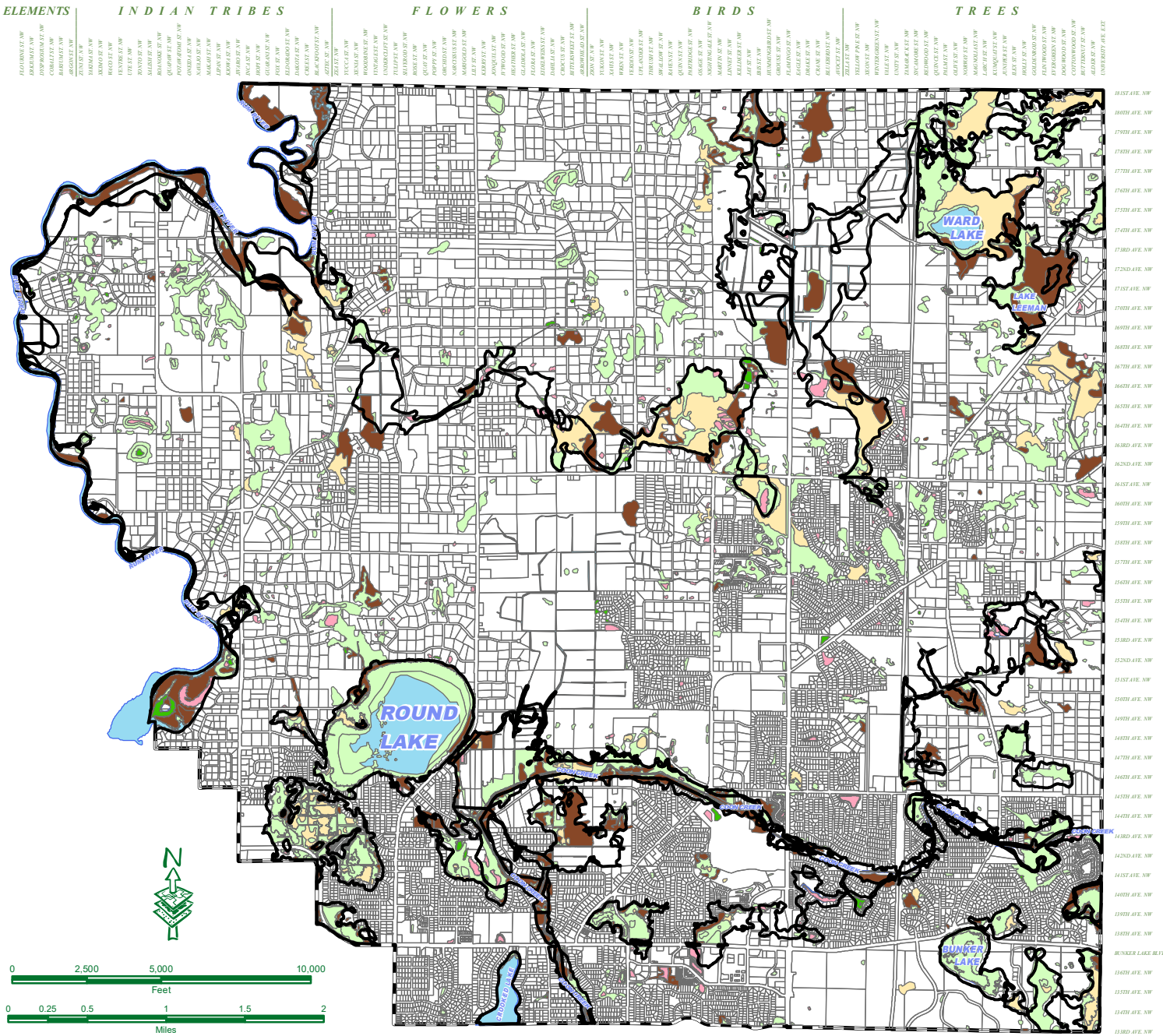
Map Date: January 2018

Legend

Expiration Date

None

Figure 2.9



CITY OF ANDOVER
Incorporated 1974

Comprehensive Plan Figure 2.10
Wetlands and Floodplain

The highlighted areas on this map respresent a digitized version of wetland areas originally identified by the National Wetland Inventory conducted by the United States Department of the Interior Fish and Wildlife Service. THe inventory was prepared through stereoscopic analysis of high altitude aerial photography that identified areas based on vegetation, visible hydrology and geography. It should be noted that field delineation is necessary to verify wetland boundaries.

Floodplain boundaries are represented based on the National Wetland Inventory completed by the U.S. Fish and Wildlife Service in 2013.

For questions or comments please contact the City of Andover.

City of Andover - Planning Department
1685 Crosstown Blvd. NW
Andover, MN 55304
(763) 755-5100

Map Date: Oct 2018

LEGEND

- Andover Floodways
- Water
- Riverine
- Deep Marsh
- Shallow Marsh
- Seasonally Flooded Basin or Flat
- Shrub Swamp
- Wooded Swamp

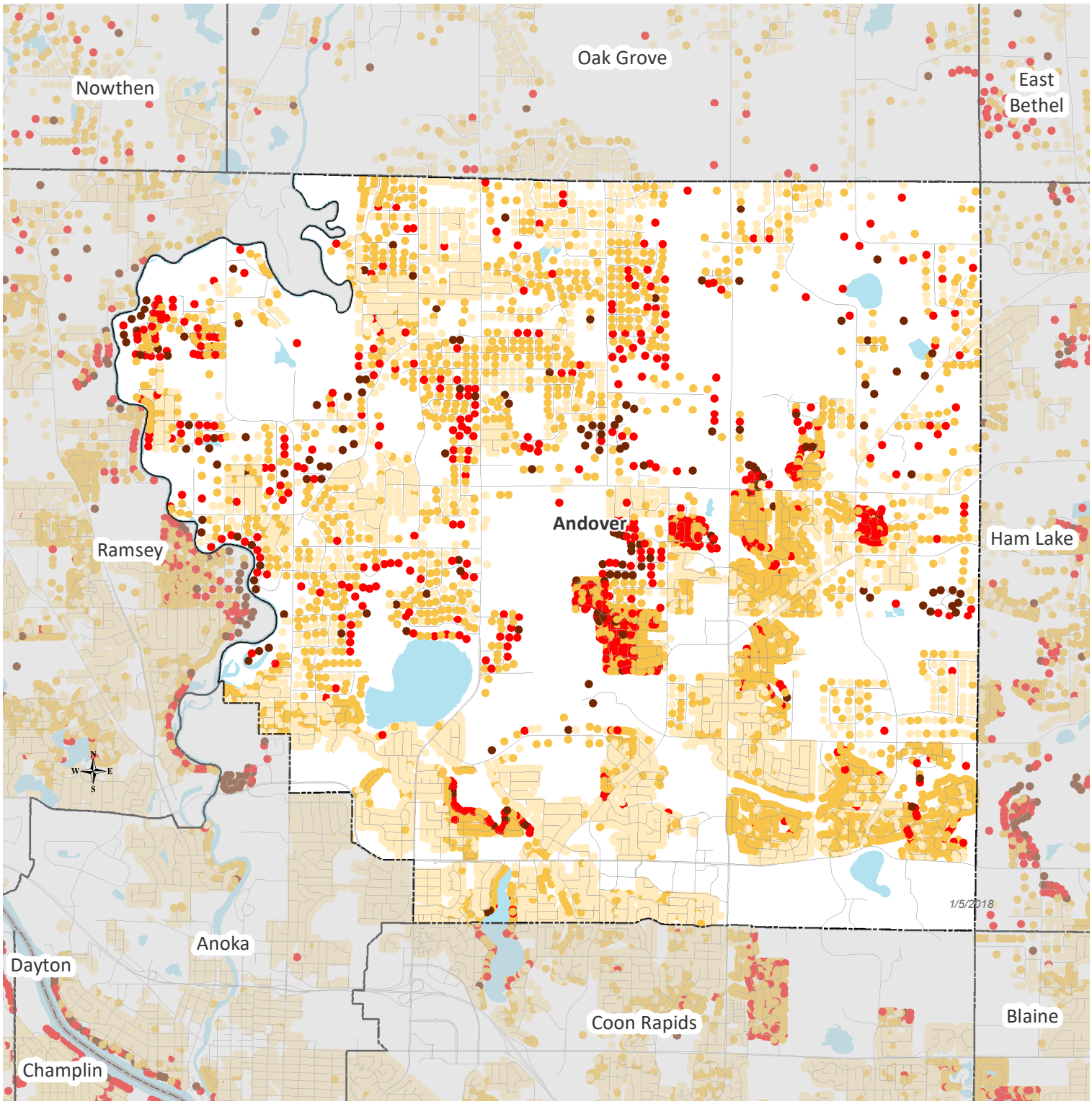
Figure 2.10

Document Path: H:\Gisdata\Planning\Projects\Figure 2.1 Wetlands and Floodplain 8.5 x 11.mxd

Owner-Occupied Housing by Estimated Market Value

Andover

Figure 2.10A



Owner-Occupied Housing Estimated Market Value, 2016

- $243,500 or Less
- $243,501 to $350,000
- $350,001 to $450,000
- Over $450,000

- County Boundaries
- City and Township Boundaries
- Streets
- Lakes and Rivers

1 in = 1.1 miles

Source: MetroGIS Regional Parcel Dataset, 2016 estimated market values for taxes payable in 2017.

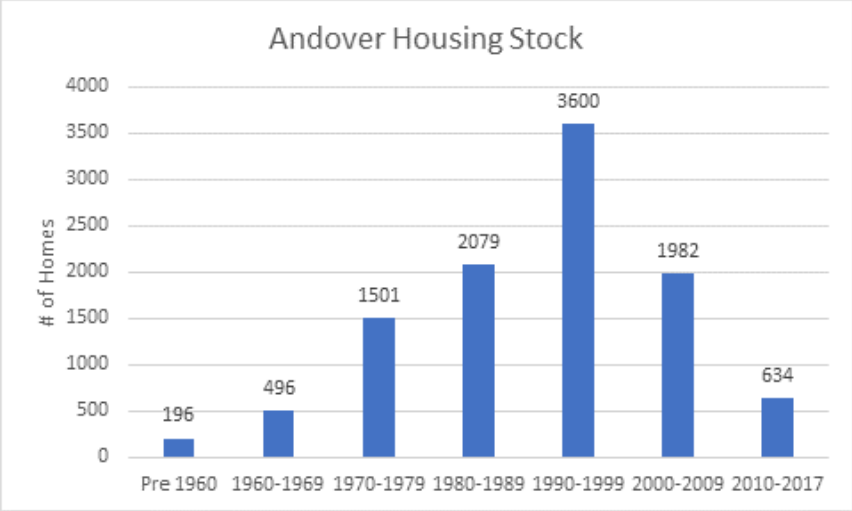
Note: Estimated Market Value includes only homesteaded units with a building on the parcel.

the more traditional single-family home and suburban lot size. A part of this trend can be attributed to the increased size of newer homes. As the growth forecasts in this plan indicate, the city will continue to grow at a moderate pace with more than ninety percent of residential growth within the MUSA.

Housing Stock Summary

A variety of housing types and price ranges are available for individuals and families within all stages of the life cycle. Figure 2.10A shows the Owner-Occupied Housing by Estimated Market Value. Figure 2.11 shows the age of the housing stock. Andover has one of the highest average household sizes in the Twin Cities area, at 3.28 persons per household according to the 2010 census. Household sizes will decline slightly in the future to an estimated 2.8 persons per household by 2040. The large average household size is influenced by a relatively youthful population and an abundance of single-family housing.

Figure 2.11 Age of Andover Housing Stock



Source: Anoka County Assessor's Office. October 2018.

The Metropolitan Council has determined the regional need for low- and moderate-income housing for the period from 2021-2030. Andover's share of the region's needs for low- and moderate-income housing during this period are as follows:

Affordable Housing Need Allocation for Andover	
At or below 30% AMI	208
31 to 50% AMI	141
51 to 80% AMI	13
Total Units	**362**

Existing Housing Assessment

An Existing Housing Assessment is the first step in identifying housing needs for the community. The following tables are not a comprehensive picture of Andover's housing stock, but a starting point to identify and address the community's existing housing needs.

Total housing units[3] = **10,645**
Total households[2] = **10,391**

Table 1: Affordability in 2016[3]

Units affordable to households with income at or below 30% AMI	Units affordable to households with income 31% to 50% AMI	Units affordable to households with income 51% to 80% AMI
94	300	4,900

2 - Source: Metropolitan Council, 2016 household estimates.

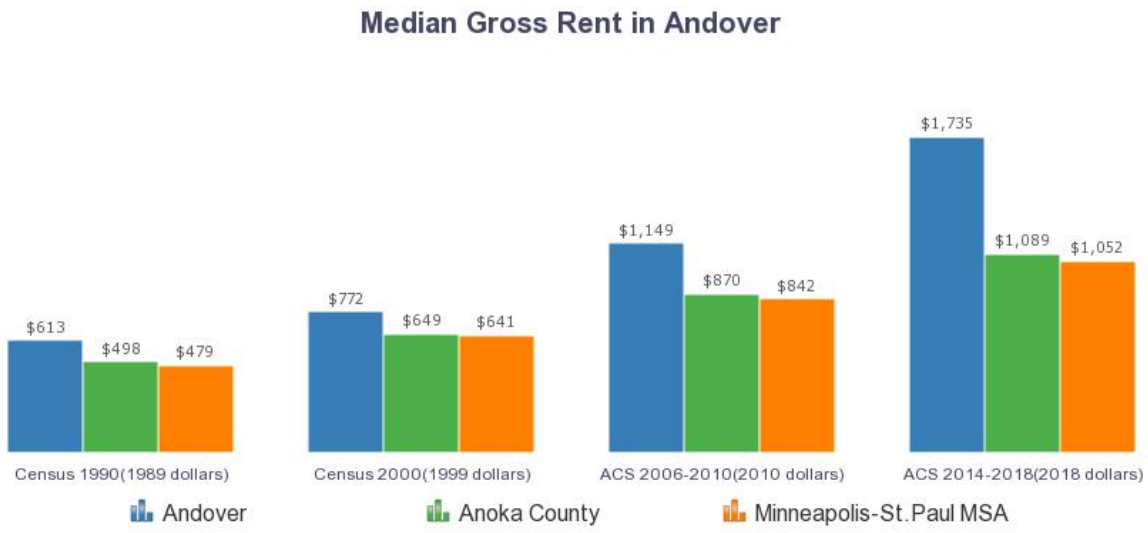
3 - Source: Metropolitan Council staff estimates for 2016 based on 2016 and 2017 MetroGIS Regional Parcel Datasets (ownership units), 2010-2014 Comprehensive Housing Affordability Strategy data from HUD (rental units and household income), and the Council's 2016 Manufactured Housing Parks Survey (manufactured homes). Counts from these datasets were adjusted to better match the Council's estimates of housing units and households in 2016 as well as more current tenure, affordability, and income data from the American Community Survey, home value data from the Federal Housing Finance Agency, and rents from HousingLink's Twin Cities Rental Revue data.

The affordability of housing is one of the primary community needs that has been identified through the existing housing assessment. Housing is considered to be affordable if the household pays no more than 30 percent of its gross income on housing cost and no more than 45 percent on the combined cost of housing and transportation. If a household has to pay more than this it would require the household to cut back on other necessities such as food, clothing and medical care. Households paying more than the affordable level are considered to be "cost burdened". As the following tables show 1,458 Andover residents were considered cost burdened in 2016. Housing affordability is broken down into three bands of affordability based on a percentage of the average median income (AMI) for the area, generally referenced as 30% of AMI, 50% of AMI, and 80% of AMI. Table 1 shows the number of units that would be considered affordable in Andover, the majority of that affordablility is at the 80% AMI level. Affordability at the 50% AMI and 30% AMI levels account for less than 4% of the units in the community with less than 1% of that coming from the 30% AMI level.

As Figure 2.10A ("Owner-Occupied Housing by Estimated Market Value") shows, owner-occupied homes shown at $243,500 (the pale yellow color) are equivalent to the 80% AMI affordability level for home ownership (2016). These homes would be considered "Naturally Occurring Affordable Housing" (NOAH) and can be found throughout the suburban and rural areas of the community, providing an important portion of affordable units available to meet the projected demand. In regard to rental units, median gross rent for Andover has consistenly tracked above both the rates for Anoka County and the Twin Cities metropolitan area and the trend over the last several

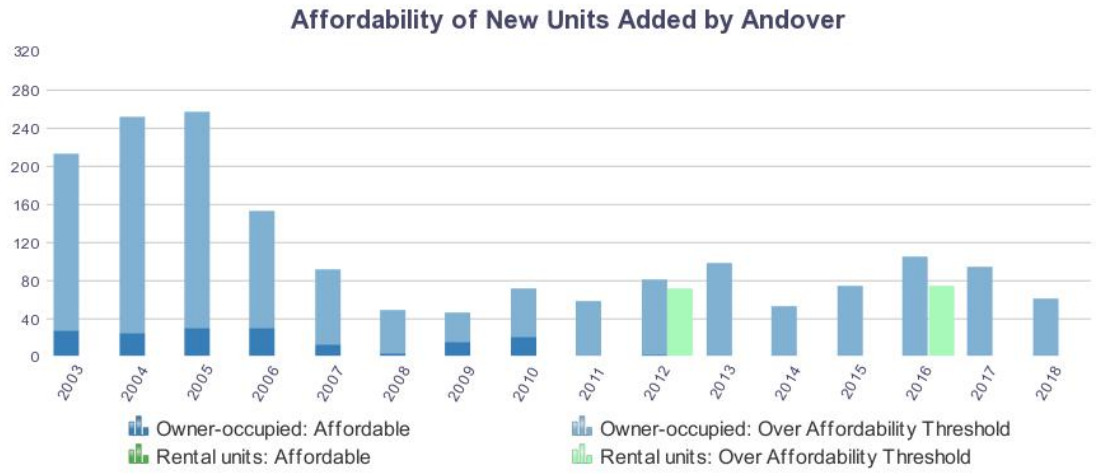
years has seen a widening gap between those rental rates (see Figure 2.12). Finally, the construction of new units of owner-occupied and rental housing has not been generating a supply of new affordable housing (as shown in Figure 2.13).

Figure 2.12 - Median Gross Rent in Andover



Source: Metropolitan Council, Local Planning Handbook community pages (Andover)

Figure 2.13 – Affordability of New Units Added by Andover



Source: Metropolitan Council, Local Planning Handbook community pages (Andover)Table 2:

Tenure in 2016[4]

Ownership units	Rental units
9,892	753

4 - Source: U.S. Census Bureau, 2012-2016 American Community Survey five-year estimates; counts adjusted to better match the Council's 2016 housing stock estimates.

Table 3: Housing Type in 2016[1]

Single-family units	Multi-family units	Manufactured homes	Other housing units
10,120	455	0	70

1 - Source: Metropolitan Council, 2016 housing stock estimates. Single-family units include single-family detached homes and townhomes. Multifamily units include units in duplex, triplex, and quadplex buildings as well as those in buildings with five or more units.

Table 4: Publicly Subsidized Units[5]

All publicly subsidized units	Publicly subsidized senior units	Publicly subsidized units for people with disabilities	Publicly subsidized units: all others
15	0	0	15

5 - Source: HousingLink Streams data (covers projects whose financing closed by December 2016), http://www.housinglink.org/streams 6 Housing cost burden refers to households whose housing costs are at least 30% of their income.

Table 5: Housing Cost-Burdened Households in 2016[6]

Income at or below 30% of AMI	Income 31% to 50% of AMI	Income 51% to 80% of AMI
388	424	646

6 - Source: U.S. Department of Housing and Urban Development, 2010-2014 Comprehensive Housing Affordability Strategy (CHAS) data, with counts adjusted to better match Metropolitan Council 2016 household estimates

Summary of Existing Housing Needs

Based on the data and analysis above, the City of Andover has identified the following housing needs as priorities for our community through the year 2040. In the implementation chapter of this plan, Chapter 6, you will find a discussion of the tools and strategies we will employ to address those needs.

1. Maintenance assistance for low-income homeowners at or below 60% of AMI
2. Rental units for large families at all affordability levels
3. Preservation of naturally occurring affordable housing within all affordability levels.
4. Allocation of affordable housing at all affordability levels.

Summary of Projected Housing Needs

To simplify our land use guidance and acknowledge the strong, diverse homeownership options that already existing in our community, we are focusing on maintaining existing housing to keep it affordable, and guiding land that would support multi-family affordable housing. Therefore, our future land use map (see Figure 2.4) reflects minimum densities of 8 units per acre sufficient to address our total allocation of affordable housing need of 362 units. Some parts of the city, specifically near the major intersections along Bunker Lake Boulevard, such as 7th Avenue and 7th Avenue, are guided at higher density residential uses including some at 20 units an acre or above. The Implementation Chapter of this Comprehensive Plan, Chapter 6, includes a housing implementation table that discusses the tools that are available to address housing needs and the circumstances for their use. The City of Andover will consider assistance on a project merit basis.

Implementation

The implementation plan has two components. The first component is comprised of the various activities undertaken by the city. The second component consists of programs conducted by others that are supported by the city.

LOCAL PROGRAMS AND STRATEGIES

High Density Zoning

The city continually has one or more undeveloped residential sites zoned for high density residential development, to provide opportunities for increased density and affordable housing. As these sites are developed, the city evaluates new sites that are appropriate based on several factors, including the efficient extension of municipal utilities and the capacity of the transportation system to support increased densities.

Planned Unit Development Review

This process is used for medium to high-density residential projects to allow project specific zoning standards to be created. In this manner, city requirements can be modified based on the needs of the project. The City Council must authorize the use of planned unit development review for each proposal based on the criteria established in the City Code.

OTHER PROGRAMS

Metropolitan Council – Section 8 Rental Assistance

Minnesota Housing Finance Agency (MHFA)
Minnesota Mortgage Program
Homeownership Assistance Fund
Purchase Plus Program

Minnesota Urban and Rural Homesteading Program
Partnership for Affordable Housing
Rental Assistance for Family Stabilization (RAFS)
Energy Cost Homeownership Program (ECHO)

Anoka County
Fair Housing Implementation
First Time Homebuyer Program
HOME Investment Partnerships Program
Housing Referral Assistance
Community Development Block Grant Program
Continuum of Care
Shelter Plus Care

Anoka County Community Action Program
ACCAP provides a variety of programs for low to moderate income individuals and families, including pre-purchase education, confidential financial counseling, down payment assistance, post purchase follow-up, reverse mortgage counseling, foreclosure prevention, housing maintenance assistance, various service areas.

SOLAR RESOURCE PROTECTION

Metropolitan cities in Minnesota are required to include an element for protection and development of access to direct sunlight for solar energy systems in the Comprehensive Plan. A solar access protection element is included in the Comprehensive Plan to assure the availability of direct sunlight to solar energy systems. It has less impact on natural resources. Increasing our usage of solar energy would decrease our reliance on fossil fuels and nuclear power. The purpose for including this section of the Comprehensive Plan is to ensure that direct sunlight access to solar panels is not subjected to shading from nearby trees, buildings, or other structures.

Andover has taken steps to becoming a more sustainable community by encouraging alternative energy systems that have a positive impact on energy production and conservation while not having an adverse impact of the community. The City adopted a code for Solar Energy Systems and Wind Energy Conversion Systems to promote alternative energy sources.

The Metropolitan Council calculated Andover's gross solar potential and created a Solar Suitability map as shown on Figure 2.14. The gross solar potential and gross rooftop potential are expressed in megawatt hours per year (Mwh/yr), and these estimates are based on the solar map for Andover. These values represent gross totals; in other words, there are not intended to demonstrate the amount of solar likely to develop within Andover. Instead, the calculations estimate the total potential resource before removing areas unsuitable for solar development or factors related to solar energy efficiency.

The gross solar generation potential and the gross solar rooftop generation potential for Andover are estimates of how much electricity could be generated using existing technology and assumptions on the efficiency of conversion. The conversion efficiency of 10% is based on benchmarking analyses for converting the data from Figure 2.14 to actual production, and solar industry standards used for site-level solar assessment.

Solar Resource Calculation

Community[1]	Gross Potential (Mwh/yr)	Rooftop Potential (Mwh/yr)	Gross Generation (Mwh/yr)[2]	Rooftop Generation Potential (Mwh/yr)[2]
Andover	47,123,898	1,588,713	4,712,389	158,871

Source: Metropolitan Council. June 2017

1 - There are a few communities where generation potential calculations could not be produced. There are areas within some maps where data was unusable. These areas were masked and excluded from gross rooftop potential and generating potential calculations.

2 - In general, a conservative assumption for panel generation is to use 10% efficiency for conversion of total insolation into electric generation. These solar resource calculations provide an approximation of each community's solar resource. This baseline information can provide the opportunity for a more extensive, community-specific analysis of solar development potential for both solar gardens and rooftop or accessory use installations. For most communities, the rooftop generation potential is equivalent to between 30% and 60% of the community's total electric energy consumption. The rooftop generation potential does not consider ownership, financial barriers, or building-specific structural limitations.

HISTORIC PRESERVATION

The City has one structure listed on the National Register of Historic Places. The 20-room Porter Kelsey home was built in 1887 with the brick made from their own brickyard, the Kelsey Brick Company. Many years ago, brick from the brickyard was brought to Minneapolis by train and used for the inside walls of the courthouse. In Anoka, the former courthouse, the former Catholic Church, and many of the historic storefronts were made of the same yellow brick made on the Kelsey Farm.

AGGREGATE RESOURCES

There are no deposits of significant commercial potential in the City of Andover. The City does, however, allow mining and excavation as a temporary use with approval of a Conditional Use Permit.

AIRPORTS

The closest metro aviation facility to the City of Andover is the Anoka County Airport in Blaine. The city is not in the Airport Influence Area of that airport and is not directly affected by existing or proposed plans or operations of the facility.

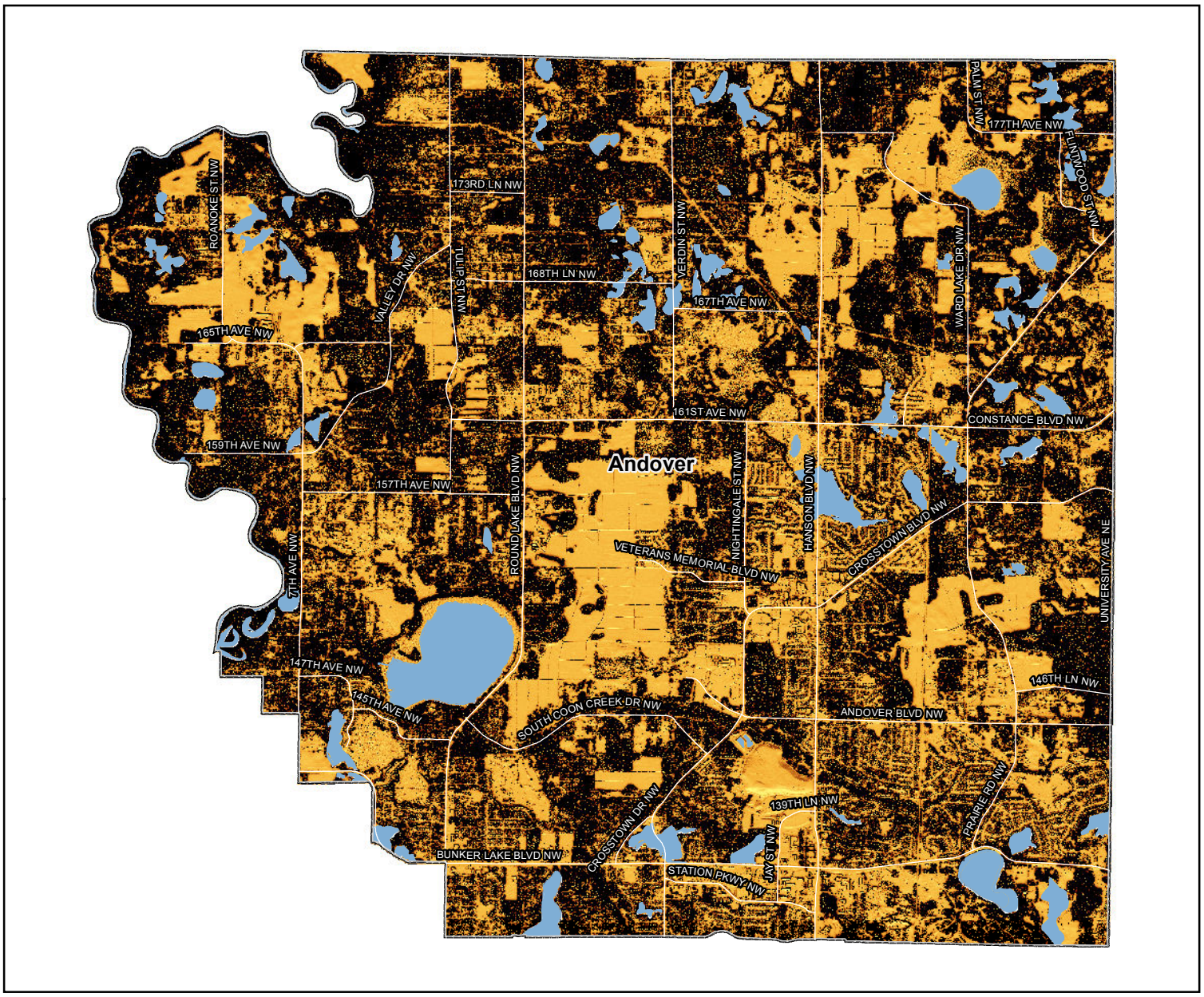
The city is within the region's general airspace that needs to be protected from potential obstructions to air navigation. Local ordinance limits height by zoning district and land use; and does not permit structures that reach 200 feet above ground level. If a proposed structure, such as a water tower, would need to be

constructed at 200 feet or more in height, the city would notify the Federal Aviation Administration (FAA) and MnDOT Aeronautics prior to processing a local permit. MNDOT Rules 8800 and Tall Tower requirements, and FAA Part 77 airspace information and Form 7460-1, are found at:
www.dot.state.mn.us/aero/avoffice/talltowers.html

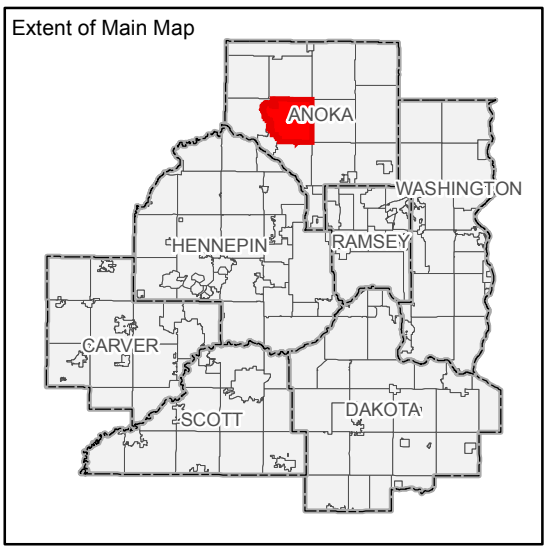
Gross Solar Potential

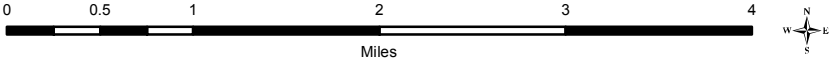
City of Andover, Anoka County

Figure 2.14



11/30/2016





Gross Solar Potential

(Watt-hours per Year)

High : 1264085

Low : 900001

Solar Potential under 900,000 watt-hours per year

County Boundaries

City and Township Boundaries

Open Water Features

Source: University of Minnesota U-Spatial Statewide Solar Raster.