

**Department of Planning and Development**  
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**MEMORANDUM**

To: Members of the Regional Planning Commission

From: Dennis A. Sandquist, Director

Date: August 5, 2009

Re: Development Capacity Future Land Use Demand

Staff recommends that development of the Future Land Use Map be predicated on a firm agreement by the Regional Planning Commission of the quantity (acres) of residential and commercial land use needed to accommodate anticipated growth through 2030. Once the land use demand by type is established, the Regional Planning Commission can start to designate appropriate areas on the Future Land Use Map.

The development demand and capacity calculations are provided in the attached spreadsheet. The calculations are based on the RPC's adopted population projection of 540,000 persons and a detailed analysis of the county's existing development and land use patterns. Staff's conclusion regarding the Future Land Use Demand is presented in the table below:

New Land Use Demand		
Land Use	Gross Acres	Net Acres
Estate	9,524	6,604
Residential (single & multi-family)	19,886	13,789
Retail	3,247	2,251
Office/Industrial/Mixed	3,160	2,191
Total Land Use Demand	35,817	24,835

These new land use areas are exclusive of existing municipal boundaries and existing unincorporated developments. The difference between the gross planned acres and the net acres accounts for land that will be utilized for road right-of-way (20%), government and institutional uses (10%), and open space (15%). The remainder of this memorandum describes the development capacity and land use analysis, contained in the attached spreadsheet.

The Commission may want to adjust the development capacity and future land use demand now and the numbers may need to be further refined over the next several weeks as the Future Land Use Map is developed. However, staff recommends that the Commission reach agreement regarding a demand for future land use areas before it proceeds with mapping Future Land Use Areas. This will serve as a target for development of the map.

The development capacity and future land use demand analysis consists of six steps, which are on separate tabs in the attached spreadsheet. The analysis is based on the Department's 2005 land use inventory and current (July 2009) municipal boundaries. The GIS Department updates this file usually within a few weeks of annexations being recorded. Staff tried to reconcile the different age of the data using non-spatial census data, as discussed in the fifth step of the analysis.

The first step of the analysis consisted of identifying all the vacant and agricultural parcels within each municipality based on P&D's 2005 land use inventory. It does not include large estate parcels or other parcels that may have infill potential. From this inventory, staff subtracted parcels, or portions of parcels, that are located in floodways, floodplains, ADID wetlands, or NRCS wetlands. The result is 17,687 parcels (or portions of parcels) or 33,848 acres of vacant and agricultural land within the current municipal boundaries. Staff will have a map showing the results of this analysis available at the RPC meeting.

Staff considered the idea of eliminating very small parcels from the analysis, but decided not to pursue this option for two reasons. First, while there are a lot of small properties, they don't count for much acreage, and thus don't have a big impact on the final result. Secondly, in looking at the map, it is clear that many of the small lots are in newer, un-built subdivisions.

The second step of the analysis was to determine the existing split of land uses including residential (estate, single family, and multifamily), Retail, Office/Industrial/ Mixed Use, Mining, Exempt, and Open Space) for each community. Again, this was accomplished based on our 2005 land use inventory. From this analysis, staff was also able to determine the estate and single family residential densities for each community by dividing the acres by the number of parcels. This analysis does not take into consideration the amount of land dedicated to roadways.

The third step of the analysis was to apply the residential land use ratios determined in step two to the vacant land determined in step one in order to calculate the capacity for additional residential development within municipalities. In performing this analysis, Staff assumed that full build out is 85% of capacity and that 20% of developed land goes to right-of-way. Both of those assumptions can be easily changed for all communities or for individual communities. Staff also assumed a multi-family density of 6 units/acre and a household size of 2.8 persons. Again, these assumptions can be altered for all communities or for individual communities. The result of this analysis is that based on the prevailing land use patterns, densities, and available land as of 2005, the existing municipal areas can accommodate an additional 28,221 housing units and 79,019 persons.

The fourth step of the analysis was to determine the existing "entitled" development capacity of the unincorporated area. Staff accomplished this using our 2007 inventory of buildable 5-10 acre A1 parcels and the number of vacant residential parcels greater than one acre identified in our 2005 land use inventory. This resulted in identification of 2,316 parcels. Through GIS analysis, 47 parcels that are completely within wetlands or floodplains were eliminated yielding 2,269 buildable parcels. To account for the age of the GIS data, the 564 lots created through final subdivisions since 2005 were added to determine the total number of buildable parcels in unincorporated McHenry County. This figure was multiplied by the assumed 85% build-out rate to determine the final development capacity of 2,408 units and 6,743 persons. Staff will have a map showing the results of this analysis available at the RPC meeting.

The fifth step of the analysis was to account for development capacity that has been consumed since the 2005 land use inventory. Staff accomplished this by subtracting the 8,717 residential building permits issued by the county and the municipalities from 2005 to June 2009. The municipal data was

not disaggregated. It is not important where the land has been consumed as we are not planning within municipal boundaries.

Staff also sought to determine the amount of future population growth that can be accommodated in existing vacant units. Staff used the 2007 American Community Survey to determine the existing vacancy rate and number of vacant units. From this analysis it was determined that 3,435 could be absorbed to lower the vacancy rate to a target 3.0%. Absorption of these units reduces the demand for new units and reduces the future land use demand.

The end result of the analysis is that the existing municipalities can accommodate an additional 22,916 housing units and 64,165 persons and the unincorporated area has capacity for 2,431 housing units and 6,808 persons for a combined capacity of 25,347 housing units and 70,973 persons. These figures include the population that can be accommodated within the vacant residential units.

As shown on the final spreadsheet tab, accommodating the 2030 population of 540,000 persons requires planning for an additional 221,359 persons and 81,428 housing units in currently unincorporated areas, exclusive of existing developed areas and exclusive of areas with existing development capacity. Most of this development will occur adjacent to existing municipalities and through future annexations. Based on recent trends, perhaps 10% of residential development will occur under county jurisdiction.

Because most residential and nearly all non-residential development will occur within future municipal annexation areas, staff utilized the municipal development patterns identified in step two to calculate future land use areas. These calculations, which were presented on the first page of this memorandum, are contained on the spreadsheet's Future Land Use tab. The existing residential mix and densities were used to determine the net area of new residential development by type. The existing ratio of residential use areas to retail areas and office/industrial/mixed use areas are used to determine the net required acres for these uses. The existing ratio of these primary uses to open space and exempt uses was used to determine the addition land required to accommodate these uses within residential, retail, and office/industrial areas. An additional 20% was added to accommodate right-of-way within residential, retail, and office/industrial areas.

The result of this analysis is the gross acreage required to accommodate growth for the four land use categories previously discussed by the Regional Planning Commission: Estate, Residential (including single-family and multi-family), Retail, and Office/Industrial.

As indicated at the beginning of this memo, the Commission may want to adjust the development capacity and future land use demand based on its own knowledge of McHenry County development patterns and land availability. In addition, the analysis may need to be further refined over the next several weeks as the Future Land Use map is developed. However, staff recommends that the Commission reach agreement regarding a target demand for future land use areas before it proceed with developing its Future Land Use map.