

DEKALB COUNTY,  
ILLINOIS

LAND  
EVALUATION  
and  
SITE  
ASSESSMENT

September 20, 2000

**DEKALB COUNTY  
LAND EVALUATION AND SITE ASSESSMENT SYSTEM**

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## **I. Introduction**

The DeKalb County Land Evaluation and Site Assessment System (LESA) is designed to evaluate the viability of a site for agricultural uses. Although the framework of the system was developed by the Natural Resources Conservation Service of the U.S. Department of Agriculture, the contents of the County's LESA System were prepared locally to utilize soil survey information and interpretations and to incorporate local values and objectives regarding the protection of agricultural land use and the coordination of growth, affecting land development.

The System consists of two parts, the Land Evaluation and the Site Assessment, with a maximum of 300 points possible. The Land Evaluation has a maximum of 100 points and is used to rate farmland for its agricultural productivity and its prime farmland category. The data for formulating the land evaluation is derived from a soil survey of DeKalb County. Generally, the Land Evaluation arranges the County's soils by their relative values, represented by a score of 0 to 100, with 0 being the worst for agriculture and 100 the best. The Site Assessment considers important factors other than soils relative to a specific parcel, which determine viability for agricultural use. The maximum number of points for the Site Assessment is 200. If a parcel were to receive a total of 215 points or more for the completed evaluation, that would indicate that the site has a high rating for agriculture. In utilizing the LESA System, the higher the point value, the greater the productivity and the more viable the site for agricultural use.

The DeKalb County LESA System is a valuable tool to guide land use decisions for the County. It does not take away the power of local officials to make land use decisions. Rather, it assists them in making rational, consistent, and supportable land use decisions. Applications of the LESA System will generally fall under two types of requests involving conversion of land from agricultural use to non-agricultural use. The most frequent application of LESA will be when a request is made to rezone a tract of land from the County's agricultural districts to another zoning district, districts, or for special uses. The LESA System can also be used to review state and federal projects for compliance with the Illinois Farmland Preservation Act and the Federal Farmland Protection Policy Act and their impact on important farmland.

In applying LESA in DeKalb County, the user of the system must remember that it is one among several tools to assist in making land use decisions; it should not be used alone. This user manual which describes the County's LESA System should be used in conjunction with the County's Land Use Plan, Goals and Objectives, and adopted policies, as a basis for the continued implementation of the County's Comprehensive Plan as part of the application of the Zoning Ordinance and for the overall protection of the public health, safety and welfare of the residents of DeKalb County. Since the County's LESA System is designed to be based on existing conditions, this system requires periodic review and possible modification to adjust for changing needs and conditions. Initial review should occur two years from the system's effective date and subsequent reviews should take place at least every five years.

The following sections of the User Manual provide a detailed description of each part of the LESA System and instructions for calculating the total Land Evaluation and Site Assessment Value.

## **II. Land Evaluation**

In the agricultural Land Evaluation, the soils of DeKalb County have been placed into ten groups ranging from the best to the worst, based on their suitability for crop production (See Table I).

For DeKalb County, the soils were ranked according to three criteria: land capability classification, important farmland identification, and soil productivity. A relative value has been determined for each group; the best group was assigned a relative value of 100 with all other groups being assigned lower relative values. Table II shows the breakdown of the soils groups by three criteria and the relative value for each agricultural group.

The Land Evaluation procedure will help responsible planners and decision makers determine the importance of the County's soil resources in terms of their importance to the agricultural base. In addition, the Land Evaluation portion of the LESA System is intended to meet the following objectives:

- (1) It will determine land quality for agricultural uses.
- (2) It will distinguish between classes of land of differing quality to enable decision makers to select lands to be protected for agricultural uses.
- (3) It will be consistently applicable.
- (4) It will be technically sound and compatible with national land classification system.
- (5) It will be flexible to reflect differences among areas.
- (6) It will be useful to agricultural land protection programs and land use planning.

**Table I**  
**List of Soil Series and Evaluations**  
**DeKalb County, Illinois**

1	2	3	4	5	6	7	8	9
<u>Map Symbol</u>	<u>Soil Series</u>	<u>Slope</u>	<u>Land Capability Class &amp; Subclass</u>	<u>Important Farmland Determination</u>	<u>Productivity Index Level</u>	<u>Acres</u>		<u>Agricultural Value Group</u>
						<u>No.</u>	<u>%</u>	
24A	Dodge	0 - 2	I - 1	Prime	75	520	.1	3
24B	Dodge	2 - 4	Ile - 1	Prime	74	8,325	2.0	6
24C2	Dodge	4 - 7	Ile - 4	Statewide	69	705	.2	8
27B	Miami	2 - 4	Ile - 1	Prime	69	2,580	.6	7
27C2	Miami	4 - 7	Ile - 4	Statewide	62	3,245	.8	8
27D2	Miami	7 - 12	IIIe - 1	Statewide	62	360	.1	9
41	Muscatine	0 - 2	I - 3	Prime	100	1,110	.3	1
59	Lisbon	0 - 2	I - 3	Prime	100	980	.2	1
60B	LaRose	2 - 4	Ile - 2	Prime	69	240	.1	7
60C2	LaRose	4 - 7	Ile - 4	Prime	66	2,095	.5	7
60D2	LaRose	7 - 12	IIIe - 1	Statewide	66	2,170	.5	9
62	Herbert	0 - 2	I - 2	Prime	85	3,295	.3	3
67	Harpster	0 - 2	IIw	Prime	85	5,740	1.4	5
68	Sable	0 - 2	IIw	Prime	100	440	.1	2
103	Houghton	0 - 3	IIIw	Statewide	--	1,235	.3	8
104	Virgil	0 - 2	I - 3	Prime	90	4,180	1.0	3
105A	Batavia	0 - 2	I - 2	Prime	85	4,310	1.1	3
105B	Batavia	2 - 4	Ile - 2	Prime	83	9,610	2.4	5
105C2	Batavia	4 - 7	Ile - 4	Prime	81	560	.1	5
V107	Sawmill	0 - 3	IIw	Prime	100	9,615	2.4	2

**Table 1, Continued**

1	2	3	4	5	6	7	8	9
<u>Map Symbol</u>	<u>Soil Series</u>	<u>Slope</u>	<u>Land Capability Class &amp; Subclass</u>	<u>Important Farmland Determination</u>	<u>Productivity Index Level</u>	<u>Acres</u>		<u>Agricultural Value Group</u>
						<u>No.</u>	<u>%</u>	
134A	Camden	0 - 2	I - 1	Prime	70	2,015	.5	3
134B	Camden	2 - 6	Ile - 1	Prime	69	2,335	.6	7
145B	Saybrook	2 - 4	Ile - 2	Prime	83	62,015	15.2	5
145C2	Saybrook	4 - 7	Ile - 4	Prime	83	5,725	1.4	5
148A	Proctor	0 - 2	I - 2	Prime	90	835	.2	3
148B	Proctor	2 - 4	Ile - 2	Prime	88	330	.1	5
152	Drummer	0 - 2	IIw	Prime	100	17,415	28.8	2
154	Flanagan	0 - 2	I - 3	Prime	100	48,265	11.9	1
171A	Catlin	0 - 2	I - 2	Prime	95	6,410	1.6	1
171B	Catlin	2 - 4	Ile - 2	Prime	93	37,660	9.2	4
171C2	Catlin	4 - 7	Ile - 4	Prime	87	725	.2	5
191	Knight	0 - 2	IIw	Prime	75	355	.1	6
198	Elburn	0 - 2	I - 3	Prime	100	16,590	4.1	1
199A	Plano	0 - 2	I - 2	Prime	95	2,320	.6	1
199B	Plano	2 - 4	Ile - 2	Prime	93	1,090	.3	4
219	Millbrook	0 - 2	I - 3	Prime	90	2,430	.6	3
224E2	Strawn	10 - 20	Ve	Statewide	--	275	.1	9
242	Kendall	0 - 2	I - 2	Prime	80	700	.2	3
243A	St. Charles	0 - 2	I - 1	Prime	75	1,135	.3	3
243B	St. Charles	2 - 4	Ile - 1	Prime	74	195	.05	5
318D2	Lorenzo	6 - 15	IVe	Statewide	--	125	.05	9
325B	Dresden	2 - 4	Ile - 3	Prime	64	400	.1	7

Table 1, Continued

1	2	3	4	5	6	7	8	9
<u>Map Symbol</u>	<u>Soil Series</u>	<u>Slope</u>	<u>Land Capability Class &amp; Subclass</u>	<u>Important Farmland Determination</u>	<u>Productivity Index Level</u>	<u>Acres</u>		<u>Agricultural Value Group</u>
						<u>No.</u>	<u>%</u>	
325C2	Desden	4 - 7	IIIe - 2	Statewide	60	480	.1	9
329	Will	0 - 3	IIw	Prime	85	610	.1	5
330	Peotone	0 - 3	IIIw	Statewide	--	3,090	.8	8
344A	Harvard	0 - 2	I - 2	Prime	80	2,055	.5	3
344B	Harvard	2 - 4	IIe - 2	Prime	78	4,495	1.1	6
344C	Harvard	4 - 7	IIe- 4	Prime	74	1,200	.3	6
656B	Octagon	2 - 4	IIe- 2	Prime	69	8,560	2.1	7
656C2	Octagon	4 - 7	IIe - 4	Prime	69	12,485	3.1	7
791A	Rush	0 - 2	I - 1	Prime	90	500	.1	3
791B	Rush	2 - 4	IIe - 1	Prime	88	320	.1	5
792A	Bowes	0 - 2	I - 2	Prime	95	595	.1	1
792B	Bowes	2 - 4	IIe - 2	Prime	93	615	.1	4
---	Cut & Fill	---	---	---	--	425	.1	--
---	Gravel Pits	---	---	---	--	410	.1	--
---	Limestone Quarries	---	---	---	--	20	*	--
---	Sewage Lagoons	---	---	---	--	10	*	--
---	Water	---	---	---	--	510	*	--

**Table 2**  
**Soil Groups for**  
**DeKalb County, Illinois**

1	2	3	4	5	6	7
<u>Agricultural Group</u>	<u>Land Capability Class &amp; Subclass</u>	<u>Important Farmland Classification</u>	<u>Productivity Index</u>	<u>Acres</u>	<u>Percent</u>	<u>Relative Value</u>
1	I	Prime	95 - 100	76,270	18.8	100
2	IIw	Prime	95 - 100	127,470	31.3	94
3	I	Prime	94	21,975	5.4	88
4	II	Prime	90 - 94	39,365	9.6	84
5	II	Prime	80 - 89	85,635	21.0	81
6	II	Prime	70 - 79	14,570	3.5	75
7	II	Prime	69	28,695	7.1	44
8	II, III	Statewide	ALL	8,275	2.1	31
9	III, IV, V	Statewide	ALL	3,410	0.9	28
10	OTHER	ALL	ALL	1,375	0.3	0

### III. Site Assessment

Agricultural viability of a site cannot be measured in isolation from existing and impending land use needs of DeKalb County. The Site Assessment process provides a system for identifying important factors, other than soils, that affect the quality and viability of a site for agricultural uses.

This section describes each of 15 Site Assessment factors to be considered when a change to another land use is proposed in the agricultural districts. The 15 Site Assessment factors are grouped into the following five major areas of consideration:

1. Agricultural/Land Uses;
2. Zoning;
3. Compatibility and Impact of Uses;
4. Land Use Feasibility; and
5. Compatibility with Comprehensive Development Plans.

Based upon current land use data, land use regulations, site inspection and other pertinent information, a point value is determined by analyzing each site assessment factor and selecting a number value that best reflects the quality of the property in question.

#### **SITE ASSESSMENT FACTORS, VALUES. AND DESCRIPTIONS OF FACTORS**

##### **I. Agricultural/Land Uses**

- 1.1 Percent of area within one mile of subject property compatible to agricultural use.

##### **Point Value**

<b>20 - 91 - 100%</b>	<b>10 - 41 - 50%</b>
<b>18 - 81 - 90%</b>	<b>8 - 31 - 40%</b>
<b>16 - 71 - 80%</b>	<b>6 - 21 - 30%</b>
<b>14 - 61 - 70%</b>	<b>4 - 11 - 20%</b>
<b>12 - 51 - 60%</b>	<b>0 - 1 - 10%</b>

This factor addresses the long-term viability that agricultural uses may have within an area associated with the site. If an area has a low percentage of compatible agricultural uses, then a request based on an assumption that the site is not suitable for agricultural uses due to non-compatibility may have merit. If the area has a high percentage of compatible agricultural uses, then the area has a high probability of remaining viable and the conversion of the site may have a negative impact on the entire area. The definition of “agricultural uses” should be interpreted to mean all agricultural and related uses that can be considered part of a farm operation. This would include farmland, pastureland, farm residences, barns, out-buildings, and miscellaneous cultural features.

1.2 Percent of land in agricultural uses adjacent to site.

**Point Value**

<b>20 - 91 - 100%</b>	<b>10 - 41 - 50%</b>
<b>18 - 81 - 90%</b>	<b>8 - 31 - 40%</b>
<b>16 - 71 - 80%</b>	<b>6 - 21 - 30%</b>
<b>14 - 61 - 70%</b>	<b>4 - 11 - 20%</b>
<b>12 - 51 - 60%</b>	<b>0 - 1 - 10%</b>

This factor assesses the short-term viability of the site's agricultural capacity by recognizing that adjacent non-compatible uses can effectively render agriculture nonproductive. Non-compatible uses primarily consist of residential subdivisions but can include large transportation facilities that have disrupted access to or drainage of the subject property, recreation areas that overflow with patrons, attractive nuisances such as quarry ponds, and successful commercial and industrial concerns.

1.3 Percentage of site suitable for Agricultural Uses

**Point Value**

<b>20 - 91 - 100%</b>	<b>10 - 41 - 50%</b>
<b>18 - 81 - 90%</b>	<b>8 - 31 - 40%</b>
<b>16 - 71 - 80%</b>	<b>6 - 21 - 30%</b>
<b>14 - 61 - 70%</b>	<b>4 - 11 - 20%</b>
<b>12 - 51 - 60%</b>	<b>0 - 1 - 10%</b>

This factor assesses the features that exist on the site that can function to make it suitable for farming. Features include trees and other vegetation, slope, internal barriers such as drainage ditches or rocks, configuration resulting in excessive point rows or two few rows, buried foundations, etc.

**2. Zoning**

2.1 Compatibility of the site's proposed use with the purpose and intent of the Zoning District requested.

**Point Value**

<b>20 - No</b>
<b>0 - Yes</b>

The County's Zoning Ordinance is the most important tool for implementing the County's Comprehensive Plan. Each district, including its list of special uses, has its own purpose that is tailored to achieve the Plan's goal as well as reduce conflicts between non-compatible land uses. This factor assesses the proposed land use in light of these objectives.

- 2.2 Percent of perimeter of site that joins existing zoning districts that are compatible to agricultural uses.

**Point Value**

<b>12 - 91 - 100%</b>	<b>7 - 41 - 50%</b>
<b>11 - 81 - 90%</b>	<b>6 - 31 - 40%</b>
<b>10 - 71 - 80%</b>	<b>4 - 21 - 30%</b>
<b>9 - 61 - 70%</b>	<b>2 - 11 - 20%</b>
<b>8 - 51 - 60%</b>	<b>0 - 1 - 10%</b>

This factor assesses both existing and proposed uses that are not compatible to agricultural uses by recognizing that some zoning districts, particularly the medium/high density residential districts, can render agriculture unsuitable. Medium or high density residential districts allow minimum lots sizes of one acre or less. Certain commercial and industrial districts are also incompatible with agriculture.

**3. Compatibility/Impact of Use**

- 3.1 Degree to which affected local governments can bear the additional costs the proposed use may generate.

**Point Value**

<b>10 - More than 1.5 miles</b>
<b>8 - More than 1.0 to 1.5 miles</b>
<b>6 - More than .75 to 1.0 miles</b>
<b>4 - More than .50 to .74 miles</b>
<b>2 - More than .25 to .49 miles</b>
<b>0 - 0 to .25 miles</b>

This factor assesses the increased fiscal burden that the local governments must bear when they extend additional services to the site, if the request is granted. Some requests will require few, if any, additional services, whereas others will require many. Some of the local governments are in a position to successfully bear the additional costs whereas others are not. Analyses of Fiscal Impacts of New Developments, conducted by Northern Illinois University, relates these costs to distance from boundaries of incorporated areas. Since factor 3.2 (below) assesses transportation, those costs should not be considered here.

- 3.2 Degree to which the affected transportation routes can bear the traffic that the proposed use may generate.

**Point Value**

- 10 - *earthen***  
**8 - *aggregate***  
**4 - *hard surface***  
**0 - *traffic/access controlled***

This factor assesses the impact that the proposed use may have on the roads accessing the site. It is separated from factor 3.3 for the purpose of emphasizing the role that roads play in the successful operation of any development. Ideally, the proposed use will generate a fair share of the cost of maintaining or improving the access roads. However, there will be instances when this does not occur and these instances should be evaluated for their impact on those who must pay for the roads, but are not benefitted by their contribution.

- 3.3 Potential of a site to be annexed to municipality or served by public sewer and water systems.

**Point Value**

- 10 - *More than 1.5 miles***  
**8 - *More than 1.0 to 1.5 miles***  
**6 - *More than .75 to 1.0 miles***  
**4 - *More than .50 to .74 miles***  
**2 - *More than .25 to .49 miles***  
**0 - *0 to .25 miles***

Annexation of a site to a municipality is the County's most important method of protecting agricultural lands and activities. Most all municipalities in the County have sewer and water systems and ordinances that state that upon either annexation or connection, sites must either connect or be annexed. When connection to a sewer and water systems occurs, the cost dictates that lot size be reduced resulting in more people living on less land.

#### 4. Land Use Feasibility

- 4.1 Viability of the property as a farm, as represented by the ratio of the acreage of the site over its farm value (as determined by minimum lot size divided by the relative soil values of the site).

##### Point Value

<b>16 - 91 - 100%</b>	<b>8 - 41 - 50%</b>
<b>14 - 81 - 90%</b>	<b>6 - 31 - 40%</b>
<b>12 - 71 - 80%</b>	<b>4 - 21 - 30%</b>
<b>10 - 61 - 70%</b>	<b>2 - 11 - 20%</b>
<b>9 - 51 - 60%</b>	<b>0 - 1 - 10%</b>

The agricultural productivity of any given property is dependent on the types of soil. If the site consists of less productive soil, then a petitioner's claim that it is not suitable for agriculture because of soils may be validated. In addition, the County has determined that the viability of a farm is in part dependent on the ability to place a farm house on the site. The largest agricultural zoning district, the A-1 District, requires a minimum of 40 acres for a new farm house. This question relates the minimum lot size required by zoning to the land evaluation (LE) score of the specific site, in order to yield a ratio which is then divided into the actual acreage of the site in order to assess that site's viability for farming in the light of zoning restrictions on farm houses. Example: a 30-acre site consisting entirely of Drummer soil would have an LE of 94; 40 acres divided by 94 is 42.5%; 30 acres (the actual site size) divided by 42.5 is 71% (rounded up), for a score of 12. Even though the site is too small for a farm house, the fact that it consists of a very productive soil yields a high score in this evaluation.

- 4.2 Ratio of the acreage of site over the required acreage for proposed use.

##### Point Value

<b>12 - 2:1 or higher</b>	<b>6 - 1.5/1</b>
<b>11 - 1.9/1</b>	<b>5 - 1.4/1</b>
<b>10 - 1.8/1</b>	<b>4 - 1.3/1</b>
<b>8 - 1.7/1</b>	<b>2 - 1.2/1</b>
<b>7 - 1.6/1</b>	<b>0 - 1.1/1 or less</b>

This factor assesses the size of the site in light of efficient land use. If the acreage of the site over the acreage reasonably required is a high value, then the ratio indicates that an excessive amount of land may be converted. When determining the amount of acreage considered as appropriate, it should include areas for access ways and buffers.

## 5. Compatibility With Comprehensive Development Plans

5.1 Consistency of proposed use with the recommendations of the County's Land Use Plan.

### Point Value

- 20 - *Incompatible with Plan.***
- 10 - *Compatible with existing use, but not with Plan map.***
- 0 - *Totally compatible.***

The Land Use Plan is the element of the County's Comprehensive Plan that makes recommendations regarding where different future land uses should occur. These recommendations are always considered in the light of the two principal goals of the Comprehensive Plan; to preserve agricultural land, and to guide development toward land that adjoins incorporated boundaries. This factor assesses the site's role in achieving those goals. Consistency with the intent of the Plan should be determined when a land use change is proposed. It should be remembered that the Land Use Plan does not reflect every possible use that would be consistent with the goals of the Comprehensive Plan.

5.2 Consistency of the adjoining land uses with the recommendations of the current Land Use Plan of the Comprehensive Plan.

### Point Value

- 20 - *Incompatible with Plan.***
- 10 - *Compatible with municipal plan, but not with County Plan.***
- 0 - *Totally compatible.***

Existing uses on adjoining lands can have an impact on the decision regarding a proposed change in land use for a site. For example, the presence of residences on abutting parcels can make the development of new houses on a subject property more likely to be approved. However, certain existing land uses are at odds with the recommendations of the Land Use Plan of the County's Comprehensive Plan. In many cases, the Land Use Plan does not reflect the existing land uses because it is not deemed appropriate for more land in a particular area to be converted to match those existing uses. The compatibility of existing land uses on adjoining lands with the recommendations of the Land Use Plan is, therefore, an important consideration when evaluating the proposed use of a subject property.

### 5.3 Consistency of proposed use to municipal plan.

#### Point Value

**10 - *Inconsistent with municipal plan, or parcel is beyond 1.5 mile jurisdictional boundary for municipal planning.***

**5 - *Within 1.5 mile municipal planning area, but no municipal plan recorded.***

**0 - *Consistent with municipal plan.***

To insure the cooperation between municipalities and DeKalb County, the County's Land Use Plan considered the municipal plans recorded at that time. A continuation of this cooperation is reflected in this factor. The weight is relatively low because municipal plans, for the most part, do not include agricultural areas. If the parcel is within two municipal planning areas, the plan from the nearest municipality shall be considered.

#### **IV. Instructions for Calculating the Total Land Evaluation and Site Assess Value for a Site.**

The following are instructions to determine the total Land Evaluation and Site Assessment part, each require separate calculations.

1. **Land Evaluation Value** -- The Land Evaluation (LE) value will be provided by the DeKalb County Soil and Water Conservation District office when a petition is filed for a map amendment (rezoning).
2. **Site Assessment Value** -- To establish the Site Assessment point value of the given parcel, work through the following steps:
  - a). Based upon local land use information, site inspections, and other pertinent data, assess the site for each factor shown in Section III.
  - b). A point value for each factor is determined by analyzing each Site Assessment factor and choosing the category that best suits the property in question.
  - c). Add all factor values to arrive at a Site Assessment subtotal. The maximum number of possible points for any given parcel is 200.
3. **Assessing a Site for its Agricultural Viability**

Once the value for the Land Evaluation part and Site Assessment part are obtained, add both values for the total points for each site.

The total maximum points possible for any site are 300. The Land Evaluation may be assigned a

maximum of 100 points, and the Site Assessment may be assigned a maximum of 200 points.

The following breakdown should be used in evaluating a site for rezoning in the agricultural district, to another zoning district for protection of agriculture:

<b>215 - 300</b>	<b>High Rating for Protection</b>
<b>185 - 214</b>	<b>Moderate Rating for Protection</b>
<b>184 - below</b>	<b>Low Rating for Protection</b>

The higher the total points accrued for a site, the more agriculturally viable the given site will be. When considering a number of sites for a nonagricultural use, selection of the site with the lowest point score will usually result in protection of the best agricultural land in the most viable locations.