

LAND EVALUATION AND SITE ASSESSMENT

The Land Evaluation and Site Assessment System (LESA) is a tool for determining the advisability of a land use change from an agricultural use to a non-agricultural use (usually residential development). It also provides a guide to the relative importance of protecting the site as farmland. The LESA system was developed by the USDA, but local organizations have developed the particular site assessment characteristics which apply to Sangamon County. The system not only helps evaluate the relative value of agricultural land, it also promotes land use goals of Springfield and Sangamon County.

There are two parts to the LESA system, Land Evaluation which assesses the soils on the site for suitability for crop production and Site Assessment which examines characteristics other than soils which contribute to the quality of the site as farmland and the ability or probability of the site continuing in agricultural use. The system assigns points based on the site's compliance with certain identifiable, measurable criteria. A maximum of 300 points (100 for Land Evaluation and 200 for Site Assessment) can be awarded. A high number of points indicates not only that the site is a high quality agricultural site, but that the proposed use would either have high development costs or lack essential public services. Using a point system provides a consistent, objective determination of the site's agricultural suitability.

The following section is a narrative description of the various components of the LESA system, which is in turn followed by the point system itself.

LAND EVALUATION - 100 POINTS

The Land Evaluation section is largely a technical process predetermined by the USDA. From a master list, soils in Sangamon County are categorized into 1 of 9 groups depending on its capability class, productivity index and prime farmland rating. The average productivity index of each group is determined by summing "acres of soil type x productivity index of soil type" and dividing by the total acres in that group. The highest productivity index is given a relative value of 100 points and the lower productivity indices are assigned a new value by prorating based on the ratio of the highest average productivity index to 100.

When a site is evaluated the acreage of each soil group is determined and the site's relative productivity index is calculated. This figure is the number of points the site receives.

SITE ASSESSMENT - 200 POINTS

The Site Assessment section deals with factors other than soils which can affect the quality of the site in the future as farmland. Generally, the more suitable a site is for urban uses, the less suitable it is for agriculture. Conversely, the more suitable the site is for agriculture, the less suitable it is for residential uses and the higher the initial and continuing costs if the site were developed. The Site Assessment factors were developed based on those assumptions. These factors are divided into 3 categories: Agriculture Land Use - 50 points - assesses the feasibility of the site remaining in agriculture by looking at the amount of agriculture near the site and at the site's actual use. Maximum points are given if the area and the site are agriculturally oriented. Compatibility/Impact of Uses - 65 points - assess the impact the proposed use would have on existing uses, the environment and historic features. The greater the adverse impact of proposed use, the more points are given. Existing Infrastructure - 85 points - assess the suitability of the site for residential uses by measuring the distance of the site from essential public services. If public services are available, the site is felt to be more suitable for development than for agriculture. Nearness to public services implies that the site is adjacent to or very close to existing urban areas and that the municipality plans to encourage development in that area. Encouraging

development according to a city's comprehensive plan should save farmland in the long run. For these reasons, few points are awarded if public services are available.

Following is a brief explanation of the site assessment factors:

Agricultural Land Use

Land in Agriculture Within 1/2 Mile of Site.

The percent of land used for agriculture within one-half mile radius of the site provides a general view of the current agriculture character of the area. Generally, areas which are largely agriculture are more viable for continued farming uses.

Contiguous Land in Agriculture.

Adjacent land uses in agriculture are again a strong indicator of the character of the area. The greater the proportion of contiguous land uses in agriculture use, the more potential there is for conflicts if the site is changed from farmland. A determination of surrounding land uses can help identify what types of nuisance complaints may arise.

Percent of Site in Agriculture.

The current use of the site is an indicator of the feasibility of the site for agriculture. If little of the site is being used for agricultural purposes, it may indicate, along with the Land Evaluation, that the site is not of much agricultural importance.

Compatibility/Impact of Uses

County Sector.

The location of the site in relation to Springfield or other incorporated areas is important in assessing the probability of the land remaining in agriculture. The closer the site is to an incorporated area, the more likely it is that the site will be developed. Development contiguous to incorporated areas is desirable, so site location next to an incorporated area receives 0 points.

Soil Suitability for On-Site Waste Disposal.

Assessment of the site's suitability to handle an on-site waste disposal system is based on the Sangamon County soils map soil suitability ratings and is a matter of determining the amount of land with that type of limitation. Soils with severe restrictions for septic tanks can increase the cost of development and there is the risk of the system not functioning properly and polluting streams and groundwater. For these reasons sites with severe soil restrictions for septic tanks are better left for agriculture and receive 10 points.

Environmental Impact of Proposed Use.

This factor assesses the impact the new use would have on the environment and natural features rather than on existing land uses as was addressed earlier. The proposed use would have a negative

impact if, for example, it caused surface runoff problems, it was in the floodplain or it destroyed important local wildlife habitat or unusual vegetation.

Impact on Unique Historical/Cultural Features.

Historical or cultural features which might be adversely affected by a land use change include historical sites, landmarks or markers, architecturally unique areas or archeological sites.

Existing Infrastructure

Transportation Accessibility.

The type of road to which a subdivision has access is an indication of its general quality and ability to absorb increased traffic. Increasing non-agriculture related traffic on rural roads creates demands for widening, various improvements and increased standards of maintenance. Conflicts between cars and farm vehicles can also result. If the road is not adequate, needed improvements and maintenance can cause increased taxes placing a burden on the farmer. Poor roads thus are weighted against development and toward keeping the land in agriculture.

Central Sewer.

The availability of a central sewer system to the site implies a nearness to urban areas and a decision to open the land for development. The farther the sewer must be extended to reach the site, the more probability the site should not yet be developed and should remain in agriculture. Public health interests favor central sewers over septic systems which may malfunction leaking effluent into groundwater or streams.

Public Water Supply.

As with a central sewer, the availability of public water supply indicates a municipality's desire for that area to develop. A public water supply is better than a well for health reasons, also.

Distance From Firehouse.

This factor as with many others is a reverse measure of agriculture capability and measures the site's suitability for urban development. Fire protection is an essential public service whose adequacy is measured in response time for a fire engine to arrive at the fire. The better the fire protection the fewer points are given toward maintaining agricultural use.

Distance From High School.

The time it takes to get from the site to the high school which children would attend reflects the closeness of the site to an urban area and the likelihood of development.

AGRICULTURAL LAND EVALUATION

Group #1 - Total Acres: 166,030 - Average Productivity Index: 159

<u>Soil #</u>	<u>Mapping Unit Description</u>	<u>Productivity Index</u>	<u>Capability Class</u>	<u>Prime/ Important Farmland</u>
36A	Tama	150	1	Prime
43	Pave	160	1	Prime
198	Elburn	155	1	Prime

Group #2 - Total Acres: 131,695 - Average Productivity Index: 151

36B	Tama	148	2E	Prime
73	Ross	145	1	Prime
77	Huntsville	146	1	Prime*
199A	Plano	145	1	Prime
68	Sable	155	2W	Prime
451	Lawson	155	2W	Prime*

Group #3 - Total Acres: 27,730 - Average Productivity Index: 143

134A	Camden	120	1	Prime
36C2	Tama	143	2E	Prime
199B	Plano	144	2E	Prime
284	Tice	145	2W	Prime*

Group #4 - Total Acres: 88,440 - Average Productivity Index: 138

50	Viriden	135	2W	Prime
67	Harpster	135	2W	Prime
74	Radford	140	2W	Prime*
107	Sawmill	140	2W	Prime*
138	Shiloh	135	2W	Prime
144	Hartsburg	140	2W	Prime
684B	Broadwell	139	2E	Prime

Group #5 - Total Acres: 63,995 - Average Productivity Index: 122

17	Keomah	125	2W	Prime
45	Denny	110	2W	Prime
112	Cowden	120	2W	Prime
134B	Camden	119	2E	Prime
242	Kendall	130	2W	Prime
249	Edinburg	130	2W	Prime
259C	Assumption	123	2E	Prime
280B	Fayette	125	2E	Prime
567C	Elkhart	123	2E	Prime
685B	Middletown	104	2E	Prime
131C	Alvin	103	3E	Prime
131D	Alvin	101	3E	Prime
208	Sexton	115	3W	Prime
684C2	Broadwell	133	2E	Prime

*Subject to flooding

Group #6 - Total Acres: 37,680 - Average Productivity Index: 114

<u>Soil #</u>	<u>Mapping Unit Description</u>	<u>Productivity Index</u>	<u>Capability Class</u>	<u>Prime/ Important Farmland</u>
19C2	Sylvan	105	2E	Important
134C2	Camden	115	2E	Important
280C2	Fayette	119	2E	Important
685C2	Middletown	105	2E	Important
19D	Sylvan	106	3E	Important
36D2	Tama	140	3E	Important
119D	Elco	102	3E	Important
250D2	Assumption	113	3E	Important
80D2	Fayette	113	3E	Important
567D2	Elkhart	113	3E	Important

Group #7 - Total Acres: 13,750 - Average Productivity Index : 88

8D3	Hickory	64	4E	Important
8E	Hickory	71	4E	Important
19D3	Sylvan	95	4E	Important
119D3	Elco	95	4E	Important
131E2	Alvin	84	4E	Important
134D3	Camden	102	4E	Important
212D3	Thebes	87	4E	Important
280D3	Fayette	104	4E	Important

Group #8 - Total Acres: 9,865 - Average Productivity Index: 82

8E3	Hickory	63	6E	Non-prime
19E3	Sylvan	87	6E	Non-prime
119E3	Elco	87	6E	Non-prime

Group #9 - Total Acres: 8,050 - Average Productivity Index: 0

8F	Hickory	0	7E	Non-prime
551F	Gosport	0	7E	Non-prime
801	Orthents	0	0	Non-prime

Relative Point Value for Soil Groups

<u>Group #</u>	<u>Relative Value</u>
1	100
2	95
3	90
4	87
5	77
6	72
7	55
8	52
9	0

LAND EVALUATION AND SITE ASSESSMENT

Agricultural Site Assessment **AGRICULTURAL LAND USE**

Points

Land in Agriculture

(within 0.5 miles of site)

90% or more	20
75-89%	10
50-74%	5
Under 50 %	0

Contiguous Land in Agriculture

(% of lineal frontage) (including pasture & farmsteads)

90% or more	20
75-89%	10
50-74%	5
Under 50%	0

Percentage of Site in Agriculture

75-100%	10
50-74%	5
Under 50%	0

Possible Points

50

COMPATIBILITY/IMPACT OF USES

Points

County Sector

Rural	20
0.5 Mile from an Incorporated Area	10
Incorporated Area	0

Soil Suitability for On-Site Waste Disposal

75% or More Soils with Severe Restrictions	20
50-74% of Soils with Severe Restrictions	15
25-49% of Soils with Severe Restrictions	5
Less than 25% of Soils with Severe Restrictions or Sewer Available	0

Environmental Impact of Proposed Use

Negative Impact	15
Little or None/with Special Design or Protective Measures	5
Little or None	0

Impact on Unique Historical/Cultural Features

Negative Impact	10
No Impact	0

Possible Points 65

EXISTING INFRASTRUCTURE Points

Transportation Accessibility

Access to Township Road – unpaved road surface, <40’ ROW, or <18’ pavement	20
Access to Township Road – 18’-20’ pavement, 40’ ROW	10
Access to Township Road – >20’ pavement, 40’ ROW – or Access to County or State Highway	0

Availability of Central Sewer

Sewer Not Available	15
Private Sewage System	8
Sewer Over 600’ Away	5
Sewer 600’ or Less Away & Available	0

Public Water Supply

Public Water Not Available	20
Public Water Over 1,000’ Away	15
Public Water 1,000’ or Less Away	5
Public Water Available at Site	0

Distance from Firehouse

Not in Fire Protection District	20
More Than 5 miles from responding fire station	10
2.6-5 Miles from responding fire station	5
0-2.5 Miles from responding fire station	0

Distance From School (High School)

Over 30 Minutes	10
15 to 30 Minutes	5
Less Than 15 Minutes	0

Possible Points 85

Agricultural Site Assessment 200

Agricultural Land Evaluation 100

GRAND TOTAL LAND EVALUATION & SITE ASSESSMENT (LESA) 300

