Natural Resources Information Report 22.02

Prepared for: Piatt County Zoning Board
Craig & Shannon Hicks

Pin # 06-35-19-006-002-04

Piatt County
Soil & Water
Conservation District

PIATT COUNTY SOIL AND WATER CONSERVATION DISTRICT
NATURAL RESOURCE INFORMATION REPORT
NRI

Date District Board Reviewed Application	July 16th, 2025
Applicant's Name	Craig & Shannon Hicks
Parcel ID Size of Parcel	06-35-19-006-002-04 18.25-acre
Present Zoning Current Land Use Proposed Zoning Proposed Land Use	Agriculture Crop land Residential Single family home
Piatt County Zoning Board of Appeals Meeting Date	July 24th, 2025
Contact Person from Piatt SWCD	Brianne Gates

Copies of this report or notification of the proposed land-use change were provided to:	***yes***	***no***
The Petitioner	X	
The Contact person	X	
The Piatt County Zoning Board of Appeals	X	
The Piatt County Soil Water Conservation District Files	X	

Report Prepared By: Brianne Gates Position: Resource Conservationist

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Forward:

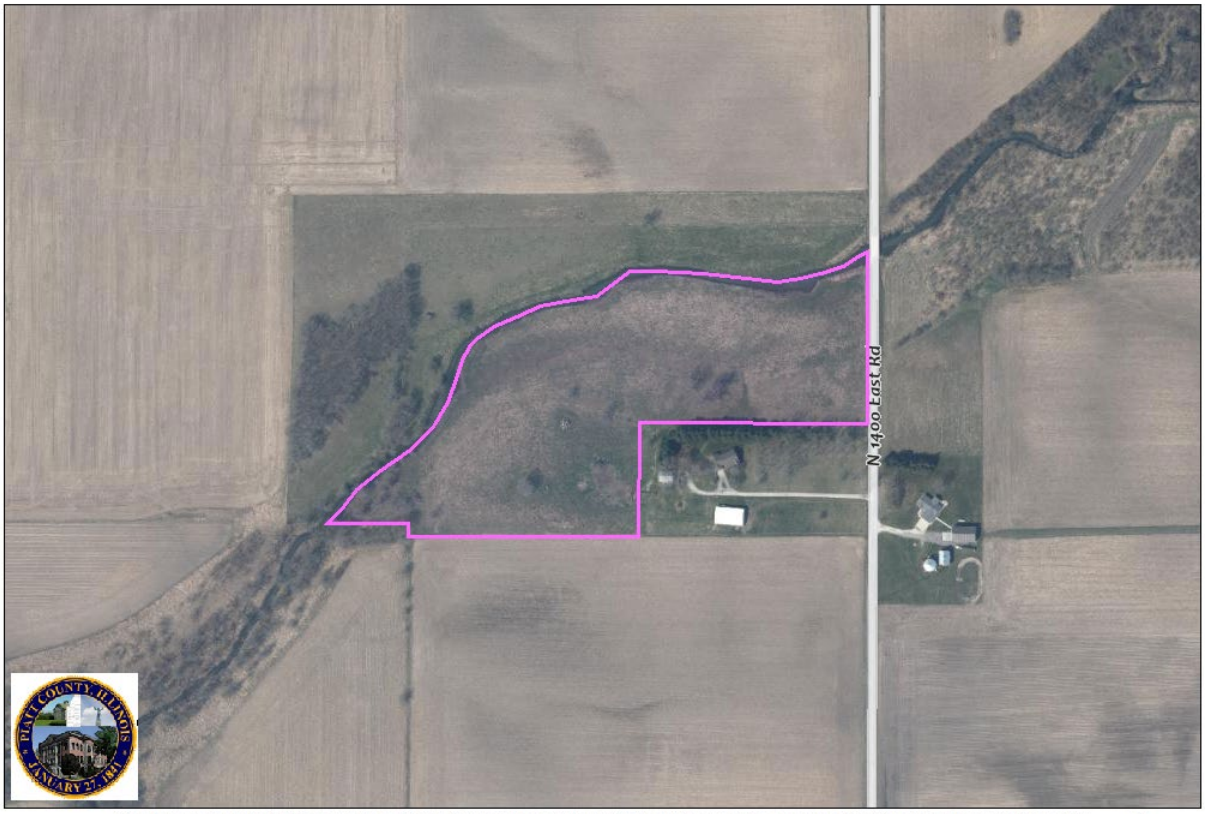
Soil and Water Conservation Districts are required to prepare Natural Resource Information (NRI) Reports under the Illinois Soil and Water Conservation Act of 1977, Illinois Revised Statutes, Chapter Five.

Section 22.02a The Soil and Water Conservation District shall make all natural resource information available to the appropriate county agency or municipality in the promulgation of zoning, ordinances or variances. Any person who petitions any municipality or county agency in the district for variation, amendment, or other relief from municipality or county zoning ordinance or who proposes to sub-divide vacant or agricultural lands therein shall furnish a copy of such petition or proposal to the Soil and Water Conservation District. The Soil and Water Conservation District shall be given not more than thirty days from the time of receipt of the petition or proposal to issue its written opinion concerning the petition or proposal and submit the same to the appropriate county agency or municipality for further action. Added by Act approved December 3, 1971.

This report provides technical data necessary to evaluate the natural resources of a specific area and the impacts or limitations associated with the proposed land use change. The report is limited to information researched by the Piatt County Soil and Water Conservation District staff. (Technical information is obtained from several different sources and may be subject to modification based on detailed site investigations or new technical information.) Information gathered in this report comes from several key reference materials and are cited throughout this report and listed in the Reference section. Any questions on the information contained in this report can be directed to:

Piatt County Soil and Water Conservation District
1209 Bear Lane
Monticello, IL 61856
Phone 217-762-2146 ext. 3

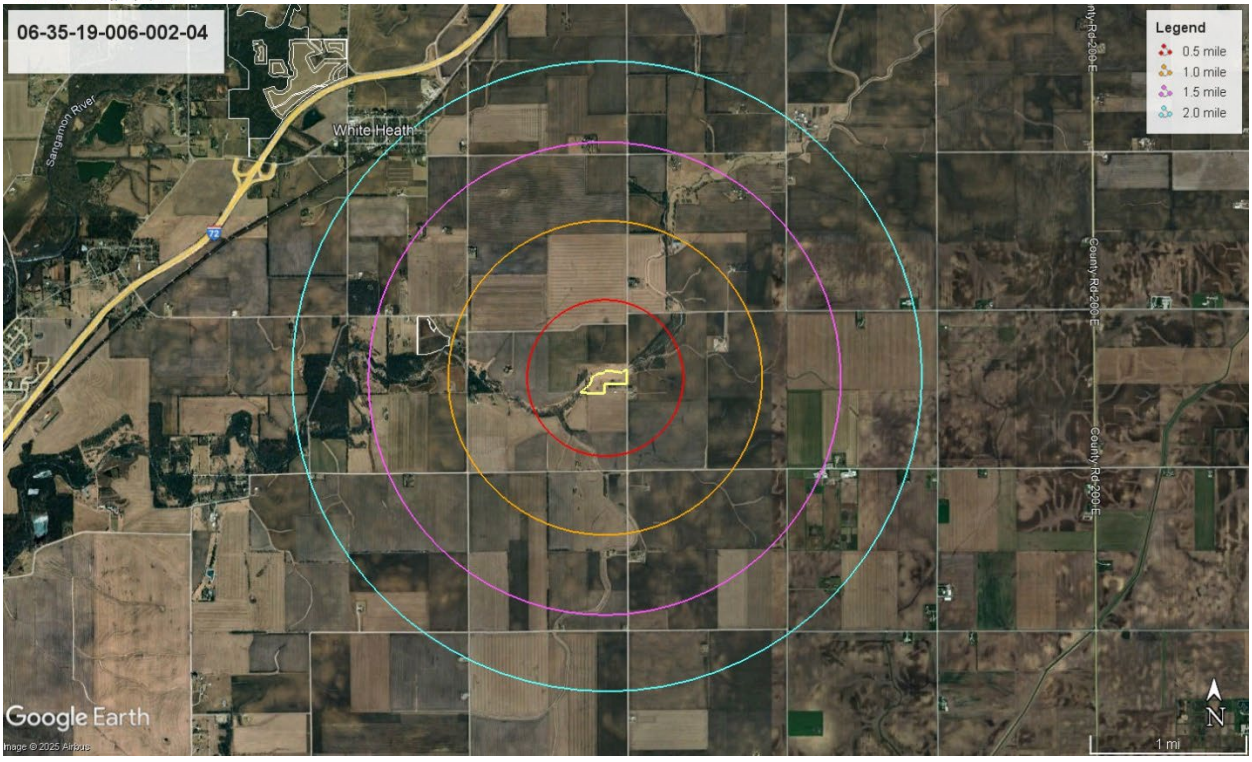
06-35-19-006-002-04 Base Map



This map application was prepared with Piatt County geographic information system (GIS) data. Piatt County does not warrant or guarantee the accuracy or suitability of GIS data for any purpose. The GIS data within this application is intended to be used as a general index to spatial information and not intended for detailed, site-specific analysis or resolution of legal matters. Users assume all risk arising from the use or misuse of this application and information contained herein. The use of this application constitutes acknowledgement of this disclaimer.

NORTH

Date: Wednesday, July 2, 2025



Concerns of the Board

The Piatt County Soil and Water Conservation District has reviewed the proposed land use change and has some concerns relevant to the impact on the area's natural resources. The reader is advised to consider the following information contained in this report.

- **Special attention should be paid to any sanitation placed on the property. The Piatt County Health Department should be contacted for the best septic design. Significant increases in construction cost and possibly increased maintenance will be required.**

- **Special attention should be paid to the flood risk associated with this site, particularly on the northern portion.**

- The land is currently zoned for agriculture. **Underground tile drainage is an important aspect of the modern farm operation, and should this field contain drainage tile, care should be taken to locate, reroute and/or maintain the tile.** If there is tile in the field and it is not maintained, it could potentially cause major problems in the future.

Land Evaluation Site Assessment (LESA):

This site received a score of **198.9** indicating a **low** level of protection for the current agricultural use.

A site with a score ranging from
0-200 has a low rating for protection.
200-225 is a medium rating for protection.
225-250 a high rating for protection.
250-300 a very high rating for protection.

Technical Data

Included in this report you will find numerous publications and specific recommendations for construction site erosion control. The erosion control practices work effectively only if they are installed timely and correctly and then properly maintained. This information is also available from the Piatt County SWCD office in Monticello and the Illinois Urban Manual.

Erosion Control: construction sites can experience 20 to 200 tons/acre/year of soil loss, which is greater than other land uses like agriculture averaging 4-5 tons/acre/year. Sediment entering creeks, rivers and lakes degrade water quality and reduce capacity, which increases the risk of flooding. Sediment also carries other possible pollutants such as chemicals and metals by adhering to the sediment's surface. It is extremely important that the developer employ Best Management Practices, like the ones listed below, to help reduce soil erosion and protect water quality and reduce capacity, which increases the risk of flooding. Sediment also carries other possible pollutants such as chemicals and metals by adhering to the sediment's surface. It is extremely important that the developer employ Best Management Practices, like the ones listed below, to help reduce soil erosion and protect water quality during construction and after.

Silt Fencing: is a woven geotextile fabric stretched across and attached to supporting posts used to intercept sediment-laden runoff from small drainage areas of disturbed soil. The purpose is to filter out sediment from runoff before it enters a water body. Silt fence should be used to intercept concentrated flows of runoff into the detention basin or exiting the site into a ditch. Silt fence should also be routinely inspected and maintained to ensure proper installation and operation. (Please see attachment A)

Construction Road Stabilization: the stabilization of temporary construction access routes, subdivision roads, on-site vehicle transportation routes, and construction parking areas with stone immediately after grading the area. The purpose of this practice is to reduce erosion areas. (Please see attachment B)

Vegetative Cover - is one of the most important means to control runoff and sedimentation. Planting temporary vegetation around the perimeter of the construction site provides a good natural buffer to filter sediment and chemicals. The SWCD recommends that a temporary grass be planted in the areas that will not be disturbed. This vegetation will help protect soil from erosion during construction. A permanent vegetative filter strip will be extremely important in protecting the storm water detention basin from runoff. If at any time during construction land is left exposed for more than 30 days it should be temporarily seeded with some sort of vegetation like oats or rye. Temporary seeding is very important to stabilize the soil. After cuts are completed on bare soil slopes and road ditches temporary seeding must be established. See table 1 below for Temporary Seeding rates (Illinois Urban Manual). (Please see attachment C)

OPERATION AND MAINTENANCE

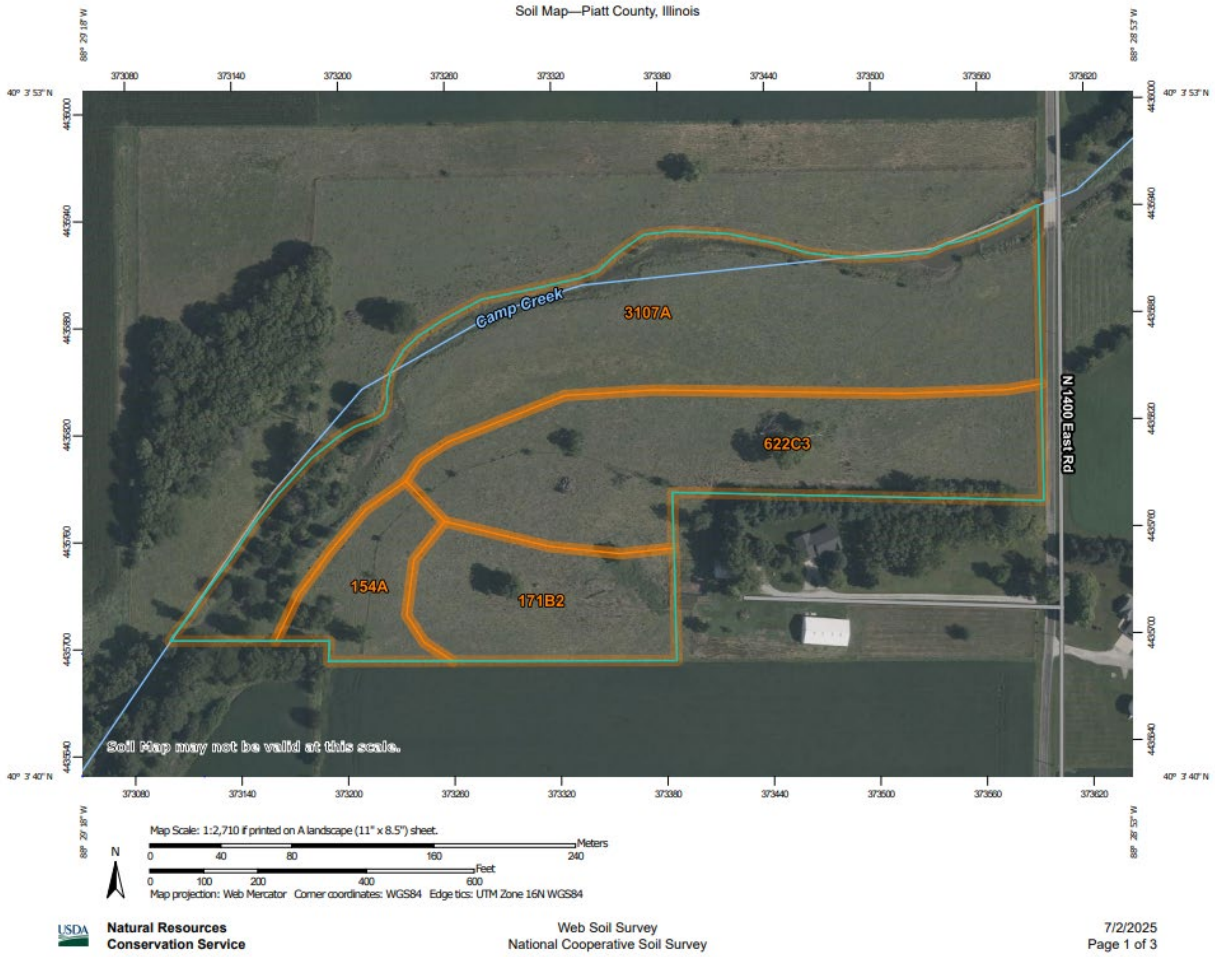
Reseed areas where seedling emergence is poor, or where erosion occurs, as soon as possible. Protect from vehicular and foot traffic. Control weeds by mowing.

TEMPORARY SEEDING SPECIES, RATES AND DATES

Species	Lbs./Acre	Lbs./1000 ft.2	Seeding Dates
Oats	90	2	Early spring – July 1
Cereal Rye or Wheat	90	2	Early spring – Sept. 30
Perennial Ryegrass	25	0.6	Early spring – Sept. 30

Soil Information

The Soil information comes from United States Department of Agriculture, Natural Resources Conservation Service Soil Survey of Piatt County. This information is important to all parties involved in determining the suitability of the proposed land use change.
Each soil polygon is given a number, which represents its soil type. The letter found after the soil type number indicates the soils, slope class. Each soil map unit has limitations for a variety of land uses such as septic systems, buildings with basements, and building without basements.



SYMBOL	DESCRIPTION	ACRES	PERCENT
154A	Flanagan silt loam, 0-2% slopes	1.3	7.3%
171B2	Catlin silt loam, 2-5% slopes, eroded	2.4	13.3%
622C3	Wyanet clay loam, 5-10% slopes, severely eroded	5.6	31.1%
3107A	Sawmill silty clay loam, 0-2% slopes, frequently flooded	8.7	48.4%

Soil Interpretations Explanation

Nonagricultural

General

These interpretative ratings help engineers, planners, and others to understand how soil properties influence behavior when used for nonagricultural uses such as building site development or construction materials. This report gives ratings for proposed uses in terms of limitations and restrictive features. The tables list only the most restrictive features. Other features may need treatment to overcome soil limitations for a specific purpose.

Ratings come from the soil's "natural" state, that is, no unusual modification occurs other than that which is considered normal practice for the rated use. Even though soils may have limitations, an engineer may alter soil features or adjust building plans for a structure to compensate for most degrees of limitations. Most of these practices, however, are costly. The final decision in selecting a site for a particular use generally involves weighing the costs for site preparation and maintenance.

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Soil limitation ratings of slight, moderate, and severe are given for the types of proposed improvements that are listed or inferred by the petitioner as entered on the report application and/or zoning petition. The most common type of building limitation this report gives limitations ratings for is septic systems. It is understood that engineering practices can overcome most limitations for buildings with and without basements, and small commercial buildings. Limitation ratings for these types of buildings are not commonly provided. Organic soils, when present on the parcel, are referenced in the hydric soils section of the report.

The area of development will be susceptible to erosion both during and after construction. Any areas left bare for more than 7 days should be temporarily seeded or mulched and permanent vegetation needs to be established as soon as possible.

Limitations Ratings

1. ***Not limited***- This soil has favorable properties for the use. The degree of limitation is minor. The people involved can expect good performance and low maintenance.
2. ***Somewhat limited*** - This soil has moderately favorable properties for the use. Special planning, design, or maintenance can overcome this degree of limitation. During some part of the year, the expected performance is less desirable than for soils rated slight.
3. ***Very limited***- This soil has one or more properties that are unfavorable for the rated use. These may include the following: steep slopes, bedrock near the surface, flooding, high shrink-swell potential, a seasonal high-water table, or low strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance, which in most situations is difficult and costly.

EPA REQUIREMENT

EPA Storm water Pollution Prevention Plan (SWPPP) Reference Tool:

EPA requires a plan to control storm water pollution plan for all construction sites over 1 acre in size. *A Guide for Construction Sites* is a reference tool for construction site operators who must prepare a SWPPP in order to obtain NPDES permit coverage for their storm water discharges. The guide describes the SWPPP development process and provides helpful guidance and tips for developing and implementing an effective plan. Two model plans, based on hypothetical sites, are now available as a supplement to the guide. The first example plan is for a medium-sized residential subdivision and the second is for a small commercial site. Both examples utilize the SWPPP template that is included in the guide.

To view the guide, models and template, visit
http://www.epa.gov/npdes/swpppguide.

A new small lots plan can be found at this website location:
http://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources

Low impact development:

The EPA's new report, "Reducing Storm water Costs through Low Impact Development (LID) Strategies and Practices." Provides ideas to improve water quality through unique designs. The report contains 17 case studies from across North America that show using LID practices in construction projects can lower costs while improving environmental results. LID practices are innovative storm water management practices used to manage urban storm water runoff at its source. The goal of LID practices is to mimic the way water moves through an area before development occurs, which is achieved using design techniques that infiltrate, evapotranspiration and reuse runoff close to its source. Some common LID practices include rain gardens, grassed swales, cisterns, rain barrels, permeable pavements and green roofs. LID practices increasingly are used by communities across the country to help protect and restore water quality. For a copy of the report, go to www.epa.gov/owow/nps/lid/costs07.

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SANITARY FACILITIES

SYMBOL	Septic Tank Absorption Fields	ACRES	PERCENT
154A	VERY LIMITED	1.3	7.3%
171B2	VERY LIMITED	2.4	13.3%
622C3	VERY LIMITED	5.6	31.1%
3107A	VERY LIMITED	8.7	48.4%

The Table shows the degree and kind of soil limitations that affect septic tank absorption fields and sewage lagoons.

The limitations are considered **Not limited** if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome. The limitations are considered **Somewhat limited** if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations. The limitations are considered **Very limited** if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required.

Septic Tank Absorption Fields: these are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 to 72 inches is evaluated. The ratings are based on soil properties, site features and observed performance of the soils. Permeability, high water table, depth to bedrock or to a cemented pan, and flooding affect absorption of the effluent. Large stones and bedrock or a cemented pan interfere with installation. Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluent, surfacing of effluent, and hillside seepage, can affect public health. Groundwater can be polluted if highly permeable sand and gravel or fractured bedrock is less than 4 feet below the base of the absorption field, if slop is excessive, or if the water table is near the surface. There must be unsaturated soil material beneath the absorption field to filter the effluent effectively. Many local ordinances require that this material be of a certain thickness.

Building Site Development

Symbol	Dwellings With Basement	Dwellings Without Basements	Small Commercial Buildings	Acres	Percent
154A	Very Limited	Somewhat Limited	Somewhat Limited	1.3	7.3%
171B2	Somewhat Limited	Somewhat Limited	Somewhat Limited	2.4	13.3%
622C3	Not Limited	Somewhat Limited	Somewhat Limited	5.6	31.1%
3107A	Very Limited	Very Limited	Very Limited	8.7	48.4%

The Table shows the degree and the kind of soil limitations that affect dwellings with or without basements and small commercial buildings.

The limitations are considered **Not limited** if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome. The limitations are considered **Somewhat limited** if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations. The limitations are considered **Very limited** if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required.

Dwellings and Small Commercial Buildings: these are structures built on a shallow foundation on undisturbed soil. The load limit is the same as that for single-family dwellings no higher than three stories. Ratings are made for small commercial buildings without basements and, for dwellings without basements. The ratings are based on soil properties, site features, and observed performance of the soils. A high-water table, depth to bedrock or to a cemented pan, large stones, slope, and flooding, affect the ease of excavation and construction. Landscaping and grading that require cuts and fills of more than 5 or 6 feet are not considered.

Prime Farmland Soils

Each soil map unit in the United States is assigned a prime or non-prime rating. Prime agricultural land does need to be in the production of food & fiber.

Table 5 of the Natural Resource Conservation Service Soil Survey Book states that urban or built-up land on prime farmland soils is not prime farmland.

SYMBOL	DESCRIPTION	ACRES	PERCENT
154A	All areas are prime farmland	1.3	7.3%
171B2	All areas are prime farmland	2.4	13.3%
622C3	Not prime farmland	5.6	31.1%
3107A	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season	8.7	48.4%

Soil Productivity Index

Soil Productivity in this context is defined as the capability of a soil in its normal environment of producing a specified system of management.

The Soil Productivity Index is determined using crop yield data under average management to assess farmland. Productivity Index values represent the productivity of Illinois soils by soil type.

Note: This LESA System uses Productivity Index values from the 2012 updated table in Bulletin 810 published in *Average Crop, Pasture, and Forestry Productivity Ratings for Illinois Soils* (Olson et al., 2000), which cannot be compared to values from Bulletin 811 in *Optimum Crop Productivity Ratings for Illinois Soils* (Olson & Lang, 2000).

SYMBOL	PRODUCTIVITY INDEX	ACRES	PERCENT
154A	120	1.3	7.3%
171B2	116	2.4	13.3%
622C3	89	5.6	31.1%
3107A	123	8.7	48.4%

CULTURAL AND ANIMAL RESOURCE

EcoCAT Report:
The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

The Illinois Historic Preservation Agency may require a Phase 1 Archeological Review to identify any cultural resources that may be on the site. Contact info is listed below:

Phone: 217.782.4836
Illinois Department of Natural Resources
Illinois State Historic Preservation Office
Attn: Review and Compliance/Old State Capitol
1 Natural Resources Way
Springfield, IL 62702

Illinois Endangered Species Protection Act & Illinois Natural Areas Preservation Act:
State agencies or units of local government must consult the Department about proposed actions that they will authorize, fund or perform. Private parties do not have to consult, but they are liable for prohibited taking of state-listed plants or animals or for adversely modifying a Nature Preserve or a Land and Water Reserve.
Home rule governments may delegate this responsibility, through duly enacted ordinances, to the parties seeking authorization or funding of the action.

IL Department of Natural Resources
Contact
Impact Assessment Section
217-785-5500
Division of Ecosystems & Environment

The Land Evaluation and Site Assessment System

The Land Evaluation and Site Assessment system is a tool designed to evaluate the viability of agricultural lands where changes in land-use are proposed. LESA was developed as a decision-making tool used by the Zoning Board of Appeals, City Councils or County Boards to help make unbiased decisions of proper land-use. The LESA system was developed by the USDA-N.
RCS and takes into consideration local conditions such as physical characteristics of the land, compatibility of surrounding land-uses, urban growth factors, and land-use policies determined by local government. LESA was designed for use in conjunction with the county's land-use plan, zoning ordinances, and other policies being used to decide land-use changes.

The LESA system uses a points system to determine what should be protected. From 0 to 200 points, the site has a low rating for protection; from 200 to 225 points, it has a medium rating for protection; from 225 to 250 points, it has a high rating for protection; and from 250 to 300 points, it has a very high rating for protection. Selecting the site with the lowest total points will usually protect the best farmland located in the most viable areas.

Attached at the end of the report are the guidelines on how the points are decided. The pages come from the Land Evaluation and Site Assessment System for Piatt County.

PIATT COUNTY
AGRICULTURAL LAND EVALUATION WORKSHEET
RELATIVE VALUE OF SITE

AGRICULTURAL GROUP	RELATIVE VALUE FOR EACH GROUP	NUMBER OF ACRES IN SITE FOR GROUP	PRODUCT OF RELATIVE VALUE AND NUMBER OF ACRES
1	100		
2	97		
3	94		
4	88	3.7	325.6
5	79	8.7	687.3
6	76	5.6	425.6
7	63		
8	0		
	TOTAL	18.0	1438.5

AVERAGE SITE VALUE = **PRODUCT OF RELATIVE VALUE AND ACRE** / **ACRES IN SITE**

AVERAGE SITE VALUE = 1438.5/18.0 acres = 79.9

PIATT COUNTY
SITE ASSESSMENT FACTORS

A. LAND USE / AGRICULTURE

16 1. Percent of Land in Agricultural Use Within 1 Mile (20)

0 2. Percent of Site in Agricultural Use (20)

B. COMPATIBILITY / IMPACT OF PROPOSED USES

20 1. Distance from City / Village (20)

0 2. Compatibility of Agricultural and Non-Agricultural Uses (15)

C. LAND USE FEASIBILITY

10 1. Soil Limitations for Building Site Development (15)

15 2. Soil Limitations for Sanitary Facilities (15)

12 3. Flooding / Storm Water Management (15)

D. URBAN / RURAL

15 1. Central Water (15)

15 2. Central Sewer (15)

6 3. Transportation (15)

10 4. Fire District (20)

E. MUNICIPAL PLANS AND ZONING

0 1. Compatibility with Comprehensive Land Use Plan or Zoning (15)

SITE ASSESSMENT

79.9 TOTAL POINTS

LAND EVALUATION

119.0 TOTAL POINTS

PIATT COUNTY LAND EVALUATION AND SITE ASSESSMENT SYSTEM

198.9 TOTAL POINTS
300 POSSIBLE POINTS

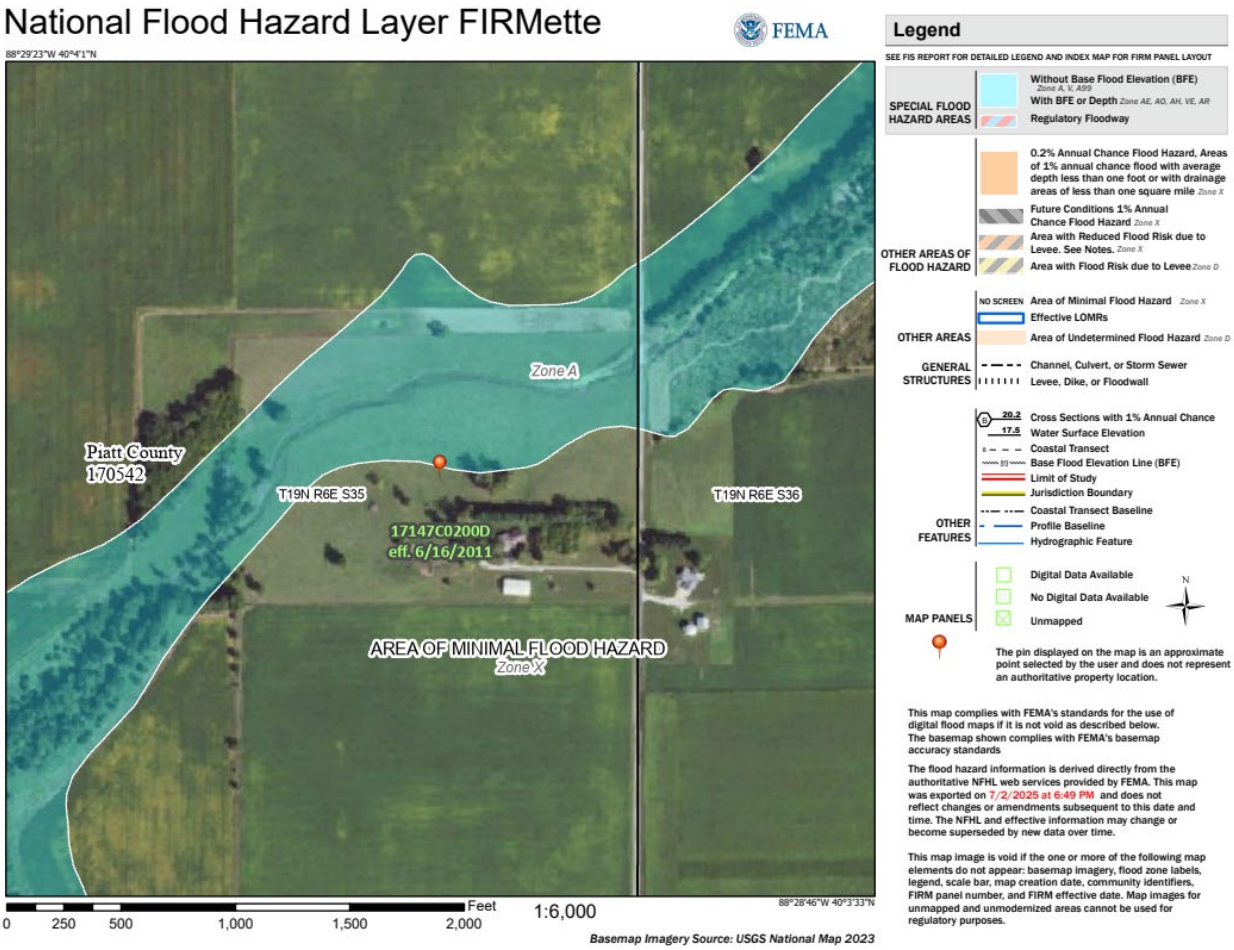
Flood Insurance Rate Maps

Importance of Flood Information

A floodplain is defined as land adjoining a watercourse (riverine) or an inland depression (non-riverine) that is subject to periodic inundation by high water. Floodplains are important areas demanding protection since they have water storage and conveyance functions that affect upstream and downstream flows, water quality and quantity, and suitability of the land for human activity. Since floodplains play distinct and vital roles in the hydrologic cycle, development that interferes with their hydrologic and biologic functions should be carefully considered.

Flooding is both dangerous to people and destructive to their properties. The following map can help developers and future homeowners to "sidestep" potential flooding or ponding problems.

FIRM is the acronym for the Flood Insurance Rate Map, produced by the Federal Emergency Management Agency. These maps define flood elevation adjacent to tributaries and major bodies of water and superimpose that onto a simplified USGS topographic map. The scale of the FIRM maps is generally dependent on the size and density of parcels in that area. (This is to correctly determine the parcel location and flood plain location.) The FIRM map has three (3) zones. A is the zone of 100-year flood, zone B is the 100-to-500-year flood, and zone C is outside the flood plain.



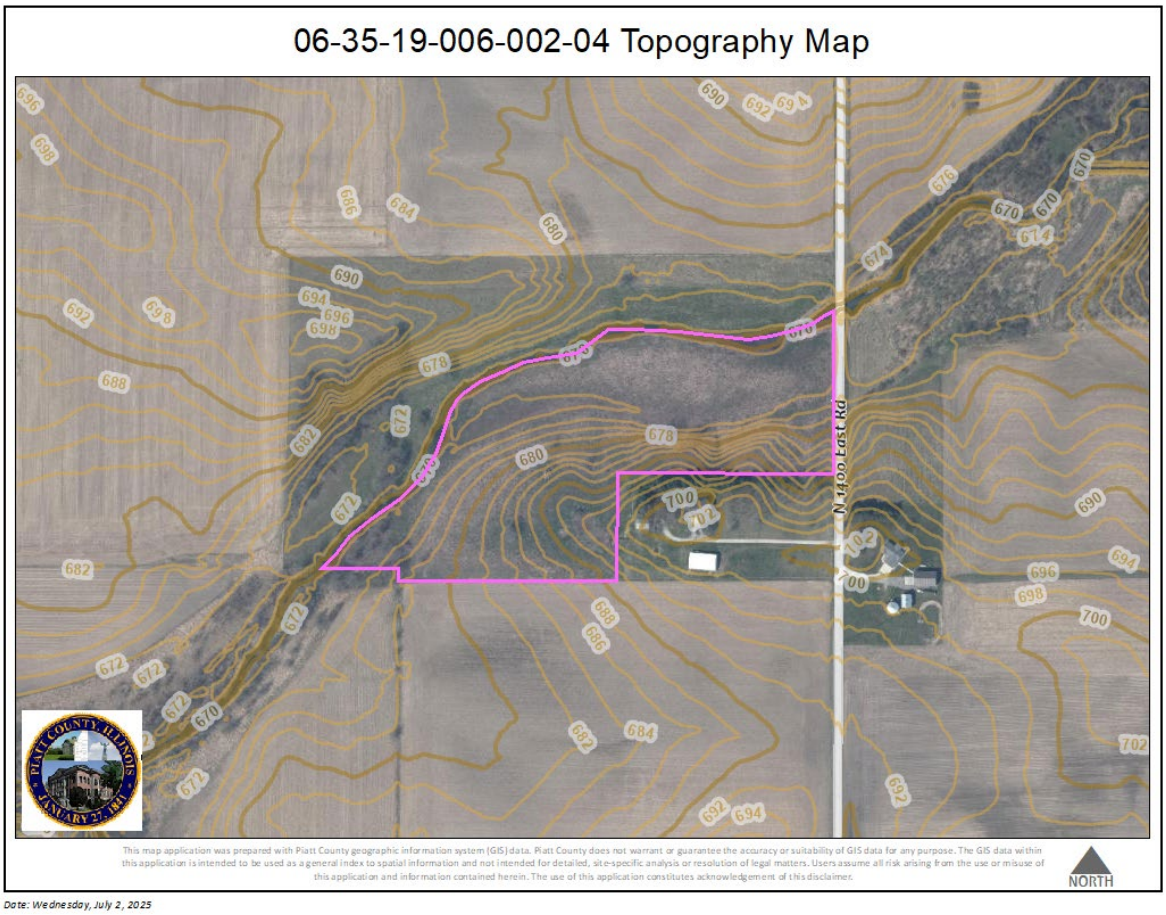
Topographic Maps

U.S.G.S Topographic maps give information on elevations, which are important mostly to determine slopes, drainage directions, and watershed information. Elevations determine the area of impact of floods of record. Slope information determines steepness and erosion potential. Drainage directions determine where water leaves the PIQ, possibly impacting surrounding natural resources. Watershed information is given for changing land use to a subdivision type of development on parcels greater than 10 acres.

What is a watershed?

Simply stated, a watershed is the area of land that contributes water to a certain point. The point that we use on these reports is usually the point where water exits the parcel. The point is marked with a "O." The watershed boundary is drawn in using the following marking: (— • • —). Often times, water will flow off the parcel in two or more directions. In that case, there is a watershed break on the parcel (— • • —), and there are two or more watersheds on the parcel. The watershed boundary is important because the area of land in the watershed can now be calculated using an irregular shape area calculator such as a dot counter or plan miter.

Using regional storm event information, site specific soils and land use information, the peak storm water flow through the point marked "O" for a specified storm event can be calculated. This value is called a "Q" value (for the given storm event) and is measured in cubic feet per second (CFS). When construction occurs, the Q value naturally increases because of the increase in impermeable surfaces. This process decreases the ability of soils to accept and temporarily hold water. Therefore, more water runs off and increases the Q value. Theoretically, if each development, no matter how large or small, maintains their pre-construction Q value after construction by the installation of storm water management systems, the streams, wetlands, and lakes will not suffer damage from excessive urban storm water.



Historical Aerial photos

2025

2019

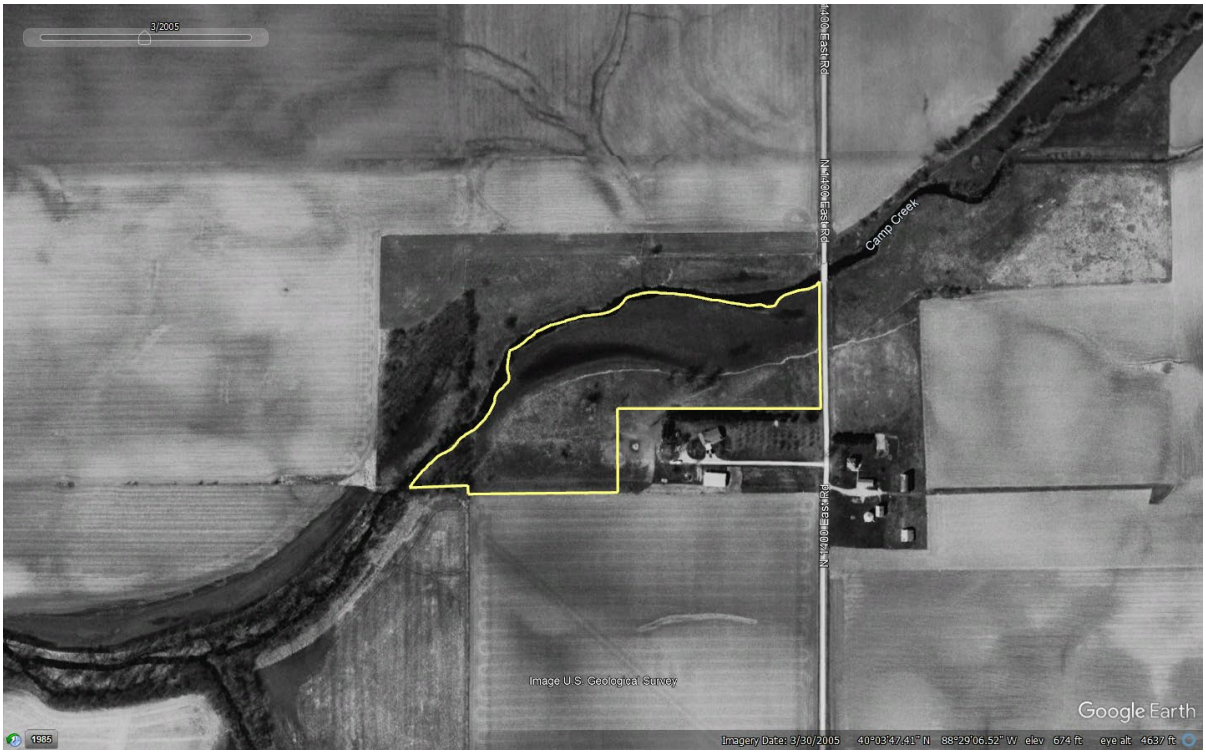
2016


10/2016
N 1400 E St Rd
Camp Creek
N 1500 E St Rd
1985
Google Earth
Imagery Date: 10/7/2016 40°03'47.41" N 88°29'06.52" W elev 674 ft eye alt 4637 ft

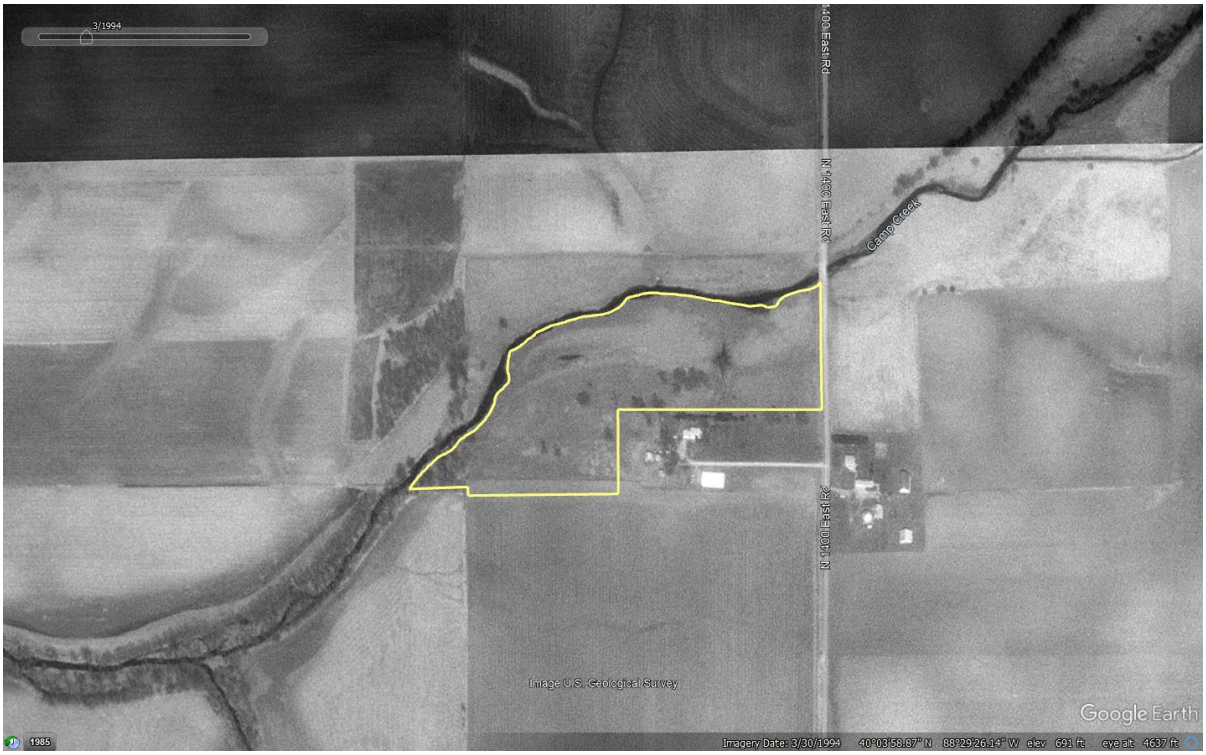
2010


8/2010
N 1400 E St Rd
Camp Creek
N 1500 E St Rd
Image USDA/FPAC/GEO
1985
Google Earth
Imagery Date: 6/23/2010 40°03'47.41" N 88°29'06.52" W elev 674 ft eye alt 4637 ft

2005


3/2005
400 East Rd
N 400 East Rd
Camp Creek
N 400 East Rd
Image U.S. Geological Survey
Google Earth
1985
Imagery Date: 3/30/2005 40°03'47.41" N 88°29'06.52" W elev 674 ft eye alt 4637 ft

1994


3/1994
400 East Rd
N 400 East Rd
Camp Creek
N 400 East Rd
Image U.S. Geological Survey
Google Earth
1985
Imagery Date: 3/30/1994 40°03'58.87" N 88°29'26.14" W elev 691 ft eye alt 4637 ft

Glossary

AGRICULTURE - The growing, harvesting and storing of crops including legumes, hay, grain, fruit and truck or vegetable including dairying, poultry, swine, sheep, beef cattle, pony and horse production, fur farms, and fish and wildlife farms; farm buildings used for growing, harvesting and preparing crop products for market, or for use on the farm; roadside stands, farm buildings for storing and protecting farm machinery and equipment from the elements, for housing livestock or poultry and for preparing livestock or poultry products for market; farm dwellings occupied by farm owners, operators, tenants or seasonal or year around hired farm workers.

ADT – The average daily traffic that a local road normally receives; based upon records by the County Superintendent of Highways.

B.G. - Below Grade. Under the surface of the Earth.

BEDROCK - Indicates depth at which bedrock occurs. Also lists hardness as rippable or hard.

COMPREHENSIVE LAND USE PLAN - A report from a governmental planning agency that describes how its area of jurisdiction should be developed, expressing both policies and a coordinated plan for private land use, a transportation system, public services, and public facilities. Piatt County's Comprehensive Plan (2010) can be found here: https://piatt.gov/plan.php

FLOODING - Indicates frequency, duration, and period during year when floods are likely to occur.

HIGH LEVEL MANAGEMENT - The application of effective practices adapted to different crops, soils, and climatic conditions. Such practices include providing for adequate soil drainage, protection from flooding, erosion and runoff control, near optimum tillage, and planting the correct kind and amount of high-quality seed. Weeds, diseases, and harmful insects are controlled. Favorable soil reaction and near optimum levels of available nitrogen, phosphorus, and potassium for individual crops are maintained. Efficient use is made of available crop residues, barnyard manure, and/or green manure crops. All operations, when combined efficiently and timely, can create favorable growing conditions and reduce harvesting losses -- within limits imposed by weather.

HIGH WATER TABLE - A seasonally high water table is a zone of saturation at the highest average depth during the wettest part of the year. May be apparent, perched, or artesian kinds of water tables.

Water Table, Apparent - A thick zone of free water in the soil. An apparent water table is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil.

Water Table, Artesian - A water table under hydrostatic head, generally beneath an impermeable layer. When this layer is penetrated, the water level rises in an uncased borehole.

Water Table, Perched - A water table standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone.

DELINEATION - For Wetlands: A series of orange flags placed on the ground by a certified professional that outlines the wetland boundary on a parcel.

DETERMINATION - A polygon drawn on a map using map information that gives an outline of a wetland.

HYDRIC SOIL - This type of soil is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part (USDA Natural Resources Conservation Service 1987)

INTENSIVE SOIL MAPPING - Mapping done on a smaller more intensive scale than a modern soil survey to determine soil properties of a specific site, e.g. Mapping for septic suitability.

LAND EVALUATION AND SITE ASSESSMENT (L.E.S.A.) - A systematic approach for evaluating a parcel of land and to determine a numerical value for the parcel for farmland preservation purposes.

MODERN SOIL SURVEY - A soil survey is a field investigation of the soils of a specific area, supported by information from other sources. The kinds of soil in the survey area are identified and their extent shown on a map, and an accompanying report describes, defines, classifies, and interprets the soils. Interpretations predict the behavior of the soils under different used and the soils' response to management. Predictions are made for areas of soil at specific places. Soils information collected in a soil survey is useful in developing land-use plans and alternatives involving soil management systems and in evaluating and predicting the effects of land use.

PALUSTRINE - Name given to inland freshwater wetlands.

PERMEABILITY - Values listed estimate the range (in rate and time) it takes for downward movement of water in the major soil layers when saturated but allowed to drain freely. The estimates are based on soil texture, soil structure, available data on permeability and infiltration tests, and observation of water movement through soils or other geologic materials.

PIQ - Parcel in question.

POTENTIAL FROST ACTION - Damage that may occur to structures and roads due to ice lens formation causing upward and lateral soil movement. Based primarily on soil texture and wetness.

PRIME FARMLAND - Prime farmland soils are lands that are best suited for food, feed, forage, fiber and oilseed crops. It may be cropland, pasture, woodland, or other land, but it is not urban and built up land or water areas. It either is used for food or fiber or is available for those uses. The soil qualities, growing season, and moisture supply are those needed for a well-managed soil economically to produce a sustained high yield of crops. Prime farmland produces in highest yields with minimum inputs of energy and economic resources and farming the land results in the least damage to the environment.

Prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are favorable. The level of acidity or alkalinity is acceptable. Prime farmland has few or no rocks and is permeable to water and air. It is not excessively erodible or saturated with water for long periods and is not frequently flooded during the growing season. The slope ranges mainly from 0 to 5 percent. (USDA Natural Resources Conservation Service)

PRODUCTIVITY INDEX - Using crop yield data under average management to assess farmland, Productivity Index values represent the productivity of Illinois soils by soil type. Bulletin 810 can be found here:
http://soilproductivity.nres.illinois.edu/Bulletin810ALL.pdf

Note: This LESA System uses Productivity Index values from the 2012 updated table in Bulletin 810 published in *Average Crop, Pasture, and Forestry Productivity Ratings for Illinois Soils* (Olson et al., 2000), which cannot be compared to values from Bulletin 811 in *Optimum Crop Productivity Ratings for Illinois Soils* (Olson & Lang, 2000).

SEASONAL - When used in reference to wetlands, "seasonal" indicates that the area is flooded only during a portion of the year.

SHRINK-SWELL POTENTIAL - Indicates volume changes to be expected for the specific soil material with changes in moisture content.

SOIL MAPPING UNIT - A map unit is a collection of soil and miscellaneous areas delineated in mapping. A map unit is generally an aggregate of the delineations of many different bodies of a kind of soil or miscellaneous area but may consist of only one delineated body. Taxonomic class names and accompanying phase terms are used to name soil map units. They are described in terms of ranges of soil properties within the limits defined for tax and in terms of ranges of tax adjuncts and inclusions.

SOIL SERIES - A group of soils, formed from a particular type of parent material, having horizons that, except for texture of the A or surface horizon, are similar in all profile characteristics and in arrangement in the soil profile. Among these characteristics are color, texture, structure, reaction, consistence, mineralogical and chemical composition.

SUBSIDENCE - Applies mainly to organic soils after drainage. Soil material subsides due to shrinkage and oxidation.

TERRAIN - The area or surface over which a particular rock or group of rocks is prevalent.

TOPSOIL - That portion of the soil profile where higher concentrations of organic material, fertility, bacterial activity and plant growth take place. Depths of topsoil vary between soil types.

WATERSHED - An area of land that drains to an associated water resource such as a wetland, river or lake. Depending on the size and topography, watersheds can contain numerous tributaries, such as streams and ditches, and pounding areas such as detention structures, natural ponds and wetlands.

WETLAND - An area that has a predominance of hydric soils is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances does support, a prevalence of hydrophilic vegetation typically adapted for life in saturated soil conditions.

References

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