
Land Use History: Survey and Land Ownership Records

Activity Overview

Students research the original land surveys, survey notes, and land ownership records of their school and restoration site.

Objectives

Students will:

- research primary sources
- trace changing attitudes of land use
- use atlases, databases, charts, graphs, and maps to generate information about the local community, United States, and the world
- interpret the past using a variety of resources

Subjects Covered

Language Arts and Social Studies

Grades

6 through 12

Activity Time

Depends on nature of search

Season

Any

Materials

Resources from public library, historical society, and title company; land history fact sheet

State Standards

Social Studies:

Use reference points to locate positions on earth's surface (A.4.1)

Map physical, natural, or human features (A.4.2)

Describe examples of land use, communities, shelters (A.4.4)

Use atlases, databases, charts, graphs, maps, etc. (A.4.5)

Identify environmental changes (A.4.6)

Identify environmental changes (A.4.6)

Identify human caused changes and effects (A.4.8)

Background

1. Land History: Survey Records

The United States Congress in 1785 needed revenue to pay large war debts from the American Revolution. Leaders of the young nation were also eager for to distribute land to Revolutionary war veterans. However, a simple method of surveying and marking the land was needed to avoid chaos for the settlers claiming land. Congress appointed a committee, which included Thomas Jefferson, to work on a method of surveying. The result is the Land Ordinance of 1785, which allowed the surveying of publicly owned lands. The Northwest Ordinance of 1787 provided for orderly rectangular surveys that mark the land off into six-mile square townships. The land became known as the Northwest Territory, which consists of the present states of Ohio, Indiana, Illinois, Michigan, Wisconsin, and a portion of Minnesota. Beginning in 1785 public domain land was surveyed in eastern Ohio. Surveyors went into the wilderness to survey and map all the land in the Northwest Territory. As the United States expanded, Florida and all territory west of the Mississippi River excluding Texas was surveyed using this new method for 30 states in total. The only land not surveyed in this way was land already in private ownership such as Spanish land grants in Texas or California, or villages and cities in the Louisiana territory. Instructions to surveyors required them to note the condition of the land for settlement and note trees and general land forms along survey lines. Information from the land surveys lends valuable insights into what was on the land at that time. This information may be used to understand the biological history of your site and help determine what kinds of plant communities may be restored. The early surveys and survey notes are available from local libraries, state historical societies, and the State Commissioner of Public Lands or Federal Bureau of Land Management.

The following resources are available to research land history:

General Land Office Survey Plats

A product of the original land surveys, these maps of individual townships include basic topography and some cultural features such as roads, trails, Native American sites, mines, dams, and cultivated areas.

General Land Office Surveyors' Notes

The General Land Office Surveyors were required to make notes about the soil, vegetation, and cultural features they observed as they carried out the surveys. These notes are in the form of small notebooks arranged by township. They are generally available on microfilm and are being digitized state by state. Check the Bureau of Land Management for the up to date list at www.glorerecords.blm.gov

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Use maps, photographs, satellite images for information (A.8.1)
Use an atlas (A.8.3)
Conduct land use history (A.8.4)
Describe short-term and long-term environmental changes (A.4.6)
Describe interactions with physical environment (A.8.8)
Use atlases & vocabulary to describe earth & human attributes (A.12.1)
Analyze effects of population changes on environment (A.12.4)
Analyze cultural factors that influence design of places (A.12.9)
Assess land use policies (A.12.12)
Analyze cultural and political conflict and cooperation (A.12.13)
Identify & examine sources of information about history (B.4.1)
Use timelines to describe history (B.4.2)
Employ arguments about historical events (B.8.2)
Use criteria to organize and analyze history (B.8.12)
Language Arts:
Create or produce writing (B.4.1, 8.1, 12.1)
Plan, revise, edit, & publish writing (B.4.2, 8.2, 12.2)
Plan, revise, edit, & publish writing (B.4.2, 8.2, 12.2)
Orally communicate (C.4.1, 8.1, 12.1)
Conduct then communicate research (F.4.1, 8.1, 12.1)

United States Geological Survey Topographical Maps

The Geological Survey mapped land from the late 1890s to the present. They are extremely detailed and accurate topographical maps that include contours, elevations, place names, vegetation, and civil boundaries. Topographic maps are available through on-line services such as Topozone or TerraServer.

State Vegetation Maps

Many states have maps created from information from original surveys or recreated from other documents. For instance, Wisconsin has an Early Vegetation of Wisconsin map created by John Curtis. Other states have maps available through the Geologic and Natural History offices or Natural Heritage Offices. Check NatureServ.org for information

2. Land Use History: Land Ownership Records

Plat maps or title abstracts provide political and cultural history of school sites. Maps and abstracts often include information about the location of Native American villages and camps, Indian trails, effigy mounds, European settlement and the subsequent changes in land use and development. Look at www.cyndislist.com for information on land records. Another on-line source is NationalAtlas.gov

The following resources are available to research land use history:

General Land Office Tract Books

These books record sale of land by the Federal Government to the first purchasers. The records include names of purchasers, amount of land purchased, legal description of property, price paid, and date of purchase. Known as land patents these documents are available from the Bureau of Land Management. Certified copies are available for a fee.

Land Economic Inventory

This was a joint project of land grant universities and departments of agriculture beginning in 1922 in Michigan. This became Federal practice in 1928. Inventories surveyed the current and potential use of land, particularly related to forestry. Among the results of this survey are sets of detailed maps.

Archeological Atlas

Some states have compilations of notes on Native American archeological and historical sites. While not always a complete inventory of Native American sites these shows features such as village and camps, mound groups, burial sites, gardens, quarries, and battlefields. Much additional archeological work continues and State Historical Societies or archeology offices are excellent sources of information.

Plat Maps and Atlases

These are usually restricted to one county and show names of rural land-

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owners and boundaries of individual properties. Plat maps and atlases of the nineteenth century often include illustrations of individual farmsteads and business premises, maps of cities and villages, and locations of schools and cemeteries, and even interviews with long-term settlers.. Twentieth-century versions are generally much simpler.

Sandborn Insurance Maps

Sandborn maps are extremely detailed and large-scale maps of cities and villages ranging in date from the 1800s to the 1970s. These maps show the exact size and placement of every building on each block and its use. Most cities were mapped several times at five- to 10-year intervals.

Activity Description

The first step in researching original surveys and maps for your school site is finding the legal description of the land. Check at your school district office to obtain a specific legal description of the school. A legal description is written this way: The east One-half (E1/2) of the Northwest One-quarter (NW1/4) of Section 26, Township Seven North (T7N), Range six East (R6E).

Another source to find your school's township, range, and section number is present day maps that include township, range and section numbers. Good map sources include *Atlas and Gazetteer* with topographic maps of the entire state or city maps such as *Rand McNally Street Guides*. County maps also provide township and section information for rural and suburban communities. County, township, and section numbers are the minimum information needed to begin research on your site.

Once you have the legal description of the school, you are ready to begin your research.

Original surveyor's notes and maps are on microfilm or digitized. The following steps walk you through the process of locating surveyor's notes and maps:

1. Identify the town and range of your county. For example T7N is the town and R9E is the range for Dane County, Wisconsin. Identify the section where your school is located on a township map.
2. To find the surveyor's written description, look for your section in the notes. Surveyors described the landscape along the north and east lines framing each section. For instance, if your school is in section 23 in the Town of Dunn, find the surveyor's description of the north line between 22 and 23, and between 23 and 24; then the east line between 14 and 23, and between 23 and 26.

Plat maps are available as original books and on microfilm. Oversized plat books must be photocopied from microfilm. The following steps walk you through the process of locating plat maps: Some are being made available digitally.

1. Go to a library card catalog or a genealogical web site such as Cyndi's List for a list of available plat maps.
2. Compile a sequence of four to five maps from the earliest available plat maps to present day.

Land survey records are now available on the World-Wide Web for many states. In Wisconsin they are available through the UW-Madison Digital Library. As an example the following steps guide you

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through locating land survey records for Wisconsin on the web:

1. Go to the Wisconsin Public Land Survey Records website: <http://digicoll.library.wisc.edu/SurveyNotes/>
2. Click on the SEARCH link located on the left side of the homepage.
3. Scroll down to your TOWNSHIP, for example T7N.
4. Scroll down to your RANGE, for example R21E.
5. Scroll down to your SECTION, for example 16.
6. Once TOWNSHIP, RANGE, and SECTION are selected, click on SEARCH.
7. MAPS of the Township are located at the top of the page. To print the map, click on the DISPLAY IMAGE FOR PRINTING and then click print.
8. Click on each SECTION LINE link for the section survey notes. These notes describe the existing landscape between the section lines.
9. To print the four sets of notes, click on DISPLAY IMAGE FOR PRINTING for each and then click print. You are also able to save each image for future referencing.
10. If your section is located on the exterior/edge of a township, you will notice SECTION LINES that are from a different township. These SECTION LINE descriptions are from the township that is located next to your township and will provide you with the boarder survey notes.

In the Classroom:

1. Read the land survey notes and examine the surveyor's map. Note the original vegetation, unique landforms and features, creeks and ponds, and existing trails or early roads, etc. Do any of these features remain today, or remain but in an altered form? How does the surveyor describe the agricultural value of the land? Pay attention to the types of trees used as witness trees. The species, its size and distance from other witness trees provide valuable clues to the types of communities growing originally in the area.
2. Next, examine the land use maps and follow changes over time in ownership, development, construction of roads, and changes in land use. Notice how the names of landowners are often preserved in the street names. Look for locations of possible one-room schoolhouses or other preexisting schools in your area.
3. Write in the requested facts on your Land History Field Sheet.

Extensions

- Research census records along with the maps to learn about the owners of the properties. Records will include such information as occupation, number of occupants, and their educational levels. State, county, or city historical societies may also have old maps or photos of the area. The following resources may be available locally at your public library, historical society or local title companies.
- Overlay the features in early survey maps onto aerial photographs to compare and contrast and seek explanations for patterns of development.

Assessments

- Orally present the land history of your school site. Describe the original vegetation and list 2 –3 changes in land ownership.
- Construct a map and locate witness trees and landforms based on the early survey notes.

Land History Fact Sheet

School: _____

Address: _____

Legal description of the school site:

Township name: _____

Township (numbered north): _____

Range (numbered east and west): _____

Section number (1 to 36): _____

Location within a section (e.g. NW ¼): _____

Original vegetation:

Write a brief description from the Surveyor's Notes of the land and the vegetation growing on the land:

List two witness trees from the Surveyor's Notes (include their size):

1. _____

2. _____

Land ownership:

List previous landowners and approximate dates of their ownership along with acreage (if possible):

List 3 interesting or unusual observations:

1. _____

2. _____

3. _____

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Sections Within a Township

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	24	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

1 Section = 160 Acres

(1 x 1 Mile)

$\frac{1}{2}$ Section = 320 Acres

$\frac{1}{4}$ Section = 160 Acres

One Section of a Township

Each section of land is divided into 160 acre quarter sections designated as the Northwest quarter (NW 1/4), South West quarter (SW 1/4), Northeast quarter (NE 1/4), and Southeast quarter (SE 1/4).

NW			NE		
SW			SE		

1 link = 7.92 inches

25 links = 1 rod

100 links = 1 chain

1 chain = 66 feet

80 chains = 1 mile

10 sq. chains = 1 acre

160 sq. rods = 1 acre

1 section = 640 acres

$\frac{1}{4}$ section = 160 acres

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<p>Section Corner List Witness Trees</p> <p>_____</p> <p>_____</p>	<p>Quarter Section Post</p> <p>_____</p>	<p>40</p>	<p>80</p>	<p>Section Corner List Witness Trees</p> <p>_____</p> <p>_____</p>
<p>Quarter Section Post</p> <p>_____</p> <p>_____</p>	<div style="border: 1px solid black; width: 100%; height: 100%; position: relative;"> <div style="position: absolute; top: 0; left: 0; width: 50%; height: 50%; text-align: center; vertical-align: middle;">NW 1/4</div> <div style="position: absolute; top: 0; right: 0; width: 50%; height: 50%; text-align: center; vertical-align: middle;">NE 1/4</div> <div style="position: absolute; bottom: 0; left: 0; width: 50%; height: 50%; text-align: center; vertical-align: middle;">SW 1/4</div> <div style="position: absolute; bottom: 0; right: 0; width: 50%; height: 50%; text-align: center; vertical-align: middle;">SE 1/4</div> </div>		<p>Quarter Section Post</p> <p>_____</p> <p>_____</p>	
<p>40</p>	<p>40</p>	<p>40</p>	<p>40</p>	
<p>Section Corner List Witness Trees</p> <p>_____</p> <p>_____</p>	<p>Quarter Section Post</p> <p>_____</p>	<p>Section Corner List Witness Trees</p> <p>_____</p> <p>_____</p>		

Information for T _____ R _____ Sec _____

Surface _____ Soil _____ Vegetation (Timber) _____

