

Allan Berry

UID: 659312736

20 May, 2016

LIS580 Summer I, 2016 - Berger - Paper 2

Contextual Assessment of Aerial Photographs at the University of Illinois at Chicago Library

Introduction and Description of the Collections at UIC

At the University of Illinois at Chicago Library, tens of thousands of aerial photographs lie in storage, acquired variously without adherence to any formal collection plan. Most of these photographs are as yet unprocessed. The Library is currently in discussion as to what should be done with them: how they should be preserved, and what amount of resources should be provided for their digitization and public accessibility. This discussion necessarily requires some notion of the rarity or scarcity of these materials for optimum resource allocation.

According to the Digital Services Librarian at the UIC Library, Tracy Seneca, few collections are currently accessible, including City of Chicago Department of Development and Planning photographs from 1968, 1973, and 1994, and Northeastern Illinois Planning Commission (NIPC) series from 1980, 1990, and 2001. These collections are in the minority. The Library has other unadvertised, unprocessed collections, consisting of approximately 75,000 images on reels from 1922-1999, including Kane, Lake, Cook, and

other counties, photographed by the firm Chicago Aerial Services. All years have accompaniment index maps for feature location. Digitization of these photographs has proceeded on a piecemeal basis, with approximately seven thousand files digitized, from the years 1949, 1964, 1970, 1975, 1990, 1995, and 1999. These digitized files represent something less than 10% of this entire collection.¹

The Library has another separate collection of approximately 17,000 physical negatives, from the 1920s to the 1970s, literally pulled from a dumpster by a concerned benefactor. These are oblique aerial photographs, sometimes without location data. Very few of these items have been digitized; some are being sequestered for mold.²

Finally, the Library has some digital aerial photographic collections: USGS surveys from 2002 and 2005, and National Agriculture Imagery Program (NAIP) images from 2004, 2005, and 2006.³

Most of the above photograph collections remain uncatalogued.⁴ Timing and budget concerns have conspired to keep such a large processing project on the back burner. Lately, because of increased concern regarding the preservation of these collections, and the timely completion of other major projects, the Library has begun to explore the possibility of processing these materials: to properly house them, catalog them, and provide access to them.

An initial hurdle the Library faces is knowing whether or not its materials are unique: would making these collections available duplicate existing efforts elsewhere,

¹ Seneca, 2016.

² *ibid.*

³ *ibid.*

⁴ *ibid.*

perhaps in another regional university library, or perhaps in the holdings of a federal agency. In other words, while the UIC Library believes its collection is useful and important, it does not currently possess sufficient data to back up this belief. A complete processing of the collection would require substantial resources—a waste if the Library were to discover, upon completion, that another institution already possesses a similar public collection.

To this end, a first step is to survey peer institutions, to ascertain what relevant collections exist, and how they are available. This activity will help to put the Library's collection in context, both geographically and temporally. Are aerial photographs common in general? How often were they created, and by whom? What sort of geographic coverage do they provide? In particular, what collections exist in the state of Illinois, especially relating to Chicago?

The scope and timeline of this paper does not permit the necessary step of contacting all relevant Illinois institutional collections for solid primary-source estimates of their collections, and the current status of their digitization or efforts for access. While I do include a reasonable estimation of the scale of these nearby collections below, gleaned from secondary sources, I leave the bulk of such a contextual assessment to a later stage in this project.

History and Classification of Aerial Photography

To understand the relative scarcity of the UIC aerial photography collection, it helps to understand the frequency and comprehensiveness of aerial photography projects generally, and of Illinois in particular.

For some background, Mary Rose Collins writes that “aerial photographs have been taken since the earliest balloons and airplanes hooked up camera boxes to shoot the landscape.”⁵

Vertical aerial photos are extremely reliable for gleaning information... oblique views tend to be for illustration or for artistic uses, although they were used for aeronautical chart mapping during World War II and topographic mapping in the 1950s and 1960s... Taken from much closer to the ground than satellite photos, pictures from airplanes are easier to process and understand and can be extremely useful to a non-imagery expert.”⁶

Collins continues that despite the prevalence of aerial views over the 20th century, they have become increasingly useful in recent years for agricultural, environmental, and urban-planning uses.⁷

Collins supplies a few useful classifications for aerial photographs. They can be either “vertical” or “oblique,” meaning photographs taken straight down at the earth, or taken instead at an angle. They can be either black and white, or in color, or in color with an infrared channel (CIR), usually meant for agricultural uses. In terms of format, the most common size for these photographs is 9 x 9 inches, although other sizes are also common.

⁵ Collins, vii.

⁶ *ibid.*, viii-1.

⁷ *ibid.*, 1-2.

Aerial photographs also come in many scales;⁸ according to the ASCS Status Maps, common scales for Illinois tend to be 1:20,000 and 1:40:000.⁹

History of Illinois Aerial Film Photography

As Donald Luman writes, except during World War II, the U.S. Department of Agriculture (USDA) and other federal agencies performed (Illinois) statewide aerial photography "at least once each decade," from 1936 to the present.¹⁰

First-time statewide coverage of vertical aerial photography was achieved in Illinois between 1936 and 1939. Collected on a county-by-county basis, acquisition of the photography was in response to President Franklin Roosevelt signing into law the Agriculture Adjustment Act on May 12, 1933. The law was originally administered by the United States Department of Agriculture, Agricultural Adjustment Administration, which is now known as the USDA Farm Service Agency... The revisit interval ranges from one year to ten years for any particular county. The overall county average is approximately 4 1/2 years between successive acquisitions.¹¹

In consultation with Agricultural Stabilization and Conservation Service Aerial Photography Status Maps, published annually throughout the 1970s by the USDA, a researcher can discern which counties were contracted for photography at any one time. For example, in 1972, aerial surveys of most of the Chicagoland "collar" counties, meaning McHenry, Lake, Kane, Du Page, Kendall, Will and some of Cook, were currently in process. Each of these counties were previously photographed in 1967. The city of Chicago itself was apparently outside of this ASCS project's jurisdiction, as it is marked "NP," meaning

⁸ *ibid.*, 7-10.

⁹ ASCS 1972, 20.

¹⁰ Luman, 2005, 1.

¹¹ *ibid.*, 1.

"No ASCS Coverage"; from these maps it is not clear why Chicago is absent.¹² By 1981, all of these counties had been photographed, in 1974, again excepting Chicago; no other areas of the state are uncovered.¹³ Presumably some urban areas were photographed by other agencies. New York City is also marked "NP," for a comparison example, although Los Angeles and Detroit are fully covered in their respective states' indices.

In an email to the author, Jenny Marie Johnson of the University of Illinois at Urbana-Champaign Map Library details this idiosyncrasy further:

Prior to 1988, flights for Illinois were done on a county-by-county basis. From 1988 on, the flights [were] quarterquad centered and [covered] the entire state... Besides the federal government, there were some flights done in the Chicago Metro Area by the Northeastern Illinois Planning Commission.

If you look at our indexes, you'll see that Cook County is a bit of a problem -- most of the center of the county wasn't flown at all by the USDA projects! Just a big blank city-shaped space. If you have photos of center city-ish areas, they probably are not standard USDA products!¹⁴

Indeed, Luman explains that in 1980 the U.S. Geological Survey coordinated the National High Altitude Photography program (NHAP) to avoid duplication of effort among various federal agencies. The first NHAP photography project of the state of Illinois began in 1981, and was completed in 1986. In 1987, the program's name was changed to the National Aerial Photography Program (NAPP); NAPP Illinois photography sets were completed in 1988, 1995, and 1999. In 1999, USGS started to use digital photography, completing its first digital survey of Illinois in 2001.¹⁵

¹² ASCS 1972, 20.

¹³ ASCS 1981, 23

¹⁴ Johnson, 2016.

¹⁵ Luman, 2005, 1-4.

Locating Aerial Photographs of Illinois

According to Collins, the procurement of aerial photographs from commercial sources tends to be more “efficient and faster than an archive or government source,” apparently for piecemeal procurement, not for access to full collections. Collins also recommends looking for stock photographs from both government and commercial sources.¹⁶

Although photographs from the U.S. Government are not usually free of charge, it is still “the primary source of aerial photography,”¹⁷ according to Collins. Four federal agencies have holdings of aerial photographs relevant to Illinois: the U.S. Geological Survey, the USDA, the National Archives, and the Library of Congress. USGS Earth Science Information Centers (ESICs) take orders for such imagery, providing databases of aerial photographic coverage of the United States from federal sources. USGS also runs the Earth Resources Observation Systems (EROS) Data Center in South Dakota, which coordinates the “acquisition, processing, and dissemination of imagery” from approximately 1940 to the present. The National Archives “holds nine million aerial photographs produced by civilian and military branches of the U.S. Government,”¹⁸ primarily from 1935-1945, including photographs from the USDA and USGS.¹⁹ Collins also mentions that the Library of Congress itself has historical aerial photographs dating from before the 1940s, and some “seven million” aerial photographs from NASA and USGS.²⁰

¹⁶ Collins, 3.

¹⁷ *ibid.*, 21.

¹⁸ *ibid.*, 22-38.

¹⁹ United States National Archives website.

²⁰ Collins, 22-38.

The largest available cache of historical aerial images is from the USDA, via its Aerial Photography Field Office. According to the USDA website, the agency has more than ten million images available, on request, from 1955 to the present, covering most of the United States.²¹ Most of these images are not readily accessible online, however.

For Illinois-specific sources, Collins recommends contacting the major universities across Illinois, as well as the Illinois State Geological Society. She lists their total holdings of aerial photographs, as of 1998; the largest collections are with the University of Illinois at Urbana-Champaign (with 147,840 images), Southern Illinois University at Carbondale (with 80,000 images), and Illinois State University (with 69,000 images). The University of Chicago has some 11,000 images total between its Joseph Regenstein Collection and Map section. The ISGS has approximately 7,500 images. Other universities around the state also have holdings of up to thirteen thousand images each.²²

Of course, Collins' figures, and her recommendations, are nearly twenty years old today. More comprehensive tools exist online for access to aerial photographs, tools which were unavailable in 1998. An excellent online example is "1937-1947 Illinois Historical Aerial Photography,"²³ with approximately 33,500 images available online for the entire state of Illinois; according to Donald Luman of the Illinois State Geological Survey, this project took ten years and over a million dollars for the ISGS and its sponsors to create.²⁴ USGS itself has created the "EarthExplorer," which includes free access to aerial images among other geographic data; for example, a quick search can provide a wealth of images of

²¹ USDA website.

²² Collins, 46-47.

²³ Illinois State Geological Survey website.

²⁴ Luman, 2016.

Chicago from 1975 to 2002, with basic metadata sidecars, although apparently only readily available as small-format JPG.²⁵

While a definitive comprehensive survey of aerial photographs in Illinois may not be possible within the confines of this paper, the author was able to visit and generally evaluate the largest aerial photography collection in Illinois (according to Collins), within the Map Library at the University of Illinois at Urbana Champaign, and to interview the librarians involved with its aerial photography collection. The Map Library website describes the collection:

The earliest aerial photography in the collection is from the late 1930s and the most recent is from 2005... all aerial photographs are in black and white except for 2005 photos of the Chicago Metropolitan Area. Most of the photos measure 9x9 or 9x6 inches. The Library does not hold the negatives. Photographs taken before 1988 were done on a county-by-county basis; photos taken in 1988 and after were taken as part of a state-wide flight. Indexes are available for all sets to identify specifically needed photographs... Indices are not available online at this time.²⁶

Johnson adds some background to this description: much of the University's collection comes from gifts, with completeness depending on whoever was gifting the collection. In some cases, the Map Library received full sets, but in others only received odd- or even-numbered photographs, or a random selection of photographs. Nevertheless, except for a set from 2005, all of the photographs have been catalogued and can be searched via a combination of call number, keyword, and full-text within the standard UIUC Library online catalog.²⁷

²⁵ USGS EarthExplorer website.

²⁶University of Illinois at Urbana-Champaign, Map Library.

²⁷ Johnson, 2016.

Conclusion

For a comprehensive picture of aerial photographs of Chicago and Illinois, further work will need to be performed, especially in the contacting of various institutional archives around the state to discern a better idea of their collections. Pricing and availability of federal collections, in particular the USDA, should also be evaluated. At this juncture, however, no near equivalents to the UIC Library aerial photography collections apparently exist, at least with any substantial online public access. Overlap exists with federal sources, in particular with the USGS “EarthExplorer”, and with the efforts of the Illinois State Geological Survey; these efforts do not appear to match, either in format or temporal coverage, the presumed UIC collections. In addition to the self-evident preservation concerns, which should be addressed in any case, increased public access to the UIC aerial photography collections may well be warranted.

Works Cited

Agricultural Stabilization And Conservation Service. *ASCS Aerial Photography Status Maps*.

Salt Lake City: U.S. Dept. Of Agriculture, 1972. Print.

—. *ASCS Aerial Photography Status Maps*. Salt Lake City: U.S. Dept. Of Agriculture, 1980.

Print.

Collins, Mary Rose. *The Aerial Photo Sourcebook*. Lanham, Md: Scarecrow Press, 1998. Print.

Illinois State Geological Survey. "1937-1947 Illinois Historical Aerial Photography."

N.p., n.d. Web. 20 May 2016.

Johnson, Jenny Marie. Re: Aerial Photographs. 19 May 2016. E-mail.

Luman, Donald E., and Dick Vraga. "2005 Statewide Digital Orthophotography for Illinois."

Illinois GIS Notes Winter 2005 (2005): 1-5. Print.

Luman, Donald E. Re: Aerial Photographs. 19 May 2016. E-mail.

University of Illinois at Urbana-Champaign, Map Library.

"Aerial Photography in the Map Library." N.p., n.d. Web. 20 May 2016.

Seneca, Tracy (Digital Services Librarian at the University of Illinois at Chicago).

Internal communication in the UIC Library, April 2016.

United States Department of Agriculture, Farm Service Agency. "Aerial Photography."

N.p., n.d. Web. 20 May 2016.

United States Geological Survey. "EarthExplorer." N.p., n.d. Web. 20 May 2016.

United States National Archives. "Ordering Reproductions of Maps, Plans, and Aerial

Photographs." N.p., n.d. Web. 20 May 2016.