August 29, 2013

The Dow Chemical Company
P.O. Box 8361
South Charleston, WV 25303-8361
USA

Ms. Gail A. Dieter
New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau E, Section B
625 Broadway, 12th Floor
Albany, NY 12233-7017

Subject: RCRA Facility Investigation
SWMU 1 Timeline
Former Hampshire Chemical Corp. Facility
Waterloo, New York

Dear Ms. Dieter:

Hampshire Chemical Corp. (HCC) is pleased to submit one hard copy and one electronic copy of the *SWMU 1 Timeline* for the Former HCC Facility in Waterloo, New York. The technical memorandum documents and summarizes the operational history of Solid Waste Management Unit (SWMU) 1, which is identified as the former Village of Waterloo Dump.

Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) and remedial activities are being conducted pursuant to a Second Amended Order on Consent executed between HCC and the New York State Department of Environmental Conservation (NYSDEC) under Index Number 8-20000218-3281, August 12, 2011.

If you have any questions on this report, please contact me at 304-747-7788, or Brian Carling at 610-384-0747.

Sincerely,

Jerome E. Cibrik, P.G.
Remediation Leader

Attachments

cc: Mr. Pete Miller, NYSDEC Region 8 (CD)
Mr. Pete Hoffmire, NYSDEC Region 8 (CD)
Mr. Steve Brusso, Evans Chemetics (Hard copy)
CH2M HILL Project File (Hard copy and CD)

SWMU 1 Timeline, Former Hampshire Chemical Corp. Facility, Waterloo, New York

PREPARED FOR New York State Department of Environmental Conservation

PREPARED BY: CH2M HILL

DATE: August 29, 2013

Introduction

This technical memorandum documents the operational history of Solid Waste Management Unit (SWMU) 1 (unit) and its surrounding area at the former Hampshire Chemical Corp. (HCC) facility in Waterloo, New York (site). The area designated as SWMU 1 is comprised of land owned by Evans Chemetics, the New York State Canal Corporation (NYSCC), and a former residential property located in the southwestern section of the unit that currently is owned by HCC (Figure 1). The unit is regulated under Title 6 of the New York Code of Rules and Regulations (NYCRR) Part 373 and the Resource Conservation and Recovery Act (RCRA), with the New York State Department of Environmental Conservation (NYSDEC) as the lead agency. Multiple RCRA facility investigations (RFIs) have been performed at the unit since 1993, including investigations at SWMU 1 since December 2001.

Based on an RCRA facility assessment (RFA) report (A.T. Kearney 1993), SWMU 1 is identified as the former Village of Waterloo Dump and included areas west and south of the former "West 40" storage area of Evans Chemetics (Attachment 1). Although the precise size of the unit is unknown, the former Village of Waterloo Dump area was bound by the Cayuga-Seneca Canal Raceway to the north, the Cayuga-Seneca Canal to the south, the Evans Chemetics facility to the east, and East Water Street to the west. According to the RFA, the unit (SWMU 1) managed municipal waste from the Village of Waterloo (A.T. Kearney 1993). Historical filling and dumping activities within the former raceways also were noted in a *Planning and Needs Assessment Study for the Village of Waterloo* (Thoma Development Consultants 1998). Before the 1950s, the original 1818 Cayuga-Seneca Canal channel that was located between Main Street and the current canal channel and passed through the West Mill area was filled in, apparently by becoming a Village of Waterloo Dump. There is no information discussing the design of the dump unit.

Based on numerous historical resources, this timeline has been developed to document the operation, post-operation, and investigation activities at SWMU 1. Table 1 presents the operational history of SWMU 1 and shows activities completed between approximately 1918 and 1950. Table 2 summarizes post-operational activities before the start of the investigation phase. Table 3 shows the various phases of investigation that started in December 2001 and continued until November 2012. Table 4 lists a general regulatory timeline relevant for SWMU 1, based on New York State regulatory guidelines and standards for landfills and refuse disposal.

Historical Operations at SWMU 1

Based on aerial photographs from 1938, 1954, 1963, and 1978 (Attachment 2) and Sanborn maps from 1886, 1893, 1904, 1911, 1918, 1948, and 1962 (Attachment 3), the following inferences were made regarding the area currently identified as SWMU 1:

- Former operational areas that historically have existed within the boundary of SWMU 1 included the woolen dye production called the West Mill, a raceway that was filled in, and the Village of Waterloo Dump.
- Based on Sanborn fire insurance maps from 1886 to 1911, it appears a portion of the area currently identified as SWMU 1 was an operational area for the West Mill. In addition, the Sanborn maps dating from 1886 to 1911 show the canal/raceway and lock system crossing east-west through the center of SWMU 1, separating the West Mill operational area from the area later identified as the Village of Waterloo Dump.
- Based on the Sanborn map from 1918, the Village of Waterloo Dump was identified within the western area of SWMU 1 (just east of East Race Street [currently referred to as East Water Street]) and near the section of the east-west crossing canal/raceway that crossed through SWMU 1. According to the Sanborn map, the east-west canal/raceway had been filled in from East Race Street through the West Mill area lock system. It is not known what was used to fill the canal/raceway. The RFA report (A.T. Kearney 1993) did not report a startup date for the Village of Waterloo Dump, but it is likely that municipal waste was included in fill materials.
- Based on the Sanborn map from 1918, some of the buildings on the western end of the West Mill area were demolished. Though there are no records, the demolition debris may have been placed in the former canal/raceway sometime between 1911 and 1918 when some of the buildings were demolished. It is not known if other wastes from the facility were placed in the former canal/raceway during this period.
- Based on the 1938 aerial photograph, the east-west raceway that crossed through SWMU 1 appears to be filled up through a wooded area near the West Mill area lock system as noted by a light colored soil/fill material.
- According to the RFA report (A.T. Kearney 1993), the Village of Waterloo Dump reportedly stopped accepting wastes between 1948 and 1950. The Brewer Road Landfill, an offsite landfill just outside of Waterloo, began operating in 1951 and received waste from the facility. Therefore, it is likely the SWMU 1 area stopped receiving waste from the facility, if any, around 1951.
- According to the RFA report (A.T. Kearney 1993), Evans Chemetics purchased the land with the Village of Waterloo Dump (up to East Water Street) in 1952 in order to gain water rights and access from the Cayuga-Seneca Canal.
- In 19853, Seneca Meadows Landfill (SML) opened on the northern side of Waterloo. Municipal waste from the village of Waterloo likely was disposed at the new SML starting around 1953.
- Based on the 1954 aerial photograph, filling and dumping activities within the east-west canal/raceway that crossed through SWMU 1 appears to have stopped, and the dump

appears closed, based upon the extent of grass and tree vegetation over the footprint of the former canal/raceway.

- The 1962 Sanborn map and the 1963 aerial photograph for the facility show that the West Mill area buildings are no longer present. A small area of open water just east of the old lock system of the former raceway and east of the former West Mill area is still present. The SWMU 1 area appears to be vegetated by grass or trees.
- Based on test pitting field activities at SWMU 1 conducted between 2001 and 2009, fill material indicative of both municipal waste (bottleware, glassware, wood, and metal) and industrial waste (amber and clear commercial bottleware) was identified and appeared to be mixed together. Construction and demolition debris waste also was encountered during the test pitting; however, no pattern indicative of segregated waste placement was observed.

Based on the above chronological listing, dumping activities in the vicinity of SWMU 1 began between 1911 and 1918. In addition, Sanborn maps indicate the area along the western side of SWMU 1 was identified as the Village of Waterloo Dump as early as 1918. The dump reportedly stopped accepting wastes between 1948 and 1950 (A.T. Kearney 1993). The Brewer Road Landfill, an offsite landfill located just outside of Waterloo, began operating in 1951 and received waste from the facility. SML likely began receiving municipal waste from the village of Waterloo in 1953. Therefore, it is likely that no waste from the facility was disposed of in the former Village of Waterloo Dump after approximately 1951 (A.T. Kearney 1993), and that no waste from the village of Waterloo was disposed in the dump after approximately 1953. Based on the extent of grass and tree vegetation covering SWMU 1 observed on the aerial photographs, it appears the Village of Waterloo Dump was closed by 1954.

In a 1992 correspondence between W.R. Grace & Co. and the United States Environmental Protection Agency (USEPA), a map was included that identifies the former Village of Waterloo Dump within the general vicinity of the area currently known as SWMU 1 (Attachment 1) (W.R. Grace 1992). In addition, the map extends the limits of the former Village of Waterloo Dump adjacent to the Cayuga-Seneca Canal on what currently is the NYSCC right-of-way.

1999 Wastewater Treatment Plant Construction

In 1999, a soil investigation was conducted at SWMU 7 and SWMU 8, along with limited soil removal near SWMU 7. Both SWMU 7 and SWMU 8 are near the eastern end of SWMU 1. While SWMU 8 is completely within the current footprint of SWMU 1, SWMU 7 is outside but adjacent to SWMU 1 (Figure 1). SWMU 7 was a hazardous container storage facility, and SWMU 8 was a former nonhazardous waste storage facility. Both SWMU 7 and SWMU 8 were located near the construction of a new wastewater treatment plant (WWTP) (Figure 1).

Radian International (Radian) completed the investigation work, which is documented in the *SWMU 7 & 8 Investigation Summary Report* (Radian 1999). Soil samples were collected in June and July 1999 from the area immediately underlying SWMU 7 and the portion of SWMU 8 where concrete was removed. The soil samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls

(PCBs), and metals. The soil samples collected in July 1999 also were analyzed for pesticides and total cyanide.

In SWMU 7 soil, chloroform was the only organic compound that exceeded the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) cleanup level, and the exceedance was noted in only one sample. Other VOCs, metals, SVOCs, and PCBs were detected in soil collected at SWMU 7, but none above their respective TAGM cleanup levels.

Based on these sample results from SWMU 7, in August 1999, soil at the location where chloroform exceeded TAGM guidance criteria was excavated vertically to a depth of 3 feet and laterally to an area approximately 20 feet by 20 feet. Upon completion of the soil excavation, six additional samples were collected from the floor and sidewalls of the excavation to confirm the remaining soil met NYSDEC TAGM guidance criteria. These samples were analyzed for chloroform only. None of the confirmatory samples reported chloroform above NYSDEC TAGM guidance criteria.

Soil removed from the excavation was placed into rolloff containers, sampled, and analyzed for toxicity characteristic leaching procedure (TCLP) VOCs, SVOCs, metals, chlorinated herbicides, ignitability, reactivity, pH, and PCBs. The material was characterized as nonhazardous based upon the waste characterization analyses and was transported to the Modern Landfill Facility in Model City, New York, for disposal as nonhazardous waste. In 1999, soil generated during construction of the WWTP from areas where no exceedances were reported (outside of the SWMU 7 excavation area) was placed on SWMU 1. This information was obtained from communications with Evans Chemetics and was indicated in a letter from NYSDEC dated November 8, 2006.

RFI Investigations of Soils

A significant amount of investigation work has been conducted at SWMU 1 to determine the extent of waste and any associated environmental impacts. Based on surface soil samples collected from SWMU 1 during the RFI conducted in 2002 (CH2M HILL 2006) and RFI addendum in 2007 (CH2M HILL 2008), benzo(a)pyrene and dibenzo(a,h)anthracene were the only constituents detected above NYSDEC restricted use soil cleanup objectives (RUSCO) for industrial screening criteria and only exceeded the criteria in two (SS-04 and LFB-04) of the 15 surface soil sampling locations at SWMU 1 (Figure 2). As both SS-04 and LFB-04 were located near the asphalt roadway that crosses over SWMU 1, the presence of polycyclic aromatic hydrocarbons (PAHs) in surface soil at these two locations could be from runoff from the asphalt roadway. In 2007, human health and ecological risk assessments were performed as part of the RFI addendum and concluded there are no potential ecological and/or human health direct contact risks based on the SWMU 1 soil sample results (CH2M HILL 2008).

Summary of Operations and Regulatory Status

NYSDEC has communicated that SWMU 1 is to be managed under New York's waste management regulations. This section presents a brief overview of the applicable regulations.

New York first established waste management regulations through the New York State Department of Health (NYSDOH) Part 19, Refuse Disposal in 1963 (NYSDOH 1963), and were later included under the NYSDEC, 6 NYCRR Part 360, Refuse Disposal in 1973 (NYSDEC 1973). Both NYSDOH Part 19 (1963) and 6 NYCRR Part 360 (1973) required that the refuse areas be operated and maintained such that debris and leachate from the debris do not impact water quality conditions and standards as established by the State.

The 6 NYCRR Part 360 regulations have been updated since 1973, with the current version of the 6 NYCRR Part 360 Solid Waste Management Facility regulations (Subpart 360-2 Landfills) being established in December 1988 and most recently revised in November 1999. In accordance with 6 NYCRR Section 360-1.7, all landfills that ceased to accept waste before October 9, 1993 (with or without approved closure plans) must meet the NYCRR closure and post-closure requirements in effect when the facility ceased normal operation.

As discussed with NYSDEC in November 2012 and as indicated above, soil generated during the excavation of SWMU 7 in 1999 was not placed on SWMU 1. As indicated in the *SWMU 7 & 8 Investigation Summary Report* (Radian 1999), soil from the SWMU 7 excavation was disposed at an offsite facility. However, an unknown volume of soil generated during the construction activities of the new WWTP tanks, including soil near the former SWMU 7 pad that was outside the SWMU 7 investigation excavation area and did not exceed applicable criteria, was placed and spread on SWMU 1. During surface soil sampling activities at SWMU 1, only two PAHs were reported above their respective RUSCO criteria. In addition, as stated in RFI addendum (CH2M HILL 2008), the presence of the two PAHs at only two of the fifteen surface soil locations at SWMU 1 does not pose a human health or ecological risk and is not related to SWMU 7 operations. Additionally, no operations occurred within the footprint of the WWTP tank excavation area. Therefore, the placement of soil from the WWTP construction activities within the boundary of SWMU 1 in 1999 is not considered waste disposal.

Closing

The Village of Waterloo Dump (SWMU 1) stopped accepting waste between 1948 and 1950, which was before Evans Chemetics acquired land in 1952 that included the former dump. The dump was closed and covered in the early 1950s using the standard practices implemented at that time. The first 6 NYCRR Part 360 landfill closure regulations from NYSDEC were published 1973, more than 20 years after the unit (SWMU 1) was closed and covered, and the current 6 NYCRR Part 360 landfill closure requirements were updated in 1993, or approximately 40 years after the unit (SWMU 1) was closed and covered. The 1973 or 1993 Part 360 regulations should not be retroactively applied to SWMU 1. However, to meet the intent of the cover provisions in Part 360, HCC plans to propose an enhancement to the existing cover as part of the pending Corrective Measures Study for SWMU 1.

References

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CH2M HILL. 2006. *RCRA Facility Investigation Report.*

CH2M HILL. 2008. *RCRA Facility Investigation Addendum Report.*

CH2M HILL. 2012a. *2011 SWMU 1 Investigation Report.*

CH2M HILL. 2012b. *Groundwater Monitoring Results Report, April 2011 and October 2011 Monitoring Events.*

CH2M HILL. 2012c. *SWMU 1 Additional Fill Survey Technical Memorandum at SWMU 1.*

CH2M HILL. 2012d. *SWMU 1 Methane Survey Technical Memorandum.*

New York State Department of Environmental Conservation (NYSDEC). 1973. *6 NYRCC Part 360. Refuse Disposal.*

New York State Department of Environmental Conservation (NYSDEC). 2003. *Record of Decision. Utica City Dump, Utica, Oneida County, New York. Site No. 6-33-015.* August.

New York State Department of Environmental Conservation (NYSDEC). 2006. Letter Correspondence with comments to the RCRA Facility Investigation (RFI) Report. November 8.

New York State Department of Health (NYSDOH). 1963. *State Sanitation Code. Part 19. Refuse Disposal.*

O'Brien & Gere Engineers, Inc. (OBG). 2001. *RFA Sampling Visit Work Plan.*

O'Brien & Gere Engineers, Inc. (OBG). 2003. *RFA Sampling Visit Report.*

Radian International (Radian). 1999. *SWMU 7 and 8 Summary Report, Evans Chemetics Facility.*

Thoma Development Consultants. 1998. *Planning/Needs Assessment Study. Downtown and Canal Area. Village of Waterloo.*

W.R. Grace & Co. 1992. Correspondence to USEPA Region 2 on comments to the *Draft RCRA Facility Assessment Report for the Evans Chemetics Facility.*

Tables

TABLE 1
Period of Operation of SWMU 1

Time Period	Description	Source
Operation		
Pre-1918 to 1951	An area within the western portion of SWMU 1 is identified as the Village of Waterloo Dump. The Village of Waterloo placed debris, fill soil, and refuse in this area for more than 33 years.	October 1918 Sanborn fire insurance map; *RCRA Facility Assessment Report* (A.T. Kearney 1993); O'Brien & Gere Engineers, Inc. (OBG) 2003
Until 1948	A portion of SWMU 1 was occupied by part of the Seneca-Cayuga Canal, a lock, and several raceways.	Sanborn maps, OBG 2003
Between 1948 and 1950	Unit (dump) reportedly stopped accepting waste.	A.T. Kearney 1993

TABLE 2
Post-Operational Activities at SWMU 1

Time Period	Description	Source
Post-Operational		
Between 1938 and 1957	The old West Mill was demolished and the east-west canal/raceway that crossed through SWMU 1 was filled in. The former Village of Waterloo Dump was located immediately north of where the canal/raceway had been filled.	Aerial photographs 1938, 1957
1952	Evans Chemetics purchased the land containing the dump in 1952 to acquire water rights from the Cayuga-Seneca Canal.	A.T. Kearney 1993
Pre-1964	Based on 1964 Sanborn map, canal and raceways were filled to the western edge of the old lock, and the area is identified as the Village of Waterloo Dump.	1964 Sanborn map, OBG 2003
1974	Private residence is constructed southwest of SWMU 1 and adjacent to the Cayuga-Seneca Canal.	Seneca County Tax Office
1999	Some excavated soil materials generated during the construction of the new wastewater treatment plant tank area were placed on the dump.	NYSDEC 2006; Radian (1999) indicated the excavated soil from SWMU 7 were characterized as nonhazardous and properly disposed at the Modern Landfill Facility in Modern City, New York

TABLE 3
Investigative Activities at SWMU 1

Time Period	Description	Source
Investigation		
Between December 2001 and March 2002	Evaluated the boundaries of the former Village of Waterloo Dump with test pit excavations and an investigation was conducted to determine whether there were releases from the landfill. Nine test pits were completed in the SWMU 1 area. Test pits were completed to locate the former raceways and describe the fill material encountered. Intact glass bottles were found at one test pit, which contained a thick white-colored liquid.	OBG 2003
December 2001 and January 2002	Monitoring wells MW-14, MW-15, MW-16S/I, MW-17, and MW-18 were installed and groundwater samples were collected from the wells.	OBG 2003
September 2002	Ten soil samples, LFB-01 through LFB-10, were collected from the SWMU 1 area cover. Only benzo(a)pyrene was detected above its industrial screening criteria in one sample.	OBG 2003
April and May 2004	Three test pits were excavated at SWMU 1. Approximately 7 cubic yards of fill material containing glass bottles and associated soil were removed from the excavations. An intact glass bottle, containing acetone, was retrieved from an open excavation. A groundwater sample collected from the test pit showed elevated concentrations of acetone and total and dissolved metals.	CH2M HILL 2004
2006 RFI field work	Nine test pits were excavated in the western portion of SWMU 1, which confirmed the boundaries of the former raceways and provided information about the extent and characteristics of the fill material. Several intact glass bottles containing a thick, white-colored liquid were encountered. Analytical results indicated the bottles contained elevated levels of acetone and certain metals. These compounds also were detected in groundwater samples from the area at levels above TOGS standards.	CH2M HILL 2006
December 2007	Two soil vapor samples were collected at SWMU 1. The investigation results concluded that none of the constituents of concern detected in the SWMU 1 soil vapor samples is likely to present a vapor intrusion concern.	CH2M HILL 2008
2007	On December 17, 2007, eight surface soil (0- to 2-inch depth) samples (SWMU 1-SS-01A through SWMU 1-SS-08A) and eight subsurface soil (2- to 12-inch depth) samples (SWMU 1-SS-01B through SWMU 1-SS-08B) were collected. Only dibenzo(a,h)anthracene and benzo(a)pyrene were reported above the industrial screening criteria in one surface soil sample. The soil results collected from the SWMU-1 cover were evaluated and confirmed that no potential ecological and/or human health direct-contact risks as a result of the presence of the PAHs in the surface soils.	CH2M HILL 2008

TABLE 3
Investigative Activities at SWMU 1

Time Period	Description	Source
2008	Confirmed the location of buried canal and raceway connectors and foundation remnants to further assess the potential extent of bottle-containing fill; evaluated variations in groundwater quality in SWMU 1; evaluated potential vapor intrusion pathways to a residence located approximately 60 feet south of SWMU 1; and evaluated the topography of and hazards posed by exposed areas of the waste near the canal.	CH2M HILL 2008
2002, 2005 and 2007	Existing monitoring well network in the SWMU 1 area (MW-14, MW-15, MW-16S/I, MW-17, and MW-18) were sampled during investigation activities.	
2008 to present	Annual groundwater sampling of all existing monitoring wells at the facility.	
December 2009	Fourteen test pits were excavated along the canal on the southern side of SWMU 1 to visually delineate fill materials that are within the canal's right-of-way. The results show a heterogeneous mixture of municipal waste and construction debris present to an average depth of 5.5 feet below ground surface, resulting in an approximate volume of 2,500 cubic yards.	CH2M HILL 2010a
December 2010	Five new monitoring wells (MW-26, MW-27, MW-28, TW-01, and TW-02) were installed.	CH2M HILL 2012c
2011	Soil borings (BS-01 through BS-14) were performed to confirm the location of the former raceways at SWMU 1 and delineate the southern extent of landfill materials. Six geotechnical soil borings (GT-01 to GT-06) also were advanced in 2011 to define the characteristics of the overburden fill material of the SWMU 1 area.	CH2M HILL 2012a
2012	Seven additional soil borings (BS-15 through BS-21) were completed to delineate the southern extent of waste and debris materials near the former residence.	CH2M HILL 2012c
October and November 2012	A methane gas survey was completed using six existing groundwater monitoring wells (MW-14, MW-18, MW-26, MW-27, MW-28, and TW-02). Results showed that subsurface conditions are not favorable for methane generation at SWMU 1.	CH2M HILL 2012d

TABLE 4
Regulatory history for SWMU 1

Time Period	Source	General Description
Regulatory Timeline		
1962	The State of New York first established waste management regulations through the New York State Department of Health (NYSDOH) Part 19, Refuse Disposal	Both NYSDOH Part 19 (1963) and 6 NYCRR Part 360 (1973) required that the refuse areas be operated and maintained such that debris and leachate from the debris do not impact water quality conditions and standards as established by the State. Requirements established for final closure were the same between the NYSDOH Part 19 and the 6 NYCRR Part 360 versions.
1973	Waste management regulations included under the NYSDEC, 6 NYCRR Part 360, Refuse Disposal	
November 1999	Current version of the 6 NYCRR Part 360 Solid Waste Management Facility regulations (Subpart 360-2 Landfills)	Subpart 360-2 regulates the siting, design, construction, operation, closure, and post-closure activities of landfills. Closure activities as discussed in Subpart 360-2.15 would need to include a multi-layer geomembrane cap, landfill gas control and monitoring system, leachate collection and monitoring system, and operations and monitoring that would include quarterly inspections over the 30-year post-closure period.

Figures

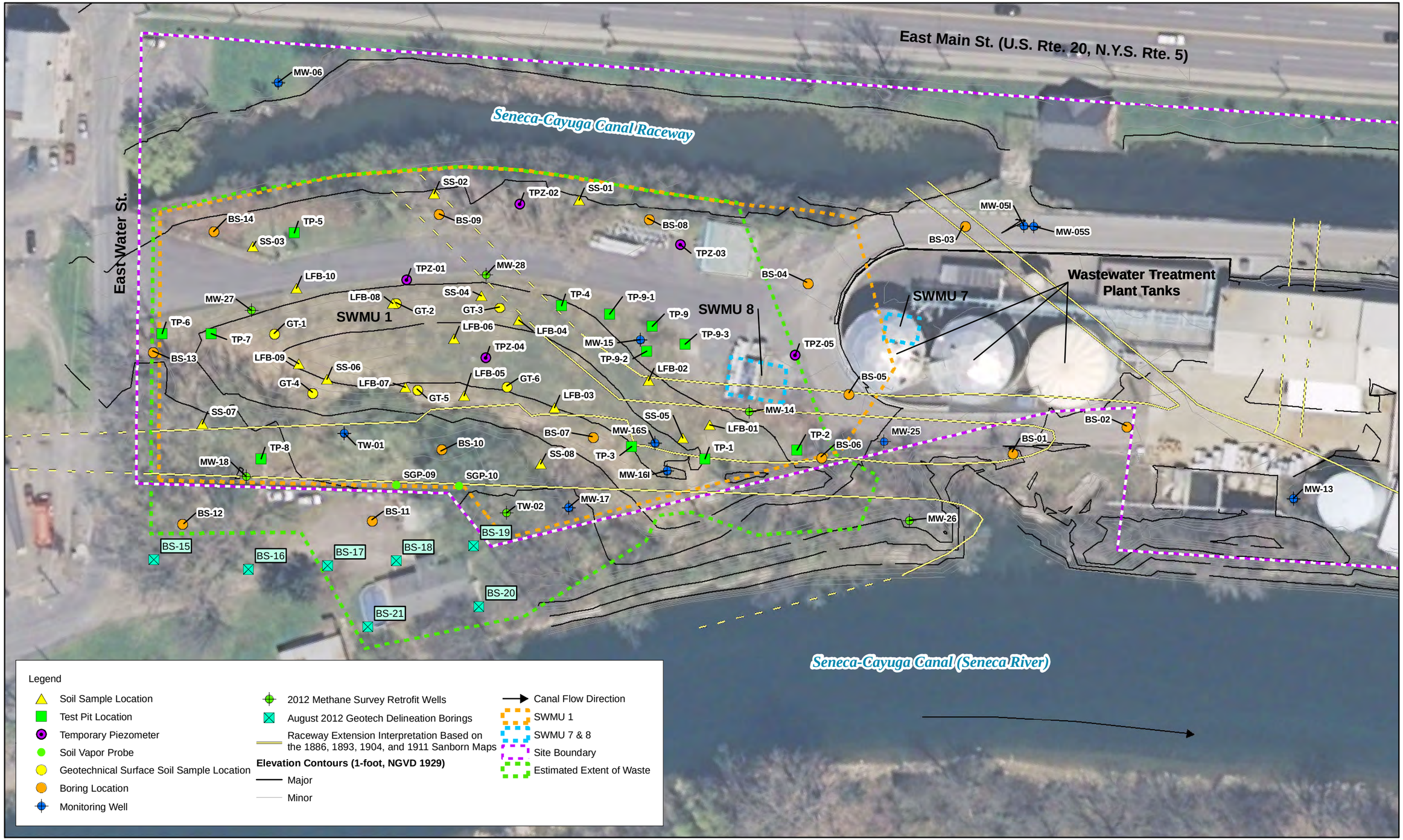


Figure 1
SWMU 1 Site Location
Former Hampshire Chemical Corp. Facility
Waterloo, New York

CH2MHILL

E:\GIS\DOW\WATERLOO\REPORTS\2013\TCLPSAMPLINGOFNORTHSHOREDEPOSITWP\MAPFILES\FIGURE 01 - SWMU 1 SITE LOCATION.MXD JHANSEN1 6/27/2013 4:18:12 PM

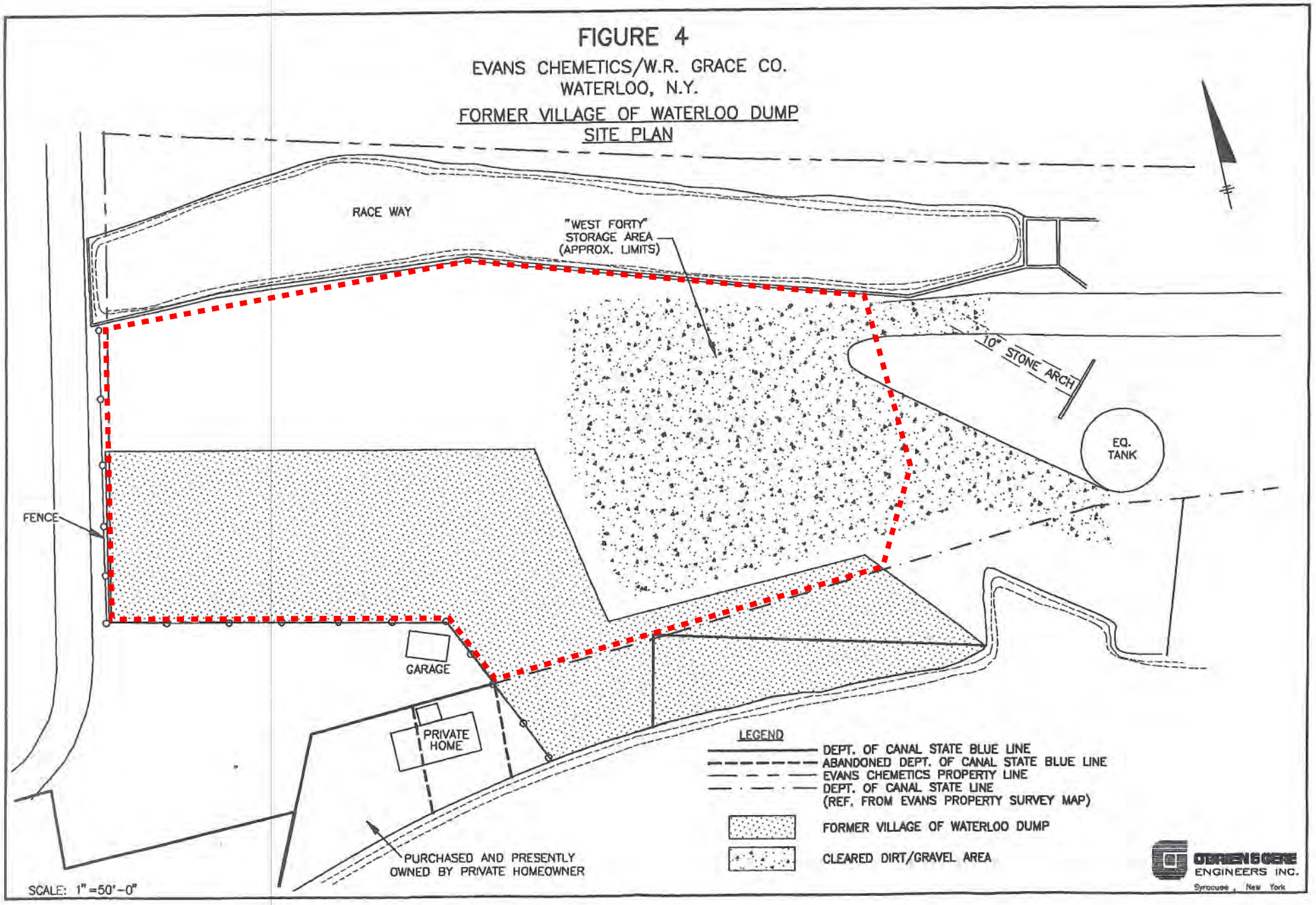
Figure 2
Surface Soil Sample Exceedances at SWMU 1
Former Hampshire Chemical Corp. Facility
Waterloo, New York

CH2MHILL

E:\GIS\DOW\WATERLOO\REPORTS\2013\TCLPSAMPLINGOFNORTHSHOREDEPOSITWP\MAPFILES\FIGURE 02 - SURFACE SOIL SAMPLE EXCEEDANCES AT SWMU 1.MXD JHANSEN1 6/10/2013 12:40:01 PM

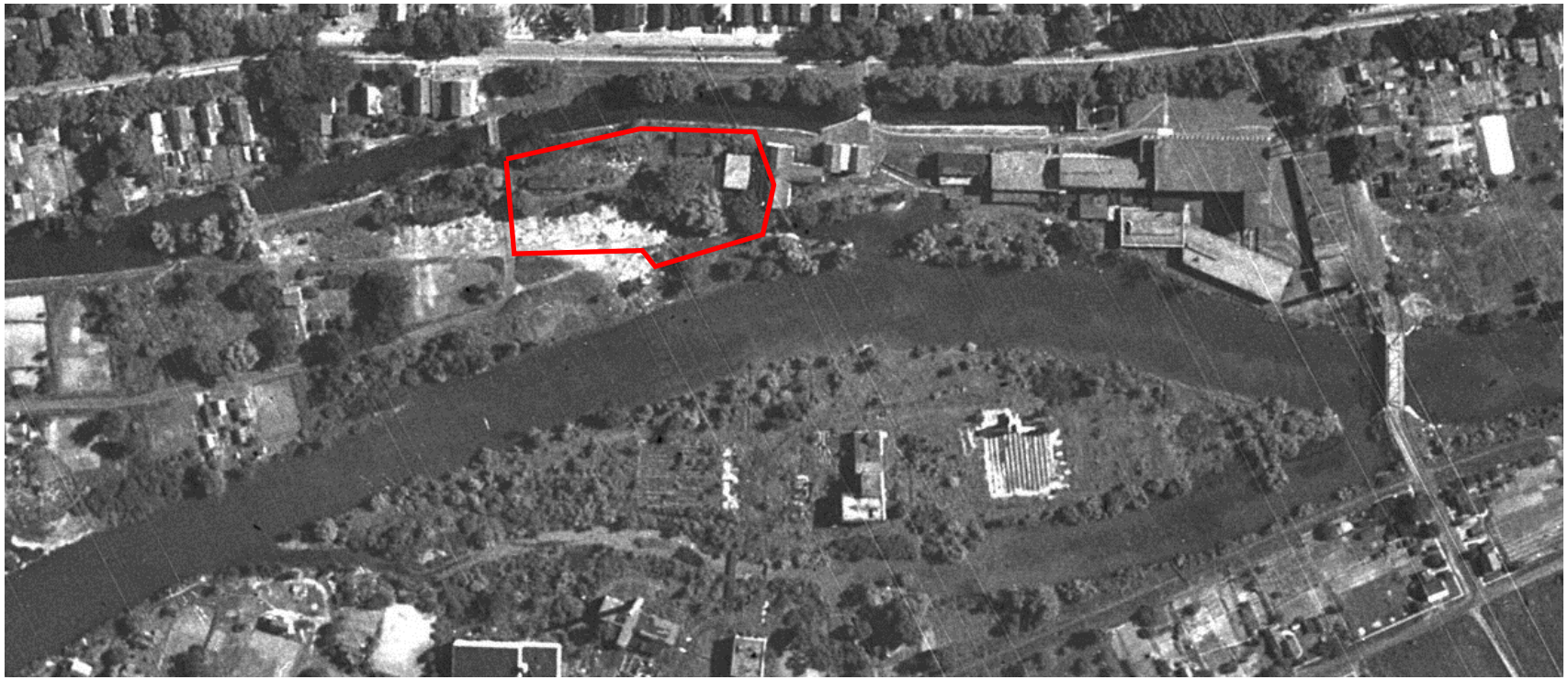
Attachment 1

1992 SWMU Map



Approximate SWMU 1 boundary

Attachment 2
Aerial Photographs

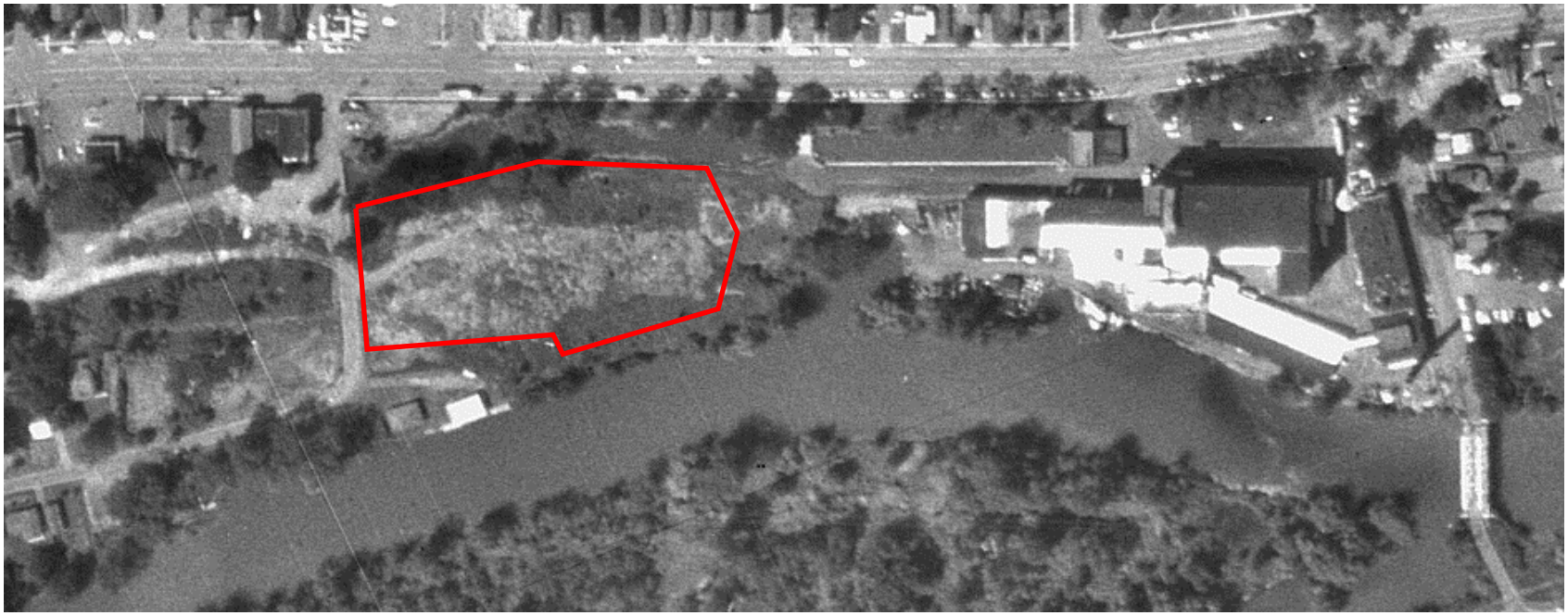


Aerial 1938

Approximate SWMU 1 boundary

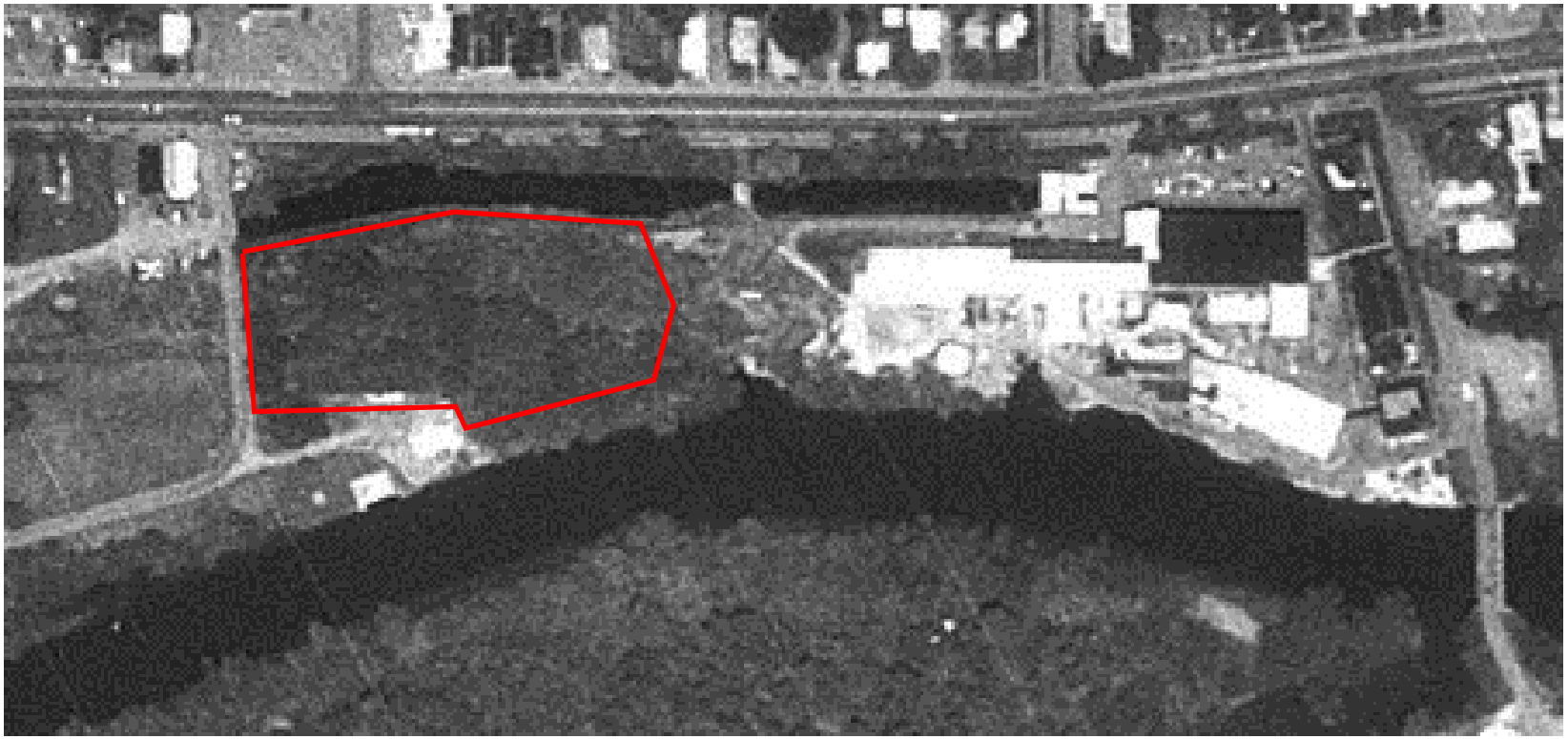
Aerial 1954

Approximate SWMU 1 boundary



Aerial 1963

Approximate SWMU 1 boundary

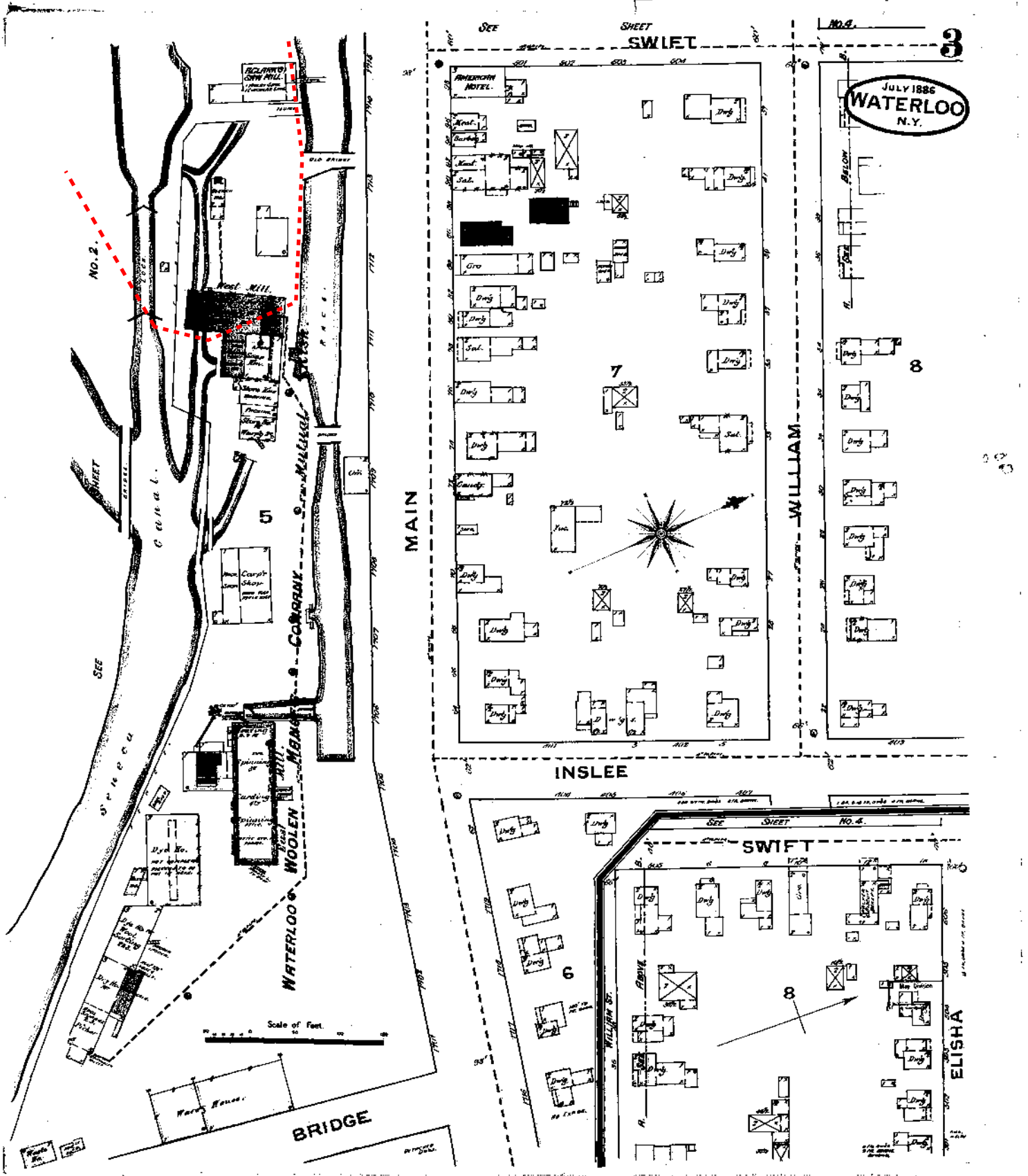


Aerial 1978

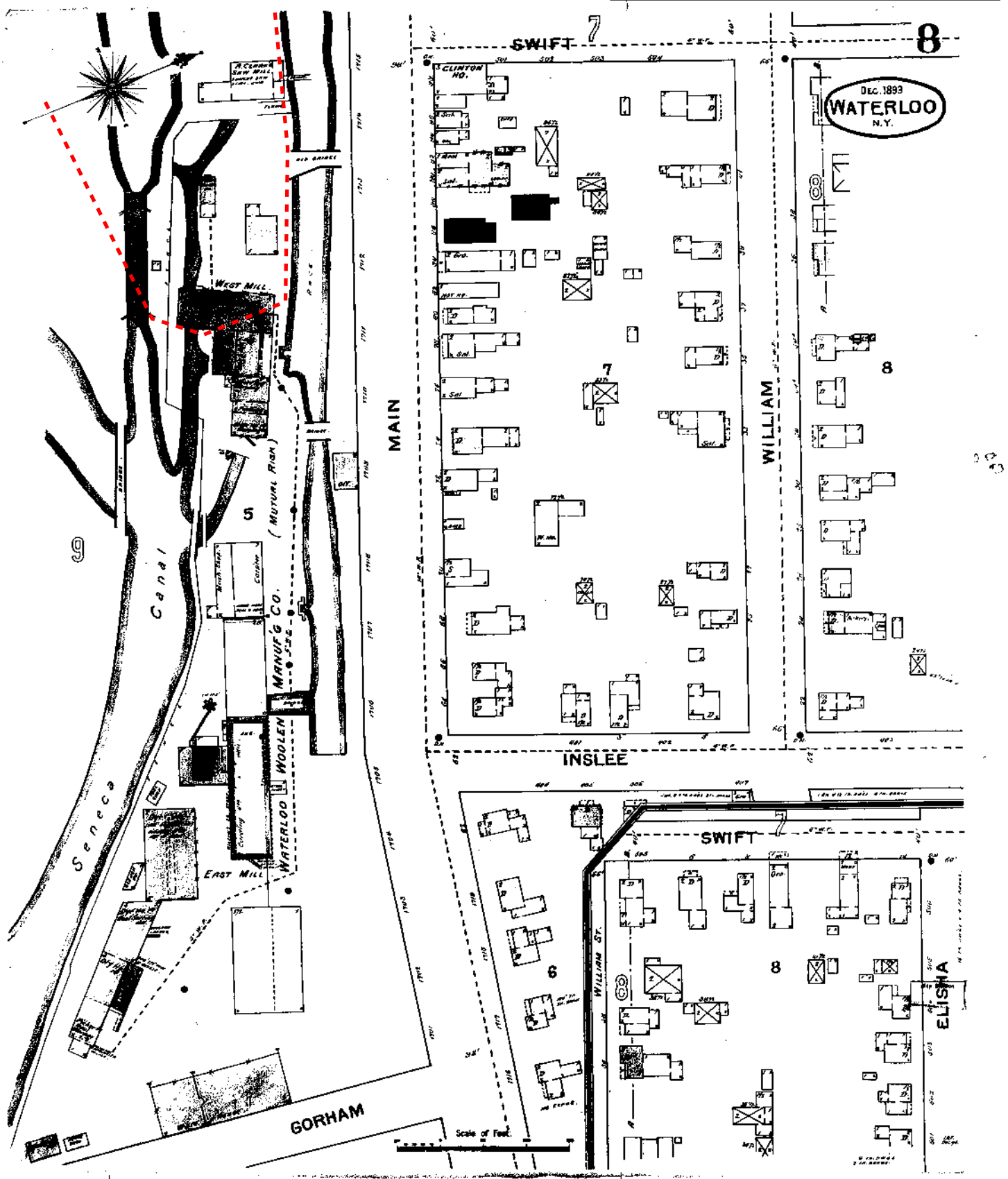
Approximate SWMU 1 boundary

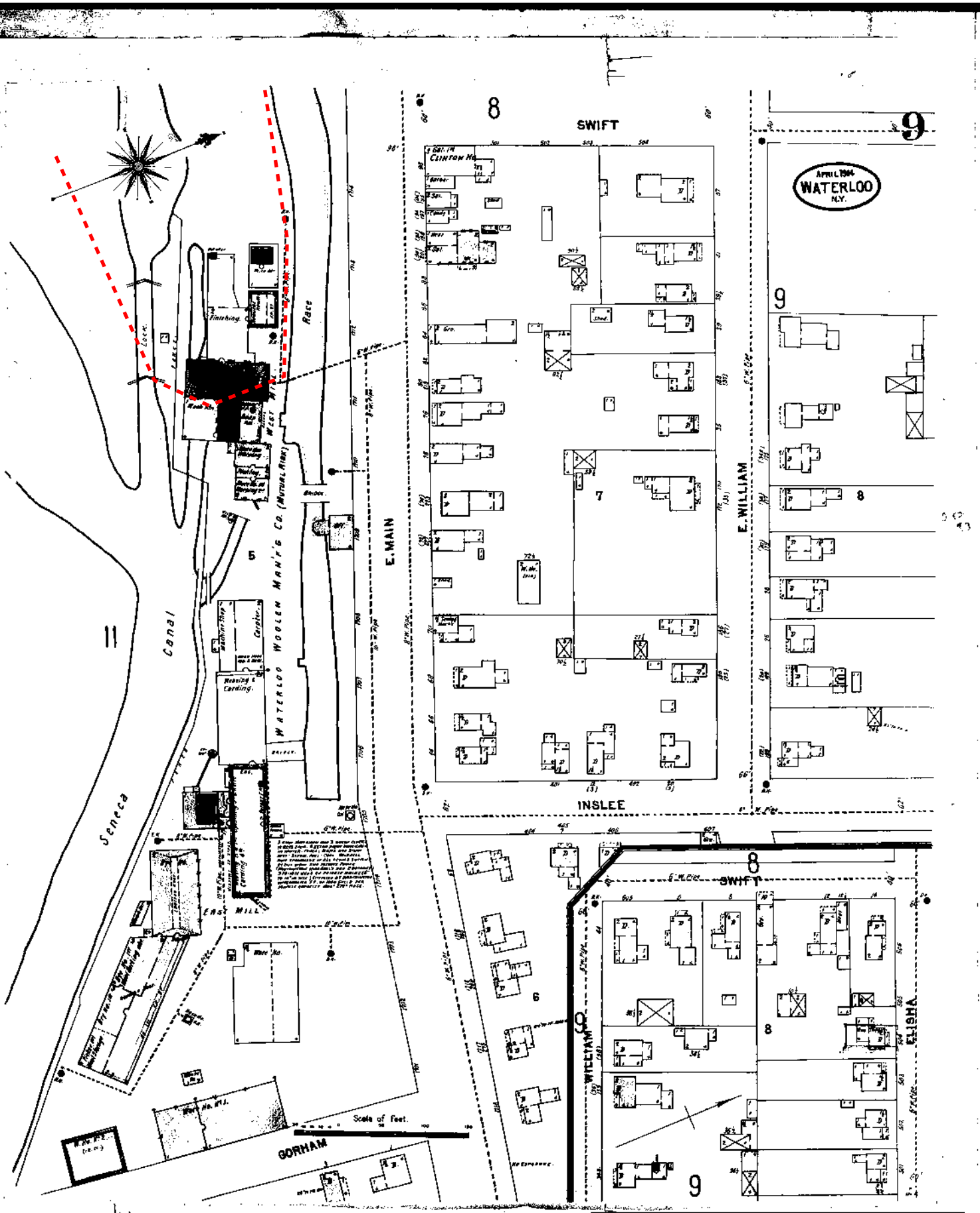
Attachment 3

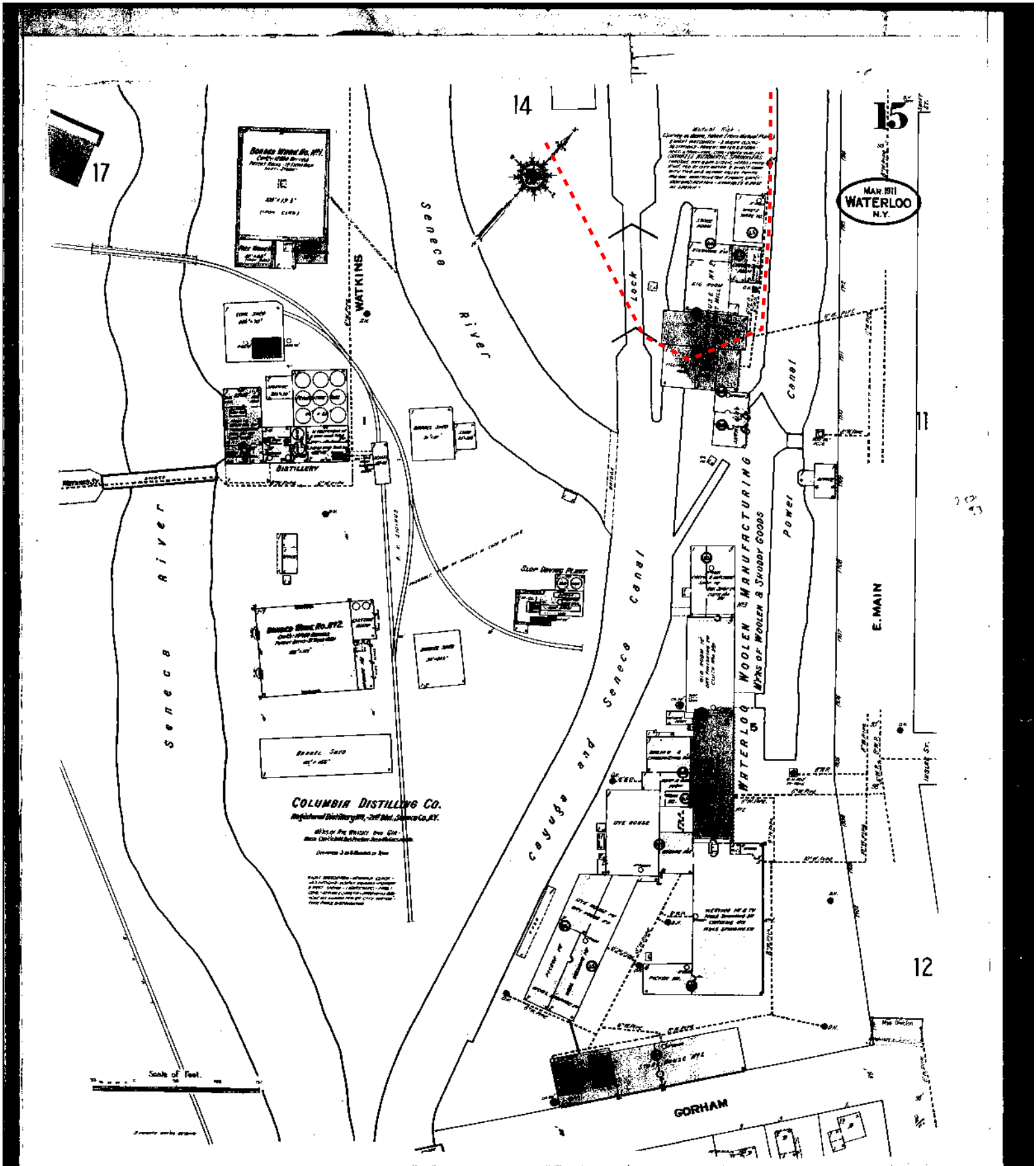
Sanborn Maps



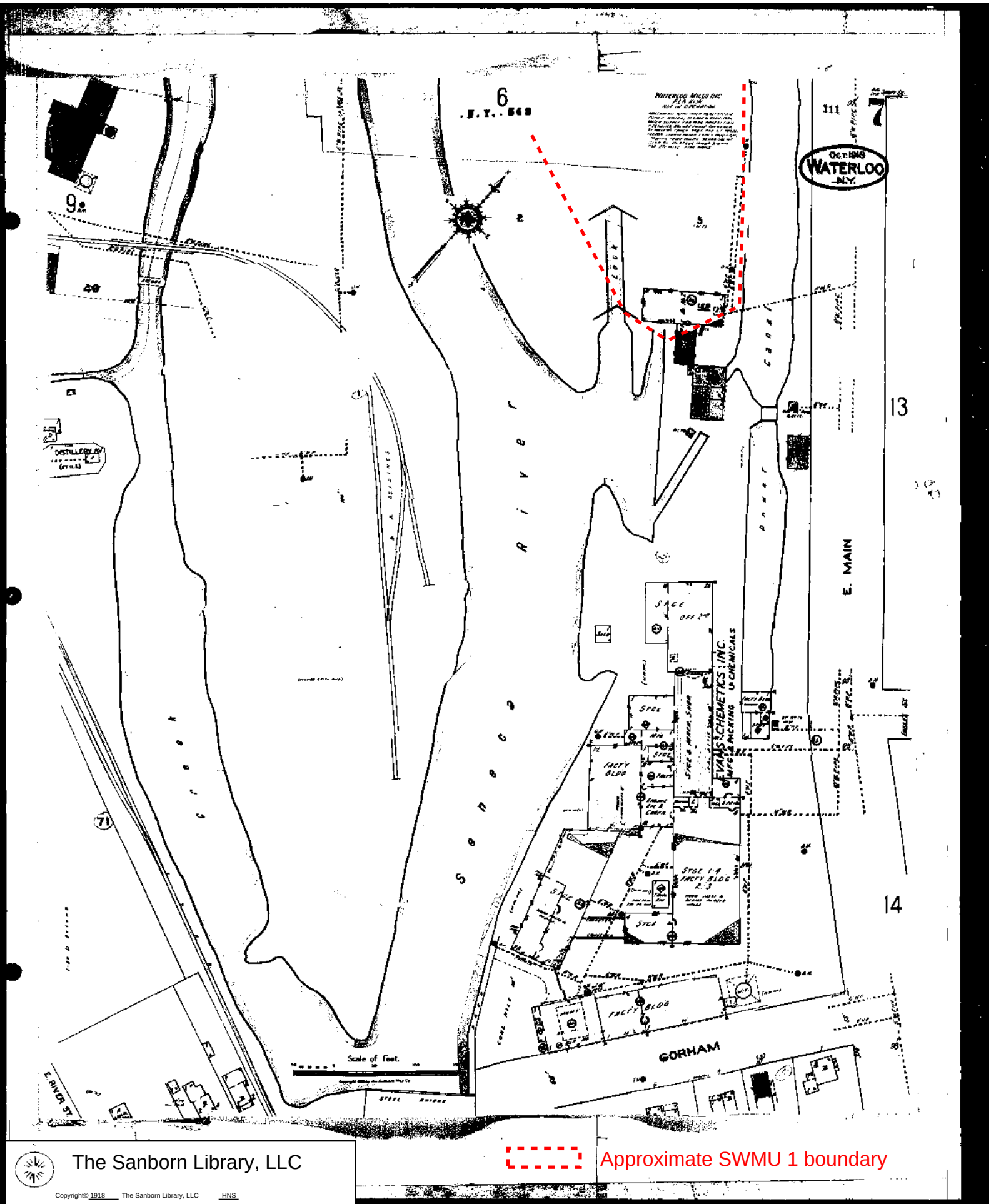
Approximate SWMU 1 boundary

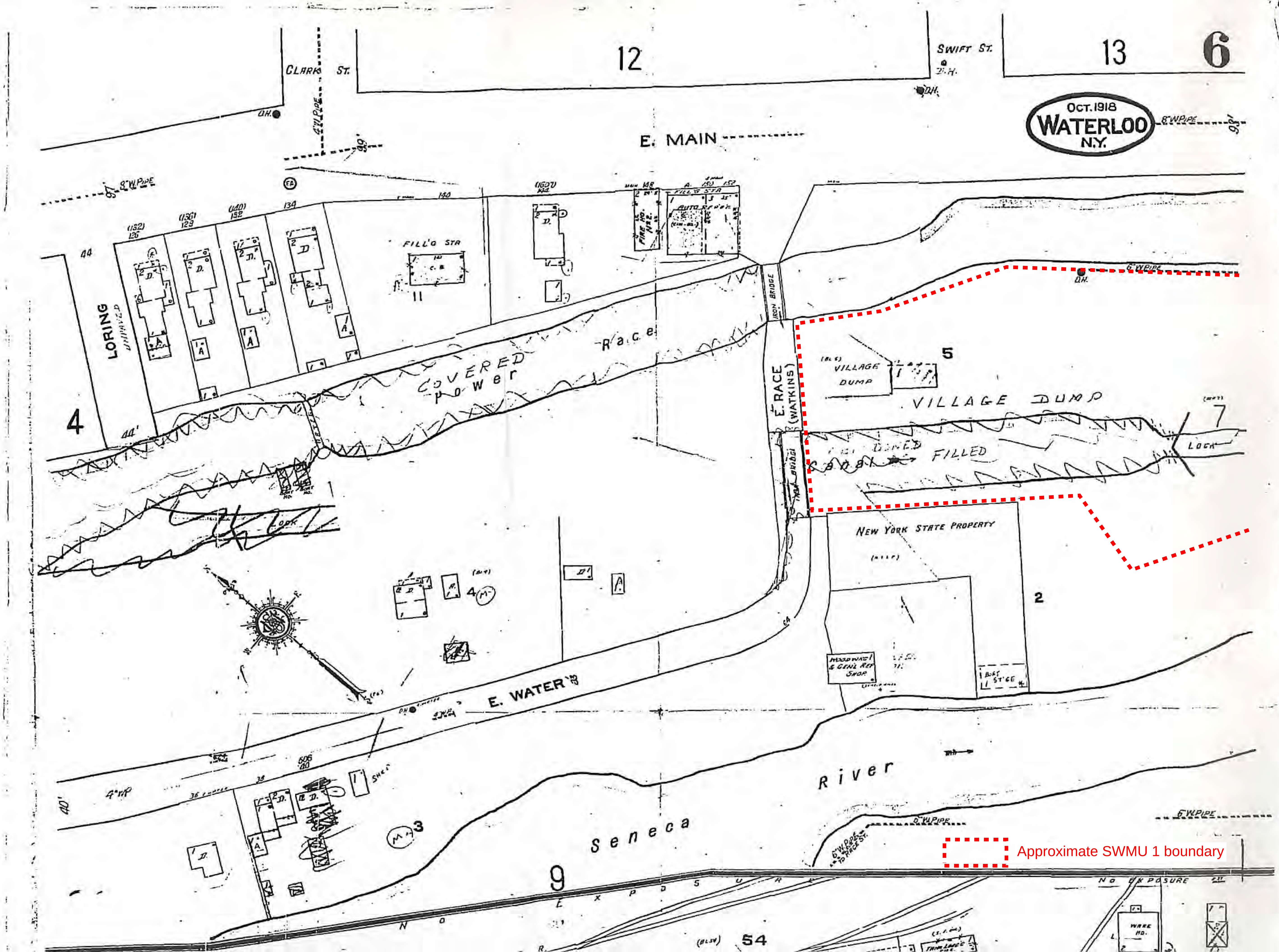






Approximate SWMU 1 boundary





12
13
6
OCT. 1918
WATERLOO
N.Y.
CLARK ST.
SWIFT ST.
E. MAIN
LORING
UNPAVED
FILL'G STA
FIRE HO.
AUTO REPAIRING
IRON BRIDGE
COVERED
Power
Race
E. RACE
(WATKINS)
VILLAGE DUMP
VILLAGE DUMP
FILLED
CANAL
LOCK
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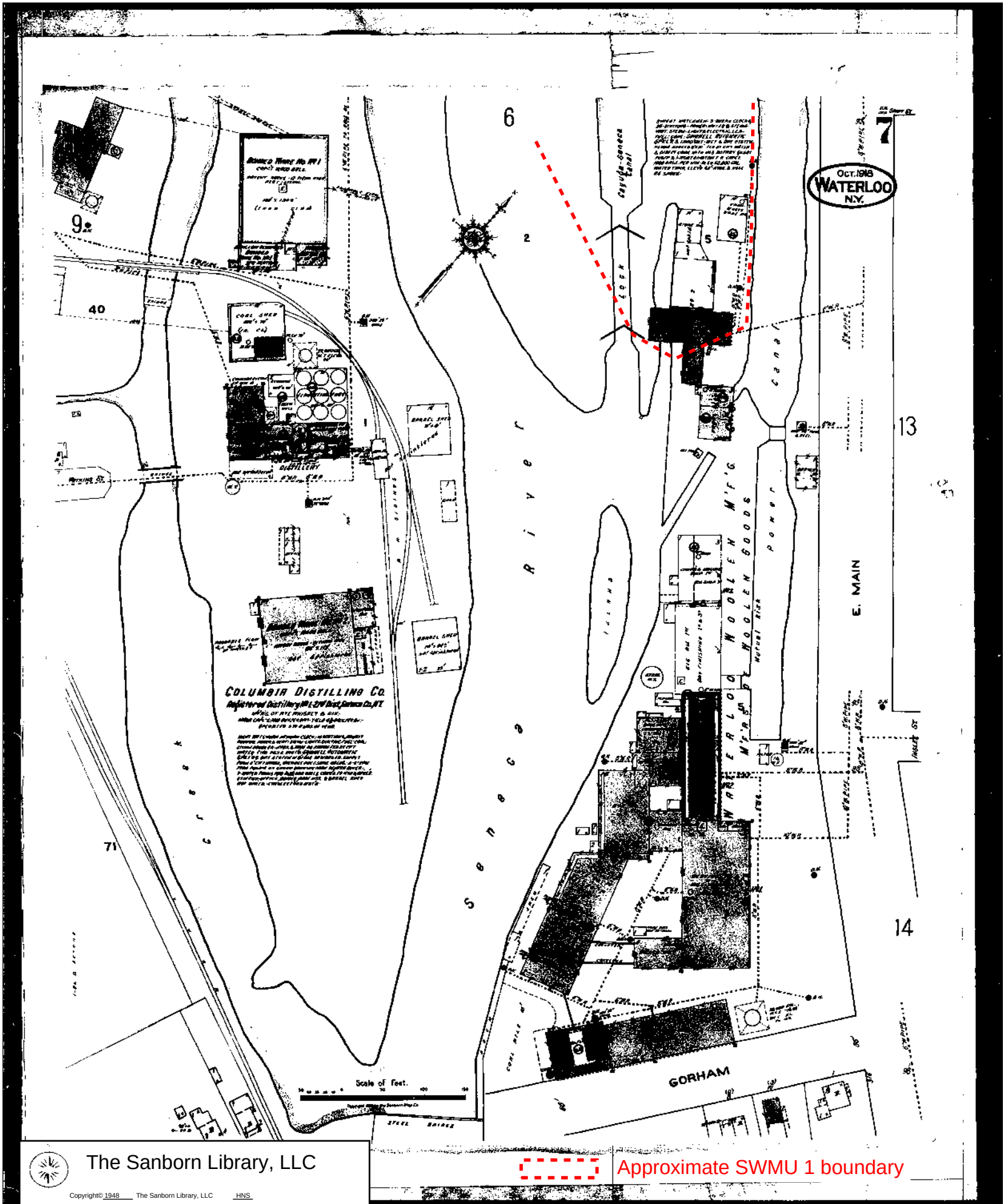
54
Approximate SWMU 1 boundary



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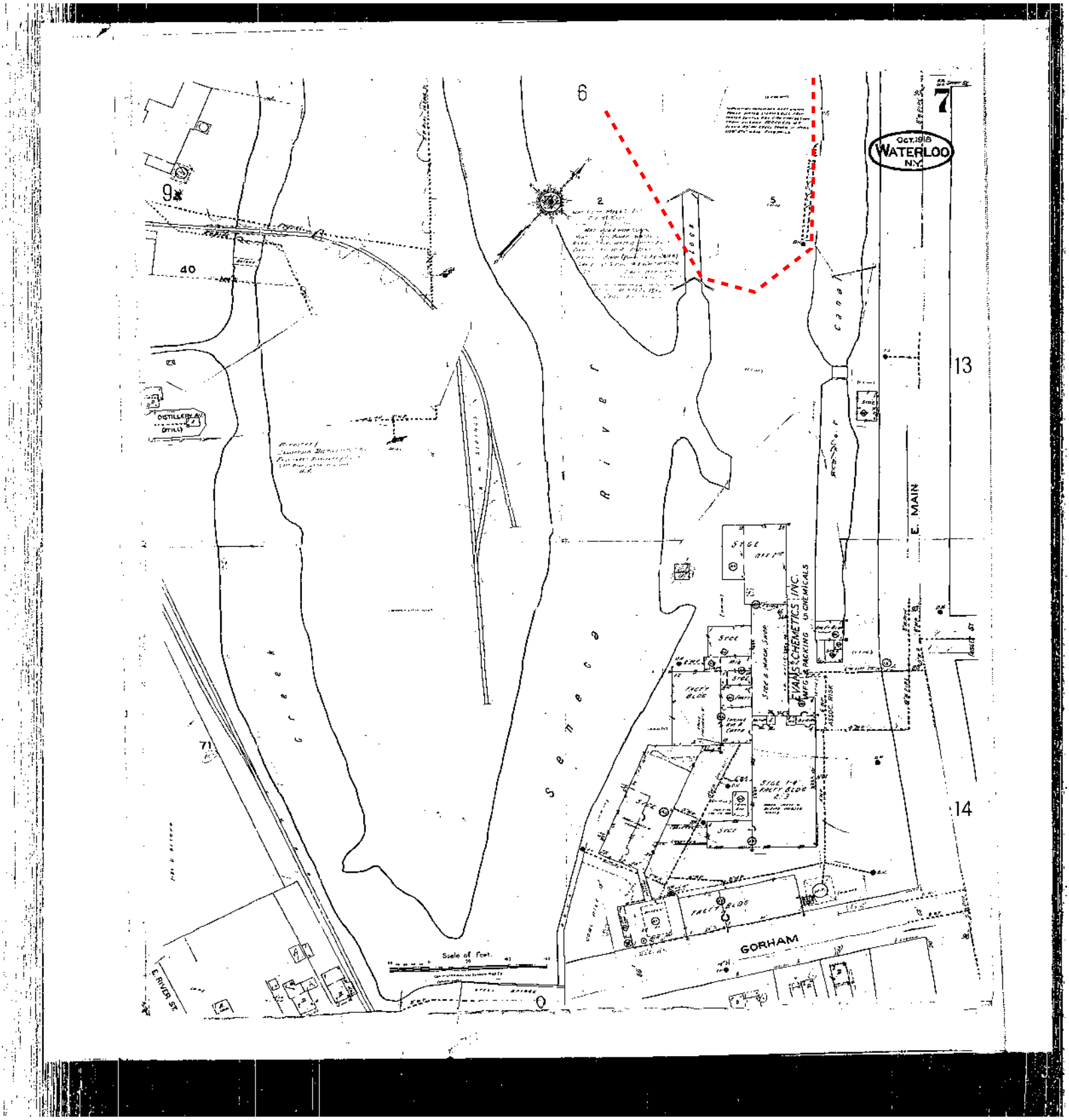

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Approximate SWMU 1 boundary