

SHORELINE CHANGES REPORT

**TASK AREAS: WINTER STREET, TOWER AVENUE, GAS PLANT
SUPERIOR, WISCONSIN**

PREPARED FOR:

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PREPARED BY:



**PROJECT REFERENCE #18328
WDNR PO #37000-0000010657**

NOVEMBER 2019

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1.0 INTRODUCTION

1.1 Purpose

The Wisconsin Department of Natural Resources (WDNR), retained The Sigma Group, Inc. (Sigma) of Milwaukee, Wisconsin to conduct an analysis of historical records targeted to initiate the identification of source properties/areas and potential responsible parties (PRPs) within five task areas, all located in Superior, WI, contributing to the degradation of the St. Louis and Superior Bays. The WDNR also retained the Sigma Group to analyze historic changes in the shoreline and drainage patterns within selected task areas and evaluate ownership for Interstate Island. The conclusions of these analyses are summarized in the following reports, submitted to the WDNR in November 2019:

- Historic Records Screening Report: Estuary Flats Task Area
- Historic Records Screening Report: Winter Street South Task Area
- Historic Records Screening Report: Winter Street North Task Area
- Historic Records Screening Report: Tower Avenue Task Area
- Historic Records Screening Report: Gas Plant Task Area
- Historic Records Screening Report: Historic Maps Supplemental Volume
- Shoreline Changes Report: Task Areas: Winter Street, Tower Avenue, Gas Plant
- Drainage Patterns Report: Task Areas: Winter Street, Tower Avenue, Gas Plant
- Interstate Island Ownership Research Summary Report

This report is a Shoreline Changes Report for the Winter Street, Tower Avenue, and Gas Plant task areas in Superior, Wisconsin. The purpose of the assessment was to chronologically map changes in the shoreline from 1861 through 2018 in the three task areas with an emphasis on submerged lands. The assessment was completed between April and November 2019.

To perform the service, Sigma reviewed available aerial photographs, Sanborn Fire Insurance maps, historical city directories, City of Superior historical records, historical maps and surveys and available regulatory documents. A listing of reviewed documents is included as an **Appendix**. Based on a review of the maps and historical records, a series of figures (**Figures 1 through 18**) depicting shoreline changes over time were prepared.

1.2 Submerged Lands

Portions of the task areas comprise lakebed and fill land on the former lakebed. Section 24.39(4), Wis. Stats., in conjunction with s. 30.11, Wis. Stats., grants authority to the board of commissioners of public lands to lease "rights to the beds of lakes and rights to fill in beds of lakes or navigable streams" to individual riparian owners and municipalities. These leases may be granted to riparian owners for the purpose of improving navigation and for the improvement or construction of harbor facilities. A lease may also be granted to municipalities, where the municipality is the riparian owner, for the purpose of improving or providing recreational facilities related to navigation for public use.

1.3 Methodology

Based on a review of the maps and historical records, a series of figures depicting shoreline changes over time were prepared. Each figure shows a line representing the shoreline for the time period referenced on the figure, overlaid onto a 2018 aerial image. In addition to figures 1-18, the project deliverables also include the digital files of the maps and records used to generate the figures.

In general, in order to overlay historical shorelines on the 2018 aerial image, various geographic features, and if available on the record map, lines of latitude and longitude, were used to align the historical maps with the 2018 aerial image and depict the historical shorelines. The shorelines depicted in the figures are therefore approximate, and inherently subject to the accuracy of the associated historical maps and records.

2.0 SITE DESCRIPTION

2.1 Winter Street North

The Winter Street North Task Area, which comprises approximately 53 parcels encompassing approximately 604 acres, is bordered by St. Louis Bay to the north, a railroad right-of-way to the east (Tower Avenue Task Area), Winter Street to the south (Winter Street South Task Area) and the Estuary Flats Task Area to the west, all located in the City of Superior, Douglas County, Wisconsin.

For purposes of clarity, the task area shoreline has been divided into the following features, from west to east:

- Hallett Dock;
- Standard Oil Dock;
- Midwest Energy Resources Dock, which is located on the sites of the following historical docks:
 - Great Lakes Dock;
 - Carnegie Dock; and
 - Lehigh Dock.
- The remnants of the historical Great Northern Dock; and
- General Mills Dock.

These dock names were selected to provide a unique name to each dock in Superior and are not indicative of original ownership or length of ownership. The C. Reiss Coal Co. historically operated on both the Hallett Dock and the Standard Oil Dock. Consequently, while the Standard Oil Dock is commonly referred to as the C. Reiss Dock, this name is not used in this report to avoid confusion between the two docks.

2.2 Tower Avenue

The Tower Avenue Task Area, which comprises approximately 202 parcels encompassing approximately 189 acres, is bordered by Howards Bay to the north, Hughitt Avenue to the east, North 5th Street to the south and a railroad right-of-way to the west (Winter Street North Task Area), all located in the City of Superior, Douglas County, Wisconsin.

For purposes of clarity, the task area shoreline has been divided into the following features, from west to east:

- Globe Elevator Dock, a long and narrow dock;
- Paper Calmenson Dock, a wide land mass extending east from the base of the Globe Elevator Dock;
- Tower Slip; and
- CHS Dock (only the areas to the west of Dock Street are considered in this report).

These dock names were selected to provide a unique name to each dock in Superior and are not indicative of original ownership or length of ownership.

2.3 Gas Plant

The Gas Plant Task Area, which comprises approximately 136 parcels encompassing approximately 221 acres, is approximately bordered by Superior Bay to the north and east, Marina Drive to the southeast, and East 2nd Street/Water Street to the southwest, with a roughly triangular extension bounded by Hill Ave to the west, North 12th Street the south, and E Street to the southeast, all located in the City of Superior, Douglas County, Wisconsin.

For purposes of clarity, the task area shoreline has been divided into the following features, from northwest to southeast:

- The Graymont-LaFarge Dock;
- The Graymont-LaFarge Slip;
- The Superior Wastewater Treatment Plant Lagoon; and
- Superior Bay.

These dock names were selected to provide a unique name to each dock in Superior and are not indicative of original ownership or length of ownership.

3.0 SHORELINE CHANGES

3.1 Winter Street North & Tower Avenue

The Hallett Dock was originally constructed to a length of 1,000 feet in 1893, then extended to 2,600 feet in 1915. The dock was used for coal storage by the Youghioghney & Lehigh Coal Co. from 1893 through 1906, the Pittsburgh Coal Co. from 1906 through 1911, and the C. Reiss Coal Co. beginning in 1911. The 1976 Cultural Resources Survey by the US Army Corps of Engineers (Cultural Resources Survey) noted that the dock was abandoned in 1970.

The Standard Oil dock began as a wooden pile dock constructed between 1891 and 1893. A larger dock, constructed with solid fill, was then added in 1907. The oil pipeline section of the dock was owned by the Standard Oil Co. and its successors. The coal dock portion, which had a capacity of 7-800,000 tons of coal, was originally owned by the Berwind Fuel Co. Between 1940 and the late 1960s, ownership was transferred to the city of Superior and the dock was leased to the C. Reiss Coal Co. The coal dock was abandoned in the late 1960s.

The historical Great Lakes dock was constructed by the Great Northern Railway in 1889, to a length of 600 feet. The railway expanded it in 1897 and 1901 to a final length of 2,500 feet and a peak capacity of 800,000 tons of coal. The outer portion of the dock was leased to the Pittsburgh Coal Co. from 1905 to 1911 and the Inland Creek Co. from 1911 to 1915, while the rest of the dock was leased to the Philadelphia & Reading Coal Co. from 1889 to 1911 and the Great Lakes Coal & Dock Co. from 1911 to 1915. The entire dock was then leased to the Great Lakes Coal & Dock Co. from 1915 through 1973, when Great Lakes shut down operations on the dock.

The historical Carnegie dock was constructed to a length of 1,025 feet by the Great Northern Railway in 1889, then extended to 2,525 feet in 1909, with a final capacity of 550,000 tons of coal. The railway leased the dock to the Carnegie Dock & Fuel Co. from 1909 through the mid-1950s, when the dock was abandoned. Murphy Oil constructed a pipeline to the dock in the late 1950s, using it primarily to transfer gasoline onto tanker ships through 1974.

The historical Lehigh dock was constructed in 1886 and had a capacity of 550,000 tons of coal. The Lehigh Coal & Coke Co. used the dock from 1886 to 1903 and the Northwestern Fuel Co. used the dock from 1903 through the early 1950s, when it was abandoned.

The Great Northern Dock was constructed in 1889 and used by the Great Northern Railway to transfer general merchandise and flour between railcars and lake vessels. The dock was abandoned in the late 1950s.

The General Mills Dock was constructed between 1886 and 1888. The Great Northern Railway constructed the first of the grain elevators at the base of the dock in 1886 and used the northern portion of the dock for coal storage from 1888 to 1898. A grain elevator was then constructed on the site of the coal dock.

The outer 800 feet of the Globe Elevator dock, constructed in 1887, was leased to the Northwestern Fuel Co. as a 90,000-ton coal dock from 1887 to 1920. During this time, it was referred to as Northwestern Fuel Co. Coal Dock No. 3. A series of three grain elevators were first constructed at the base of the dock in 1887. The elevators were operated by the Duluth Elevator Co. from 1887 to 1894, the Globe Elevators Co. from 1894 through the late 1950s, and the Peavey Co. in 1976.

The Paper Calmenson dock was constructed in 1896 and used by the Lehigh Valley Coal Sales Co. as a coal dock from 1896 through the mid-1950s. Two large coal storage domes constructed on the dock were disassembled in the early 1940s. From the mid-1950s through 1974, Paper Calmenson, Inc. used the dock as a warehouse and transfer site for finished steel products. In 1974, the dock was sold to Barko Hydraulics for the manufacture of heavy equipment.

Plat maps produced by the Land & River Improvement Co. From 1887, 1889, and 1890 depict the CHS dock with a relatively natural shoreline. By the 1894 map, the property has been filled to form the current shoreline. Based on the presence of a smelter on the north end of the dock in 1892 fire insurance maps, the dock was filled by that year.

3.2 Gas Plant

Historical documents indicate that prior to the late 1890s, the shoreline was roughly 100-300 feet inland of its current location. In the winter of 1881-1882, the Northern Pacific Railway constructed an offshore rail trestle which paralleled the shoreline. The shoreline was then filled to extend past the rail line in two main stages. In the mid to late 1890s, shoreline areas north of historical G Street were filled and the remainder of the railroad may have been converted from a trestle to a railbed on a narrow strip of land. Between 1908 and 1914, the remainder of the shoreline was filled past the railroad.

The majority of the Graymont-LaFarge Dock was constructed in 1901. The Northwestern Fuel Co. used the dock, which had a 1,000,000-ton capacity, to store and transfer coal. The southeastern half of the dock was leased to the Globe Shipbuilding Co. from 1941 through 1945 for the construction of ships. Coal storage continued on the northwestern side of the dock until 1945. Around 1945, the entire dock was sold to the Cutler-LaLiberte-McDougal Corp., which used the northwestern half of the dock for limestone and cement clinker storage. Marine Fueling used the western quarter of the dock for fuel storage from 1952 through at least 1976. Huron Portland Cement Co. used the northeastern side of the dock for cement processing and storage from 1950 through at least 1976.

A historical lumber mill and associated lumber wharves were used from 1887 to 1907. The mill and wharves were removed by 1938. In the 1950s, the Superior Wastewater Treatment Plant (WWTP) was constructed, with the lagoon added around 1980.

4.0 CONCLUSIONS

Sigma has reviewed available aerial photographs, Sanborn Fire Insurance maps, historical city directories, City of Superior historical records, historical maps and surveys and available regulatory documents of the Winter Street North, Tower Avenue, and Gas Plant task areas located in the City of Superior, Douglas County, Wisconsin. Based on a review of the available information, Sigma has produced a series of figures documenting major changes in the shoreline within these task areas.

The conclusions included in this assessment report should not be construed as a definitive history of shoreline changes within Superior, WI. The shorelines depicted in the figures are approximate and inherently subject to the accuracy of the associated historical maps and records.

Sincerely,



Drew Falkenburg
Project Engineer



Kristin K. Kurzka, P.E., P.G.
Senior Project Engineer

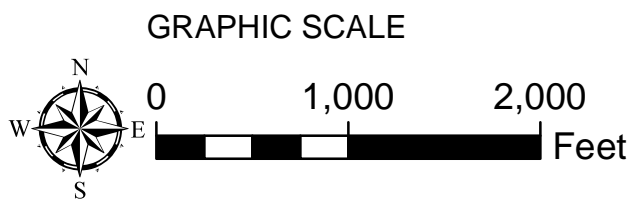
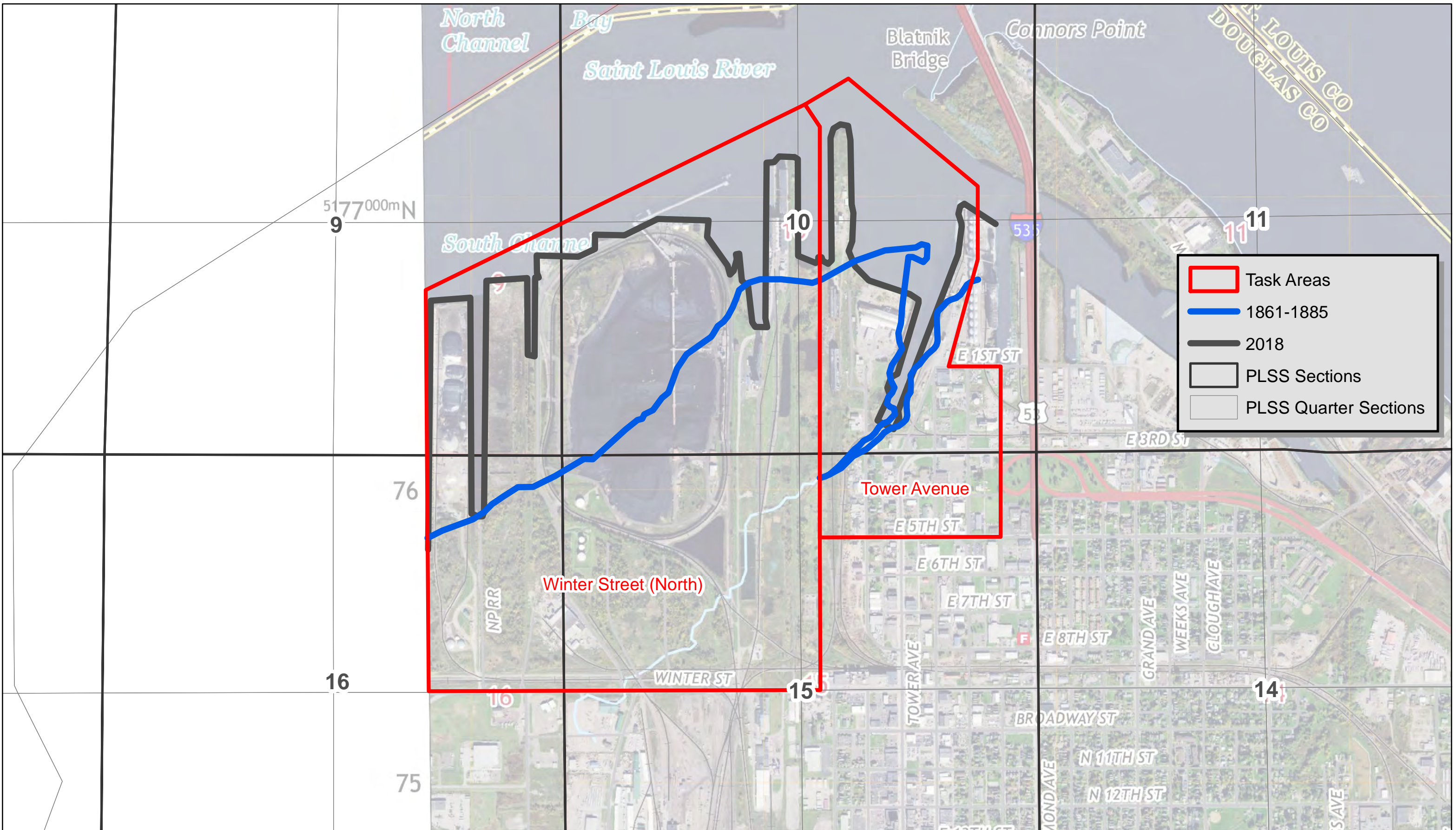


Randy E. Boness, P.G.
Manager, Geosciences Group

FIGURES

- 1 1861 Shoreline: Winter Street & Tower Avenue
- 2 1886-1900 Shoreline: Winter Street & Tower Avenue
- 3 1915-1917 Shoreline: Winter Street & Tower Avenue
- 4 1919-1935 Shoreline: Winter Street & Tower Avenue
- 5 1936-1943 Shoreline: Winter Street & Tower Avenue
- 6 1946--1951 Shoreline: Winter Street & Tower Avenue
- 7 1952-1958 Shoreline: Winter Street & Tower Avenue
- 8 1975-1976 Shoreline: Winter Street & Tower Avenue
- 9 1980-2018 Shoreline: Winter Street & Tower Avenue
- 10 1861 Shoreline: Gas Plant
- 11 1901-1907 Shoreline: Gas Plant
- 12 1908-1914 Shoreline: Gas Plant
- 13 1915-1917 Shoreline: Gas Plant
- 14 1935-1951 Shoreline: Gas Plant
- 15 1952-1958 Shoreline: Gas Plant
- 16 1958-1964 Shoreline: Gas Plant
- 17 1966-1975 Shoreline: Gas Plant
- 18 1980-2018 Shoreline: Gas Plant

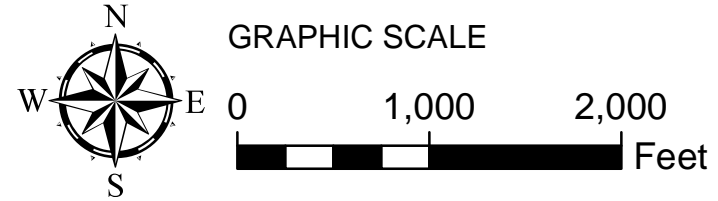
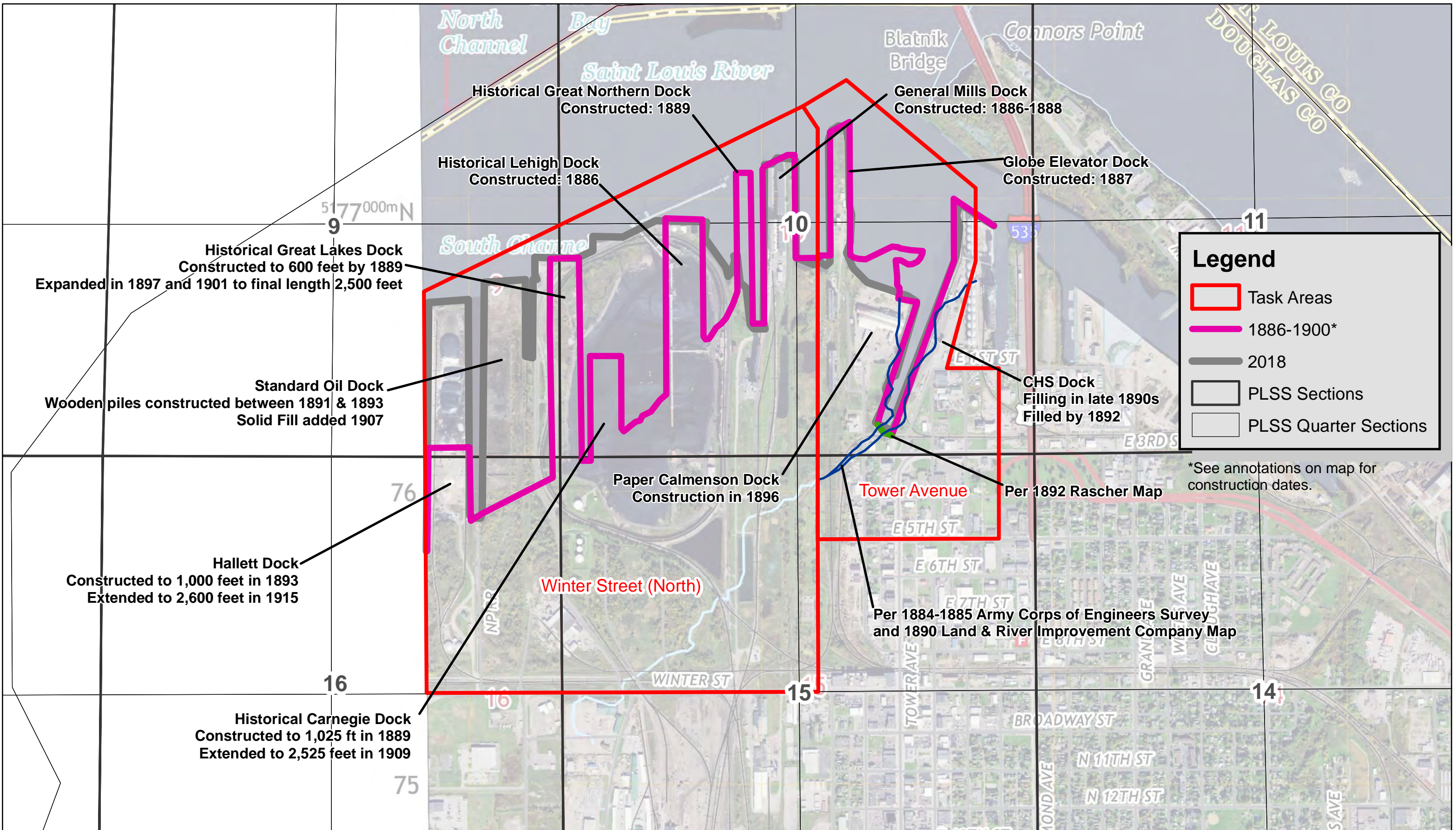
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SHORELINE

Winter Street & Tower Avenue: 1861-1885

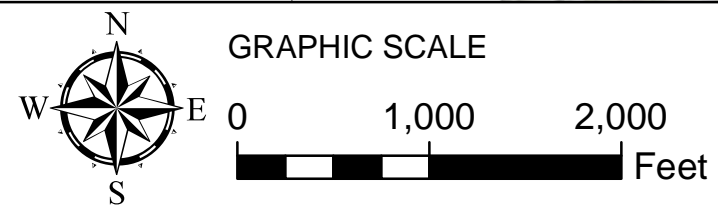
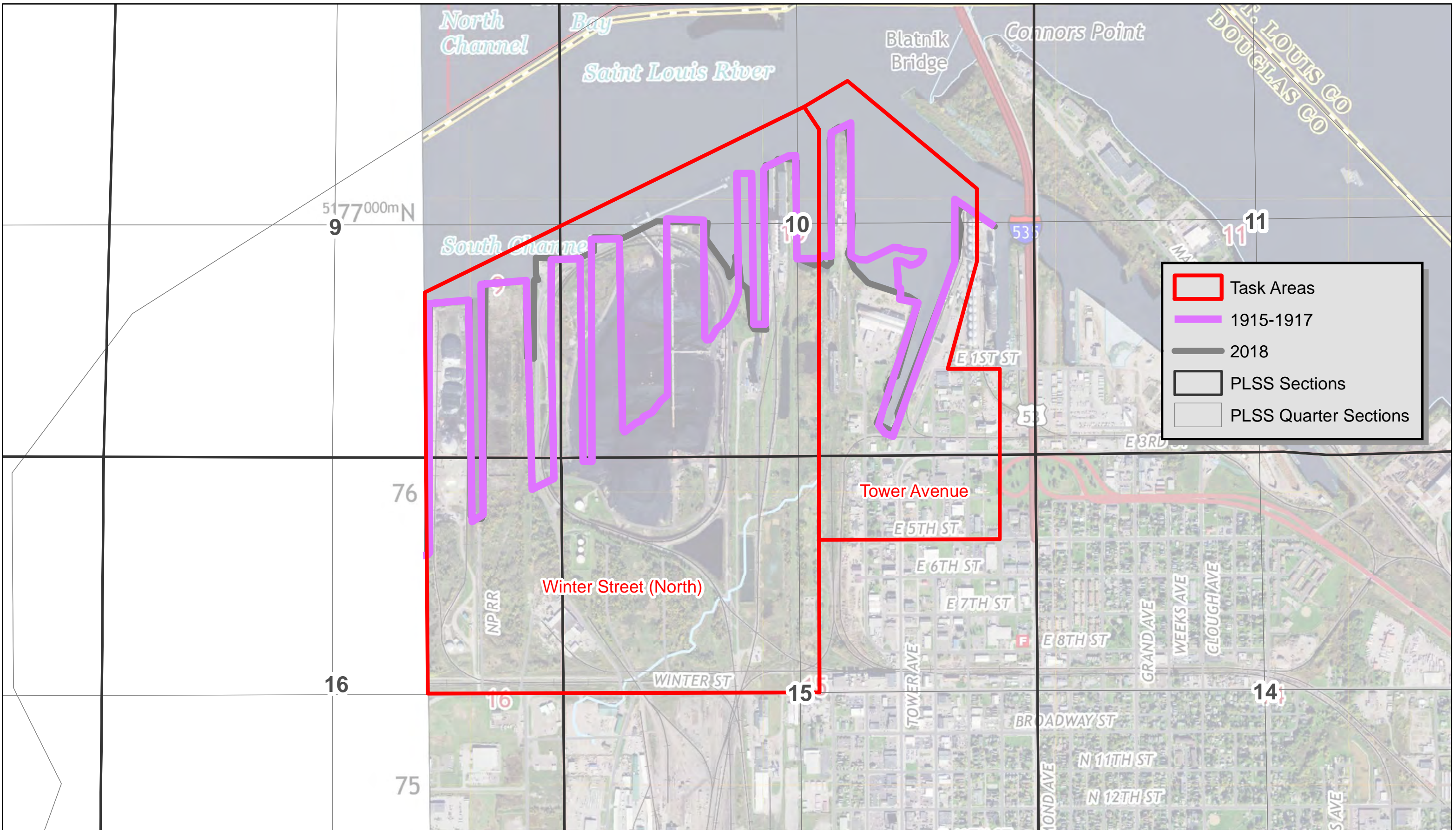
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Winter Street and Tower Avenue: 1886-1900

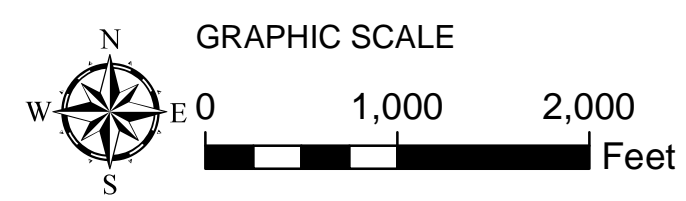
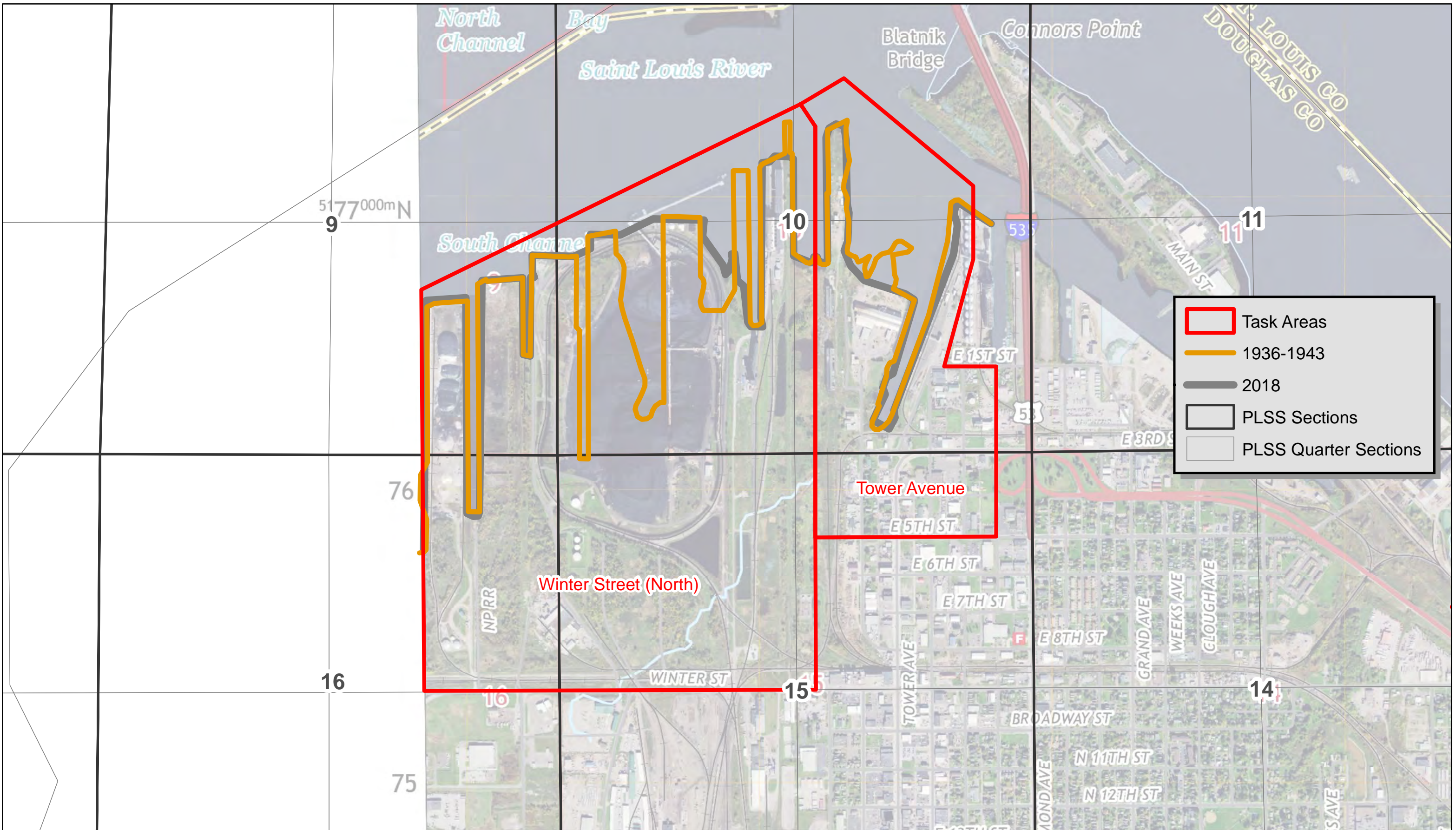
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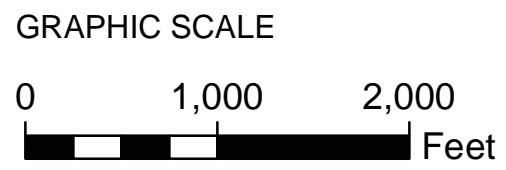
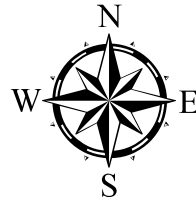
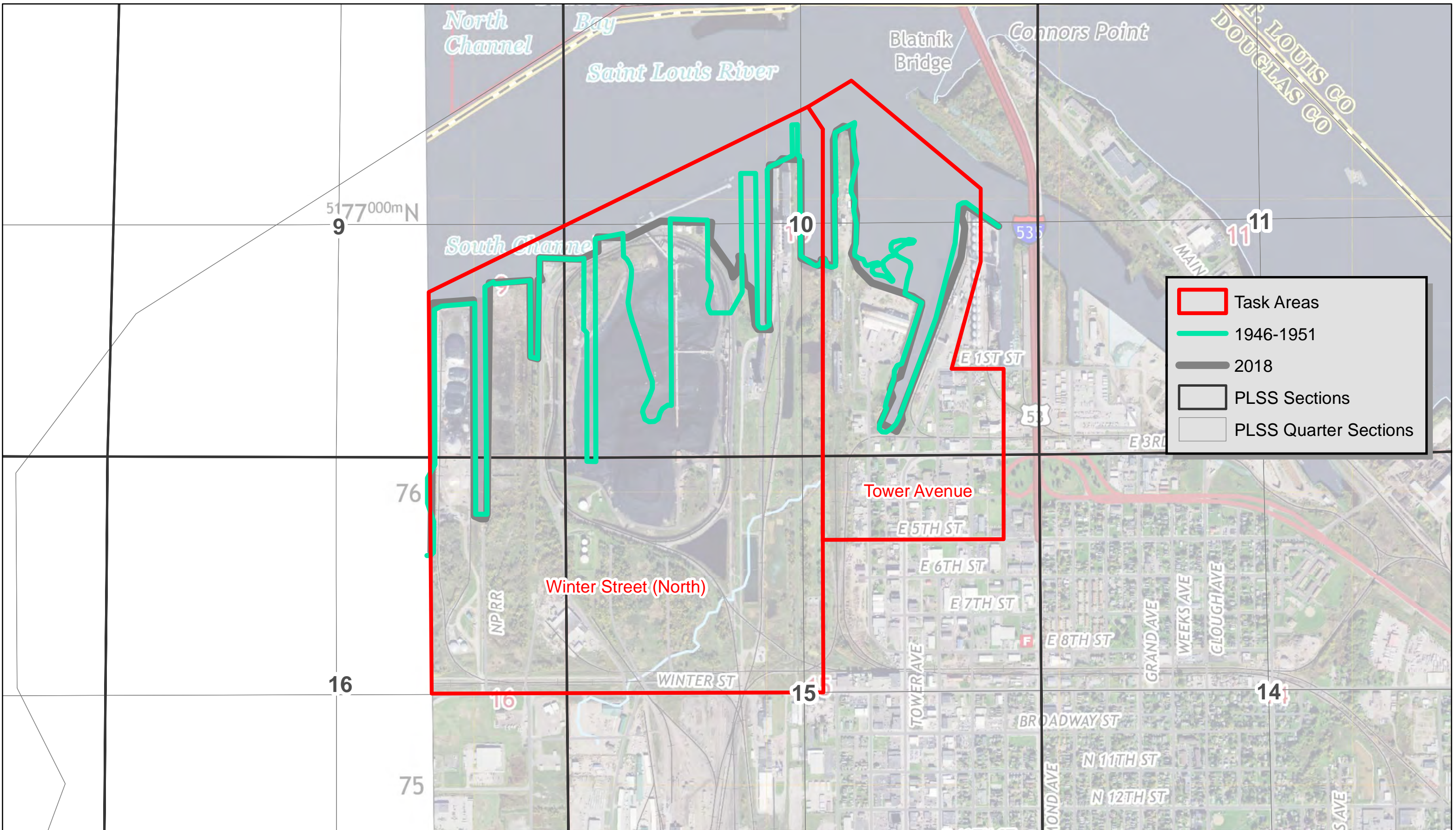
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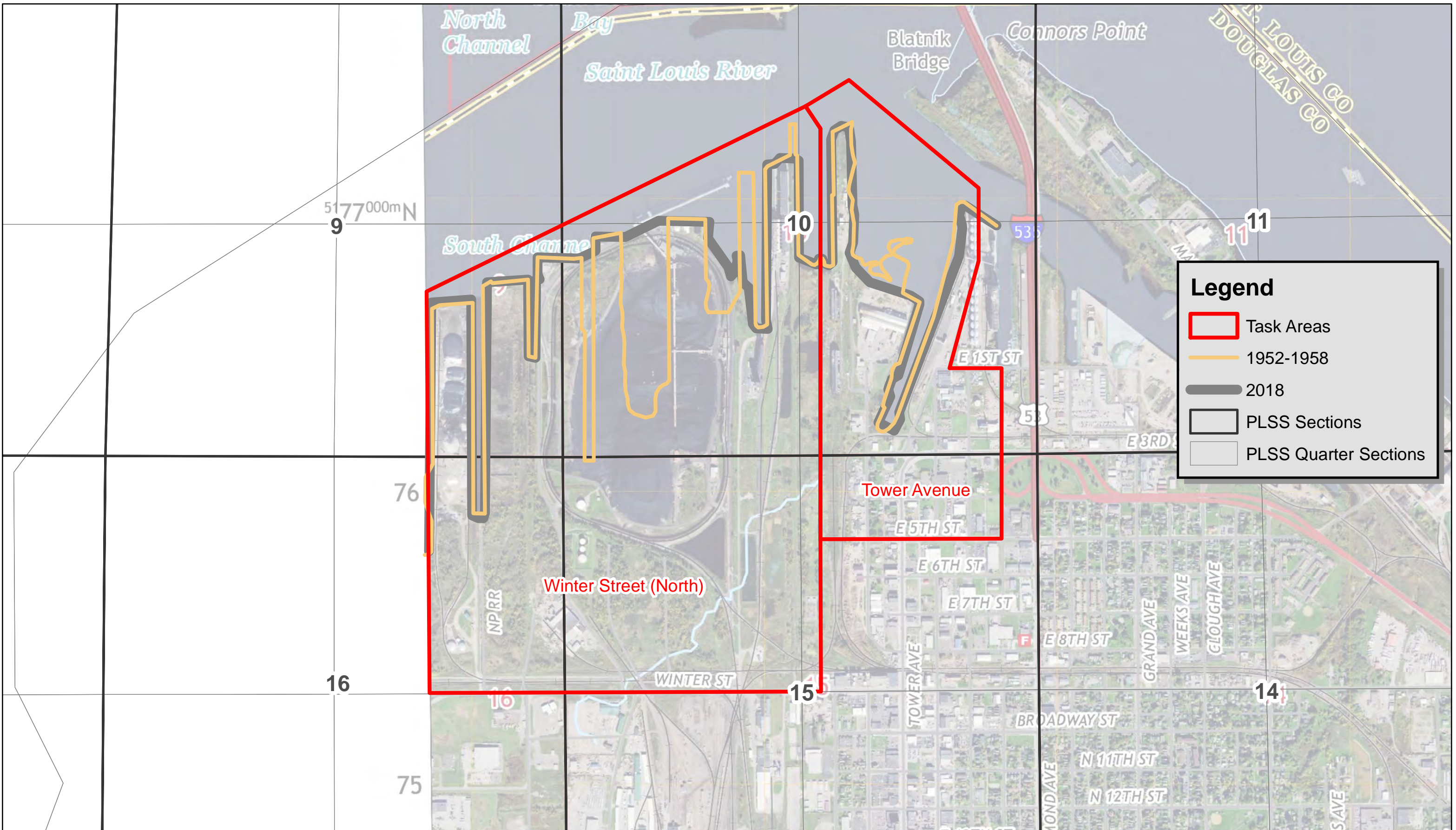
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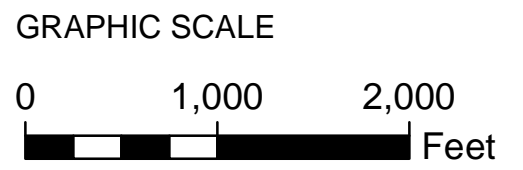
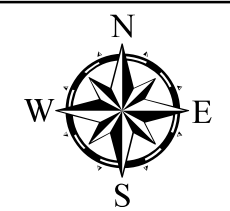
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Legend

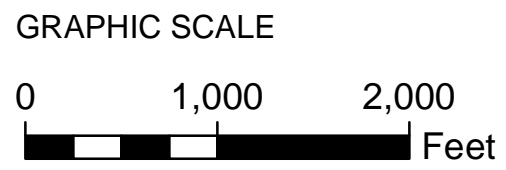
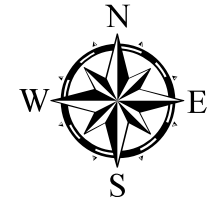
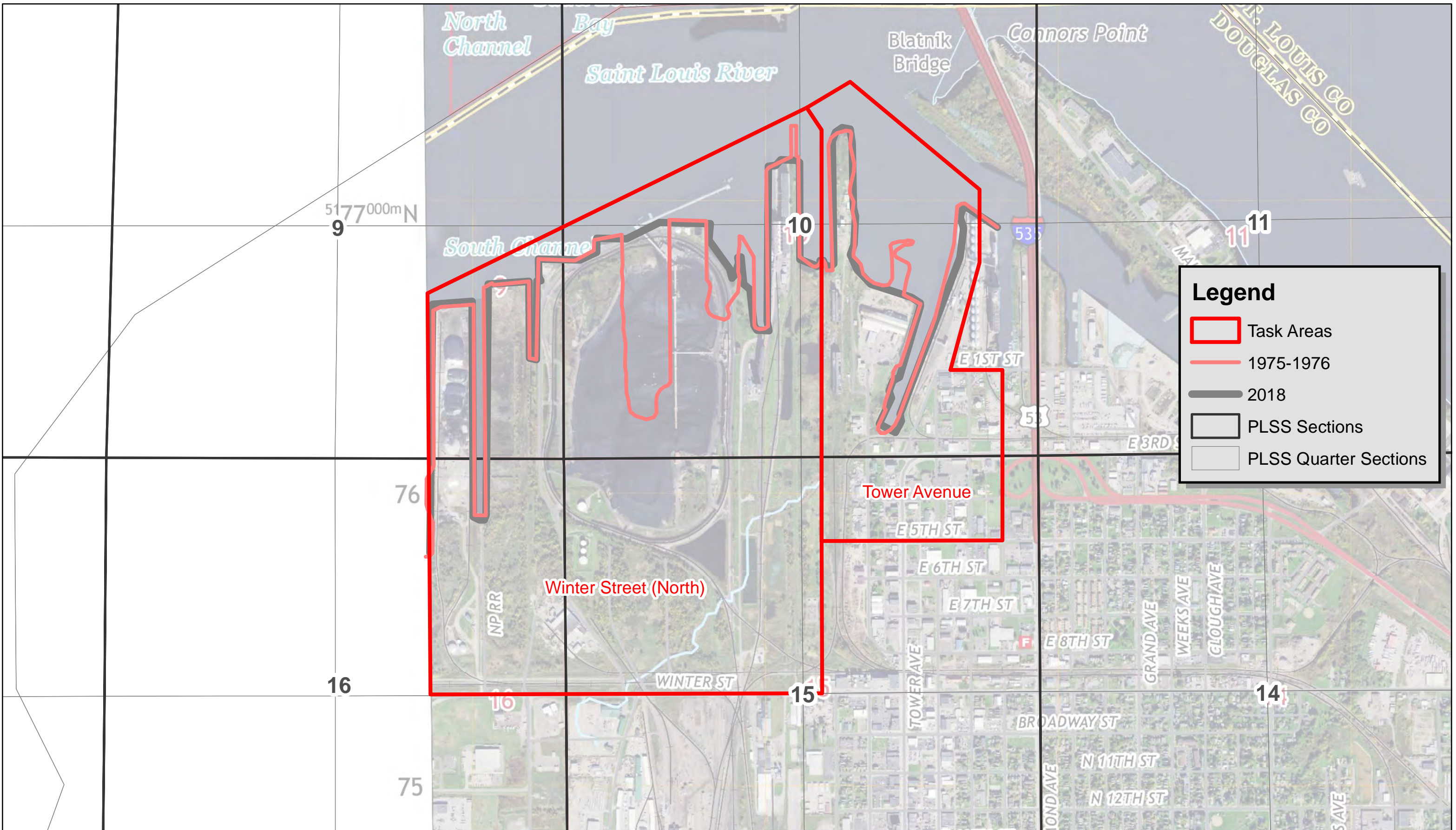
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- 1952-1958
- 2018
- PLSS Sections
- PLSS Quarter Sections



SHORELINE

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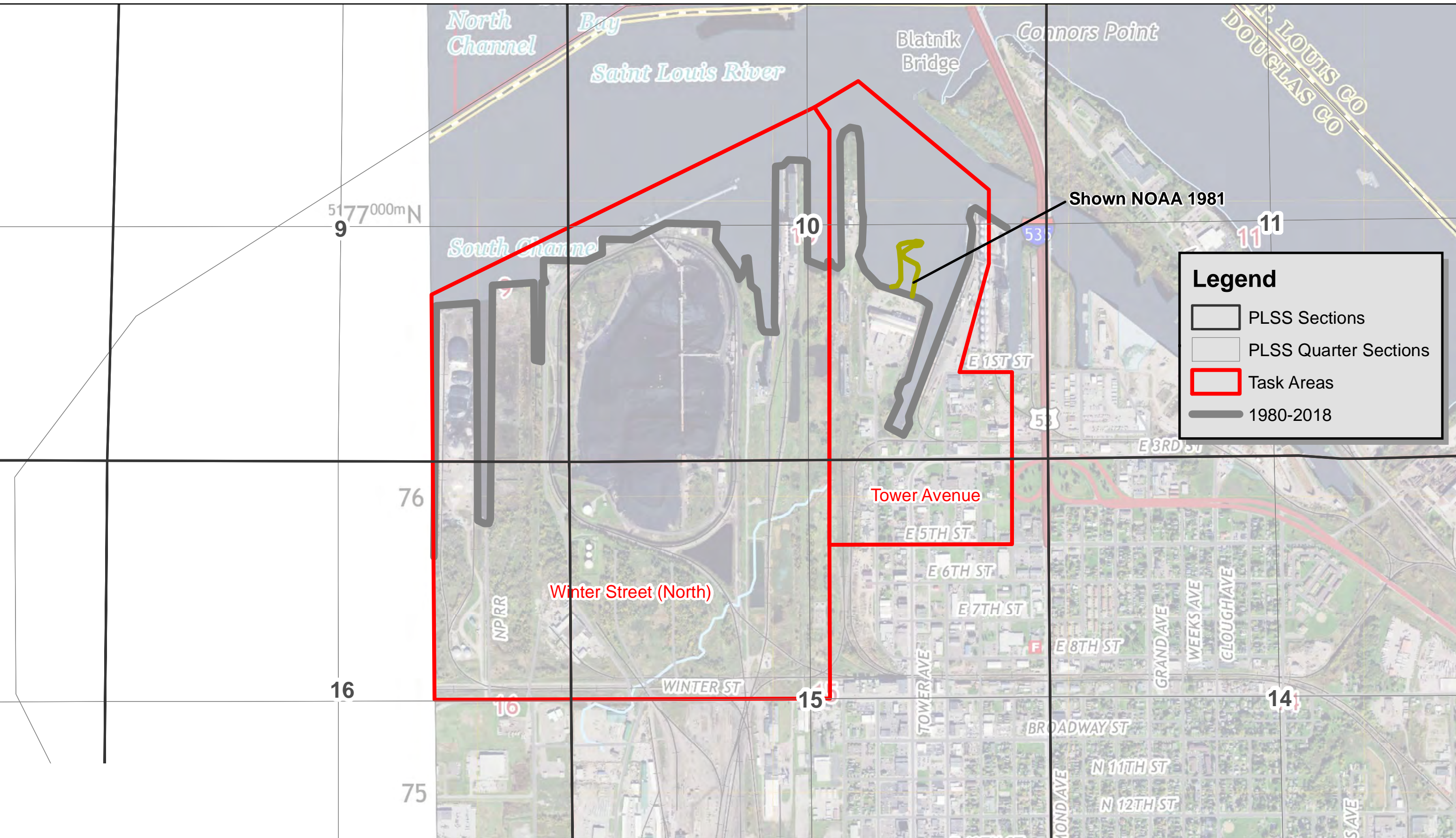
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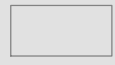

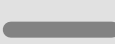
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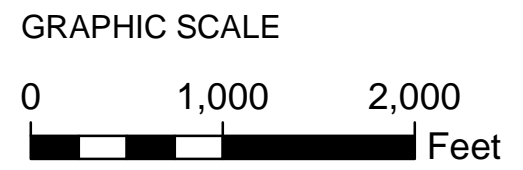
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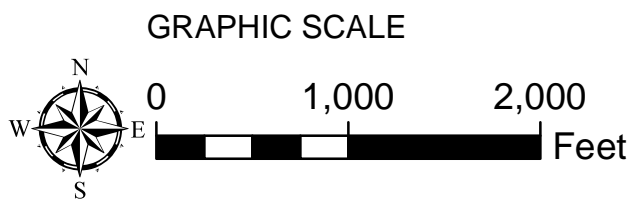
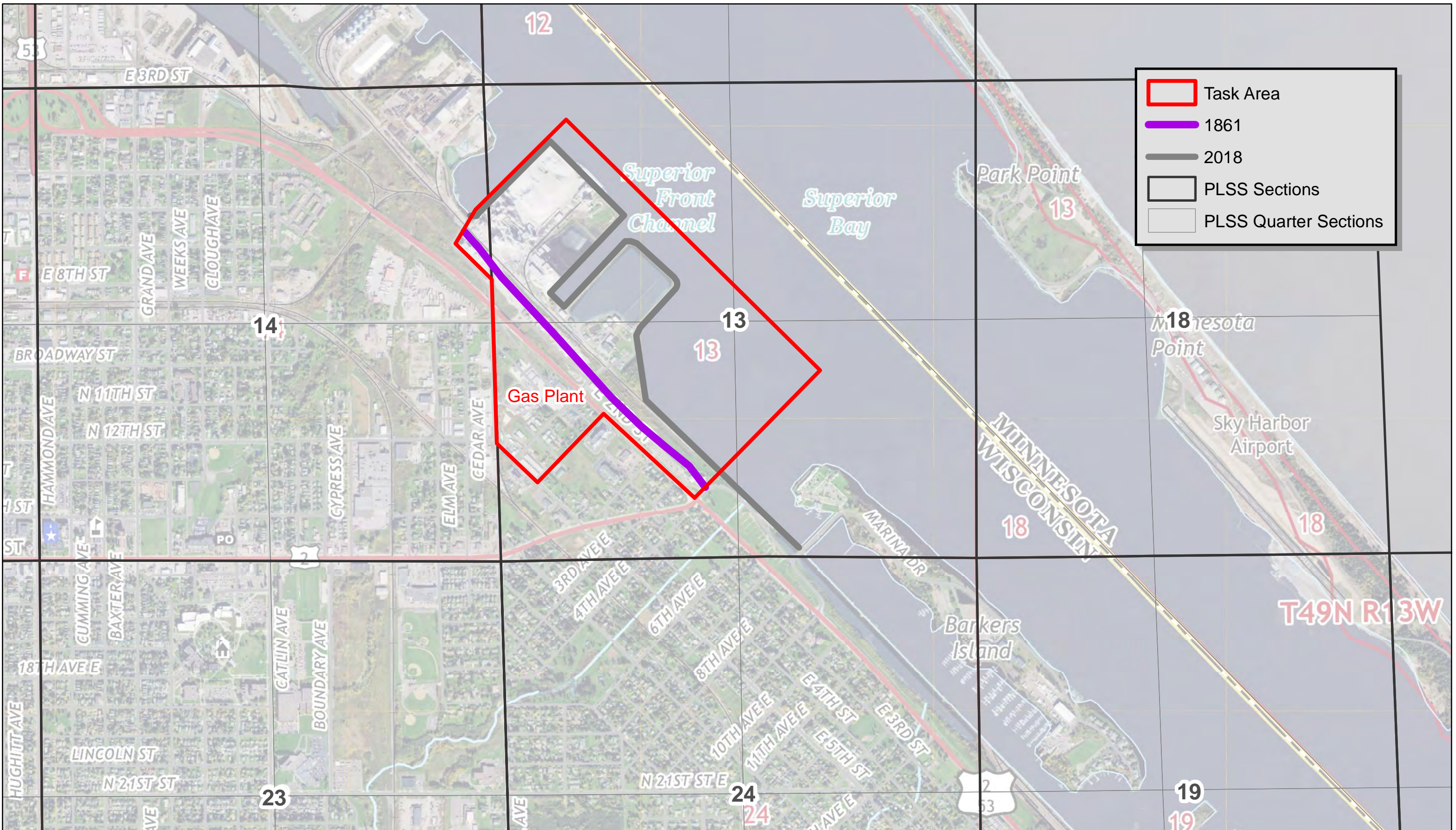
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-  PLSS Quarter Sections
-  Task Areas
-  1980-2018



SHORELINE

Winter Street & Tower Avenue:1980-2018

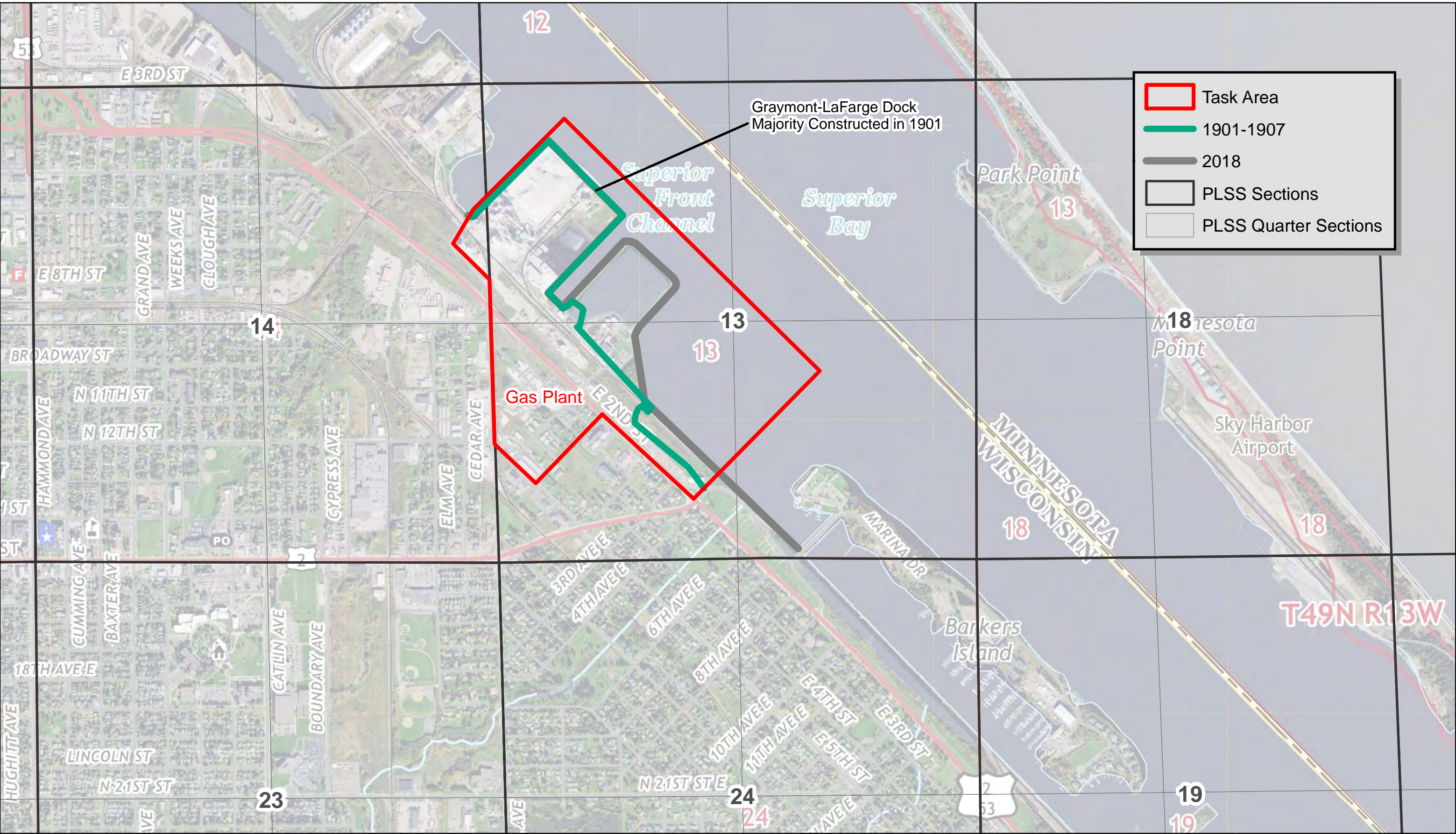
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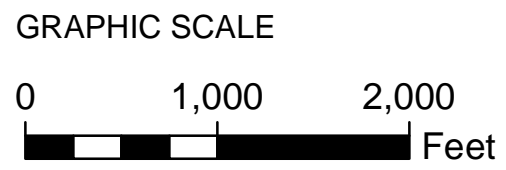
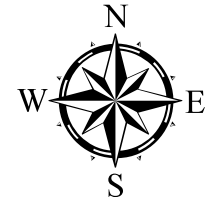
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Gas Plant: 1861

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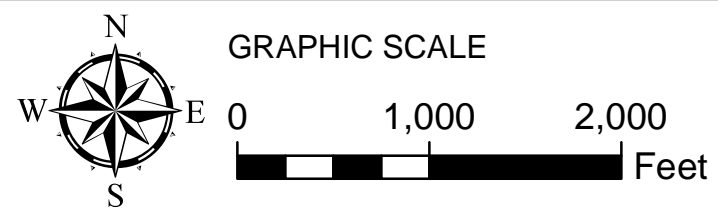
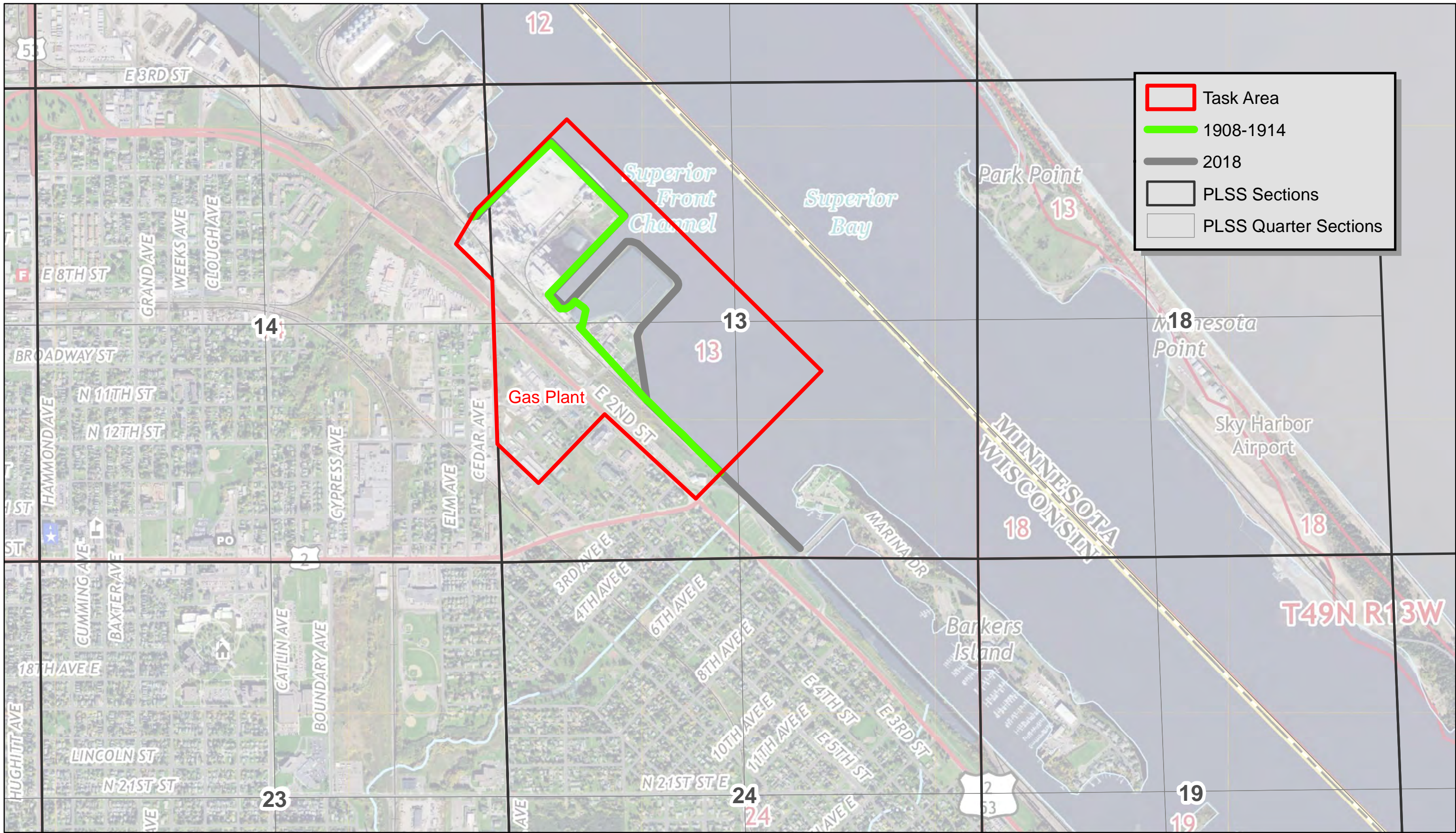


	Task Area
	1901-1907
	2018
	PLSS Sections
	PLSS Quarter Sections



SHORELINE

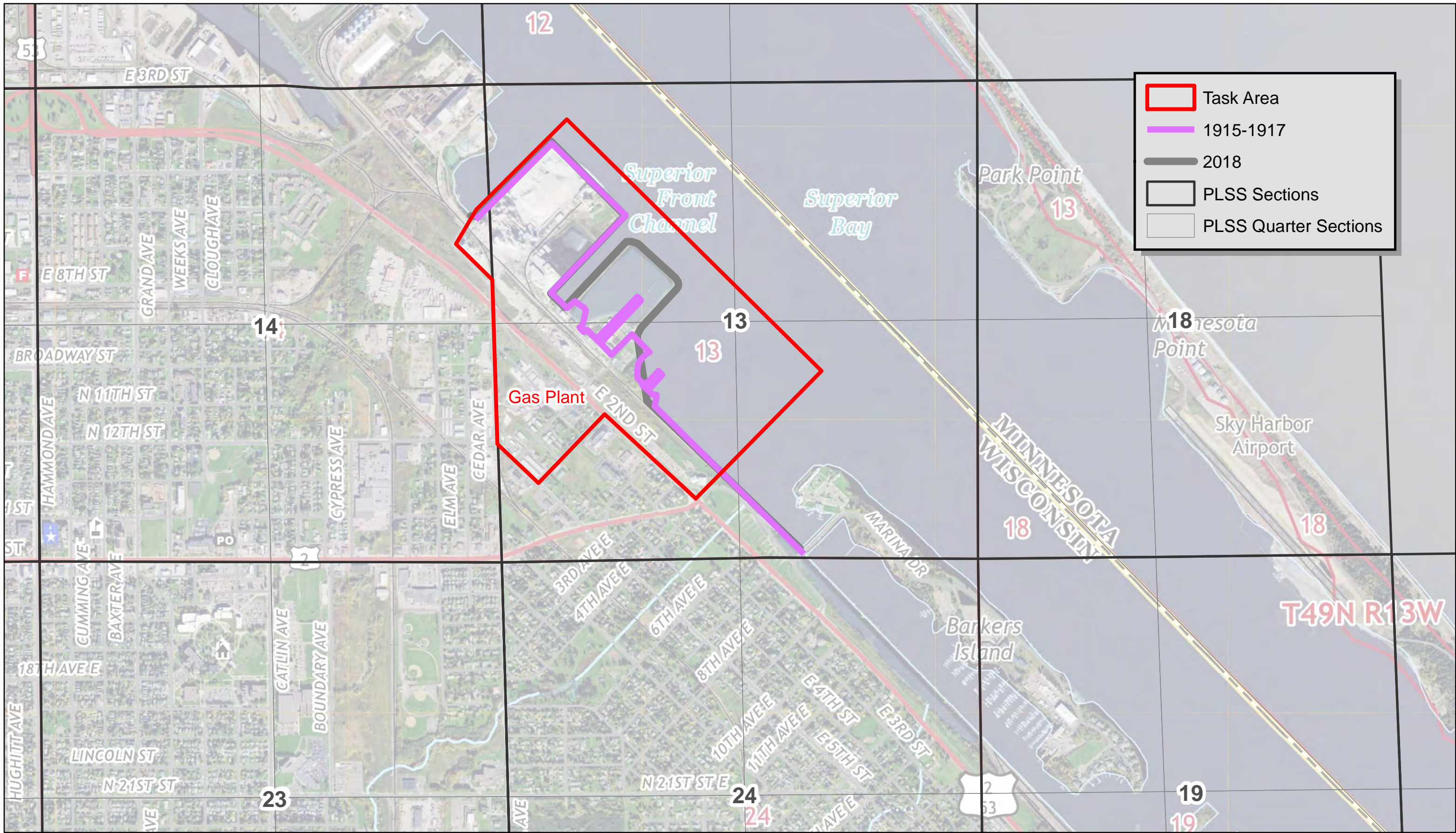
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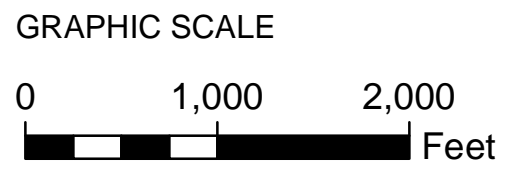
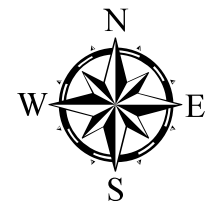
SHORELINE

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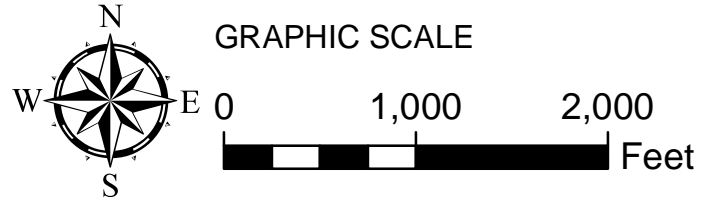
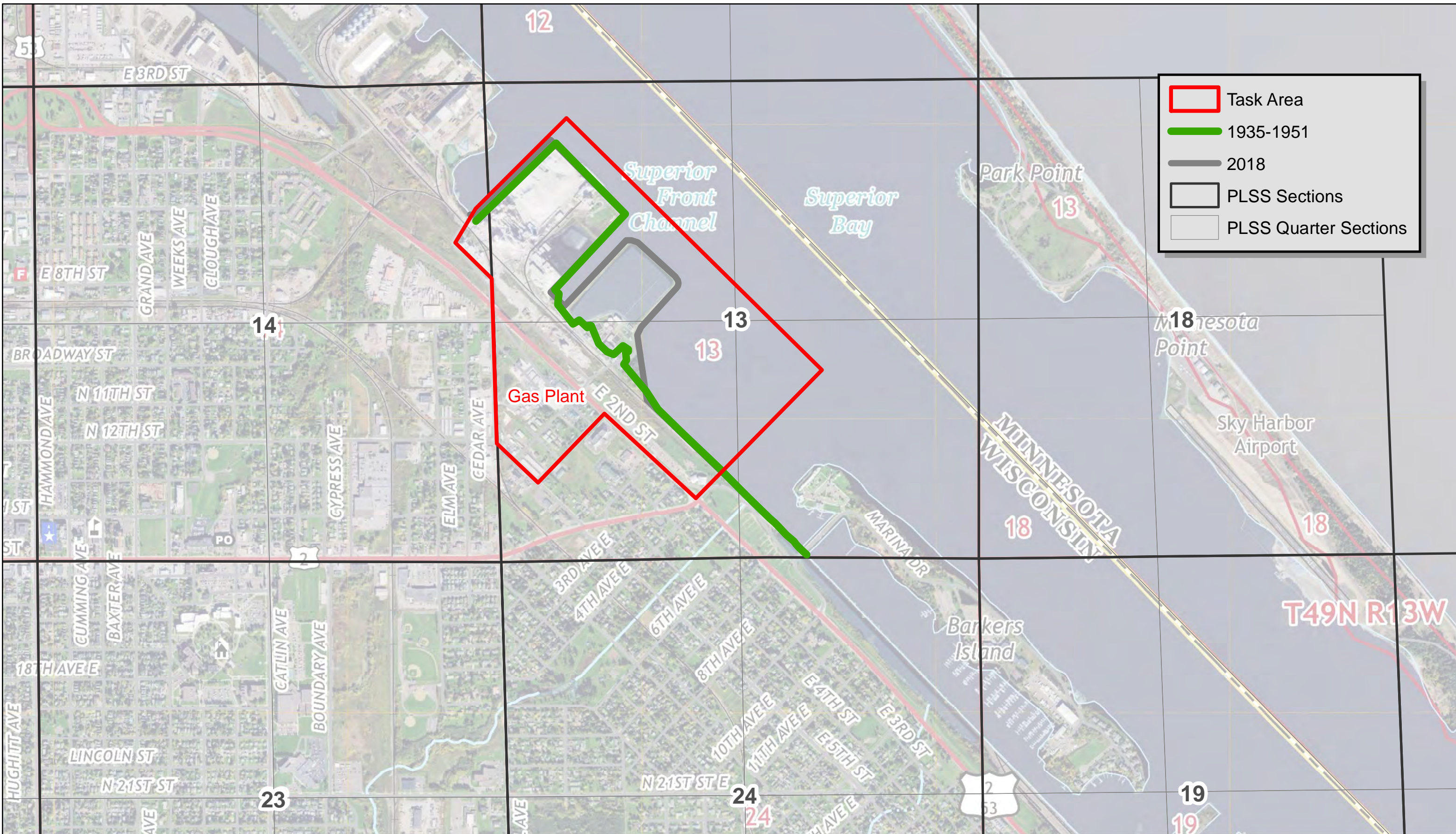
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	1915-1917
	2018
	PLSS Sections
	PLSS Quarter Sections



SHORELINE

Gas Plant: 1915-1917

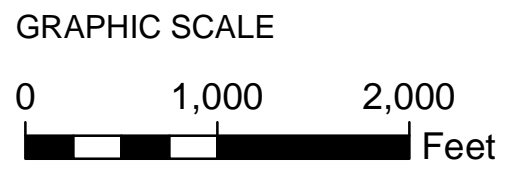
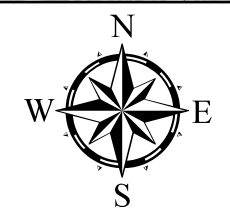
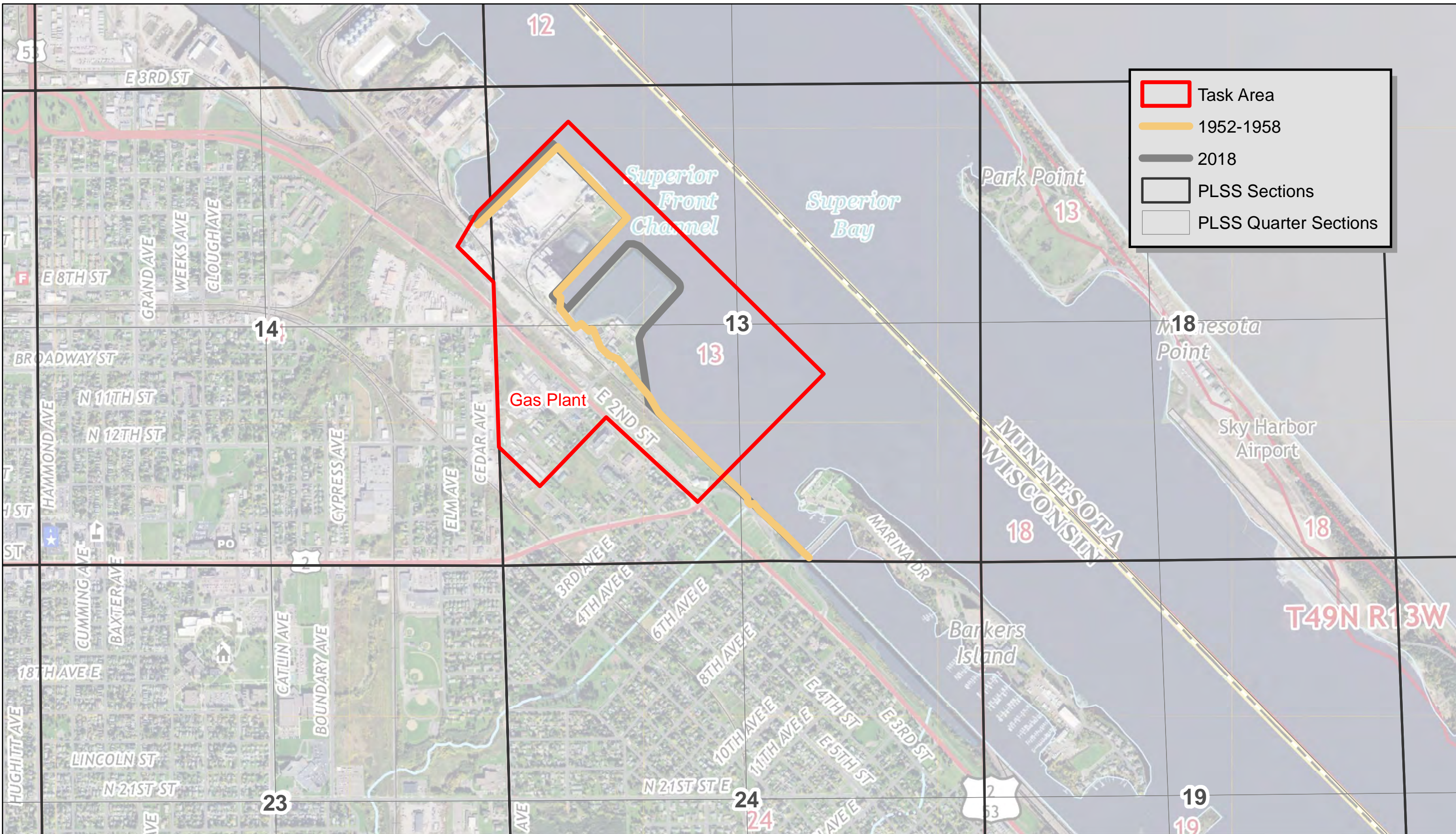
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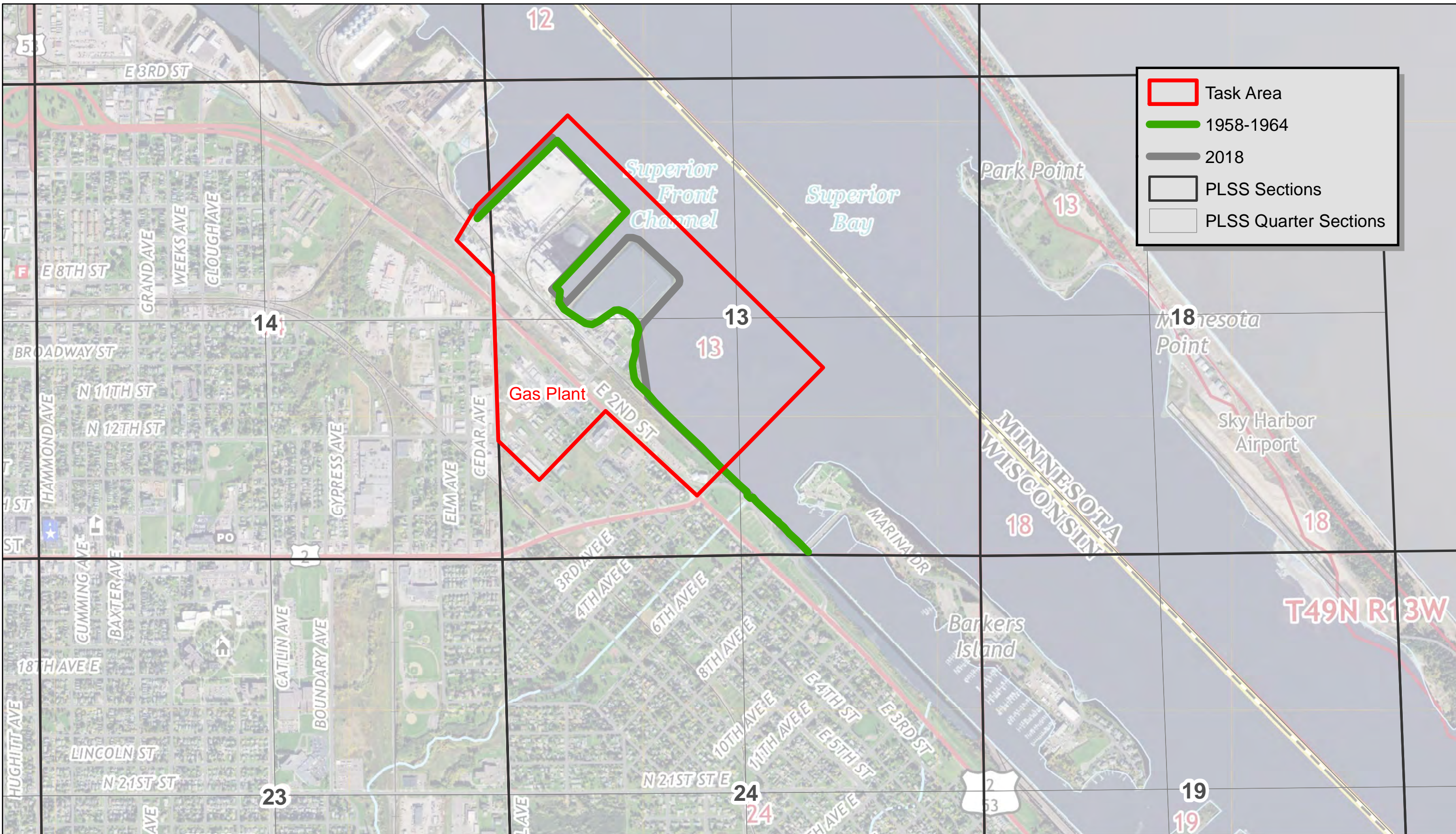
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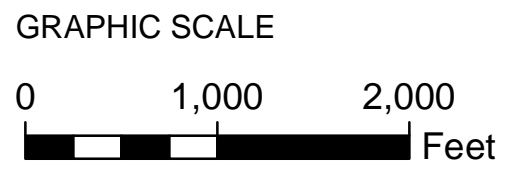
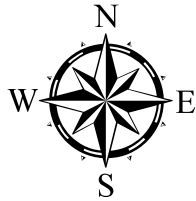
SHORELINE

Gas Plant: 1952 - 1958

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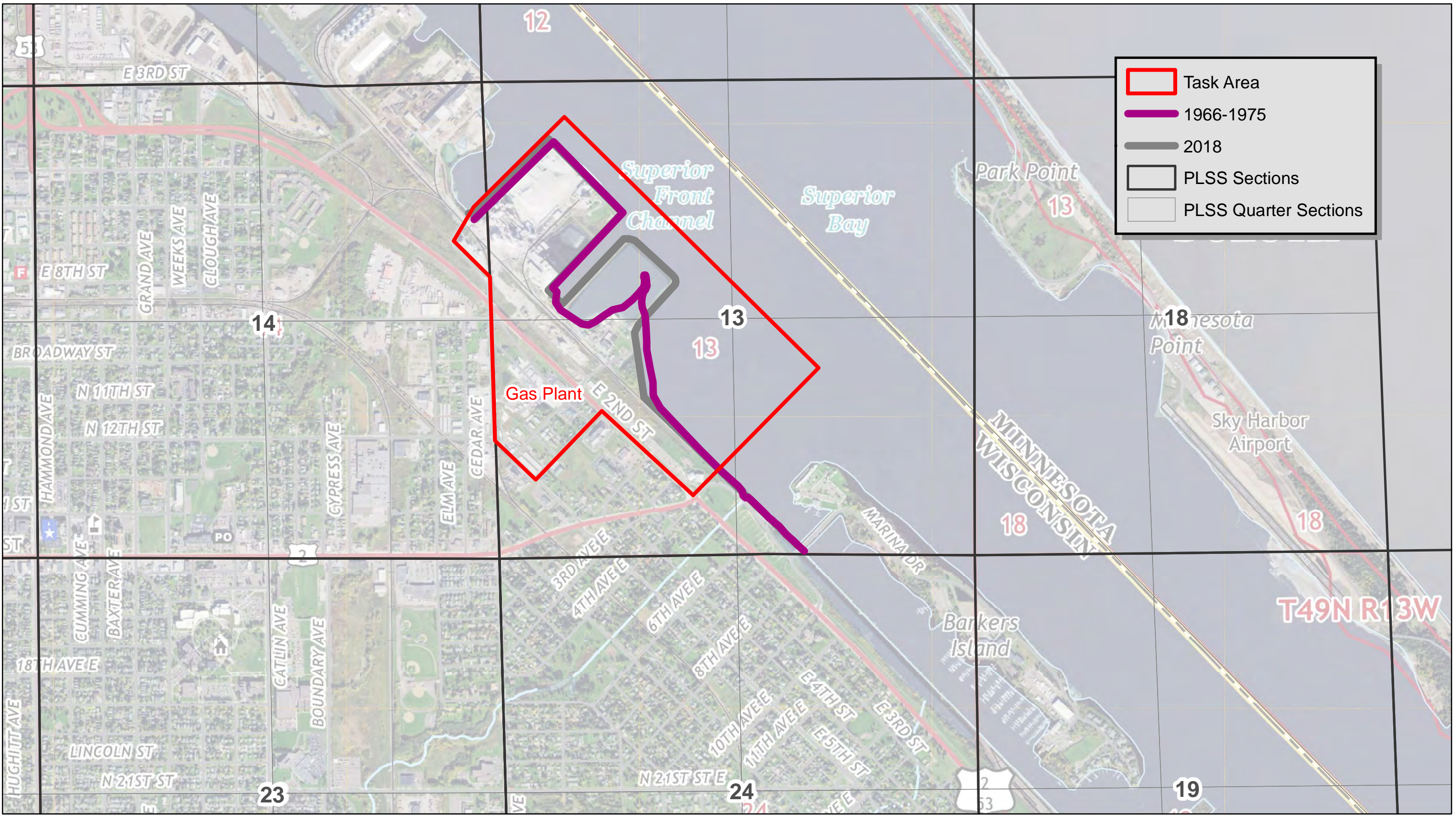
	Task Area
	1958-1964
	2018
	PLSS Sections
	PLSS Quarter Sections



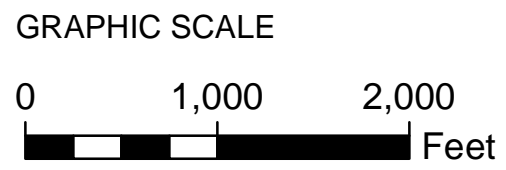
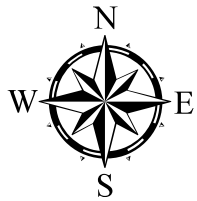
SHORELINE

Gas Plant: 1958-1964

Project: #18328 | Directory: GIS | Created by: DGF | Date: 8/13/2019 | Filename: 1966-1975 shoreline.g | Coordinate System: NAD 1983 UTM Zone 15N



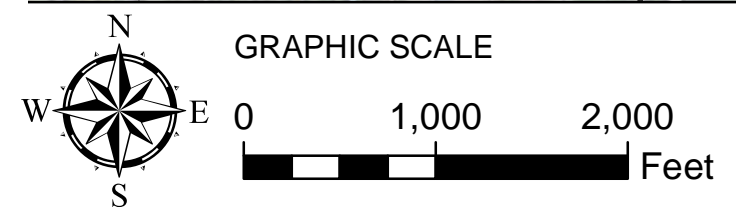
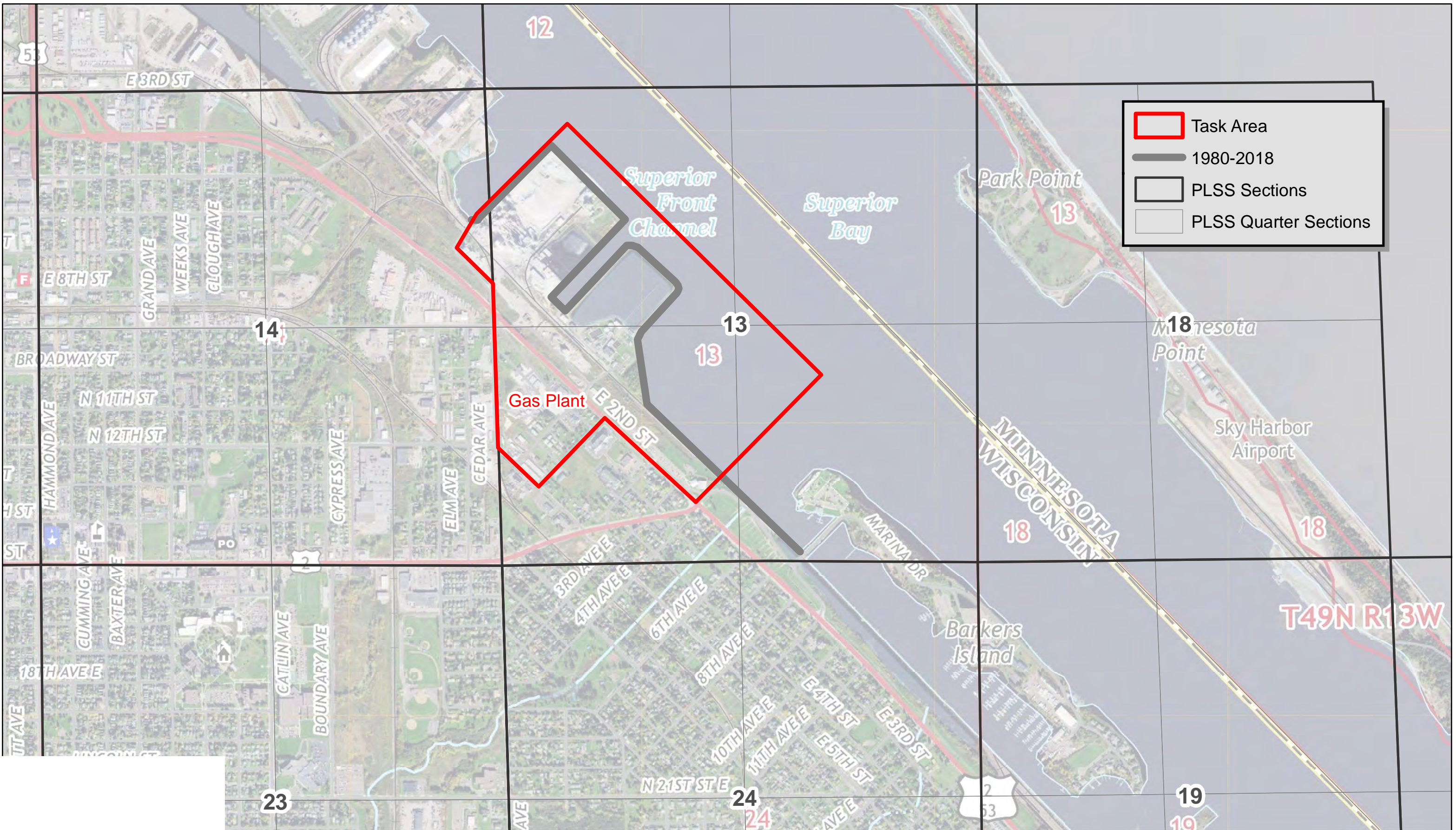
	Task Area
	1966-1975
	2018
	PLSS Sections
	PLSS Quarter Sections



SHORELINE

Gas Plant: 1966-1975

Project: #18328 | Directory: GIS | Created by: DGF | Date: 8/13/2019 | Filename: 1980-2018 shoreline g | Coordinate System: NAD 1983 UTM Zone 15N



SHORELINE

Gas Plant:1980-2018

APPENDIX

Listing of Reviewed Maps and Historical Documents

References

- 1825: *Survey of Lake Superior*, prepared by Henry W. Bayfield
- 1861: *No Title*, prepared by the National Oceanic and Atmospheric Administration
- 1863*: *Preliminary Chart of the West End of Fond du Lac of Lake Superior Embracing Superior, St. Louis and Allouez Bays and the St. Louis River to the Head of Navigation*, prepared by the Bureau of Topographical Engineers of the War Department
- 1873: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1880: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1883*: *Bird's Eye View of Superior, Wisconsin, County Seat of Douglas County*, prepared by J.J. Stoner, Madison, WI
- 1887: *Superior, Douglas County, Wisconsin*, prepared by the Sanborn Map & Publishing Co., Limited
- 1887*: *Map of West Superior, Wisconsin*, prepared by the Land & River Improvement Company
- 1887: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1889*: *Map of West Superior, Wisconsin*, prepared by the Land & River Improvement Company
- 1889***: *Superior, Douglas County, Wisconsin*, prepared by the Sanborn Map & Publishing Co., Limited
- 1890*: *Map of West Superior, Wisconsin*, prepared by the Land & River Improvement Company
- 1890*: *Map of the City of Superior, Douglas County, Wisconsin*, prepared by Bedford Brothers Real Estate, 625 Tower Avenue West Superior, WI
- 1890: *Eye of the North-West. First Annual Report of the Statistician of Superior, Wisconsin*, prepared by Frank A. Flower, City Statistician
- 1892: *Report of the City Statistician for 1892, Superior, Wisconsin*, prepared by Richmond Rochester, City Statistician, edited by Frank A. Flower
- 1892*: *Strands Sectional Map of the City of Superior and Vicinity: Douglas Co., Wis.*, prepared by M.A. Strand, Civil Engineer and Surveyor, Thompson Ave between 4th and 5th Street, Superior, WI
- 1893*: *Map of the Harbors of Duluth, Minn. And Superior, Wis.*, prepared by the U.S. Army Corps of Engineers
- 1893*: *Perspective Map of the City of Superior, Wis.* prepared by the American Publishing Co., Milwaukee, WI
- 1894*: *Map of West Superior, Wisconsin*, prepared by the Land & River Improvement Company
- 1895: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1897: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers

- 1898: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1898*: *Map of the Harbor at Duluth, Minn., and Superior, Wis. Progress Sheet No. 1 and Easterly Portion of District No. 2*, prepared by the U.S. Army Corps of Engineers.
- 1899: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1901*: *Chart of Harbor at Duluth, Minn. and Superior, Wis.*, prepared by the U.S. Army Corps of Engineers
- 1902: *The Superior Annual Review of the Year 1902*, prepared by H. C. Stivers, City Statistician
- 1904: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1906: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1907*: *Ernest A. Arnold Land Co.'s Sectional Map of Superior & Vicinity Douglas County Wisconsin*, produced by the Ernest A. Arnold Land Co., 10 Watkins Block, Superior, WI
- 1908*: *Chart of Harbor at Duluth, Minn. and Superior, Wis.*, prepared by the U.S. Army Corps of Engineers
- 1909*: *Map of Superior, Wisconsin and Vicinity*, prepared by the Land and River Co., Reorganized
- 1911: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1914*: *Chart of Harbor at Duluth, Minn. and Superior, Wis.*, prepared by the U.S. Army Corps of Engineers
- 1914**: *Superior, Douglas County, Wisconsin*, prepared by the Sanborn Map & Publishing Co., Limited
- 1915*: *Chart of Harbor at Duluth, Minn. and Superior, Wis.*, prepared by the U.S. Army Corps of Engineers
- 1915: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1915*: *Superior, WI, MN Quadrangle*, prepared by the U.S. Geological Survey
- 1916: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1917: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1917*: *Superior, WI, MN Quadrangle*, prepared by the U.S. Geological Survey
- 1919*: *Chart of Harbor at Duluth, Minn. and Superior, Wis.*, prepared by the U.S. Army Corps of Engineers
- 1924: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1925*: *Duluth Superior Harbor, Minn. And Wis. Howard's Bay and Entrance to Tower Bay Slip*, prepared by the U.S. Army Corps of Engineers
- 1925*: *Map of the City of Superior*, prepared by E.B. Banks, City Engineer

- 1926*: *Chart of Harbor at Duluth, Minn. and Superior, Wis.*, prepared by the U.S. Army Corps of Engineers
- 1929*: *Map of the City of Superior*, prepared by E.B. Banks, City Engineer
- 1932: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1935*: *Duluth-Superior Harbor*, prepared by the War Department Corps of Engineers
- 1936*: *Duluth-Superior Harbor*, prepared by the War Department Corps of Engineers
- 1937: *Survey of the Northern and North Western Lakes*, prepared by the Headquarters of the War Department Corps of Engineers
- 1938: Untitled aerial photograph of the Gas Plant task area, prepared by the AAA, provided by EDR
- 1938: Untitled aerial photographs of the Tower Ave and Winter Street North task areas, prepared by the USDA, provided by EDR
- 1940: *History of Duluth-Superior Harbor*, prepared by V.G. Erickson, R.S. Knowlton and R.J. Tanner, for the U.S. Army Corps of Engineers
- 1940*: *Duluth-Superior Harbor*, prepared by the War Department Corps of Engineers
- 1940: Untitled aerial photograph of the Gas Plant task area, prepared by the USDA, provided by EDR
- 1943*: *Duluth-Superior Harbor*, prepared by the War Department Corps of Engineers
- 1944: *Lake Superior*, prepared by the War Department Corps of Engineers
- 1946*: *Duluth-Superior Harbor*, prepared by the War Department Corps of Engineers
- 1948*: *Duluth-Superior Harbor*, prepared by the U.S. Army Corps of Engineers
- 1949: *Superior, Douglas County, Wisconsin*, prepared by the Sanborn Map & Publishing Co., Limited
- 1950*: *Duluth-Superior Harbor*, prepared by the U.S. Army Corps of Engineers
- 1951*: *Map of the City of Superior, Traveled Streets*, author unknown
- 1952*: *Duluth-Superior Harbor*, prepared by the U.S. Army Corps of Engineers
- 1952: Untitled aerial photographs of the Gas Plant, Tower Ave and Winter Street North task areas, prepared by the USGS, provided by EDR
- 1954*: *Superior, WI, MN Quadrangle*, prepared by the U.S. Geological Survey
- 1955*: *Duluth-Superior Harbor*, prepared by the U.S. Army Corps of Engineers
- 1955: *Superior, Douglas County, Wisconsin*, prepared by the Sanborn Map & Publishing Co., Limited
- 1958*: *Duluth-Superior Harbor*, prepared by the U.S. Army Corps of Engineers
- 1958: Untitled aerial photographs of the Gas Plant and Tower Ave task areas, prepared by the CCS, provided by EDR
- 1961*: *Duluth-Superior Harbor*, prepared by the U.S. Army Corps of Engineers
- 1961: Untitled aerial photographs of the Gas Plant, Tower Ave and Winter Street North task areas, prepared by the FS, provided by EDR
- 1962: *Lake Superior*, prepared by the U.S. Army Corps of Engineers
- 1964*: *Duluth-Superior Harbor*, prepared by the U.S. Army Corps of Engineers
- 1966: Untitled aerial photographs of the Gas Plant and Tower Ave task areas, prepared by the ASCS, provided by EDR

1967*: *Duluth-Superior Harbor*, prepared by the U.S. Army Corps of Engineers

1967: *Superior, Douglas County, Wisconsin*, prepared by the Sanborn Map & Publishing Co., Limited

1969*: *Superior, WI, MN Quadrangle*, prepared by the U.S. Geological Survey

1970*: *Duluth-Superior Harbor*, prepared by the U.S. Army Corps of Engineers

1970: Untitled aerial photographs of the Tower Ave and Winter Street North task areas, prepared by the USGS, provided by EDR

1972: *Superior, Douglas County, Wisconsin*, prepared by the Sanborn Map & Publishing Co., Limited

1973*: *Duluth-Superior Harbor*, prepared by the U.S. Army Corps of Engineers

1975*: *Superior, WI, MN Quadrangle*, prepared by the U.S. Geological Survey

1975: Untitled aerial photographs of the Gas Plant, Tower Ave and Winter Street North task areas, prepared by the USGS, provided by EDR

1976*: *Duluth-Superior Harbor*, prepared by the National Oceanic and Atmospheric Administration

1976: *Duluth-Superior Harbor Cultural Resources Study*, prepared by David A. Walker and Stephen P. Hall of the Archeology Department, FHA Division, Minnesota Historical Society, and authorized by the U.S. Army Corps of Engineers

1980*: *Duluth-Superior Harbor*, prepared by the National Oceanic and Atmospheric Administration

1980: Untitled aerial photographs of the Gas Plant and Tower Ave task areas, prepared by the ASCS, provided by EDR

1981: *Lake Superior*, prepared by the National Oceanic and Atmospheric Administration

1983*: *Superior, WI, MN Quadrangle*, prepared by the U.S. Geological Survey

1983: *Little Girls Point to Silver Bay*, prepared by the National Oceanic and Atmospheric Administration

1984: *Lake Superior*, prepared by the National Oceanic and Atmospheric Administration

1986: *Little Girls Point to Silver Bay*, prepared by the National Oceanic and Atmospheric Administration

1986: Untitled aerial photographs of the Gas Plant, Tower Ave and Winter Street North task areas, prepared by the USDA, provided by EDR

1988*: *Duluth-Superior Harbor*, prepared by the National Oceanic and Atmospheric Administration

1989*: *Duluth - Superior Harbor, Existing Land Use and Major Features* map, produced by the Metropolitan Interstate Committee

1991*: *Duluth-Superior Harbor*, prepared by the National Oceanic and Atmospheric Administration

1992: Untitled aerial photographs of the Gas Plant, Tower Ave and Winter Street North task areas, prepared by the NAPP, provided by EDR

1993*: *Superior, WI, MN Quadrangle*, prepared by the U.S. Geological Survey

1994: *Lake Superior*, prepared by the National Oceanic and Atmospheric Administration

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- 1996*: *Duluth-Superior Harbor*, prepared by the National Oceanic and Atmospheric Administration
- 1997*: *Duluth-Superior Harbor*, prepared by the National Oceanic and Atmospheric Administration
- 1997: Untitled aerial photographs of the Gas Plant and Winter Street North task areas, prepared by the USGS/DOQQ, provided by EDR
- 1998: Untitled aerial photograph of the Tower Ave task area, prepared by the USDA/DOQQ, provided by EDR
- 1999: *Little Girls Point to Silver Bay*, prepared by the National Oceanic and Atmospheric Administration
- 2000*: *Duluth-Superior Harbor*, prepared by the National Oceanic and Atmospheric Administration
- 2003: *Little Girls Point to Silver Bay*, prepared by the National Oceanic and Atmospheric Administration
- 2005*: *Duluth-Superior Harbor*, prepared by the National Oceanic and Atmospheric Administration
- 2006: Untitled aerial photographs of the Gas Plant, Tower Ave and Winter Street North task areas, prepared by the USDA/NAIP, provided by EDR
- 2007*: *Duluth-Superior Harbor*, prepared by the National Ocean Service, Coast Survey, Corps of Engineers, Geological Survey, and U.S. Coast Guard
- 2010: *Superior, WI, MN Quadrangle*, prepared by the U.S. Geological Survey
- 2010: Untitled aerial photographs of the Gas Plant, Tower Ave and Winter Street North task areas, prepared by the USDA/NAIP, provided by EDR
- 2013*: *Superior, WI, MN Quadrangle*, prepared by the U.S. Geological Survey
- 2013: Untitled aerial photographs of the Gas Plant, Tower Ave and Winter Street North task areas, prepared by the USDA/NAIP, provided by EDR
- 2014*: *Duluth-Superior Harbor*, prepared by the National Ocean Service, Coast Survey, Corps of Engineers, Geological Survey, and U.S. Coast Guard
- 2017: Untitled aerial photographs of the Gas Plant, Tower Ave and Winter Street North task areas, prepared by the USDA/NAIP, provided by EDR
- 2018: *Superior, WI, MN Quadrangle*, prepared by the U.S. Geological Survey

*Detail images of these maps, with the five task areas outlined, are included in the document *Historic Records Screening Report: Historic Maps Supplemental Volume*, submitted to the WDNR in November 2019.

**Index sheets from these map collections, with the five task areas outlined, are included in the document *Historic Records Screening Report: Historic Maps Supplemental Volume*, submitted to the WDNR in November 2019.