

**HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
PHASE I ENVIRONMENTAL SITE ASSESSMENT
RIVER RIPARIAN CONNECTIVITY & HABITAT - SECTION 506 PROJECT
COOK COUNTY, ILLINOIS**

Hydraulics and Environmental Engineering Section (TS-DH)
US Army Corps of Engineers, Chicago District

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**HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
RIVER RIPARIAN CONNECTIVITY & HABITAT - SECTION 506 PROJECT
COOK COUNTY, ILLINOIS**

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INTRODUCTION

The purpose of this report is to discuss the hazardous, toxic, and radioactive waste (HTRW) investigation for the River Riparian Connectivity & Habitat Section 506 Project. This report identifies both HTRW and non-HTRW environmental issues, and presents appropriate measures to resolve these issues. The methods used in performing the investigation are described in detail. Conclusions and recommendations regarding potential impacts due to HTRW and non-HTRW issues associated with the project site are provided.

AUTHORITY

Engineer Regulation (ER) 1165-2-132, Hazardous, Toxic, and Radioactive Waste (HTRW) Guidance for Civil Works projects, requires that a site investigation be conducted as early as possible to identify and evaluate potential HTRW problems. According to ER 1165-2-132, non-HTRW issues that do not comply with the federal, state, and local regulations should be discussed in the HTRW investigation along with HTRW issues.

The HTRW investigation presented in this report was conducted during the feasibility phase of the project. This report was performed at the level of detail required and relies on existing information, observations made through database research, an aerial photograph, topographic map, and historical document review, a site visit, and information provided by the local sponsor. As stated in the ER-1165-2-132 an initial assessment as appropriate for Reconnaissance Study should be conducted as a first priority for projects with no prior HTRW consideration. If the initial assessment indicated the potential for HTRW, testing, as warranted, and analysis similar to a Feasibility Study should be conducted prior to proceeding with the project design.

Hazardous, Toxic, and Radioactive Waste

The objective of ER 1165-2-132 is to outline procedures to facilitate early identification and appropriate consideration of HTRW. This investigation, therefore, identifies potential HTRW and discusses resolutions and/or provides recommendations regarding the HTRW identified.

Non-Hazardous, Toxic, and Radioactive Waste

According to ER 1165-2-132, non-HTRW environmental issues that do not comply with federal, state, and local regulations should be discussed in the HTRW investigation along with HTRW. For example, solid waste is a non-HTRW issue considered. Petroleum releases from Leaking Underground Storage Tanks (LUSTs) are not considered HTRW, but are regulated under the Illinois Administrative Code (IAC), Title 35, Part 731 – Underground Storage Tanks, Part 732 – Petroleum Underground Storage Tanks, and Part 742 – Tiered Approach to Corrective Action Objectives (TACO). These sites have the

potential to impose environmental hazards. Non-HTRW issues identified during the investigation are also discussed in this report, along with resolutions and/or recommendations for resolution.

GUIDANCE

Supplemental guidance was provided by the Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process (Designation: E 1527-13) prepared by the American Society for Testing of Materials (ASTM). The purpose of this guidance is to define good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and petroleum products. These standards recommend that an environmental assessment include a records review, site visit, interviews, and report preparation.

The goal of the environmental site assessment process is to identify recognized environmental conditions (RECs) on a property. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions; background concentrations of anthropogenic compounds are de minimis.

LAWS AND REGULATIONS

Federal

The definition of HTRW according to ER 1165-2-132, page 1, paragraph 4(a) is as follows: “Except for dredged material and sediments beneath navigable waters proposed for dredging, for purposes of this guidance, HTRW includes any material listed as ‘hazardous substance’ under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq (CERCLA). (See 42 U.S.C. 9601(14).) Hazardous substances regulated under CERCLA include ‘hazardous wastes’ under Sec. 3001 of the Resource Conservation and Recovery Act, 42 U.S.C. 6921 et seq; ‘hazardous substances’ identified under Section 311 of the Clean Air Act, 33 U.S.C. 1321, ‘toxic pollutants’ designated under Section 307 of the Clean Water Act, 33 U.S.C. 1317, ‘hazardous air pollutants’ designated under Section 112 of the Clean Air Act 42 U.S.C. 7412; and ‘imminently hazardous chemical substances or mixtures’ on which EPA has taken action under Section 7 of the Toxic Substance Control Act, 15 U.S.C. 2606; these do not include petroleum or natural gas unless already included in the above categories. (See 42 U.S.C. 9601(14).)”

As noted in 42 U.S.C. 9601(14), the term “hazardous substance” does not include crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance, nor does the term include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel. Underground storage tanks (USTs) are federally regulated under 40 CFR Part 280, which includes technical standards and corrective action requirements for owners and operators of USTs.

State

The Illinois State regulations were examined to determine which regulations governed the state specific hazardous waste disposal, release, and cleanup requirements. Illinois regulates USTs under Illinois Administrative Code, Title 35, Subtitle G, Chapter I, Subchapter D, Part 731, Underground Storage Tanks. The definition of a regulated substance under this regulation means any “hazardous substance” or “petroleum”. Hazardous substance UST is defined as an UST system that contains a “hazardous substance”, or any mixture of “hazardous substances” and “petroleum” which is not a petroleum UST system. Petroleum UST means any UST system that contains petroleum or a mixture of petroleum with minimal quantities of other regulated substances.

Owners and operators of petroleum or hazardous substance UST systems must comply with the requirements of Part 731 except for USTs excluded under Section 731.110(b) and UST systems subject to RCRA corrective action requirements under 35 Ill. Adm. Code 724.200, 724.296, 725.296, or 725 Subpart G. Other Illinois hazardous waste regulations included in 35 Illinois Administrative Code Subtitle G, Chapter I, Waste Disposal include Subchapter b, Permits; Subchapter c, Hazardous Waste Operating Requirements; Subchapter d, Part 738, Hazardous Waste Injection Restrictions; Subchapter e, Specific Hazardous Waste Management Standards; and Subchapter h, Illinois “Superfund” Program.

SITE DESCRIPTION

The River Riparian Connectivity and Habitat Restoration study area consists of three contiguous parks that straddle the Chicago River (**Figure 1**) in Cook County, Illinois. All three parks are leased, maintained, and managed by the Chicago Park District and owned by the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC). The three parks, Ronan Park (13-acres), River Park (30-acres) and Legion Park (50-acres) (**Figure 2**) encompass 2-miles of contiguous river. The confluence of the North Branch Chicago River (NBCR) and the North Shore Channel (NSC) at the Foster Avenue dam is located within River Park. The parks were integrated into the Chicago Park District system between 1917 and 1934. In the 1990s, the park district began to lease MWRDGC land and upgrade the walking and bike riding trails through much of the parks lining the river. The boundaries of the project area include the riparian zone along the NBCR and NSC bounded by Peterson Avenue to the north and Lawrence Avenue to the south.

PROJECT DESCRIPTION

The restoration measures being considered for implementation are summarized below and shown on **Figure 3**. Bank grading priority areas are noted in **Figures 4, 5, and 6**:

- Stream channel restoration to include removal of all, or a portion of, the concrete in the channel upstream of the existing dam; installation of riffles, step-pools while dam is in place; removal of the dam at mouth of stream and replace with boulder-step pool; provide natural alluvium of cobbles, gravels and sands in the channel; and plant hydraulic dead pockets with native species.
- Aquatic bed restoration to include installation of a mix of sand, silt and organic leaf litter compost soil amendment and proper hydrogeomorphology to ensure healthy plant establishment; installation of a subset of fell trees to provide snag habitat; native aquatic macrophyte seed mix and plug installation; and hand-wicking (herbicide) invasive species.
- River bank restoration to gentle the bank slopes of the NBCR and NSC including the following activities: removal of trees and all vegetation in designated bank gentling areas; removal and disposition of all foreign debris and retain natural materials; installation of natural materials include boulders and limestone slabs (not riprap); gentle bank slopes and vary the grading lines to create an undulating bank that mimics more of a natural system; excavate terraces where appropriate to add to the natural geomorphology of the system; and establish native plant community through native seeding and plug installation and subsequent establishment activities.
- Riparian savanna restoration in open park lands that are generally not utilized for active recreation. Measure activities include: removal of all invasive and exotic shrubs and herbaceous species; removal of small nonnative trees; selective seeding and plug installation and subsequent establishment activities.

GENERAL METHODS

The following sections contain information that was requested and gathered in accordance with ER 1165-2-132 for this assessment. The information was obtained from:

- Existing information review
- Historical topographic map and aerial photograph review
- Database research
- Site visit

This information was used to determine if the measures selected for restoration will have an impact on any environmental conditions that may exist in the surrounding areas, and if

there are environmental conditions on-site will have an impact on implementation of the project.

EXISTING INFORMATION REVIEW

Soil Type

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining, and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information obtained from the NRCS website (Attachment 1) is based on Soil Conservation Service SSURGO data.

The dominant soil type found in the project area are Orthents (nearly level, undulating, and rolling), typically found in ground moraines and lake plains. The parent material is earthy fill consisting of primarily silty clays. Soils are moderately well drained with high runoff potential, except in level areas. The depth to the water table is 24 to 42 inches.

Soil Quality

The environmental soil quality at the project site is largely unknown. Review of information collected to complete this investigation suggests that the topography of the project area was modified with the construction of the NSC in the early 1900s and placement of fill in side cast areas. Most of the project area has not been developed, and there are no indications that any development was industrial in nature. There are no instances indicating a release of petroleum products or hazardous substances within the project boundaries, nor has the site been developed with industry. Soils are expected to contain background de minimis concentrations of PAHs and metals similar to soils found in the Chicago region. The U.S. Geological Survey, in cooperation with the Chicago Department of Environment, assessed the concentration of PAHs and inorganic constituents in ambient surface soils in the city of Chicago (USGS 2003). USGS found that PAH compounds are ubiquitous in ambient surface soils due to atmospheric settling of particulate matter. The majority of PAHs released to the environment are derived from anthropogenic sources such as the operation of motor vehicles; burning coal, wood, or trash in a residential furnace; and industrial sources such as thermoelectric power generation and coking operations. USGS also found that while concentrations of various inorganic constituents (metals) in surface soils in the city of Chicago appeared to be affected by the natural development of the soils, the concentrations of arsenic, mercury, calcium, magnesium, phosphorus, copper, molybdenum, zinc, selenium were from 2 to 8 times higher, and concentrations of lead were about 20 times higher, than in typical soils from the surrounding area and indicate an anthropogenic source for these analytes as well. Background de minimis concentrations of PAHs and metals found in soils on the Chicago region are not RECs.

Sediment Quality

No project specific investigations were conducted to characterize sediment in the NBCR or NSC in the project area. Previous site visits conducted by members of the PDT suggest that the NBCR channel bed upstream of the dam consists of concrete; no fine grained sediment was found in the channel. Any sediment transported and deposited in the small impoundment upstream of the dam likely scours during flood events. In addition, the banks along the NSC are steep and eroding; the NSC bed likely consists of natural native materials. The quality of any fine-grained sediment found in the project area is likely reflective of the quality of the soil runoff within the watershed and may contain background concentrations of PAHs and metals, consistent with Chicago area soils.

Surface Water Quality

The State of Illinois is responsible for specifying appropriate water uses for state waters; identification of appropriate water uses takes into consideration the usage and value of public water supply, protection of fish, wildlife, recreational waters, agricultural, industrial, and navigational water ways. The assessment of suitability of a river, lake, stream, or wetland for a particular use is based on physical, chemical, and biological characteristics of the water body. Illinois Environmental Protection Agency (IEPA) applies water quality criteria to protect designated uses of waters of the state, and documents the quality of water of the state in the *National Water Quality Inventory Report*, an integrated report submitted biennially to EPA that is required to comply with Sections 305(b) and 303(d) of the Clean Water Act (CWA). The North Shore Channel and North Branch Chicago River are classified as general use waters and should be protected for aquatic life, wildlife, agricultural use, secondary contact use, and most industrial uses, and ensure the aesthetic quality of the State's aquatic environment; primary contact uses are protected for all general use waters whose physical configuration permits such use. Section 303(d) of the Clean Water Act requires states to develop a list of water quality limited waters (i.e. waters where uses are impaired), the pollutants causing impairment to those waters, and a priority ranking for the development of Total Maximum Daily Load (TMDL) calculations. Review Integrated Water Quality Report for the 2103/2014 water year (IEPA 2014) suggests the following:

- Segments IL_HCCA-04 (North Shore Channel), IL_HCC-02 (North Branch Chicago River south of the confluence with the North Shore Channel), and IL_HCC-07 (North Branch Chicago River north of the confluence) are 303(d) listed impaired waterways.
- The North Shore Channel and North Branch Chicago River are listed impaired for fish consumption in the study area.
- The North Branch Chicago River downstream of the dam is impaired for indigenous aquatic life use due to the concentrations of dissolved oxygen and total dissolved solids found in the stream.
- The North Branch Chicago River upstream of the dam is impaired for aquatic life use and primary contact recreation due to the presence of aldrin, chloride, DDT,

dissolved oxygen, hexachlorobenzene, phosphorus (total), and total suspended solids (TSS).

No project specific studies have been done to characterize the surface water quality at the project site.

Groundwater

Existing topographic information included in the Environmental Data Resources Geocheck – Physical Setting Source Summary (Attachments 2 and 3) suggests that the groundwater gradient at the site is generally to the east/southeast in the northern portion of the project area (Legion Park) and to the south in the southern portion of the project area (River and Ronan Parks). EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow as determined hydrogeologically, and the depth to water table. Reports indicate that the general direction of groundwater flow in the project is to the east, towards Lake Michigan. No project specific studies have been done to characterize the groundwater water quality at the project site.

HISTORICAL TOPOGRAPHIC MAP AND AERIAL PHOTOGRAPH REVIEW

Indications of potential RECs can be determined by identifying the past land use and site activities at the project area and surrounding areas. Identifying industrial and residential areas, observing any evidence of topographic changes, and locating extensive areas that lack vegetation can determine indications of a potential REC. Historical topographic maps and aerial photographs for the project area are included in Attachments 4, 5, and 6. A series of historical topographic maps from 1889 to 2012. Findings are presented in **Table 1**.

Table 1: Summary of Topographic Map Review

1889/1891 Topographic Maps	The NBCR is noted near its current/existing east/west alignment. A smaller unnamed north/south stream is located near the confluence of the NBCR and NSC and proceeds north, but is west of the current NSC/NBCR confluence. A smaller east/west stream is located near Bryn Mawr flows into the unnamed the north/south stream. Several roadways are present in the project area (Peterson, Bryn Mawr, and Foster) and there is spotty development in the surrounding area.
1900/1901 Topographic Maps	Development in the project area with the addition of structures to the map and additional roadways in the surrounding area; development appears residential in nature.
1929 Topographic Map	NSC is constructed just east of the unnamed north/south stream noted in previous topo maps. The confluence of the

	two waterways has been adjusted to the east. The small stream located near Bryn Mawr no longer shown and is presumed filled with construction of the NSC. Topographic changes are noted adjacent to the NSC and NBCR waterways; likely from placement of fill material generated during creation of the NSC. Deposits are located on the west bank of the NSC between Bryn Mawr and Foster and on the east and west banks of the NBCR from the confluence to Lawrence. No structures are located in the project area. The area surrounding densely developed. Residential neighborhoods, cemetery, golf course, schools, and parks surround.
1953 Topographic Map	Parks are labeled Legion and East River Parks in the project area. A pump station is noted on the east bank of the NBCR north of Lawrence. No structures are located in the project area. Riparian area along waterways reduced between 1929 and 1953.
1963 Topographic Map	Structures are located on or near the project area: a) on the west bank of the NSC south of Peterson, b) on the west bank south of Bryn Mawr (<i>in the location of Northside College Preparatory High School – outside of project area</i>), and c) north of Foster (<i>in the location of the US Marine Corps Reserve Center – outside of project area</i>). West River Park is delineated.
1972/1978/1993/1997 Topographic Maps	Structure located just south of Peterson on the west bank of the NSC is no longer present in 1972. East and West River parks noted as River Park and Ronan Parks delineated in 1993. No other significant changes in the project area between 1972 and 1997.

A series of historical aerial photographs were reviewed between 1938 and 2012. Findings from review of aerials covering the northern and southern portions of the project area (two sets of aerial photographs are required to cover project area) are summarized in **Table 2** below.

Table 2: Summary of Historical Aerial Photograph Review

1938 North	Project area is undeveloped and vegetated. The east bank south of Peterson is being used for unidentified purposes; vehicles, trailers, or small buildings are present. Trail along the west bank present. Areas of disturbance are noted on the west bank south of Bryn Mawr.
1938 South	Large area of land disturbance on west bank straddling Foster from the confluence north (<i>likely fill grading from construction of NSC</i>). Remaining project areas appear vegetated. Several unknown landforms present on the east bank directly across from confluence. Dam structure present at the confluence on NSC and NBCR.

1952 North	Project area appears to be undeveloped. No sign of previous activity along east bank south of Peterson, large areas appear to be platted for residential-type development along the west bank just south of Peterson and just south of Bryn Mawr (confirmed through review of Sanborn Maps (Attachments 7 and 8)).
1952 South	Disturbed area on west bank appears to be platted for residential development (confirmed through review of Sanborn Maps (Attachments 7 and 8)). Landforms removed from east bank.
1962 North	Previous platted areas are developed with several large buildings in each location. Areas of disturbance along the east bank.
1962 South	West bank area partly developed with U.S. Marine Corps Reserve Center (outside of project area). East bank north of Foster disturbed. Dam structure may have undergone changes, additional channel impacts noted in the aerial.
1972/1974/1984/1988 North	Buildings present on the west bank just south of Peterson removed between 1962 and 1972. The area appears to be disturbed in 1972, but vegetated in 1974. Three large circular landforms are located in their place (<i>presumed recreational features</i>). Previously disturbed areas on the east bank are vegetated in 1972; parking or other presumed recreational facility noted in 1972 on the east bank and tennis courts on west bank in 1984. Structures remain on the west bank just south of Bryn Mawr. 1984-1988 access, including trails, parking, and other presumed recreational facilities noted upland on the east and west banks.
1994/1999 North	The structures have been removed from the west bank south of Bryn Mawr and replaced with different structures (<i>in the location of the Northside College Prep High School</i>).
1972/1978/1984/1988/1994/1999 South	Earth disturbance and filling into NSC noted on west bank north of Lawrence in 1972. Other areas of the project vegetated or covered with recreational trails/features. The previously disturbed area north of Lawrence on the west bank appears to continue to be disturbed through 1994 when it appears there is no more activity; in 1999 the area appears to be vegetated.
2005-2012 North/South	The project area is mostly vegetated outside of areas where buildings were constructed in adjacent upland areas. Recreational facilities, such as parking, trails, and other amenities present.

Review of historical topographic maps and aerial photographs suggest that much of the project area was undeveloped and used primarily for recreational purposes. Review of historical maps suggest that fill generated from construction of the North Shore Channel appears to have been placed in adjacent upland areas along the NSC and NBCR. Structures were erected in several places along the NSC in the early-1900s, some removed in the mid-1900s, and others removed to accommodate more recent structures that are outside of the project area (in more upland areas of the riparian zone). Review of Sanborn Maps (Attachments 7 and 8) suggests that there were no structures placed in areas of the project that were industrial in nature.

With the exception of the MWRD pump station located north of Lawrence on the east bank, structures adjacent to and within the riparian zone of the channel are neutral in nature and consist primarily of residential structures, recreational and park amenities, and schools. Two portions of the project area require further investigation to determine status of the site:

- Aerial Photographs suggest that the west bank of the NSC north of Lawrence was disturbed for several years with activities ending in the 1990s. It is unclear the nature of the activity. While no grading or excavation is planned for this portion of the project area, the current status of the site and the site vegetation should be confirmed.
- Aerial photographs and topographic maps suggest that the west bank of the NSC south of Peterson housed previous structures – the nature of the structures is unknown. Review of Sanborn Maps suggests that there were no structures placed in areas of the project that were industrial in nature. The current status of the area should be confirmed through a site visit.

Areas within the project limits identified for bank grading may contain construction-type rubble or foundations from previous structures/recreational amenities that have removed from the project area. These materials, if encountered, should be incorporated into the project or removed and disposed at a clean construction/demolition debris (CCDD) facility.

DATABASE SEARCH

A search of available environmental records was conducted utilizing Environmental Database Resources, Inc. (EDR). EDR searched federal and state databases using the minimum search distances issued in the ASTM E 1527-13 guidelines; the project area was split into two database searches to accommodate the size of the project area. **Table 3** notes the recommended ASTM search distances for federal and state databases and the actual search distances used in the report. The EDR overview maps displaying the project area and the search results are given in **Figures 7 and 8**. EDR site designations shown in the evaluation tables below with an “N-” in the EDR Map ID were generated from the database report in the Legion Park and northern areas of the project (**Figure 7**), and EDR site designations shown in the table with a “S-” in the EDR Map ID were generated from the database report for River and Ronan Parks and more southern areas of the project (**Figure 8**).

Table 3: Minimum Search Distance for Federal and State Databases

Database	Approximate Minimum Search Distance (mi)
Federal NPL Site List	1.0
Federal CERCLIS List	0.5
Federal CERCLIS NFRAP site list	Property and Adjoining Properties
Federal RCRA CORRACTS Facilities List	1.0
Federal RCRA non-CORRACTS TSD Facilities List	0.5
Federal RCRA Generators List	Property and Adjoining Properties
Federal ERNS List	Property Only
State Equivalent NPL	1.0
State Equivalent CERCLIS	0.5
State Landfill/Solid Waste Disposal Site Lists	0.5
State LUST Lists	0.5
State registered UST List	Property and Adjoining Properties

CERCLIS

The Comprehensive Environmental Response, Compensation, and Liability, Information System (CERCLIS) contains data on any potential hazardous waste site that has been reported by states, municipalities, private companies, or private persons pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The CERCLIS database indicates the stages of evaluation and remediation that have been completed for any given site. The CERCLIS database includes the National Priority List (NPL), which identifies over 1,200 sites for priority cleanup under the Superfund program, and the CERCLIS-No Further Remedial Action Planned (NFRAP) List, which includes a listing of sites that have been removed from CERCLIS. There are no CERLCIS sites within the recommended search distance.

RCRIS

The Resource Conservation and Recovery Information System (RCRIS) lists sites which generate, transport, store, and/or dispose of hazardous waste defined by the Resource Conservation and Recovery Act (RCRA). The RCRIS database includes RCRA Corrective Action Report (CORRACTS), which identify hazardous waste handlers with RCRA corrective action activity; RCRA treatment, storage, and disposal facilities (TSDFs), and RCRA conditionally exempt small quantity generators (CESQGs), RCRA small quantity generators (SQGs), and large quantity generators (LQGs) facilities. There

is one RCRA-SQG and three RCRA-CESQGs within the recommended search distance discussed in the below table.

Table 4: RCRIS Database Search Results

EDR Map ID	Site Name	Approximate Proximity to Site	Status	Potential Impact
N-B5	Ricks Tire and Auto	< 1/8 mile west	RCRA-CESQG, no RCRA violations found. However, site is listed in LUST and SRP program. See LUST and SRP Tables.	No RCRA issues. Reported releases on project property resolved through NFA/NFR. REC unlikely.
N-C10	US Reserve Center	< 1/8 mile west	RCRA-CESQG, no RCRA violations found. However, site is listed in LUST program, see LUST Table.	No RCRA issues. LUST resolved, no reported releases on project property: REC unlikely.
N-D15	Biltmore Cleaners	1/8 to 1/4 mile west	RCRA-SQG, no RCRA violations found. However, site is listed in SRP program. See SRP Table.	No RCRA issues. Releases reported on property. Given proximity of facility to project, its unlikely facility releases have impacted on project area: REC unlikely.
S-2	North Branch Pumping	< 1/8 mile east		No reported releases on project property: REC unlikely.

SPILLS

The SPILLS database contains a listing of hazardous materials incidents reported to the Illinois Emergency Management Agency and the Office of Emergency Response. There are no reported spills on the project site.

SSU

A State equivalent CERCLIS database: the State Response Action Program database identifies the status of all sites under the responsibility of the Illinois EPA’s State Sites Unit. These sites may or may not have already been listed on the federal CERCLIS list. There are no IL SSU sites within the recommended search distance.

SWF/LF

The IEPA records the state’s Solid Waste Facilities/Landfill sites (SWF/LF). These sites may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites. There are no SWF/LF disposal sites within the recommended search distance.

IL NIPC

NIPC is an inventory of active and inactive solid waste disposal sites, based on state, local government and historical archive data. Included are numerous sites which previously had never been identified largely because there was no obligation to register such sites prior to 1971. There is one IL NIPC site within the recommended search distance.

Table 5: IL NIPC Database Search Results

EDR Map ID	Site Name	Approximate Proximity to Site	Status	Potential Impact
N-47	Sherwin Williams	¼ to ½ mile west	No additional information.	Given proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.

LUST/UST

The Illinois State Fire Marshall maintains a listing of registered underground storage tanks (UST), as required by RCRA Subtitle I. The Illinois Environmental Protection Agency maintains a listing of leaking underground storage tank reports (LUST). There are 58 LUSTs and 7 USTs within the recommended search distance, discussed in the below table. One LUST entry requires further investigation – EDR #A4 (north) lists a LUST activity adjacent to the project area on the east bank south of Peterson with unresolved status. This area should be investigation further during the site visit.

Table 6: IL LUST Database Search Results

EDR Map ID	Site Name	Approximate Proximity to Site	Status	Potential Impact
N-A4	Riverside Motel	< 1/8 mile east	1996 activity – no additional information. Hotel not present at address.	Given age of reported release and proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely. Investigate adjacent property.
N-B6	Ricks Tire and Auto	< 1/8 mile west	Site addressed in SRP program. NFR recorded 10/14/2003.	Site status resolved. Unlikely any remaining soil contamination (SRP) has impacted project property. REC unlikely.
N-13	Ker-For Partnership	< 1/8 mile east	1995 activity. Determined non-LUST by IEPA 6/19/1995.	Site status resolved: REC unlikely.

N-C14	US Army Reserve Center	< 1/8 mile west	NFA/NFR letter dated 5/2/2002	LUST resolved, no reported releases on project property: REC unlikely.
N-E17	Dara Dan	1/8 to 1/4 mile east	Residential heating oil 2004, not subject to regulations.	Given age of reported release and proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
N-E18	Joo Lee	1/8 to 1/4 mile east	NFA/NFR letter dated 12/6/1996	LUST resolved, no reported releases on project property: REC unlikely.
N-D20	William Elliot	1/8 to 1/4 mile west	NFA/NFR letter dated 11/13/2001	LUST resolved, no reported releases on project property: REC unlikely.
N-21	Daniel Wolf	1/4 to 1/2 mile east	Residential heating oil 1993. Activity 2011, unknown status.	Given age of reported release and proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
N-22	Interand Corp	Adjacent to west	NFA/NFR letter dated 3/1/1993	LUST resolved, no reported releases on project property: REC unlikely.
N-23	Lincoln-Peterson Dev	< 1/8 mile east	NFA/NFR letter dated 11/17/2008	LUST resolved, no reported releases on project property: REC unlikely.
N-24	Full Gospel Grace Ch	1/8 to 1/4 mile west	NFA/NFR letter dated 2/7/1994	LUST resolved, no reported releases on project property: REC unlikely.
N-25	BP	< 1/8 mile west	NFA/NFR letter dated 6/9/2006	LUST resolved, no reported releases on project property: REC unlikely.
N-F26	Interra Equities	1/8 to 1/4 mile east	NFA/NFR letter dated 2/9/2005	LUST resolved, no reported releases on project property: REC unlikely.
N-27	Micheal Han and Ho Sup	1/4 to 1/2 mile east	NFA/NFR letter dated 11/26/2003	LUST resolved, no reported releases on project property: REC unlikely.
N-F28	Clark Retailer	1/8 to 1/4 mile east	NFA/NFR letter dated 1/28/2005 and 8/2/2001	LUST resolved, no reported releases on project property: REC unlikely.
N-G29	Vienna Beef	< 1/8 mile west	NFA/NFR letter dated 7/28/1994	LUST resolved, no reported releases on project property: REC unlikely.
N-H30	Kim, Young HWA	1/4 to 1/2 mile east	NFA/NFR letter dated 2/23/2004	LUST resolved, no reported releases on project property: REC unlikely.
N-31	St. Gall	1/8 to 1/4 mile west	NFA/NFR letter dated 11/28/2001	LUST resolved, no reported releases on project property: REC unlikely.

N-H32	Bill Zofakis	¼ to ½ mile east	Residential “other petro” 2003. Unknown status.	Given age of reported release and proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
N-G33	American Tank Inc.	< 1/8 mile west	NFA/NFR letter dated 7/1/1992	LUST resolved, no reported releases on project property: REC unlikely.
N-G34	Arcadia	< /8 mile west	NFA/NFR letter dated 3/9/2007	LUST resolved, no reported releases on project property: REC unlikely.
N-I35	Gustasson Estate	¼ to ½ mile east	NFA/NFR letter dated 9/29/2006	LUST resolved, no reported releases on project property: REC unlikely.
N-36	Michael Eiserman	¼ to ½ mile east	NFA/NFR letter dated 4/12/2005	LUST resolved, no reported releases on project property: REC unlikely.
N-38	River park Holdings	1/8 to ¼ mile north	NFA/NFR letter dated 2/5/2013	LUST resolved, no reported releases on project property: REC unlikely.
N-39	Chris Dimitropoulou n	¼ to ½ mile east	Residential heating oil, not subject to regulation, 2012.	Given proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
N-J40	Shell Oil	¼ to ½ mile west	NFA/NFR letters dated 2/5/2013, 4/10/2001, 12/8/1999	LUST resolved, no reported releases on project property: REC unlikely.
N-J41	3400 West Peterson	¼ to ½ mile west	NFA/NFR letter dated 3/25/2003	LUST resolved, no reported releases on project property: REC unlikely.
N-K42	D&E Auto Service	¼ to ½ mile west	NFA/NFR letter dated 9/3/1998	LUST resolved, no reported releases on project property: REC unlikely.
N-43	Northwest Baptist Church	¼ to ½ mile east	2002 heating oil, heating oil program.	Given proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
N-K44	Jim Trandai	¼ to ½ mile west	1999 heating oil, heating oil program.	Given proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
N-K45	Norman Stein	¼ to ½ mile west	Site enrolled in SRP program. See LUST Table.	Site status resolved, REC unlikely.
N-L46	Chicago Board of Education	< 1/8 mile west	NFA/NFR letter dated 2/23/2001	LUST resolved, no reported releases on project property: REC unlikely.

N-48	Northeastern II University	¼ to ½ mile west	2002 fuel oil release. Unknown status.	Given proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
N-M49	Ped Sim	¼ to ½ mile west	1998 gasoline release. Corrective action plan denied 1998. Unknown status.	Given age of release and proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
N-51	Asian Human Services	¼ to ½ mile east	Pre-1974 tank and release, corrective action not required.	Given age of release and proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
N-L52	Lighting Maintenance	1/8 to ¼ mile west	Pre-1974 tank and release, corrective action not required.	Given age of release and proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
N-53	Chicago Public Schools	1/8 to ¼ mile west	2001 heating oil, heating oil program, not subject to corrective action.	Given age of release and proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
N-54	Tynan Association	¼ to ½ mile east	NFA/NFR letter dated 5/31/1995	LUST resolved, no reported releases on project property: REC unlikely.
S-A6	S. Edelman & Company	< 1/8 mile west	NFA/NFR letter dated 7/6/2001	LUST resolved, no reported releases on project property: REC unlikely.
S-A7	Yong Tai Cho	< 1/8 mile west	NFA/NFR letter dated 9/1/2005	LUST resolved, no reported releases on project property: REC unlikely.
S-A8	Roy's Alignment Shop	< 1/8 mile west	NFA/NFR letter dated 9/15/2004	LUST resolved, no reported releases on project property: REC unlikely.
S-9	Kim Hoon Nam	< 1/8 mile west	NFA/NFR letter dated 10/9/1991	LUST resolved, no reported releases on project property: REC unlikely.
S-19	National Plumbing	< 1/8 mile south	NFA/NFR letters dated 3/3/2006 and 8/16/1993	LUST resolved, no reported releases on project property: REC unlikely.
S-B12	North Park University	1/8 to ¼ mile west	NFA/NFR letter dated 10/9/2003	LUST resolved, no reported releases on project property: REC unlikely.
S-13	Rosenthal Manufacture	1/8 to ¼ mile west	NFA/NFR letters dated 8/22/1996, 3/13/1997, 9/25/1997	LUST resolved, no reported releases on project property: REC unlikely.

S-15	Jin-Wan Bae	1/8 to ¼ mile west	NFA/NFR letter dated 8/30/1994	LUST resolved, no reported releases on project property: REC unlikely.
S-C20	Chicago Public School	¼ to ½ mile west	2005 other petro release, heating oil exemption.	Given proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
S-F29	4650 North Kedzie	¼ to ½ mile southwest	NFA/NFR letter dated 1/7/2009	LUST resolved, no reported releases on project property: REC unlikely.
S-14	Chicago Transit Authority	< 1/8 mile west	NFA/NFR letter dated 8/22/2013	LUST resolved, no reported releases on project property: REC unlikely.
S-16	Snappy Convenience	< 1/8 mile east	NFA/NFR letter dated 12/11/2008	LUST resolved, no reported releases on project property: REC unlikely.
S-17	Old Jefferson Ice	1/8 to ¼ mile west	NFA/NFR letter dated 12/23/1996	LUST resolved, no reported releases on project property: REC unlikely.
S-18	North Park University	1/8 to ¼ mile west	NFA/NFR letter dated 11/13/2001	LUST resolved, no reported releases on project property: REC unlikely.
S-19	MWRD	< 1/8 mile south	NFA/NFR letter dated 8/26/2010	LUST resolved, no reported releases on project property: REC unlikely.
S-D23	4809 N California	1/8 to ¼ mile east	2007 fuel oil release, heating oil exemption.	Given proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.
S-24	Russel Sr Si Trust	1/8 to ¼ mile west	NFA/NFR letter dated 1/8/1993	LUST resolved, no reported releases on project property: REC unlikely.
S-E26	Korea 1 st Bank	1/8 to ¼ mile east	1995 release onsite. Also listed in SRP Table, see Table.	Site status resolved. Given proximity to site, it's unlikely any remaining soil contamination has impacted project property. REC unlikely.
S-28	North park University	¼ to ½ mile west	NFA/NFR letter dated 9/8/2003	LUST resolved, no reported releases on project property: REC unlikely.
S-31	Lindgren & Knapp	1/8 to ¼ mile west	1995 other petro release, heating oil exemption.	Given proximity of facility to project area, unlikely that any releases have impacted project area: REC unlikely.

Table 7: IL UST Database Search Results

EDR Map ID	Site Name	Approximate Proximity to Site	Status	Potential Impact
N-A3	Riverside Motel	< 1/8 mile east	Tank exempt from registration	Tank not on or adjacent to project area: impacts to project implementation unlikely.
N-B7	Ricks Tire and Auto	< 1/8 mile west	Tank removed	No reported releases at facility: REC unlikely.
N-8	Chilla Restaurant	1/8 to 1/4 mile east	Tank removed	No reported releases at facility: REC unlikely.
N-C9	Region One High School	< 1/8 mile west	Tank removed	No reported releases at facility: REC unlikely.
S-1	River park Maintenance	Adjacent east	Tank removed	No reported releases at facility: REC unlikely.
S-3	Apt Building	1/8 to 1/4 mile west	Tank exempt from registration	Tank not on or adjacent to project area: impacts to project implementation unlikely.
S-4	North Branch Pumping	Adjacent east	Tank removed	No reported releases at facility: REC unlikely.

SRP

The Site Remediation Program (SRP) database lists all voluntary remediation projects administered through the pre-notice site clean-up program (1989 to 1995) and the site remediation program (1996 to present). Some of the SRP sites have engineering and/or institutional controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health. Institutional controls include administrative measures, such as groundwater use restriction, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls. There are 19 SRP sites with controls within the recommended search distance. Their status and required on-site controls are discussed below.

Table 8: SRP and ENG/INST CONTROLS Database Search Results

EDR Map ID	Site Name	Approximate Proximity to Site	Status	Potential Impact
N-B6	Ricks Tire and Auto	< 1/8 mile west	IL ENG CONTROL/INST CONTROL – NFA/NFR letter dated 8/29/2003. 0.3 acres of site restricted to industrial/commercial use, asphalt barrier on site, no groundwater use restrictions.	Site status resolved. Unlikely any remaining soil contamination has impacted project property. REC unlikely.
N-C11	US Army Reserve Training	< 1/8 mile west	NFA/NFR dated 5/2/2002, no restrictions.	Site status resolved, REC unlikely.
N-D16	Biltmore Cleaners	1/8 to ¼ mile west	Enrolled in SRP 2006. NFA/NFR letter not reported.	Given proximity of facility to project area, unlikely that facility releases have impacted project area. REC unlikely.
N-D19	Johen’s Cleaners	1/8 to ¼ mile west	IL INST CONTROL – NFA/NFR letter dated 6/11/2008. 0.1 acres of site restricted to industrial/commercial use, no groundwater use restrictions.	Site status resolved. Given proximity to site, it’s unlikely any remaining soil contamination has impacted project property. REC unlikely.
N-23	Lincoln-Peterson Div.	< 1/8 mile west	IL INST CONTROL – NFA/NFR letter dated 11/17/2008. 0.3 acres of site restricted to industrial/commercial use, no groundwater use restrictions.	Site status resolved. Unlikely any remaining soil contamination has impacted project property. REC unlikely.
N-H30	Kim, Young HWA	¼ to ½ mile east	IL INST CONTROL – NFA/NFR letter dated 2/23/2004. 0.36 acres of site restricted to industrial/commercial use, no groundwater use restrictions.	Site status resolved. Given proximity to site, it’s unlikely any remaining soil contamination has impacted project property. REC unlikely.
N-I37	Sunset Construction	¼ to ½ east	IL INST CONTROL – NFA/NFR letter dated 10/15/2007. 0.24 acres of site restricted to industrial/commercial use, no groundwater use restrictions.	Site status resolved. Given proximity to site, it’s unlikely any remaining soil contamination has impacted project property. REC unlikely.
N-K45	Stein, Norman	¼ to ½ mile west	NFA/NFR letter dated 1/25/2000, no restrictions.	Site status resolved, REC unlikely.
N-L46	Chicago Board of Education	< 1/8 mile west	IL ENG CONTROL/INST CONTROL – NFA/NFR letter dated 2/23/2001. 0.1 acres of site restricted to industrial/commercial use, asphalt barrier on site, groundwater use restrictions.	Site status resolved. Unlikely any remaining soil or groundwater contamination has impacted project property – no excavation on bank in area. REC unlikely.

N-M50	T's Grand Slam Pizza	¼ to ½ mile east	IL ENG CONTROL/INST CONTROL – NFA/NFR letter dated 2/8/2006. 1.233 acres of site restricted to industrial/commercial use, foundation and asphalt barrier on site, no groundwater use restrictions.	Site status resolved. Given proximity to site, it's unlikely any remaining soil contamination has impacted project property. REC unlikely.
N-55	Charter One Bank	¼ to ½ mile east	IL INST CONTROL – NFA/NFR letter dated 3/3/2009. 0.5 acres of site restricted to industrial/commercial use, no groundwater use restrictions.	Site status resolved. Given proximity to site, it's unlikely any remaining soil contamination has impacted project property. REC unlikely.
S-A8	Roy's Alignment Shop	< 1/8 mile west	NFA/NFR letter dated 9/15/2004, no restrictions.	Site status resolved, REC unlikely.
S-10	Albany Park Service	Adjacent	ENG CONTROL/INST CONTROL – NFA/NFR letter dated 1/29/1999. 0.39 acres of site restricted to industrial/commercial use, building slab/asphalt control, no groundwater use restrictions. Facility is located south of Lawrence, offsite (Summit industries).	Site status resolved. Unlikely any remaining soil contamination has impacted project property. REC unlikely.
S-C21	Chicago Public School	¼ to ½ mile west	ENG CONTROL – NFA/NFR letters dated 6/28/2006 and 11/17/2006. 0.25 acres of site have no restriction with 3-foot soil barrier onsite, 1.4 acres of site no restrictions with building slab barrier, no groundwater use restrictions.	Site status resolved. Given proximity to site, it's unlikely any remaining soil contamination has impacted project property. REC unlikely.
S-F30	Kedzie Cleaners	¼ to ½ mile southwest	ENG CONTROL/INST CONTROL – NFA/NFR letter dated 7/11/2007. 0.19 acres of site restricted to industrial/commercial use, building slab/asphalt barrier, no groundwater use restriction.	Site status resolved. Given proximity to site, it's unlikely any remaining soil contamination has impacted project property. REC unlikely.
S-17	Old Jefferson Ice Building	Upstream 1/8 mile NBCR	INST CONTROL – NFA/NFR letter dated 11/22/1999. 0.86 acres restriction unknown (North Park University parking facility).	Site status resolved. Unlikely any remaining soil contamination has impacted project property. REC unlikely.
S-D22	4809 California	1/8 to ¼ mile east	ENG CONTROL/INST CONTROL – NFA/NFR letter dated 3/25/2008. 0.2 acres of site, worker caution with foundation controls, and no groundwater use restriction.	Site status resolved. Given proximity to site, it's unlikely any remaining soil contamination has impacted project property. REC unlikely.

S-E25	Korea First Bank	1/8 to ¼ mile east	Enrolled in 1996. Section 4 letter issued for site (pre-SRP program cleanup).	Site status resolved. Given proximity to site, it's unlikely any remaining soil contamination has impacted project property. REC unlikely.
S-27	North Park Cleaners	1/8 to 1/4 mile northwest	Enrolled in 1997. NFA/NFR letter not reported. Status unknown.	Given proximity to site, it's unlikely any remaining soil contamination has impacted project property. REC unlikely.

Others

Various other databases are searched that include supplemental information to the above databases, including: RCRA non generators, CERCLA consent decrees, National Priority list deletions, Nuclear Regulatory Commission's database of sites possessing radioactive materials, Superfund Liens, NPDES, AIRS, PCB Activity Database, Department of Defense sites, Brownfield's, Toxic Chemical Release Inventory, FIFRA/TSCA tracking system, oil and gas pipelines, historical auto and service stations, electric transmission lines, sensitive receptors, flood zone data, and the national wetlands inventory.

Table 9: Other Database Search Results

EDR Map ID	Site Name	Approximate Proximity to Site	Status	Potential Impact
N-2	Jersey Automotive	< 1/8 mile west	RCRA non-generator, MANIFEST. Previous LQG with no violations.	REC unlikely.
N-12	Chicago DOT	Adjacent	RCRA non-generator, previous LQG with no violations.	REC unlikely.
N-1	5822 Jersey Ave	< 1/8 mile west	Historical Auto Station, R & R AUTO SERVICE Year: 2007	No reported release, no bank work in area. REC unlikely.
S-A5	Ronan Park Expansion 2954 Lawrence	<1/8 mile west	Brownfield – located at Lawrence and Sacramento, variety of historical uses. Site contains metals, PAHs, and petro in soil and groundwater.	Site not located on project property. Impact to project implementation unlikely.

Orphans

The EDR search reports a list of “orphan” sites, or sites that are listed in government databases but were not able to be mapped due to inadequate address. There are no sites in the orphan site list.

SITE VISIT

A site visit was conducted on December 8, 2015. The purpose of the trip was to examine the project site for evidence of HTRW or other environmental issues. Sites of concern discussed in other sections of this report were investigated further to determine if activities from other facilities or previous activities at the project site have impacted the project area. See Attachment 9 for site visit photographs.

The project area was accessible from local roadways; the site visit was conducted using a series of trails on both the east and west banks of the North Shore Channel. All three parks, River, Ronan, and Legion have a combination of bike and walking trails, trash receptacles, dog play areas, playground equipment, and a variety of track and field amenities. The parks are well-kept. There is no sign of dumping in the project area and there was no garbage or foreign debris found at the site. There were a variety of users in each of the parks, including park management staff.

The banks of the NSC are accessible in Ronan Park, there are no fences or barriers to direct access, though a mulch trail and signage suggests staying on trails so as not to disrupt native vegetation, bird, and butterfly sanctuary on the west bank. A boat dock is located in River Park on the west bank just south of the confluence of the NBCR and NSC; a series of trails and access are provided along the NBCR on the south bank. The NBCR banks are vegetated or controlled through armoring. The NBCR channel bed appears to contain large concrete and/or stone upstream of the dam to Albany Ave, and just downstream of the dam, some large material has deposited in the north shore channel creating a perch for birds and ducks. The NSC and its banks are not accessible in the project area along the west or east banks in the grading areas in Legion Park or the east bank of the NSC in River Park. Fencing is located at the top of the bank and the bluff is steep in most areas. Portions of the existing fencing are failing. Because the banks are so steep and the existing park amenities are so close to the channel in some areas, it appears that there is limited space to grade back the banks and incorporate excess soils into the existing topography in adjacent upland areas. In some cases, existing park facilities and paths would require removal and replacement.

While the site visit was conducted in winter and vegetation was dormant, there were no areas of the site where vegetation was sparse; the banks are densely vegetated with trees and understory brush, though show signs of erosion in most areas, and upland park areas contain a combination of turf grass, trees, and patches of native vegetation restoration (in Legion park, east bank). There are no indications that the site contains HTRW. Findings for areas of concern previously identified as part of this investigation are summarized below:

- The portion of project area where land disturbance/limited vegetation was visible in the historic aerials just north of Lawrence on the west bank of the NSC appears to contain structures and/or utilities associated with the MWRD stormwater management system/pumping facility located on the east bank of the NSC in the same area. A TARP drop shaft, intake, and other storm water utilities are located

on the west bank at this location, as well as within other adjacent areas within the parks. There were no signs of HTRW conditions in the area.

- The area of the site that contained previous structures within Legion Park on the west bank is parkland. There were no indications that the project area contained any previous structures. All upland areas are vegetated or park amenities with hard surfaces that are well kept with no indications of HTRW.
- The LUST site identified in the EDR report (EDR #N-A4) adjacent to the project area in Legion Park just south of Peterson could not be located. While the EDR report mapped the Riverside Motel in the area, older residential homes are present. It is likely that the facility was mismapped. There were no signs of HTRW conditions in the area.

FINDINGS AND CONCLUSIONS

This HTRW investigation was performed to determine if HTRW and non-HTRW environmental issues at the River Riparian Restoration Project site, or surrounding area, have impacted the project site or will impact implementation of the proposed restoration measures. According to ER 1165-2-132, non-HTRW environmental issues that do not comply with federal, state, and local regulations should be discussed in the HTRW evaluation along with HTRW issues. Summary of findings from this investigation are outlined below:

No HTRW issues were identified during this investigation. The investigation identified one non-HTRW condition at the project site that may have an impact on the implementation and cost of the proposed restoration measures:

- Due to the existing condition of banks in the project area, bank grading will likely generate a large volume of soil (~80,000 cubic yards). The most cost effective way to manage excess soils and any building foundation materials encountered during grading, if present, is to incorporate the excess materials into the project footprint as much as practicable. However, given the limited space available for incorporating materials into adjacent upland areas, offsite disposal of excess soils may be necessary. Results of this investigation suggest that it is unlikely that site soils contain concentrations of contaminants above de minimis concentrations of analytes found in soils in the Chicago area. All excess materials generated at the site should be disposed at a registered clean construction and demolition debris (CCDD) facility. Coordination with CCDD facilities within the Chicago city limits should be conducted during the design phase to ensure appropriate disposal facilities are identified for Contractor use. Chicago Park District, or other appropriate signatory, should be obtained for the LPC-662 Owner Certification for CCDD facilities. Because no RECs were identified as part of this investigation, a Phase II ESA is not recommended.

No HTRW investigation can wholly eliminate uncertainty regarding the potential for HTRW associated with a project area. Performance of the HTRW investigation is

intended to reduce, but not eliminate, uncertainty regarding the potential for HTRW in connection with a project area.

REFERENCES

American Society for Testing of Materials. Publication E 1527-13. Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process.

Department of the Army. U.S. Army Corps of Engineers. ER 1165-2-132. Hazardous, Toxic, and Radioactive Waste (HTRW) Guidance for Civil Works Projects. June 1992.

IEPA Bureau of Water, 2014. Illinois Integrated Water Quality Report and Section 303(d) List, Water Resource Assessment Information and Listing of Impaired Waters.

USGS 2003. Kay and others - Concentrations of Polynuclear Aromatic Hydrocarbons and Inorganic Constituents in Ambient Surface Soils, Chicago, Illinois: 2001-02—U.S. Geological Survey Water-Resources Investigations Report 03-4105.

35 Illinois Administrative Code. Environmental Regulations for the State of Illinois.



Figure 1: River Riparian Project Location Map

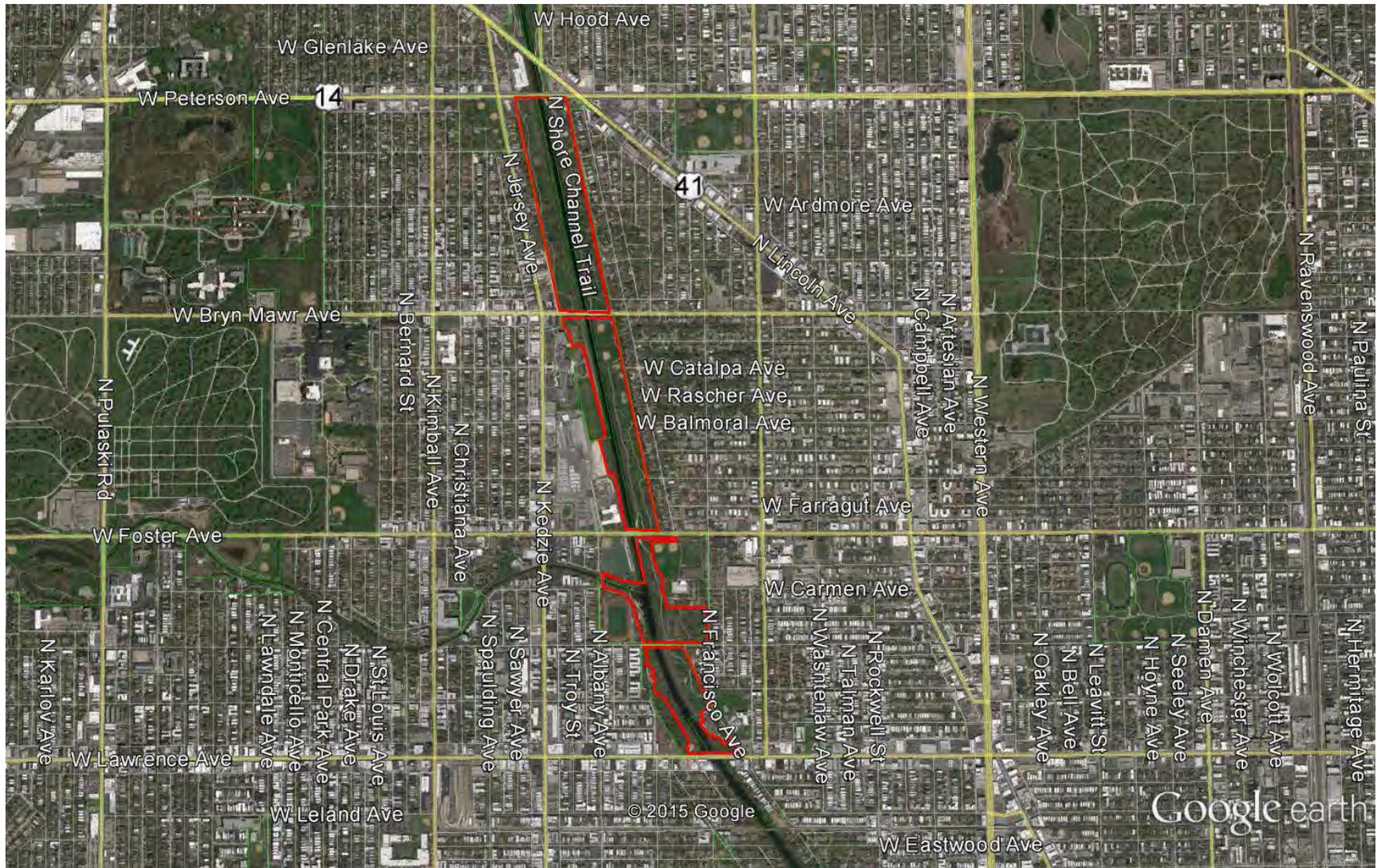
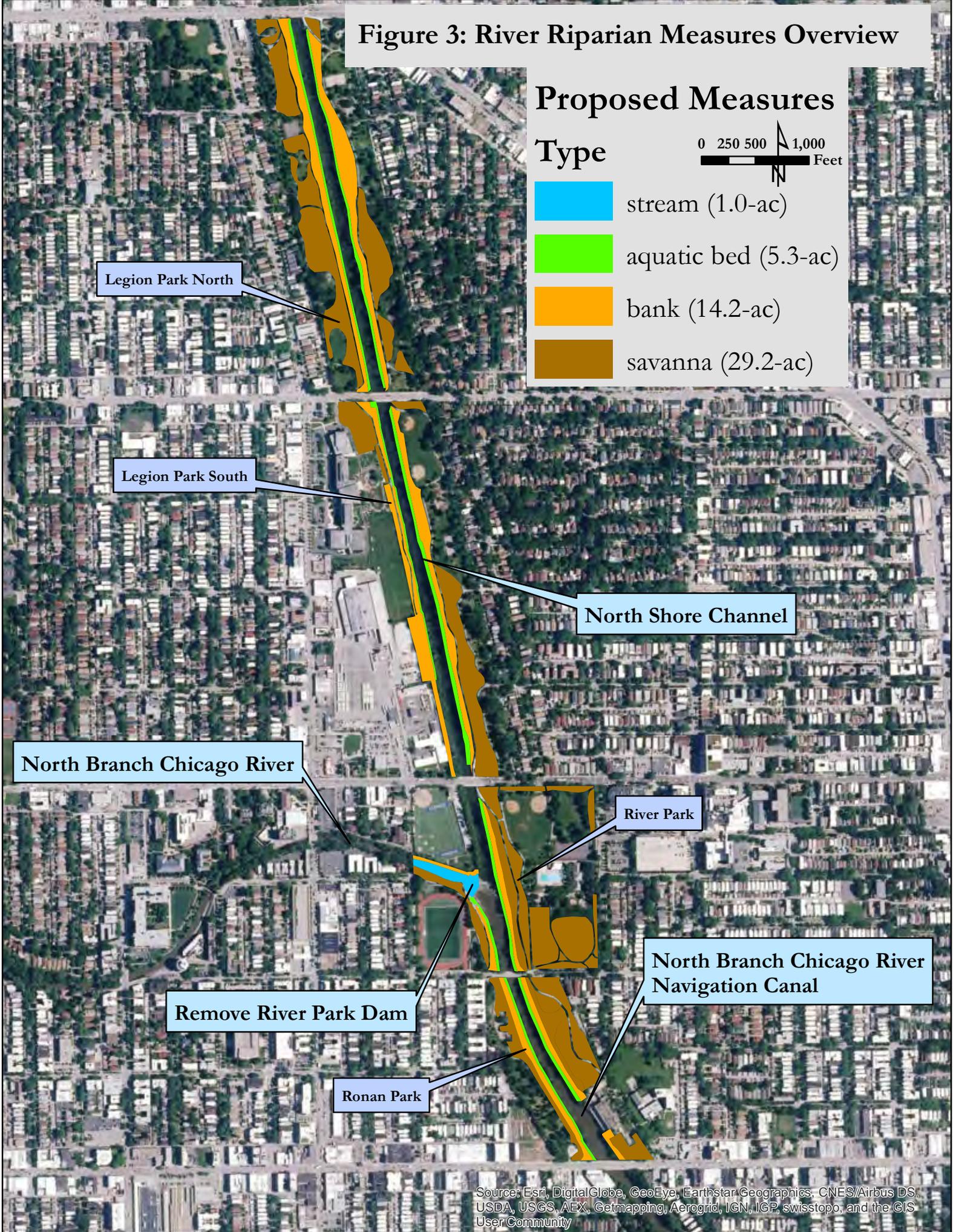


Figure 2: River Riparian Project Area Map

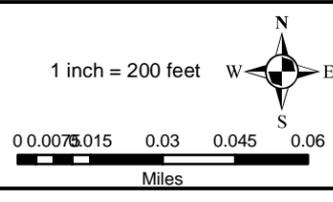
Figure 3: River Riparian Measures Overview





U.S. Army Corps Of Engineers® Chicago District

Legend	
Grading Locations	Priority
■	4
■	5
■	6
 	Project Limits
 	Linetype
 	Solid



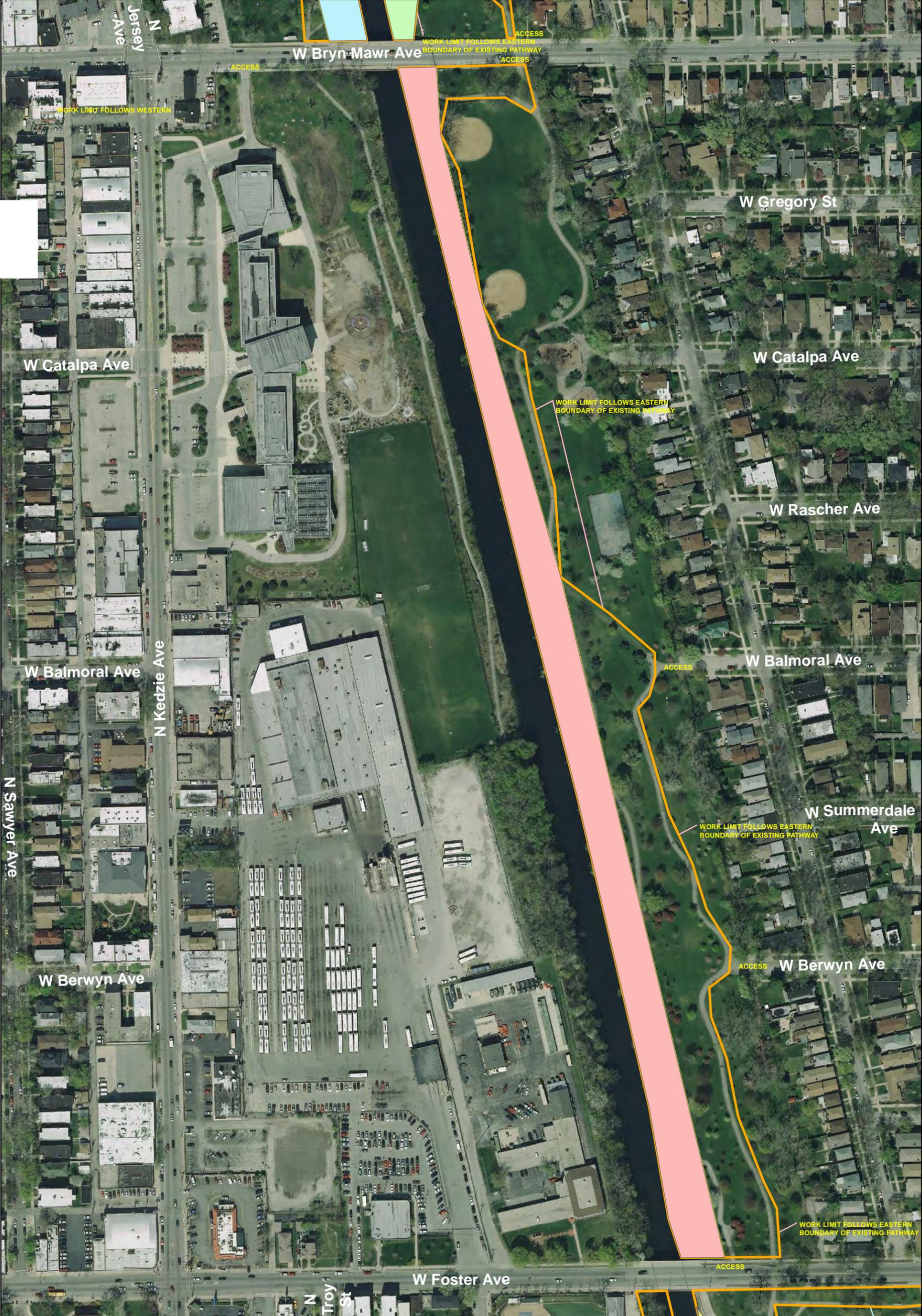
Project Limits and Grading Areas

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November, 2015

Figure 4

Chicago District, U.S. Army Corps of Engineers

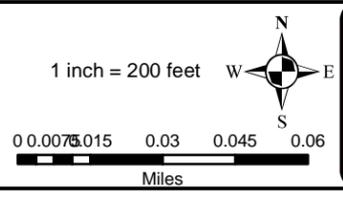
© Working Paper/Map and Hdr/06/06



U.S. Army Corps Of Engineers® Chicago District

Legend

Grading_Locations	Priority	2	5
	1	4	Project Limits
			Linetype
			Solid

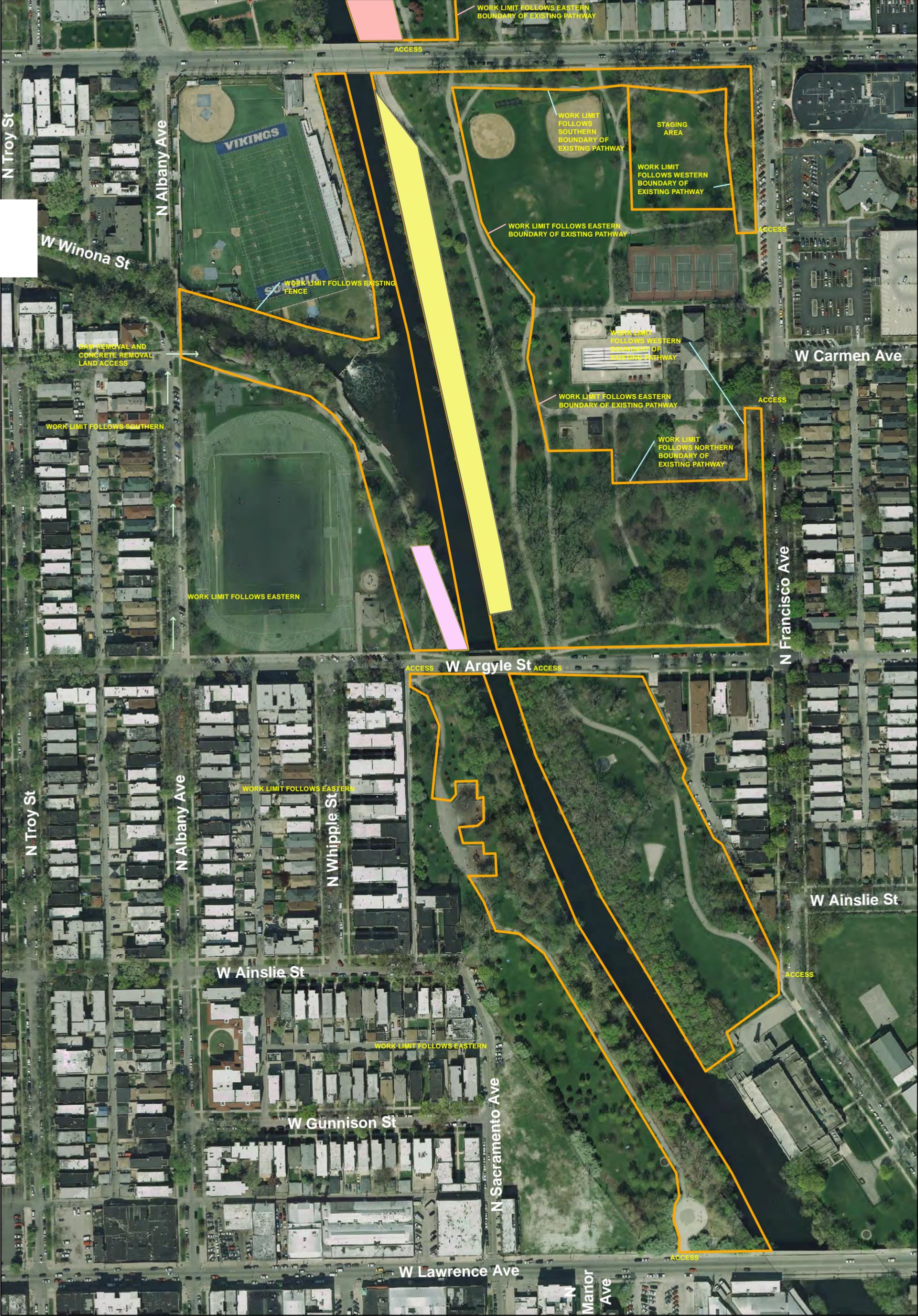


Project Limits and Grading Areas

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November, 2015

Figure 5

Chicago District, U.S. Army Corps of Engineers



U.S. Army Corps Of Engineers® Chicago District

Legend

Grading_Locations Priority

- 1 (Yellow box)
- 2 (Pink box)
- 3 (Purple box)

Project Limits Linetype

- Solid (Orange line)

1 inch = 200 feet

0 0.0075 0.015 0.03 0.045 0.06

Miles

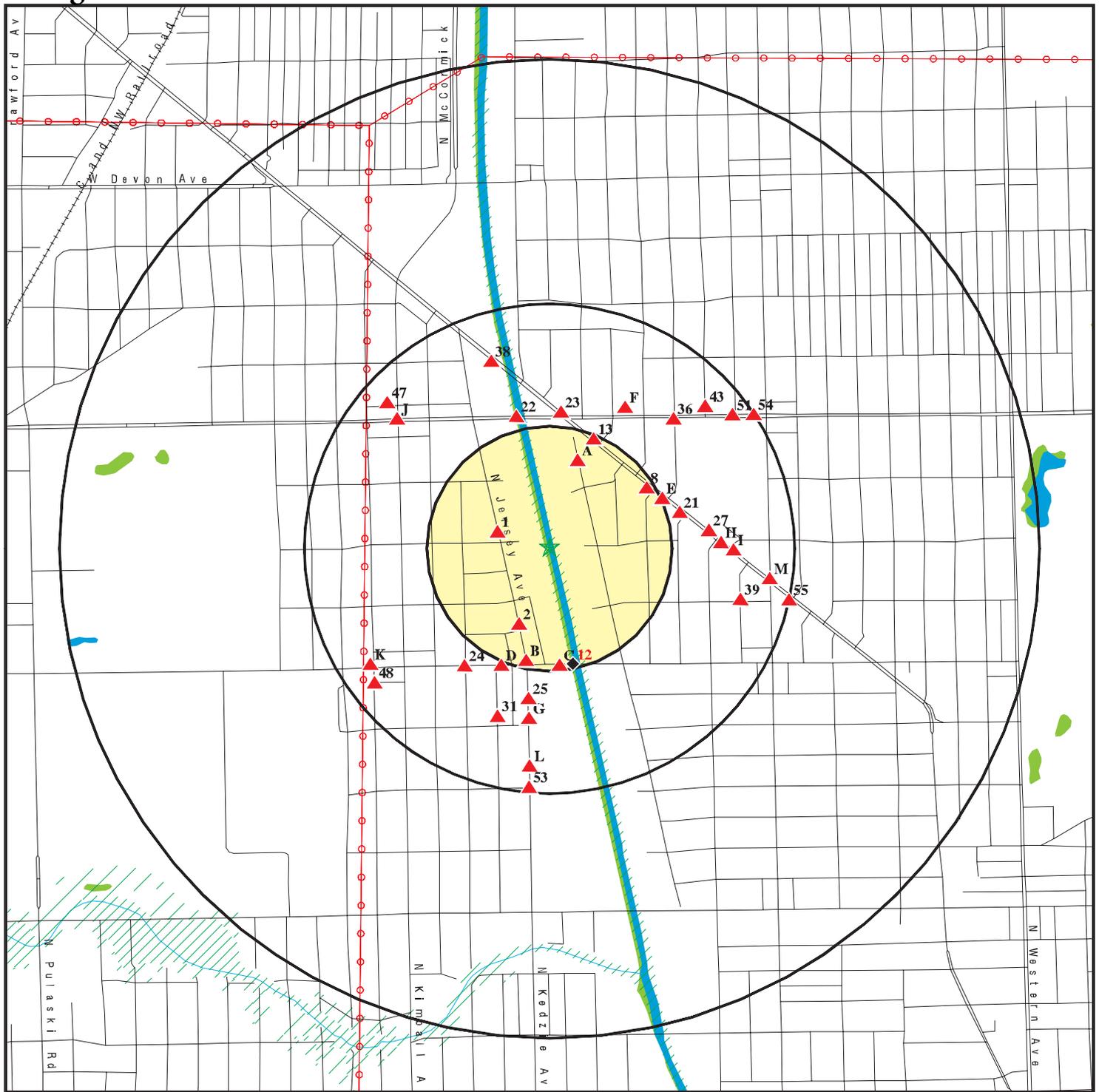
Project Limits and Grading Areas

For Official Use Only
November, 2015

Figure 6

Figure 7

OVERVIEW MAP - 4455997.2S



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- ☒ National Priority List Sites
- ☒ Dept. Defense Sites
- ☐ Indian Reservations BIA
- ⚡ Power transmission lines
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- National Wetland Inventory
- State Wetlands

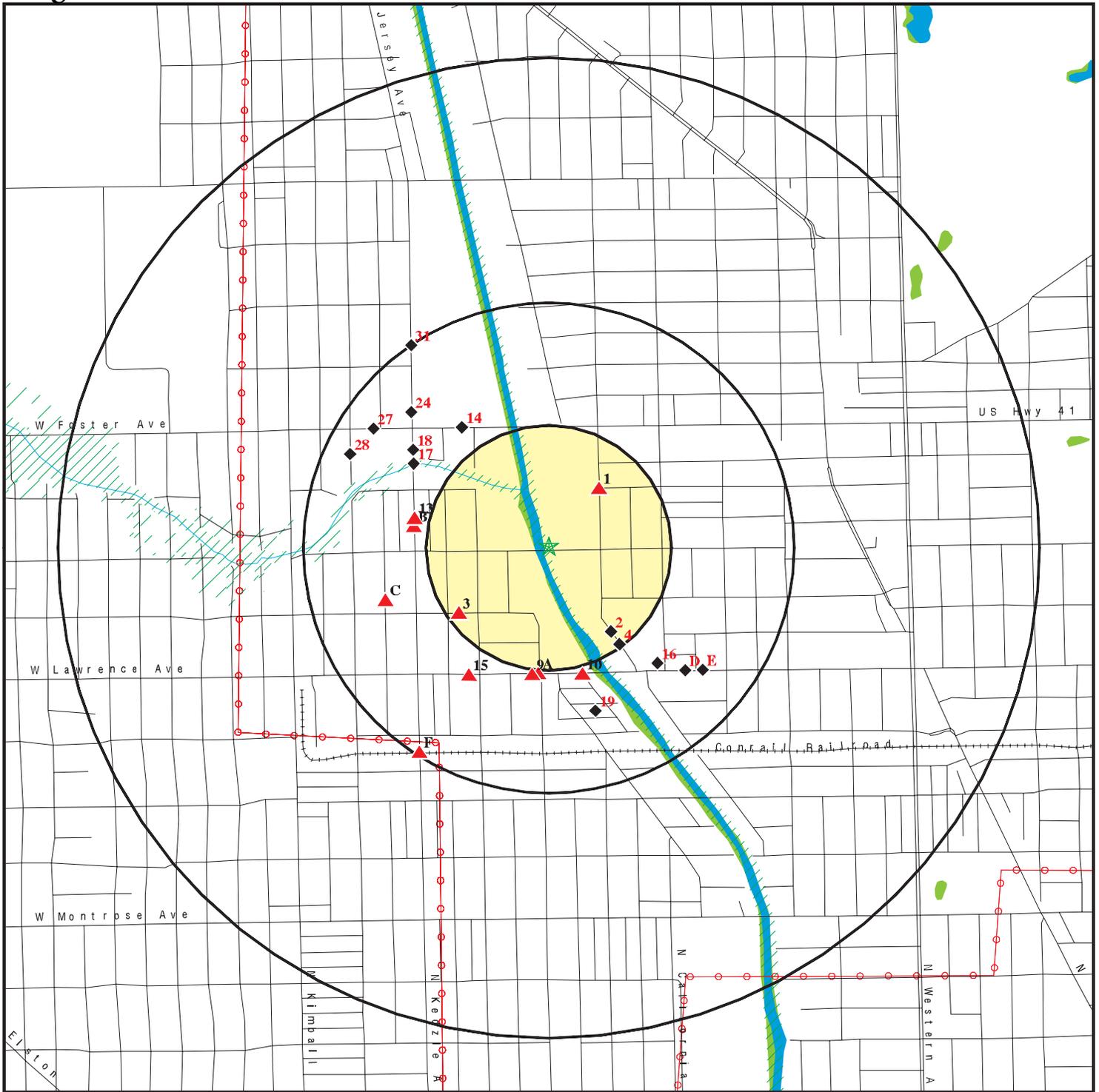
This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Legion Park North
 ADDRESS: W Peterson Avenue
 Chicago IL 60659
 LAT/LONG: 41.9865 / 87.708

CLIENT: U.S. Army Corps of Engineers
 CONTACT: Casey Pittman
 INQUIRY #: 4455997.2s
 DATE: November 03, 2015 1:09 pm

Figure 8

OVERVIEW MAP - 4455997.10S



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- ⚡ Power transmission lines
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Ronan & River Parks
 ADDRESS: N Francisco Ave
 Chicago IL 60625
 LAT/LONG: 41.9722 / 87.7033

CLIENT: U.S. Army Corps of Engineers
 CONTACT: Casey Pittman
 INQUIRY #: 4455997.10s
 DATE: November 03, 2015 1:09 pm

**HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
RIVER RIPARIAN CONNECTIVITY & HABITAT - SECTION 506 PROJECT
COOK COUNTY, ILLINOIS**

Attachment 1
NRCS Soil Maps

DIGITAL COPIES OF ATTACHMENTS ARE AVAILABLE UPON REQUEST

**HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
RIVER RIPARIAN CONNECTIVITY & HABITAT - SECTION 506 PROJECT
COOK COUNTY, ILLINOIS**

Attachment 2
EDR Database Report
Legion Park (North)

**HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
RIVER RIPARIAN CONNECTIVITY & HABITAT - SECTION 506 PROJECT
COOK COUNTY, ILLINOIS**

Attachment 3
EDR Database Report
River and Ronan Parks (South)

**HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
RIVER RIPARIAN CONNECTIVITY & HABITAT - SECTION 506 PROJECT
COOK COUNTY, ILLINOIS**

Attachment 4
Historical Topographic Maps

**HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
RIVER RIPARIAN CONNECTIVITY & HABITAT - SECTION 506 PROJECT
COOK COUNTY, ILLINOIS**

Attachment 5
Historical Aerial Photographs
Legion Park (North)

**HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
RIVER RIPARIAN CONNECTIVITY & HABITAT - SECTION 506 PROJECT
COOK COUNTY, ILLINOIS**

Attachment 6
Historical Aerial Photographs
River and Ronan Parks (South)

**HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
RIVER RIPARIAN CONNECTIVITY & HABITAT - SECTION 506 PROJECT
COOK COUNTY, ILLINOIS**

Attachment 7
Sanborn Maps
Legion Park (North)

**HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
RIVER RIPARIAN CONNECTIVITY & HABITAT - SECTION 506 PROJECT
COOK COUNTY, ILLINOIS**

Attachment 8
Sanborn Maps
River and Ronan Parks (South)

**HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
RIVER RIPARIAN CONNECTIVITY & HABITAT - SECTION 506 PROJECT
COOK COUNTY, ILLINOIS**

Attachment 9
Site Visit Photographs