Upper Des Plaines River and Tributaries
Integrated Feasibility Report and Environmental Assessment

Appendix H – HTRW Investigation

August 2013

Study Partnership

Illinois Department of Natural Resources (IDNR)
Southeastern Wisconsin Regional Planning Commission (SEWRPC)
Lake County Stormwater Management Commission (LCSMC)
Forest Preserve District Lake County (FPDLC)
Metropolitan Water Reclamation District of Greater Chicago (MWRDGC)
Cook County Highway Department (CCHD)
Forest Preserve District of Cook County (FPDCC)
U.S. Fish and Wildlife Service (USFWS)
U.S. Army Corps of Engineers (USACE

US Army Corps
of Engineers ®
Chicago District

Appendix H – HTRW Investigation Information Summary

The watershed scale of the Upper Des Plaines River and Tributaries Feasibility Study has allowed for a systems approach, evaluating the basin-wide flood risk management and ecosystem restoration potential, evaluating individual sites by purpose and then evaluating sites in combination with each other. Separate plans were formulated to meet the flood risk management and ecosystem restoration study purposes resulting in distinct flood risk management (FRM) and ecosystem restoration (ER) plans. These single purpose plans have been combined into multipurpose FRM/ER plans.

Authorization for the study directs USACE to "not exclude from consideration and evaluation flood damage reduction measures based on restrictive policies regarding the frequency of flooding, the drainage area, and the amount of runoff." Therefore, a broad range of measures throughout the watershed have been investigated and evaluated. However, not all of the individually justified projects are compliant with current USACE policy. In order to fully respond to the study authority while also considering existing policy and guidance, four distinct plans have been formulated: No Action Plan, Full Plan, CAP Plan, and Combined NED/NER Plan.

Regardless of the plan terminology used (FRM/ER versus NED/NER), and preliminary technical design details referenced in this appendix, all sites were evaluated for potential HTRW concerns and results are contained within this appendix. The site name noted in the feasibility study, nomenclature used in the HTRW report, and location of specific site investigations within the HTRW appendix are shown in Table 1 below. This appendix contains five separate HTRW reports:

Report #1 - HTRW review conducted for National Economic Development (NED) Reservoir, Levee/Floodwall, and Structural Modification Sites
Report #2 - HTRW review conducted for National Ecosystem Restoration (NER) and National Economic Development (NED) Ecosystem Restoration and Road Raise/Bridge Modification Sites
Report #3 - HTRW review conducted for Additional National Ecosystem Restoration (NER) and National Economic Development (NED) Sites
Report #4 – HTRW review conducted for C16 Environmental Mitigation Site
Report #5 - HTRW Review for Additional Levee Sites DPLV04 and DPLV05

Table 1: Summary of site designations and HTRW Information

Site Type	Feasibility Study Site Designation	HTRW Report Site Designation	Location of HTRW Information
FRM	BCRS02	Bull Creek Reservoir (BCRS02)	Report #1
	L22 (Mitigation for BCRS02)	Bull Creek Mitigation (L22)	Report #2
	ACRS08	Aptakisic Creek	Report #1

Site Type	Feasibility Study Site Designation	HTRW Report Site Designation	Location of HTRW Information
FRM		Reservoir (ACRS08)	
	FPCI01	Lake Mary Anne (FPCI01)	Report #1
	DPLV09	DPLV09	Report #3
	DPRS15 (*Mitigation for DPLV09*)	DPLV09 Compensatory Storage Site	Report#3
	C16 (*Mitigation for DPLV09*)	C16	Report #4
	DPBM04	First Avenue Bridge Modification (DPBM04)	Report #2
	DPLV01	Groveland Avenue Levee/Floodwall (DPLV01)	Report #1
	DPLV04	Levee 4 (DPLV04)	Report #5
	DPLV05	Levee 5 (DPLV05)	Report #5
ER	C09	Northbrook Marsh (C09)	Report #2
	C15	Beck Lake Meadow (C15)	Report #2
	L05	L05	Report #3
	L31	L31	Report #3
	L33	L33	Report #3
	L39	L39	Report #3
	L41	Antioch Aquatic Complex (L41)	Report #2
	L43	L43	Report #3
	K09	Somers Marsh (K09)	Report #2
	K33	Union Grove Wet Prairie (K33)	Report #2
	K41	Pikeville Forested Floodplain (K41)	Report #2
	K47	Bristol Marsh (K47)	Report #2
	R04	Sturtevant Wet Prairie (R04)	Report #2

Appendices to each investigation, including database reports, historical maps and documents, and site photographs are available electronically upon request. Information highlighted within each HTRW investigation may require additional investigation in future project phases; italicized

text is presumed information that may require additional clarification. Sites requiring additional investigation are summarized in the feasibility report.

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW INVESTIGATION UPPER DES PLAINES RIVER AND TRIBUTARIES PHASE II FEASILIBITY STUDY

National Economic Development (NED) Reservoir, Levee/Floodwall, and Structural Modification Sites

Hydraulic and Environmental Engineering Section (TS-DH)
U.S. Army Corps of Engineers, Chicago District

September 2011

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW INVESTIGATION DES PLAINES PHASE II – STRUCTURAL MODIFICATION, RESERVOIR, AND LEVEE/FLOODWALL SITES

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INTRODUCTION

The purpose of this report is to discuss the hazardous, toxic, and radioactive waste (HTRW) investigation for the Upper Des Plaines and Tributaries Phase II Feasibility Study. 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.

SCOPE OF REPORT

This report contains the results of the HTRW and non-HTRW investigations for the reservoir, levee/floodwall, and structural modification sites located in Cook and Lake Counties, Illinois. Additional HTRW investigations are required for the road raise and NER sites to complete the HTRW work for the Phase II feasibility report.

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. Therefore, HTRW and non-HTRW issues identified are discussed in this report.

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 for a Reconnaissance Phase investigation and relies on existing information, observations made through database research, a site visit, and a historical aerial photograph and topographic map review. As stated in the ER-1165-2-132, an initial assessment as appropriate for a Reconnaissance Study should be conducted as a first priority for projects with no prior HTRW consideration. If the initial assessment indicates the potential for HTRW, testing, as warranted, and analysis similar to a Feasibility Study should be conducted prior to proceeding with the project design.

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, and this practice recognizes time and cost constraints.

GUIDANCE

Supplemental guidance was provided by the Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process (Designation: E 1527-05) prepared by the American Society for Testing of Materials (ASTM). These standards include a records review, site visit, interviews, and report preparation. This report followed many of the ASTM E 1527-05 guidelines but not to the same level of detail described by the ASTM E 1527-05 guidance.

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 problems. This investigation, therefore, identifies potential HTRW problems and discusses resolutions and/or provides recommendations regarding the HTRW problems identified.

Non-Hazardous, Toxic, and Radioactive Waste

According to ER 165-2-132, non-HTRW environmental issues that do not comply with federal, state and local regulations should be discussed in the HTRW investigation along with HTRW issues. 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 problems identified during the investigation are also discussed in this report, along with resolutions and/or recommendations for resolving the issue.

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 a '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 stated in the definition of hazardous substance in the Environmental Statutes, 1988 Edition, the term does not include petroleum, including crude oil or any fraction thereof, which is not otherwise specifically listed or designated as a hazardous substance under the definition. Underground Storage Tanks (USTs) are federally regulated under 40 CFR Part 280, which includes technical standards and corrective action requirements for owner 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.

SITE DESCRIPTION

The Upper Des Plaines River watershed originates in Racine and Kenosha counties of southeastern Wisconsin, in an agricultural landscape. The watershed extends south into Illinois through Lake County and then Cook County, where it converges with the Salt Creek Watershed near Riverside, Illinois. The Des Plaines River then flows southwest on to its confluence with the Kankakee River, where the two rivers combine to form the Illinois River. The watershed covers approximately 475 square miles, covering an area that spans approximately 82 miles from north to south and 9 miles wide from east to west. The Upper Des Plaines River travels over 69 miles before its confluence with Salt Creek. Tributaries within the study area include about 331 miles of perennial and intermittent streams (see Figure 1).

The Upper Des Plaines River watershed land use is highly urbanized downstream in the southern portions of the watershed and is rural/agricultural in the upstream areas to the north. In general, land use throughout the watershed is a mix of agricultural areas, urban areas, industrial and manufacturing areas, and natural areas (see Figure 2). As of 2001, land use in the Illinois portion of the watershed consists of 57.4% urban, 23% natural landscape, and 19.6% agriculture (USACE 2011). These landscape-scale changes in land-use, and subsequent hydrologic and hydraulic alterations, have led to increased flooding

and subsequent flood damages, decreased habitat quality, degraded water quality and reduced species richness throughout the watershed.

PROJECT DESCRIPTION

The combined plan developed for the Upper Des Plaines and Tributaries Feasibility Study (Phase II Study) has been formulated to build on and extend the benefits achieved by the Upper Des Plaines River Flood Damage Reduction Feasibility Study (Phase I Study). The authorized plan developed in the Phase I Study addressed flood risk within the Upper Des Plaines River watershed in Illinois. The Phase II Study recommends a plan that further manages flood risk on the main stem of the Des Plaines River in both Illinois and Wisconsin, manages tributary flood risk, and, additionally, restores and enhances degraded ecosystems within the study area. The watershed scope of the study has allowed for a systems approach, evaluating the basin wide flood risk management and ecosystem restoration potential of each site. Separate plans were formulated to meet the flood risk management and ecosystem restoration study purposes resulting in national economic development (NED) and national ecosystem restoration (NER) plans. These plans have been combined into a single multipurpose plan.

The Phase II NED plan was formulated to manage flood risk on both the main stem Upper Des Plaines River and along its tributaries. The NED plan recommends two floodwater storage reservoirs, three levee/floodwalls, six road raises, and three modifications to existing structures be implemented throughout the watershed. This report contains the results of the HTRW and non-HTRW investigations for the reservoir, levee/floodwall, and structural modification sites located in Cook and Lake Counties, Illinois. The locations of the sites are shown on Figures 3, 4 and 5. The following project features may be implemented on one or more sites:

- Excavation for the creation of floodwater storage reservoirs
- Excavation for levee and floodwall placement
- Placement of levee and floodwalls
- Placement of culverts for floodplain connection
- Creation of pump stations
- Stormwater routing
- Modification to bridge piers

Bull Creek Reservoir (BCRS02)

Bull Creek Reservoir is a 111 acre site located at Lake Street and Winchester Road, in Mundelein, Lake County, Illinois. The Bull Creek Reservoir will provide approximately 240 acre-feet of storage on the Bull Creek tributary to the main stem Des Plaines River, reducing flood stages downstream of the reservoir within the tributary and downstream of the confluence of Bull Creek within the main stem. The inline reservoir will be excavated to a depth of four feet providing capacity designed for 25 to 100 year flood events.

Stormwater will flow from the Des Plaines River into the reservoir through a reinforced concrete pipe. A weir at the outlet of the reservoir will control the stormwater retention time in the facility. Surplus material generated from reservoir excavation that is not used to construct the levees creating the storage area will be placed at the south end of the project site (see Figure 6).

Aptakisic Creek Reservoir (ACRS08)

The Aptakisic Creek Reservoir is a 94 acre site located at Aptakistic Road and Buffalo Grove Road in Buffalo Grove, Lake County, Illinois. The Aptakistic Creek Reservoir will provide approximately 420 acre-feet of storage on the Aptakisic Creek tributary to the main stem Des Plaines River, reducing flood stages downstream of the reservoir within the tributary and downstream of the confluence of Bull Creek within the main stem. The reservoir is designed for 25 to 100 year flood events and is 4.5 feet deep. Stormwater is pumped to the reservoir from Aptakisic Creek and after the storm event is drained using and combination of sluice gate and pumping. Surplus material generated from reservoir excavation that is not used to construct the levees creating the storage area will be placed on site (see Figure 7).

Adler Park Levee (DPLV15)

The Adler Park Levee is a 1,793 foot 10-foot high levee that will protect homes on the east bank of the Des Plaines River between Spruce and Idlewood Lanes, south of Buckley Road in Libertyville, Lake County, Illinois (see Figure 8).

Oakton-Everett Levee/Floodwall (DPLV07)

The Oakton-Everett Levee is located near the west bank of the Des Plaines River, between Oakton and Touhy in Des Plaines, Cook County, Illinois. The Oakton-Everett Levee is a 1,600 foot levee and floodwall that will protect homes along River Road between Everett and Oakton Streets. The structure will include 527 feet of levee at the south end and 1,195 feet of floodwall extending the structure north. The levee/floodwall structures are approximately 10.5 feet high (see Figure 9).

Groveland Avenue Levee/Floodwall (DPLV01)

The Groveland Avenue Levee runs along the east bank of the Des Plaines River and Groveland Avenue in Riverside, Cook County, Illinois. Site features include road raises at Park Lane, Groveland Avenue, and Lincoln Avenue. The existing levee along Groveland Ave will be raised. Sheet pile will be driven into the design to obtain the designed top elevation. A road closure structure at Forest Ave is proposed to tie into the south termination of the sheet pile and the proposed floodwall. Floodwall is proposed south of Forest Ave and along the Des Plaines River (see Figure 10).

Lake Mary Anne (FPCI01)

The Lake Mary Anne Pump Station project consists of a pump station and connector pipe that will link existing storage at Lake Mary Anne and Dude Ranch Pond along the Farmer-Prairie Creek tributary to the main stem Des Plaines River, in Des Plaines, Cook County, Illinois (see Figure 11). To maintain lower flood stages in Lake Mary Anne, storm water will be pumped out of the lake to Dude Ranch Pond, which is located just south of Lake Mary Anne and across from Golf Rd. According to IDNR Farmer's Prairie Creek Study, there is an existing 12-inch and 18-inch outlet pipes that carries run-off from 294 Toll way. The pipes are currently inactive and will remain inactive. Therefore, the lake will no longer collect run-off from the toll way. There are two work areas and staging areas proposed for this project. The work areas are located on each side of Golf Rd.

Two-5 CFS pumps are proposed to pump storm water from Lake Mary Anne to Dude Ranch Pond through a 12-inch outlet pipe. A 12-inch intake pipe is also proposed. A headwall will be installed at the outlet pipe. Riprap will also be placed for erosion control. The outlet pipe will be installed under Golf rd to Dude Ranch Pond. Golf road is a major road and will likely have major utilities crossing, including a 96" interceptor pipe. Therefore, the proposed pipe will be installed under the road by directional jacking to minimize impacts to crossing utilities and traffic.

BNSF Railroad Bridge Pier Extension (DPBM01)

The BNSF Railroad Bridge Pier crosses the main stem of the Des Plaines River near State Highway 34 in Riverside, Cook County, Illinois. The project includes a skewed railroad bridge that crosses the Des Plaines River between Forest Ave and Ogden Ave. Currently the pier arrangement impedes natural flow of the river. This project extends and realigns the railroad piers upstream and downstream to provide flow conveyance. This flow improvement will change the piers effective width from 33-feet to the actual 6.5-feet and the effective bridge width from 219-feet to 265-feet in the hydraulic modeling. Additionally river bank pullback upstream and downstream would be needed to allow for effective conveyance of flows through the bridge (see Figure 12). The project will likely include sediment disturbance, handling and/or removal to realign the bridge piers and removal and disposal of excess bank material excavated for flow improvements.

Silver Creek Reservoir Expansion (SCME02)

Silver Creek Reservoir Expansion is located along Irving Park Road in Franklin Park, Cook County, Illinois. Silver Creek Reservoir contains two reservoirs (east and west reservoirs) that are separated by a 60" diameter bypass pipe. The bypass pipe conveys flow from Silver Creek. Storm water flows from Silver Creek into the east reservoir through the existing spillway structure. After the storm event, water is pumped out of the reservoir through the existing pump station. The west reservoir includes an under-drain

pipe system that serves to collect standing water in the reservoir and feeds the pump station intake structure. Water pumped out of the reservoir discharges into Silver Creek. Stormwater flows into the west reservoir from the east reservoir through a 60” diameter equalizer pipe. The west and east reservoirs are enclosed by 16-foot tall slurry wall. There is an existing access ramp to the bottom of the reservoir located at the south-end of the reservoir. The existing access to the site is from Seymour Avenue on the north-east side of the project site.

The existing reservoirs will be expanded vertically by deepening the reservoir by 10 feet. The expanded reservoirs will provide a total of approximately 155 acre-feet of storage. The existing under-drain system will be removed and replaced at the new depth. The existing spillway chute will be extended by approximately 35 feet to meet the new grade. The spillway berm, including the erosion control cell grout, will be replaced. The pump station intake structure will also be extended to meet the new grade. The existing equalizer pipe will be filled and abandoned in place and a new 60” diameter equalizer pipe will be installed (see Figure 13). The reservoir is currently operated and maintained by the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC).

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
- Database research
- Historical topographic map review
- Historical aerial photograph review
- Site visit

This information was used to determine if the measures selected for implementation for the reservoir, levee/floodwall, and structure modification sites included in the Phase II Study will have an impact on any HTRW occurrences that may exist in the surrounding areas, and if HTRW problems will have an impact on the implementation of the project. The information gathered from the above list of sources is detailed in the following sections.

EXISTING INFORMATION REVIEW

Water Quality

The Des Plaines River and tributaries are classified as general use water bodies in Illinois. The general use water quality standards apply to almost all waters of the state and are intended to protect aquatic life, wildlife, agricultural, primary contact, secondary contact, and most industrial uses. The general use standards are also designed to ensure

the aesthetic quality of the aquatic environment and to protect human health from disease or other harmful effects that could occur from ingesting aquatic organisms taken from surface waters. Aquatic life use assessments in streams are typically based on the interpretation of biological information, physiochemical water data, and physical habitat information; the assessment of primary contact use is based on fecal coliform bacteria data. The assessment of fish consumption use is based on water body-specific fish tissue data and resulting fish-consumption advisories issued by the Fish Contaminant Monitoring Program (FCMP). Public and food processing water supply is only assessed in water bodies where the use is currently occurring (as evidenced by the presence of an active intake).

Various portions of the study area in Illinois have been assessed for all, or some, of their designated uses. The Des Plaines River, Willow Creek, Higgens Creek, Buffalo Creek, and Indian Creek are listed as impaired streams in the Illinois Environmental Protection Agency (IEPA) draft Integrated Water Quality Report and 303(d) list (IEPA 2010) due to inability to achieve and reach the applicable general use water quality standards. Mill Creek and Bull Creek have been assessed for aquatic life use and fully support this function. Smaller systems, including McDonald, Silver, Crystal, and North Mill Creeks have not been assessed by IEPA.

Within the Illinois portion of the study area, some segments of the Des Plaines River do not support the aquatic life, fish consumption, or primary contact designated uses. The potential causes for aquatic life impairment include elevated levels of chloride, nitrogen, phosphorous, total dissolved and suspended solids, zinc, and silver, and excessive sedimentation and siltation caused primarily from combined sewer overflows, municipal point source discharges, urban runoff, storm sewers, highway/road/bridge runoff, site clearance and land development, hydrostructure flow regulation, and the presence of sediment contaminated with various chemicals. Sediments with elevated concentrations of mercury and PCBs of unknown origin have resulted in several fish consumption advisories issued in several reaches of the study area, and elevated levels of fecal coliform, resulting from combined sewer overflows, urban runoff, and storm sewers have impaired primary contact recreation in many areas.

Willow Creek is an aquatic life impaired waterway due to the presence of elevated levels of phosphorous and dissolved solids from municipal point sources, urban runoff, and storm sewers; the same types of sources impact Higgens and Buffalo Creeks. Higgens Creek is an aquatic life and primary contact impaired waterway due to the presence of elevated levels of chloride, fluoride, nickel, nitrogen, phosphorous, silver, total dissolved solids, zinc, and fecal coliform. Buffalo Creek is aquatic life and primary contact impaired due to the presence of elevated levels of manganese, silver, and fecal coliform. Indian Creek is aquatic life impaired due the presence of contaminated sediment containing endrin, methoxychlor, and nitrogen above highly elevated levels.

Geology

The study area was created and modified by four major glaciation events, lasting from approximately 1.6 million to 10,000 years ago. These glaciers produced a rounded topography by scraping away at the bedrock in some areas and depositing the accumulated debris in other areas. The underlying bedrock of the study area is covered by various depths of a complex layering of beds and lenses of outwash with different layers of till left by surging and retreating glaciers. In addition, the study area is laced with several clustered end moraines (ridges left by retreating glaciers), which are oriented in a north-south direction that roughly parallels the shore of Lake Michigan (see Figure 14). The importance of glacial history is the profound effect that the deposited drift, left by glaciers, had on the area's modern and moderately productive soils. These deposits range from 20 to 35 feet thick and some extend down to bedrock. The properties of loess (windblown silt) and till, mainly a compact matrix of clay, silt and sand mixed with other larger sized grains, form the parent material for soils of this area. Depending on the properties of these soils and glacial deposits, water could either be absorbed directly into the ground and stored in an aquifer or run off into nearby streams.

Soil Quality

The NRCS classifies intact soils into four hydrologic groups based on these infiltration characteristics: permeability, slope, and erosion potential. These are as follows:

- Class A - Soils with high infiltration rates that are typically deep, well drained to excessively drained sands or gravel
- Class B - Soils with moderate infiltration rates that are generally moderately deep to deep, moderately well to well-drained soils with moderately fine to moderately coarse textures
- Class C - Soils with slow infiltration rates which are mainly soils with a layer that impedes downward water movement or soils with moderately fine to fine texture
- Class D - Soils with very slow infiltration rates which are mainly clay soils, soils with a permanently high water table and shallow soils over nearly impervious material

There are 13 soil associations found within the study area (see Figure 15). One of the most important factors affecting soils of the study area is extensive urbanization. Many soils throughout the project area and within Cook County, Illinois are affected by human activities, which are overlaid by a few feet of miscellaneous fill and/or regraded top soil. Soil types found at each project area range from urban land to silty clay loam or silt loam from the Sawmill, Pella, Rush, Zurich, Mundelein, Pella, Barrington, Peotone and Houghton soils series (obtained from EDR reports see Attachment x). Soils range from poorly drained hydric soils to moderately well drained soils. The primary soil type found in many of the project areas is considered silt loam from the Fox series, hydrologic Class B, well-drained soils with intermediate holding capacity and depth to the water table

more than 6 feet. The environmental soil quality at each of the project sites is largely unknown.

Sediment Quality

Sediment samples were collected upstream of Hofmann Dam (Des Plaines River in Riverside) in 2001, 2006, and 2011. Results of the sediment investigations are included in Attachment 1. Results of sediment analysis for metals, semi-volatiles, pesticides, and PCBs in the sediment samples collected suggest that PNAs and metals are present in the sediment of the downstream portions of the Des Plaines River above the "normal" background for the Chicago Area. In addition, PCB concentrations in the sediment range from non-detect to 20 mg/kg.

DATABASE SEARCH

A search of available environmental records was conducted utilizing the Environmental Database Resources, Inc. (EDR) online for each of the project sites. EDR searched federal and state databases using the minimum search distances issued in the ASTM E 1527-00 guidelines. Table 1 notes the recommended ASTM search distance for federal and state databases. A description of information included in each database is included below.

Table 1 – Minimum Search Distance for Federal and State Database Searches

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, for various reasons.

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.

ERNS

The Emergency Response Notification System (ERNS) database lists information on reported releases of oil and hazardous substances.

SHWS

The State Hazardous Waste Sites (SHWS), or State Oversight List, are the state equivalent to CERCLIS and NPL. These sites may or may not have already been listed on the federal CERCLIS list.

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.

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).

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). The database search located one SRP sites within the search distance. This site is also listed in the Engineering Controls (ENGG CONTROL) database maintained by the IEPA.

FINDS

The FINDS database (facility index system/facility registry system) contains facility information and pointers to other sources that contain more detail. The EDR report includes the following FINDS databases in the report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (Statement Environmental Laws and Statues), and PADS (PCB Activity Data System).

Others

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

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.

Phase II Project Review

The EDR overview map displaying the project areas and the search results are given in Figures 16 through 24. The comprehensive EDR database reports are provided in Attachment 2. Analysis of information included in the EDR database, the status of the sites, and a summary of the potential project impacts are included in Tables 2 through 9. It appears, based on the analysis provided that there are several environmental concerns associated with results of the database information:

- Bull Creek – the EDR database report suggests that the location of the Vickery Manor surface impoundment (municipal) is located at the project site. The impoundment database is a statewide inventory of industrial, municipal, mining, oil & gas, and large agricultural impoundments conducted in the 1980s. This study was conducted by the Illinois EPA to assess potential for contamination of shallow aquifers. Although many of the impoundments may no longer be present, the sites may be contaminated. Additional information could not be found through on-line resources in regards to previous site use. The status of the reservoir property should be closely checked during the site visit to determine if the site has been used as a disposal area. In addition, the historical topographic and aerials maps should be reviewed in detail to determine if there have been changes in topography or if there is visual evidence of use of the site for dumping or disposal. Additional information was requested through the project manager (through Lake County), but was not available at the time of this report.

- Oakton – Everett Levee/Floodwall – there are three LUST incidents within the recommended search distance with unknown or unresolved status. It is unclear if any of these sites have the potential to impact project implementation. Additional information about the sites was requested through the IEPA but was not available at the time of this report.

- Silver Creek – there appear to be several LUST and SRP incidences adjacent to the project area to the south. While some of these sights are hydrologically separated from the eastern cell of the existing reservoir, the western cell does not have the same hydrologic barrier (Silver Creek). Several properties have groundwater use restrictions issued, including restrictions from residential and industrial/commercial groundwater use. It is unclear if deteriorated groundwater conditions are present in the project area or if implementation of the project could be impacted by the presence of groundwater during excavation activities.

Bull Creek Reservoir (BCRS02)

Table 2 – Bull Creek Reservoir EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	A1	USG Corporation	*Adjacent to east*	NFA/NFR letter dated 6/21/2006	Unlikely LUST activities have impacted project area
UST	A2	USG Research and Technology Center	*Adjacent to east*	All tanks removed	Unlikely facility activity impacted project area
MANIFEST SPILLS	A3	USG Corporation Research Center	*Adjacent to east*	Unknown scope, scale, and status of spill incident	*Confirm status of project area and facility during site visit
RCRA-SQG FINDS LUST	A4	USG Corporation Research Center	*Adjacent to east*	Current SQG, previous LGQ – with previous violations (1990s) LUST NFA/NFR letter dated 6/13/1994	*Confirm status of project area and facility during site visit
IMPDMENT	5	Vickery Manor Service Corporation	*Within Contractor staging area*	Municipal impoundment tagged in the project area – unknown status	*Confirm status of project area and review historical documents for indications of land filling
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

Aptakisic Creek Reservoir (ACRS08)

Table 3 – Aptakistic Creek Reservoir EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
No regulated sites within the ASTM recommended search distance. The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found. Verify site status and surrounding land use during site visit.					

Adler Park Levee (DPLV15)

Table 4 – Adler Park Levee EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
No regulated sites within the ASTM recommended search distance. The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found. Verify site status and surrounding land use during site visit.					

Oakton-Everett Levee/Floodwall (DPLV07)

Table 5 – Oakton-Everett Levee/Floodwall EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST RCRA-SQG FINDS	A1/A2	Auto Craft Auto Body	*Along floodwall alignment*	RCRA - no violations	Unlikely facility activities have impacted the project area
UST	B3	Bucky's Express	*<1/8 mile west*	Facility contains 4 USTs, currently in use	Facility and associated tanks are not within the project area. No indications that facility operations have impacted the project area
RCRA-SQG FINDS LUST LUST-TRUST MANIFEST	B4/B5	Mobil Oil Corporation	*<1/8 mile west*	RCRA generator with no violations LUST NFA/NFR letter dated 7/16/2009	Unlikely facility activities have impacted the project area
UST	B6	Circle K #6771	*<1/8 mile west*	Facility has several USTs on-site, most in use or exempt from registration	Facility and associated tanks are not within the project area. No indications that facility operations have impacted the project area
LUST	B7	Shell Oil Products	*< 1/8 mile west*	LUST NFA/NFR letter dated 5/21/2009	Unlikely LUST activities has impacted the project area
UST	C8	Philips 66	*< 1/8 mile west*	Facility lists several USTS, some removed and some exempt from registration. Facility is closed.	Facility and associated tanks are not within the project area. No indications that facility operations have impacted the project area
RCRA-SQG	D9	Amoco 9631	*< 1/8 mile west*	RCRA generator- no violations	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	D10	O'Hare Pontiac	*< 1/8 mile west*	LUST status unknown (reported 2003)	Up gradient to project area. Given the activities conducted for construction of floodwall (excavation), and unknown scope and scale of LUST, the status of facility was requested through IEPA. Additional information not available at time of report.
RCRA-CESQG FINDS	D11 D12	Alpha Graphics	*< 1/8 mile west*	CESQG – no violations	Unlikely facility activities have impacted project area
LUST MANIFEST	E13	WML Kunkel & Company Realtors	*1/8 to 1/4 mile west*	NFA/NFR letter dated 12/30/1997	Unlikely LUST activities have impacted the project area
RCRA-SQG FINDS MANIFEST	E14 E15	Walgreens #2212	*1/8 to ¼ mile west*	RCRA gen – no violations	Unlikely facility activities have impacted project area
UST MANIFEST RCRA-SQG FINDS	F16 F17 F18	Ridge Motors	*1/8 to ¼ mile northwest*	USTs removed from facility, facility closed Previous RCRA gen – no violations	Unlikely facility activities have impacted project area
MANIFEST RCRA-SQG FINDS	G19 G20	O'Hare Auto Group	*1/8 to ¼ mile northwest*	RCRA gen – no violations	Unlikely facility activities have impacted project area
SRP	H21	Royal Cleaners	*¼ to ½ mile west*	SRP unknown status (enrolled 2007)	Up gradient to project area. Additional information provided by IEPA staff (Attachment 6) suggests that the RAP has been approved for the site. Contamination is limited to on-site surficial soils and groundwater, with no evidence the groundwater plume extends off-site. It is unlikely that the site activities have impacted

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
					the project area.
LUST MANIFEST	H22	Clark Oil & Refining	*¼ to ½ mile west*	Two LUST incidences with unknown status (reported 1992 and 2002)	Up gradient to project area. Given the activities conducted for construction of floodwall (excavation), and unknown scope and scale of LUSTS, the status of facility was requested through IEPA. Additional information not available at time of report.
LUST MANIFEST	23	Gunn, Raymond	*¼ to ½ mile west*	Non-LUST status 9/11/1995	Confirmed site status through IEPA online database. After additional reporting by owner, it appears site is determined to be non-LUST. Unlikely activities have impacted project area.
LUST MANIFEST	24	Vanderra, Russell	*¼ to 1/2 mile south*	NFA/NFR letter dated 1/28/1997	Unlikely LUST activities have impacted project area
LUST MANIFEST UST	I25	Accurate Auto Inc.	*¼ to ½ mile west*	NFA/NFR letter dated 4/22/2003 Facility closed and USTs removed	Unlikely LUST activities have impacted project area
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

Groveland Avenue Levee (DPLV01)

Table 6 – Groveland Avenue Levee EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
RCRA-SQG FINDS LUST MANIFEST	1	Chicago Zoological Park	¼ to ½ mile southwest	Facility is current SQG, previous LQG, with no violations. LUST status unknown, scope and scale of impact unknown	Facility located up gradient to project area but not adjacent. Des Plaines River hydrologic barrier. Unlikely LUST activities have impacted project area
INST CONT SRP	2	O'Connor Cleaners	*¼ to ½ mile northeast*	SRP NFR letter dated 8/28/2007 – groundwater use restriction required	Unlikely facility activities have impacted project area or will impact project implementation
LUST MANIFEST	3	Fire Station and Water Reservoir	*¼ to ½ mile southeast*	LUST NFA/NFR letter dated 3/9/1993	Unlikely LUST activities have impacted project area
LUST	4	Village Center Development	*¼ to ½ mile southeast*	LUST NFA/NFR letter dated 6/16/2006	Unlikely LUST activities have impacted project area
MANIFEST INST CONT SRP	5	Ruby Cleaners II	*¼ to ½ mile southeast*	SRP NFR dated 1/4/2007 with groundwater use restriction on-site	Unlikely facility activities have impacted project area or will impact project implementation
LUST MANIFEST	6	Hollywood School, Riverside Pub	*¼ to ½ mile southwest*	LUST NFA/NFR letter dated 11/28/1990 – no restrictions	Unlikely facility activities have impacted project area
LUST MANIFEST	7	St. Mary's Parish	*¼ to ½ mile east*	LUST status (57.5(g))	Up gradient to project area. According to IEPA online database, the site contains a heating oil storage tank for on-site use, and is not subject to remediation. Given the proximity and type of activity, it is unlikely to impact project implementation

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
RCRA-nongen FINDS LUST MANIFEST	8	Riverside Taxi Co.	*¼ to ½ mile east*	RCRA non-gen, previous LQG, no violations. LUST NFA/NFR letter dated 2/15/2001	Unlikely facility activities have impacted project area
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

Lake Mary Anne (FPCI01)

Table 7 – Lake Mary Anne EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	A1	Amoco Oil Company #15698	1/8 to ¼ mile west	NFA/NFR letter dated 10/3/2006	Unlikely LUST activities have impacted project area
UST	A2	Shell Gas Station	*1/8 to ¼ mile west*	Facility not installed	Unlikely UST activities, if present, will impact project implementation. Site is not located on USCAE project area
RCRA-SQG FINDS	A3	Amoco Oil Company	*1/8 to ¼ mile west*	RCRA – no violations	Unlikely facility activities have impacted project area
UST LUST MANIFEST RCRA-CESQG	B4 B5 B6	Jiffy Lube	*1/8 to ¼ mile east*	Tanks removed LUST NFA/NFR letter dated 4/21/2011 RCRA – no violations	No indications that facility activities have impacted project area
RCRA Nongen MANIFEST	C7 C8	Bay Colony	*1/8 to ¼ mile south*	Previous LQG – no violations	Unlikely facility activities have impacted project area
MANIFEST	9	Honey Bee Oaks Apt Building	*1/8 to ¼ mile east*	No information	Facility is not listed in the RCRIS database or RCRAinfo. Location likely listed for contact purposes
LUST	D10 D11 D12 D13	Uno-Ven Company South Mini Mart	*¼ to ½ mile east*	Multiple LUST incidences reported, all with NFA/NFR letters dated 1/10/2007	Unlikely LUST activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

BNSF Railroad Bridge Pier Extension (DPBM01)

Table 8 – BNSF Railroad Bridge Pier Extension EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
UST	1	Midwest Property Mang	*1/8 mile northeast*	UST status unknown	Unlikely – facility UST outside of project area
NPDES MANIFEST RCRA-SQG FINDS	2/3	Riverside Brookfield High School	*1/8 to ¼ mile northwest*	RCRA - no violations. NPDES permit expires 2013, no violations	Unlikely facility activities have impacted project area or will impact project implementation
RCRA-SQG FINDS MANIFEST	A4/A5	Riverside Train Station	*1/8 to ¼ mile east*	RCRA - no violations	Unlikely facility activities have impacted project area or will impact project implementation
LUST MANIFEST	6	Fire Station and Water Reservoir	*¼ to ½ mile northeast*	LUST NFA/NFR letter dated 3/9/1993.	Unlikely LUST activities have impacted project area
LUST MANIFEST	7	Burlington Northern Railroad	*¼ to ½ mile southwest*	LUST status unknown, scope and scale of impact unknown.	Facility located up gradient to project area but not adjacent. Unlikely to affect implementation of the project (bank grading)
INST CONT SRP MANIFEST	8	Ruby Cleaners	*¼ to ½ mile northeast*	SRP NFR dated 1/4/2007 with groundwater use restriction on-site	Unlikely facility activities have impacted project area
RCRA-SQG LUST MANIFEST FINDS	9	Chicago Zoological Park	*¼ to ½ mile northwest*	RCRA previous LQG, with no violations. LUST status unknown, scope and scale of impact unknown (reported 1991)	Up gradient to project area. According to IEPA online database, the site contains a heating oil storage tank for on-site use, and is not subject to remediation. Given the proximity and type of activity, it is unlikely to impact project implementation

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	10	Village Center Development	*¼ to ½ mile northeast*	LUST NFA/NFR letter dated 6/16/2006	Unlikely facility activities have impacted project area
LUST MANIFEST	11	Village of Riverside	*¼ to ½ mile east*	LUST NFA/NFR dated 2/18/2010 (two incidents) and 8/28/1992	Unlikely facility activities have impacted project area
LUST	12	Riverside 66, Inc	*¼ to ½ mile east*	LUST NFA/NFR letter dated 10/31/2005	Unlikely facility activities have impacted project area
LUST MANIFEST	13	Hollywood School, Riverside Pub	*¼ to ½ mile northwest*	LUST NFA/NFR letter dated 11/28/1990	Unlikely LUST activities have impacted project area
LUST	14	Metal Mites, Inc.	*¼ to ½ mile east*	LUST NFA/NFR letter dated 2/11/2003	Unlikely LUST activities have impacted project area
RCRA-nongen FINDS LUST MANIFEST	15	Riverside Taxi Co.	*¼ to ½ mile northeast*	RCRA non-gen, previous LQG, no violations. LUST NFA/NFR letter dated 2/15/2001	Unlikely facility activities have impacted project area
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. Village of Riverside and Brookfield HS are discussed above. No other sites of concern were found.					

Silver Creek Reservoir Expansion (SCME02)

Table 9 – Silver Creek Reservoir Expansion EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST RCRA-SQG FINDS	A1/A2	Alliance Airlines	1/8 to ¼ mile east	RCRA- no violations	Unlikely facility activities have impacted project area
MANIFEST	3	Ablaze Transportation	*1/8 to ¼ mile northeast*	No status to report	Unlikely facility activities have impacted project area
INST CONT SRP	4	McKay Contractors, Inc.	*1/8 to ¼ mile northwest*	SRP NFR letter recorded 2/5/2007 – groundwater use restriction on-site (industrial commercial 4.5 acres)	Groundwater conditions in project area may be a concern during excavation
CERC-NFRAP	5	Milwaukee Road Bensenville Yard	*¼ to ½ mile southwest*	NFRAP – site does not qualify for NPL	Site physically separated from portions of the project area by several railroad barriers. Silver Creek hydrologic barrier. Unlikely facility activities have impacted project area
INST CONT SRP	B6	Soo Line Railroad Company	*¼ to ½ mile southwest*	SRP NFR recorded 6/3/2004 – groundwater use restriction on-site with worker caution (industrial commercial 90 acres); NFR recorded 7/19/2007 – groundwater use restriction (residential < 1 acre); NFR recorded 7/8/2010 – groundwater use restriction (residential – 270 acre)	Groundwater conditions in project area may be a concern during excavation.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST MANIFEST	B7	Soo Line Railroad, Canadian Pacific	*¼ to ½ mile southwest*	LUST status unknown	Groundwater conditions in project area may be a concern during excavation.
LUST	B8	William R. Hubbell Steel Corporation	*¼ too ½ mile southwest*	NFA/NFR letter dated 3/9/1995	Unlikely facility activities have impacted project area
LUST MANIFEST	9	Hamilton Partners	*¼ to ½ mile northwest*	NFA/NFR letter dated 2/27/1991	Unlikely facility activities have impacted project area
LUST	10	Arlington Metals Corporation	*¼ to ½ mile southwest*	NFA/NFR letter dated 3/28/1997	Unlikely facility activities have impacted project area
LUST UST MANIFEST INST CONT SRP	11	Parkway Cartage, Inc.	*¼ to ½ mile southwest*	LUST NFA/NFR letter dated 9/12/2006 USTS removed SRP NFR recorded 10/27/2006 with groundwater use restrictions (industrial commercial 1.9 acres)	Groundwater conditions in project area may be a concern during excavation.
LUST	12	B&L Partnership	*¼ to ½ mile east*	NFA/NFR letter dated 3/18/1993	Unlikely LUST activities have impacted project area
CERC-NFRAP CORRACTS RCRA-nongen FINDS MANIFEST	13	Reliable Electric Company	*½ to 1 mile south*	CERCLA actions deferred to RCRA. Previous RCRA generator - violations. CORRACT RFA completed 12/1991 and assigned low priority	Site physically separated from project area by several upland barriers. Silver Creek hydrologic barrier. Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
CERC-NFRAP CORRACTS RCRA-LQG TRIS MLTS FINDS TIER2	14	Sloan Valve Company	*½ to 1 mile east*	CERCLA actions deferred to RCRA. RCRA facility has violations – low corrective action priority. Facility stores industrial chemicals on-site.	Due to proximity of site to the project area, it is unlikely that activities at this facility have impacted the project area
CERC-NFRAP CORRACTS RCRA-nongen FINDS	15	Safety-Kleen Corporation	*½ to 1 mile west*	CERCLA actions deferred to RCRA Previous RCRA generator – violations and assigned medium corrective action priority. Human exposure and groundwater migration controls confirmed at the site 2010/2009.	Due to proximity of site to the project area, it is unlikely that activities at this facility have impacted the project area
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. Entries for O'Hare expansion were viewed in detail. No pertinent information or other sites of concern were found.					

HISTORICAL TOPOGRAPIC MAP REVIEW

Indications of potential HTRW issues 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 dumping activities, and locating extensive areas that lack vegetation can determine indications of potential HTRW issues. Historical topographic maps for each of the project sites are included in Attachment 3.

Bull Creek Reservoir (BCRS02)

Historical topographic maps were reviewed from the period between 1923 and 1993. The 1923 topographic map indicates that the site is undeveloped. A railroad is present east of the site. Wetlands cover some of the eastern portions of the site. No significant changes to the site are shown are noted between the 1923 and the 1947 topographic map except that a creek that runs through the northern portion of the site. The wetlands present on the site no longer appear on the 1960 topographic map. There are no significant changes to the site topography between 1960 and 1993. Ponds and wetlands are noted in the middle of the site in 1993. In summary, there are no significant changes in land use between 1923 and 1993; changes are most likely a result of the amount of water on the site at the time of the map. There are no signs that there have been significant filling or earth moving activities at the site.

Aptakisic Creek Reservoir (ACRS08)

Historical topographic maps were reviewed from the period between 1900 and 1993.The site in the 1900 topographic map appears to be mostly undeveloped. There several structures along the roadways that border the site. There appears to be a railroad running north-south on the east side of the site. In the 1947, 1948, and 1953 topographic map, the site and the surrounding area appear to be very similar to conditions in 1900, with the exception of additional structures on adjacent properties. In the lower southwest corner of the site in the 1963 topographic map there appears to be a utility line. There are very few changes between the 1963 topographic and 1972 topographic map. In the 1980 topographic map there appears to be another utility line running parallel to the utility line that was already running through the site. The features present on the 1993 topographic map are similar to the features present on the 1980 topographic map except that there are a few more on adjacent properties with structures associated to the south. It does not appear that the site contains any structures or has been used for industrial or commercial purposes.

Adler Park Levee (DPLV15)

Historical topographic maps were reviewed from the period between 1908 and 1993. The site looks to be an undeveloped in the 1908 topographic map. The scale of the 1960 topographic map allows the Des Plaines River to be visible. The project area is still green space, however, the words “Sewage Disposal” is noted on the eastern portions of the project area. There is more surrounding development visible in the 1960 topographic

map, and local roadways are present. There are no changes in site topography until the 1993 topographic map where the words “Sewage Disposal” no longer appear on the site. This portion of the project area will be investigated during a site visit to confirm the status of the site. It does not appear that the project area contains any structures or has been used for industrial or commercial purposes.

Oakton-Everett Levee/Floodwall (DPLV07)

Historical topographic maps were reviewed from the period between 1900 and 1995. Review of the 1900 topographic map suggests that there were no industrial developments on or east of the site before 1900; the site and east of the site appears to undeveloped. Municipalities such as Park Ridge, Des Plaines and Referee Park are noted. The scale of the 1927 topographic map include enough detail to suggest that there are structures (likely residential) west of the site along Des Plaines River Road. There are no changes to the on-site topography between 1927 and 1995. While the surrounding area was developed, the project area has remained undeveloped and natural between 1900 and 1995.

Groveland Avenue Levee (DPLV01)

Historical topographic maps were reviewed from the period between 1901 and 1998. The 1901 topographic map indicates that several municipalities have developed in the surrounding area (including rail service and other common services), and Salt Creek and the Des Plaines River are visible. Adjacent roadways and development are visible in the 1953 topographic map; Brookfield zoo and a high school are near to the north and west. The western bank of the Des Plaines River is undeveloped in this area and the eastern bank is shown as developed sometimes between 1901 and 1953 including a junior high school further east. There isn’t enough detail in the historical topographic maps to confirm when the existing levee/floodwall was constructed. There are few changes to the project area after 1953. The status of the project area should be confirmed during the site visit to determine the nature of the development in the areas adjacent to the floodwall and road raise/levee areas.

Lake Mary Anne (FPCI01)

Historical topographic maps were reviewed from the period between 1900 and 1995. The 1901 topographic map indicates that several municipalities have developed in the surrounding area (including rail service and other common services). In 1927 the site appears to be undeveloped; Golf Road is visible in the 1927 map. There are several structures noted in the 1927 map along Golf Road. Between 1927 and 1953, several more structures are noted along Golf Road and the roadways are more developed. Between 1953 and 1963, toll way 294/41 was constructed, along with other major roadways. Lake Mary is present in the 1963 topographic map, and several ponds or lakes present in the area of Dude Ranch Pond. *Perhaps these areas were used to obtain borrow for the construction of the toll way.* There are several small structures adjacent to Lake Mary and west of the Dude Ranch Pond project area. In the 1972 topographic map, Lake

Mary Anne no longer looks like two lakes but one contiguous lake. Beyond slight changes to the limits of Lake Mary Anne and Dude Ranch Pond, the sites and the surrounding area do not change significantly in the topographic maps after 1980. It appears that no structures have been built on the project area between 1900 and 1995. *Lake Mary and Dude Ranch Pond appear to be constructed lakes/ponds created as a result of the toll way construction between 1953 and 1963*. Golf Road has been present since 1929.

BNSF Railroad Bridge Pier Extension (DPBM01)

Historical topographic maps were reviewed from the period between 1901 and 1999. The "Burlington and Quincy RR" railroad bridge is located across the Des Plaines River in 1901. The 1901 topographic map also indicates that several municipalities have developed in the surrounding area (including rail service and other common services), and Salt Creek and the Des Plaines River are visible. Beyond changes to the name of the railroad bridge in 1972 to the current Burlington Northern Rail Line, and additional residential development between 1901 and 1998, there are few changes in the topography at the project site visible in the historical topographic maps.

Silver Creek Reservoir Expansion (SCME02)

Historical topographic maps were reviewed from the period between 1901 and 1997. Review of the 1901 topographic map suggests that there were no industrial developments on the site before 1901; the Chicago Milwaukee railroad is present to the south of the project area, and Irving Park Road is shown to the north. In the 1946 topographic map, it appears a ditch or creek runs through the site. Additional railroad facilities are located south of the site, including what appears to be a rail yard. There are two roads east of the site in the 1953 topographic map. There are several buildings adjacent to the two roads. The ditch is named Bensenville Ditch on the 1953 map. In the 1963 topographic map, there is a building east of the site with the words "Water Tank" written over it. The two roads north of the site in the 1953 topographic site are not shown in the 1963 topographic map. Irving Park Road is relocated south in the 1972 topographic map. There several large buildings east of the site (including within the limits of the spoil area). There are no significant changes to the site and the area surrounding the site between 1972 and 1980. A large excavated open water area is present on the site in the 1993 topographic map. The words "Water Tank" are no longer shown written on the buildings east of the site. The status of the property east of the Silver Creek Reservoir should be confirmed during the site visit.

HISTORICAL AERIAL PHOTOGRAPH REVIEW

Indications of potential HTRW issues 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 dumping activities, and locating extensive areas that lack vegetation can determine indications of potential HTRW issues. Historical aerial photographs are included in Attachment 4.

Bull Creek Reservoir (BCRS02)

Historical aerial photographs were reviewed from the period between 1953 and 2007. In the 1953 aerial photograph, the site is mostly undeveloped. A creek and other drainage ditches appear to be present in the central portions of the project site. There is a structure (*perhaps farmhouse*) on the corner of Winchester and Lake Streets, and a series of smaller structure (*perhaps silos*). This property is adjacent to the USACE project area. In the 1972 aerial photograph, there appears to be an unidentifiable disturbed area on the eastern border of the site (mid-site). There appear to be a few small lakes west of the site (*possibly constructed for golf course*). The small structures previously present adjacent to the site to the northeast are no longer present in 1972 and site shows signs of farming activities. The 1980 aerial photograph is not clear enough to identify structures or other site uses. Review of the 1988 aerial photograph suggests that the site contains multiple trails throughout the site. The disturbed area that appeared to be midway down on the eastern border of the site is no longer present. The property to the northeast appears to have additional disturbance. Areas of open water are visible in the 1988 and 1994 aerials and residential development continues adjacent to the project area. From 1994 to 2007, the site appears to be primarily vegetated with fewer trail networks than were previously used. Review of the historical aerial maps suggest that there are signs that portions of the site were accessed for unknown reasons, and there is an unknown area of land disturbing activities adjacent to the project limits to the northeast. It is unclear what this site may have been used for and if this is the area of the landfill noted in the EDR report. Coordination with the landowner is suggested to determine previous uses of the site and adjacent properties.

Aptakisic Creek Reservoir (ACRS08)

Historical aerial photographs were reviewed from the period between 1953 and 2007. The site appears to be farmland in the 1953 aerial photograph. A ditch west runs through the site. The site is surrounded primarily by farm and isolated residential areas. There are no significant changes to the site and the surrounding area between 1953 and 1962. Sometime between 1962 and 1972 aerial photograph, the southeast portion of the site appears to have been impacted by some type of activity (noted as speckled in the photograph). It is unclear what this area was used for, but later aerial photographs note this area is vegetated. It appears Buffalo Grove Road is under construction in the 1988, and completed between 1988 and 1994; residential development also flourished in the surrounding area during this time. Utility in the southwest corner is established in 1994. The site continues to be vegetated and farmed between 1994 and 2007 and the farmhouse or structure on the southeast adjacent property (*Didier farms*) continues to be developed. It does not appear, based on review of the historical aerials, that the reservoir site or adjacent properties have been used for industrial purposes.

Adler Park Levee (DPLV15)

Historical aerial maps were reviewed from the period between 1953 and 2007. The 1953 aerial indicated that the project area is forested. The Des Plaines River is visible to the

south and surrounding properties are farmed. There are significant changes to the site used between 1953 and 2007. Residential development is noted both east and west of the project area in 1972 and a disturbed area, perhaps an access road, is present between the two developments. This area is vegetated in later photographs. It is not clear that the site was used for sewage disposal; there are no indications of any disposal or industrial use of the property in the historical aerial photographs. Coordination with the landowner is suggested to determine previous uses of the site for sewage disposal.

Oakton-Everett Levee/Floodwall (DPLV07)

Historical aerial maps were reviewed from the period between 1951 and 2007. Residential development and other structures are adjacent to the floodwall alignment in the 1951 aerial. The project area is forested along the Des Plaines River, which is east of the project area. There is evidence of land disturbing activities south of the project area and within the forest preserve. This area appears to be outside of the limits of the project area. It is unclear what activities were conducted in this area. There are not significant changes to the project area between 1951 and 2007, with the exception of development of adjacent structures along River Road. There are no indications from the review of the historical aerial photographs that the project area was used for industrial purposes.

Groveland Avenue Levee (DPLV01)

Historical aerial photographs were reviewed from the period between 1951 and 2007. The 1951 photograph indicates that the project area is surrounded by forest to the west, residential to the east, and the BNSF railroad to the south. There are not significant changes on the project area or adjacent properties between 1951 and 2007, with the exception of development of roadways though the residential development to the east. There are no indications that the project area was used for industrial purposes.

Lake Mary Anne (FPCI01)

Historical aerial photographs were reviewed from the period between 1951 and 2007. The project site appears vegetation and farmland except for Golf Road that runs through the middle of the site. There is some residential development along Golf Road. Lake Mary Anne and Dude Ranch Pond and the toll way are visible in the 1967 aerial photograph. There appears to be a roadway surrounding Lake Mary with residential structures. Dude Ranch pond appears to have a pier and development adjacent along Golf Road - small structures are present. Residential development is noted south of Dude Ranch Pond in 1974 and the area of disturbance adjacent to Golf Road is extended. There are no significant changes to the site after 1974 except that the structures long Golf Road associated with Dud Ranch pond were removed some time between 1998 and 2005, the pier was removed from Dude Ranch Pond sometime between 1988 and 1994, and residential development continued adjacent to Lake Mary.

A brief information search suggests that Dude Ranch Pond was once a public fishing pond, called Fisherman’s Dude Ranch and ponds were stocked with trout and other

species. Members of the public could fish at the site and take home their catch for a fee. The site may have also been used for dumping. Information suggests that structures on the site included a field house and other small building used to operate the fishing business. Structures and other remnants of the public fishing spot were removed from the site and the entire site bulldozed. The site is still used for fishing, though the area is private property.

BNSF Railroad Bridge Pier Extension (DPBM01)

Historical aerial photographs were reviewed from the period between 1951 and 2007. The project area contains the BNSF railroad bridge crossing the Des Plaines River in 1951. The site appears to be surrounded by forest and a couple residential areas to the east. There are no significant changes to the project area between 1951 and 2007 with the exception of continual development of residential area to the east; the area to the west remains forested. There is a small unidentifiable area south of the bridge (in the Des Plaines River) in the 1962 aerial photograph. In 2005 there is an unidentifiable area north of the site along the banks of the Des Plaines River, but it is not present in 2007. The conditions of this bank should be confirmed during the site visit.

Silver Creek Reservoir Expansion (SCME02)

Historical aerial photographs were reviewed from the period between 1951 and 2007. The project area appears to be mostly natural or farmed in 1951. A rail yard exists directly south of the site. Silver Creek bisects the site. Between 1962 and 1972, Irving Park Road is constructed, a large industrial complex is developed east of the project area, and a large disturbed area exists on the project site, south of Irving Park Road in the area of the western reservoir cell. Development is present south of the rail yard and occurred in the same time frame. O'Hare airport runways are present in 1972 and the property west of the project area is developed. Development continues around the O'Hare airport between 1972 and 2007. The previously disturbed area (in the area of the western reservoir cell) is vegetated in 1981. Construction of the eastern reservoir cell begins around 1988. Water is visible in the eastern reservoir cell in 1993, and the western cell and spoil pile are noted in the 1993 aerial photograph. There are no significant changes in site use between 1993 and 2007.

SITE VISIT

Environmental engineering section staff members visited the project site on August 25 and August 30, 2011. The purpose of the trips was to overview the current site conditions and to examine the area for evidence of potential HTRW and other environmental issues. Site visit photographs are included at Attachment 5.

Bull Creek Reservoir (BCRS02)

Members of the TS-DH team (Pittman and O'Neil) visited the Bull Creek Reservoir area on August 30, 2011. The weather was in the upper 70s and overcast. The vehicle was parked at an access road mid-site along Lake Street. Surrounding area consists of residential to the southeast and commercial/office facilities to the west (Motorola, USG, and Candlewood suites). All adjacent facilities appear to be well-kept and free of questionable environmental conditions. The site is densely vegetated; location of the proposed spoil pile appears to be a wetland area, other portions of the project site are actively farmed or contain natural vegetation. Access to the site was limited from the adjacent roadways and portions of the site were not accessed due to the dense nature of the vegetation. The area noted as a surface impoundment did not show signs of contamination or debris, but limited accessibility prevented a detailed investigation of the area. The northeast intersection of Lake Street and Winchester Road has been recently disturbed. A gravel parking facility surrounded by silt fence is visible in this location, along with signs indicating the area is available for outside storage. No signs of trash or debris were visible in the project area.

Aptakistic Creek Reservoir (ACRS08)

Members of the TS-DH team (Pittman and O'Neil) visited the Aptakisic Creek Reservoir area on August 30, 2011. The weather was in the upper 70s and overcast. The site is surrounded by commercial and residential areas. Didier farms sign appears along Aptakisic Road within the project area. The site is actively farmed and there were people present in the farm area performing u-pick activities. The only area that is not farmed was the utility corridor on the southeast corner of the site that is proposed for spoil disposal. This area contains well-kept turf grass. No signs of trash or debris were visible in the project area.

Adler Park Levee (DPLV15)

Members of the TS-DH team (Pittman and O'Neil) visited the Adler Park Levee project area on August 30, 2011. The weather was in the upper 70s and overcast. The project area was accessed from Idlewood, Birchwood, and Sprucewood Lanes. Adjacent areas are residential in nature; a Lake County Public Works facility (*perhaps pump station*) is located at the northeast corner of Sprucewood and adjacent to the proposed levee. This portion of the project area is heavily wooded and contains drainage ditches that appear to cross the levee alignment on the south and flow to the Des Plaines River. Proceeding north along the floodwall alignment the area is heavily wooded and shows signs of limited dumping with landscape waste and/or isolated garbage and concrete/stone debris. A utility (*power/phone line*) runs adjacent to the new levee alignment in the project area. The area noted as "sewage disposal" appears to be part of the wooded area adjacent to the local roadways and adjacent to the Des Plaines River. It does not show signs of environmental contamination.

Oakton-Everett Levee/Floodwall (DPLV07)

Members of the TS-DH team (Pittman and O'Neil) visited the Oakton-Everett levee/floodwall area on August 30, 2011. The weather was in the upper 70s and overcast. The vehicle was parked at various access points to the project area along the floodwall alignment and along River Road. The Des Plaines River banks are steep adjacent to the new floodwall proposed at Oakton and south to Riverview. This northern project area consists of parking for residential and commercial businesses, or turf grass that is separated from the Des Plaines River by a heavily wooded narrow riparian corridor. South of Riverview, in the new levee and floodwall area, the project area is heavily wooded with underbrush. There are signs of isolated debris piles, mostly roadside garbage and construction debris, such as concrete, along the proposed floodwall along River Road.

Groveland Avenue Levee (DPLV01)

Members of the TS-DH team (Pittman and Nielsen) visited the Groveland Avenue project area on August 25, 2011. The weather was in the upper 70s and sunny. The vehicle was parked where the staging area for the site is to be located. There is limited parking on the public roadways surrounding the site. The staging area appears to be located in a forest preserve; the site appears to contain natural vegetation and trees. Access to portions of the site where new floodwall proposed along the Des Plaines River south of Forest Avenue is limited (private residential property). This property was visible from the Forest Avenue Bridge. Brush, riprap, recreational features, fencing, and other common residential backyard materials were seen along this portion of the project area. There appear to be several structures within the floodwall alignment in this area and structures built directly adjacent and even overhanging the banks of the Des Plaines River in this area, especially closer to the BNSF Bridge. Along the Des Plaines River, north of Forest Avenue, there is an existing floodwall/levee. There is thick vegetation between the Des Plaines River edge and the floodwall/levee. Areas adjacent to the floodwall/levee and proposed road raise locations are residential and residential parking. Wildlife was observed in the thick vegetation. No debris was seen on the site. The lack of vegetation in the staging area shown in the aerial photographs was not seen during the site visit.

Lake Mary Anne (FPCI01)

Members of the TS-DH team (Pittman and Nielsen) visited the Lake Mary Anne project area on August 25, 2011. The weather was in the upper 70s and sunny. The vehicle was parked along Golf Road; there is limited vehicular access to Lake Mary Anne and Dude Ranch Pond. Lake Mary Anne is surrounded by private residential property so access was extremely limited; Lake Mary Anne could only be viewed from opening in vegetation along Golf Road through private residence back yards. Lake Mary Anne appears to be well maintained. There is a small concrete utility and drainage structure with little debris in the project area south of Lake Mary Anne along Golf Road. Looking towards Dude Ranch Pond from Lake Mary Anne, Dude Ranch Park is not visible due to gated/locked

fencing, dense vegetation, and on-site debris. Similar drainage structures appear adjacent to Dude Ranch Pond adjacent to Golf Road. Inside the fenced portions of Dude Ranch Pond there is a large fish shaped piece of metal in a metal structure that may have been a sign or booth. There are also other signs of debris piles present within the fenced limits of Dude Ranch Pond visible from Golf Road. The visible piles appear to contain concrete debris and rubble and other construction debris materials. Dude Ranch Pond is visible from other surrounding areas. Several fish were observed in Dude Ranch Pond. The water in the pond looked quite clean and clear. Both Lake Mary Anne and Dude Ranch Pond were being used for recreational purposes on the day of the site visit.

BNSF Railroad Bridge Pier Extension (DPBM01)

Members of the TS-DH team (Pittman and Nielsen) visited the BNSF Railroad Bridge Pier Extension project area on August 25, 2011. The weather was in the upper 70s and sunny. The site was accessed by walking through the forest preserve from Bloomingbank Road. Wildlife such as deer was seen in the forest preserve. The project area contains riverbank that appears free of debris. Silt has accumulated under the bridge and adjacent to the piers on the western bank of the river. While the banks of the River do not appear to be heavily vegetated, this is likely due to the flashy nature of the Des Plaines River and a result of recent storm events. There was no evidence of HTRW conditions in the area of the project.

Silver Creek Reservoir Expansion (SCME02)

Members of the TS-DH team (Pittman and Nielsen) visited the Silver Creek Reservoir area on August 25, 2011. The weather was in the upper 70s and sunny. The vehicle was parked near the site on Seymour Avenue. The proposed reservoirs are gated and security fenced with no trespassing signs. There did not appear to be debris or dumping on the site. The ditch running along the east side of the existing reservoir was wet on the day of the visit; it's unclear if the ditch contains groundwater; there was no rain in the days prior to the site visit. The spoil area does not contain a building with parking areas as indicated in recent aerial photographs and topographic maps of the site. However, the area seems to have recently undergone demolition or other construction activity; there is demolition equipment in the area and a large volume of stone and other rubble present. The status of the area and nature of the material should be confirmed during the design phase on the project, if it is still present. *The EDR database search suggests that two facilities may have been located in this area (Alliance Airlines and Ablaze transportation). These facilities were listed in the RCRA database as generators/manifests but did not have any violations.* The eastern reservoir near the gate is partially vegetated with about 50% of the surface area covered with vegetation. There is a spillway on the northwest corner of the reservoir. Sandy material is present at the outlet of the spillway in the reservoir. The pump station and inlet were visible on the day of the visit. Rail yard is located and actively used south of the reservoir.

FINDINGS AND CONCLUSIONS

This HTRW investigation was performed to determine if the selected measures for the Phase II reservoir, levee/floodwall, and structural modification sites will have an impact on any HTRW occurrences that may exist in the surrounding areas, and if HTRW problems will have an impact on the implementation of the projects. 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. Recommendations for future actions and results of HTRW investigation are summarized in Table 10.

Existing information available for review suggests that the water quality in the Des Plaines II study area is poor. The Des Plaines River and tributaries are classified as general use water bodies in Illinois. The general use water quality standards apply to almost all waters of the state and are intended to protect aquatic life, wildlife, agricultural, primary contact, secondary contact, and most industrial uses. The Des Plaines River, Willow Creek, Higgens Creek, Buffalo Creek, and Indian Creek are listed as impaired streams in the Illinois Environmental Protection Agency Integrated Water Quality Report and 303(d) list (IEPA 2010) due to inability to achieve and reach the applicable general use water quality standards. Mill Creek and Bull Creek have been assessed for aquatic life use and fully support this function. Smaller systems, including McDonald, Silver, Crystal, and North Mill Creeks have not been assessed by IEPA.

Existing information available for review suggests the study area was created and modified by four major glaciation events, lasting from approximately 1.6 million to 10,000 years ago. These glaciers produced a rounded topography by scraping away at the bedrock in some areas and depositing the accumulated debris in other areas.

Review of existing information suggests that there are 13 soil associations found within the study area. Many soils throughout the project area have been affected by anthropogenic sources. The environmental quality of soils at each project location is unknown. Current design for reservoir facilities indicate that all spoils resulting from excavation of the reservoirs will remain on the project sites. Due to the volume of material that will be generated for construction of reservoirs, and the unknown quality of the excavated material (farming activities at Bull Creek and Aptakisic Creek and existing storm water reservoir at Silver Creek) management of spoil materials generated for construction and/or expansion of reservoirs is advised. Possible future soil sampling may be required if spoils cannot be managed on site.

Sediment samples collected in various downstream portions of the Des Plaines River analyzed for metals, semi-volatiles, pesticides, and PCBs in the sediment samples collected suggest that PNAs and metals are present in fine-grained sediment above the "normal" background concentrations found in the Chicago Area. In addition, PCB concentrations in the sediment range from non-detect to 20 mg/kg. Due to quality of sediment expected in the area of the BNSF bridge pier extension project, materials excavated from the Des Plaines River required for project implementation will require

special handling and disposal. Future sediment sampling is recommended to confirm the sediment quality in the proposed work areas.

Review of information provided in the EDR database search suggests that the Bull Creek site may contain a surface impoundment (municipal) noted as Vickery Manor. The location of the impoundment is located in the northeast corner of the site. Excavation is not planned in this portion of the project area; however, the exact location and limits of the impoundment are unknown. Review of historical aerial and topographic maps suggest that the site was used for farming and there is other evidence of site disturbances in the 1980s, though there is no indication of significant changes in site topography over time. Additional information could not be found through online resources; it is unclear if the impoundment is industrial, municipal, mining, oil & gas, or a large agricultural impoundment. Additional information was requested through the project manager to local points of contact in Lake County but was not available at the time of this report. The presence of, limits, and type of impoundment should be confirmed at the Bull Creek reservoir site. If a surface impoundment is present, excavation should be avoided in the area of the impoundment. A phase II investigation may be required at the project site if excavation is conducted in the limits of the surface impoundment and spoil materials will require removal and off-site disposal. Future recommended actions include obtaining additional information on site history/usage, repeating the site visit during low vegetation time (late fall or early spring), and possible future soil sampling.

Review of information provided in the EDR database suggests that there are three LUST incidents within the recommended search distance of the Oakton-Everett levee/floodwall project area with unknown or unresolved status. The sites appear to be up gradient to the proposed work. It is unclear if any of these sites have the potential to impact project implementation. Additional information about the sites was requested through the IEPA but was not available at the time of this report. The scope and scale of the LUST incidents should be confirmed. A phase II investigation may be required at the project site to determine scope and scale of site impacts from adjacent regulated activities.

Review of information provided in the EDR database suggests that there are several LUST and SRP incidences adjacent to the Silver Creek project area. Several properties have groundwater use restrictions issued, including restrictions from residential, industrial, and commercial use. While some of these regulated sights are hydrologically separated from the eastern cell of the existing reservoir, the western cell does not have the same hydrologic barrier (Silver Creek). It is unclear if deteriorated groundwater conditions are present in the project area or if implementation of the project could be impacted by the presence of groundwater during excavation activities. The probability of encountering groundwater during excavation should be determined early in the design phase of the project and phase II investigation conducted if it is determined that groundwater handling and disposal will be required during the reservoir expansion.

Review of historical aerial photographs and topographic maps indicate the project areas were undeveloped prior to 1900 and conditions have not changed significantly. While areas surrounding the project sites have undergone significant development, the project

site investigated for this report do not appear to have been used for industrial purposes. Historical topographic maps suggest that areas adjacent to the Adler Park levee alignment may have been used for “sewage disposal”. It is unclear the scope or scale of this activity, but was conducted sometime between 1960 and 1993. Additional information about the property and disposal activities was requested through the project manager, but was not provided at the time of this report. The scope and scale of the sewage disposal activity should be confirmed.

Environmental engineering section staff members visited the project site on August 25 and August 30, 2011. The purpose of the trips was to overview the current site conditions and to examine the area for evidence of potential HTRW and other environmental issues. Results of the site visits suggest that the project areas investigated appear to be clean and generally free of trash and debris. Dude Ranch Pond and areas along the alignments of the Oakton-Everett levee/floodwall and Alder Park levee contain isolated debris piles. Debris generally consists of roadside garbage, construction debris, and old structures associated with commercial activities at Dude Ranch Pond. Surrounding areas appear free of HTRW and non-HTRW conditions.

This report contains the results of the HTRW and non-HTRW investigations for the reservoir, levee/floodwall, and structural modification sites located in Cook and Lake Counties, Illinois. Additional HTRW investigations are required for the road raise and NER sites to complete the HTRW work for the Phase II feasibility report. 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.

Table 10 – Summary HTRW Results and Future Recommendations

Site	Issue	Short-Term Data Needs	Potential Future Actions
Bull Creek Reservoir	Unknown impoundment on-site	1. Determine site history and usage 2. Confirm presence of, limits, and type of impoundment with landowner 3. Conduct site visit in late fall/early spring when site void of vegetation	Conduct a phase II investigation if excavation is conducted in limits of impoundment
	Spoil generated for reservoir construction	None	Due to the volume of material that will be generated and the unknown quality of the excavated material, management of spoil materials on-site is advised. If spoil will be removed from project site, phase II investigations may be necessary to determine the quality of the soils and disposal options.
Aptakisic Creek Reservoir	Spoil generated for reservoir construction	None	Due to the volume of material that will be generated and the unknown quality of the excavated material, management of spoil materials on-site is advised. If spoil will be removed from project site, phase II investigations may be necessary to determine the quality of the soils and disposal options.
Adler Park Levee	Site debris *(debris generally consists of roadside garbage, construction, or landscape debris)*	None	Collect all debris during construction and dispose in accordance with Federal, State, and local laws and regulations

Site	Issue	Short-Term Data Needs	Potential Future Actions
	Historical topographic maps indicate "sewage disposal" activity between 1960 and 1993	Confirm the scope and scale of the sewage disposal activity with local land owner	Perform phase II investigation to determine scope and scale of site impacts from adjacent sewage disposal activities, if required
Oakton-Everett Levee/Floodwall	Site debris *(debris generally consists of roadside garbage, construction, or landscape debris)*	None	Collect all debris during construction and dispose in accordance with Federal, State, and local laws and regulations
	Three LUSTs up gradient	Confirm scope and scale of the LUST incidents with IEPA	Perform phase II investigation to determine scope and scale of site impacts from adjacent regulated LUST activities, if required
Groveland Avenue Levee	None	None	None
Lake Mary Anne	Site debris *(debris generally consists of roadside garbage, construction debris, and old structures associated with commercial activities at Dude Ranch Pond)*	None	Collect all debris during construction and dispose in accordance with Federal, State, and local laws and regulations
BNSF Railroad Bridge Pier Extension	Sediment within project limits *(fine-grained sediments in DP River contain elevated PNAs, metals, and PCB)*	None	Conduct sediment sampling during design to determine disposal options for sediments encountered during pier extension

Site	Issue	Short-Term Data Needs	Potential Future Actions
Silver Creek Reservoir Expansion	Local LUST and SRPs with groundwater use restrictions *(residential, industrial, and commercial use)*	None	1. Determine the probability of encountering groundwater during excavation 2. Conduct Phase II groundwater investigation if groundwater handling and disposal will be required during reservoir expansion
	Spoil - soil	None	Due to the volume of material that will be generated and the unknown quality of the excavated material, management of spoil materials on-site is advised. If spoil will be removed from project site, phase II investigations may be necessary to determine the quality of the soils and disposal options.

REFERENCES

American Society for Testing of Materials. Publication E 1527-00. 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.

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

U.S. Army Corps of Engineers. Upper Des Plaines River and Tributaries: Integrated Feasibility Report and Environmental Assessment. January 2011 (Draft).

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW ISSUES INVESTIGATION DES PLAINES PHASE II – STRUCTURAL MODIFICATION, RESERVOIR, AND LEVEE/FLOODWALL SITES

Attachment 1
Sediment Data Des Plaines River

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
DES PLAINES PHASE II – STRUCTURAL MODIFICATION, RESERVOIR, AND LEVEE/FLOODWALL SITES

Attachment 2
EDR Database Search

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
DES PLAINES PHASE II – STRUCTURAL MODIFICATION, RESERVOIR, AND LEVEE/FLOODWALL SITES

Attachment 3
Historical Topographic Maps

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
DES PLAINES PHASE II – STRUCTURAL MODIFICATION, RESERVOIR, AND LEVEE/FLOODWALL SITES

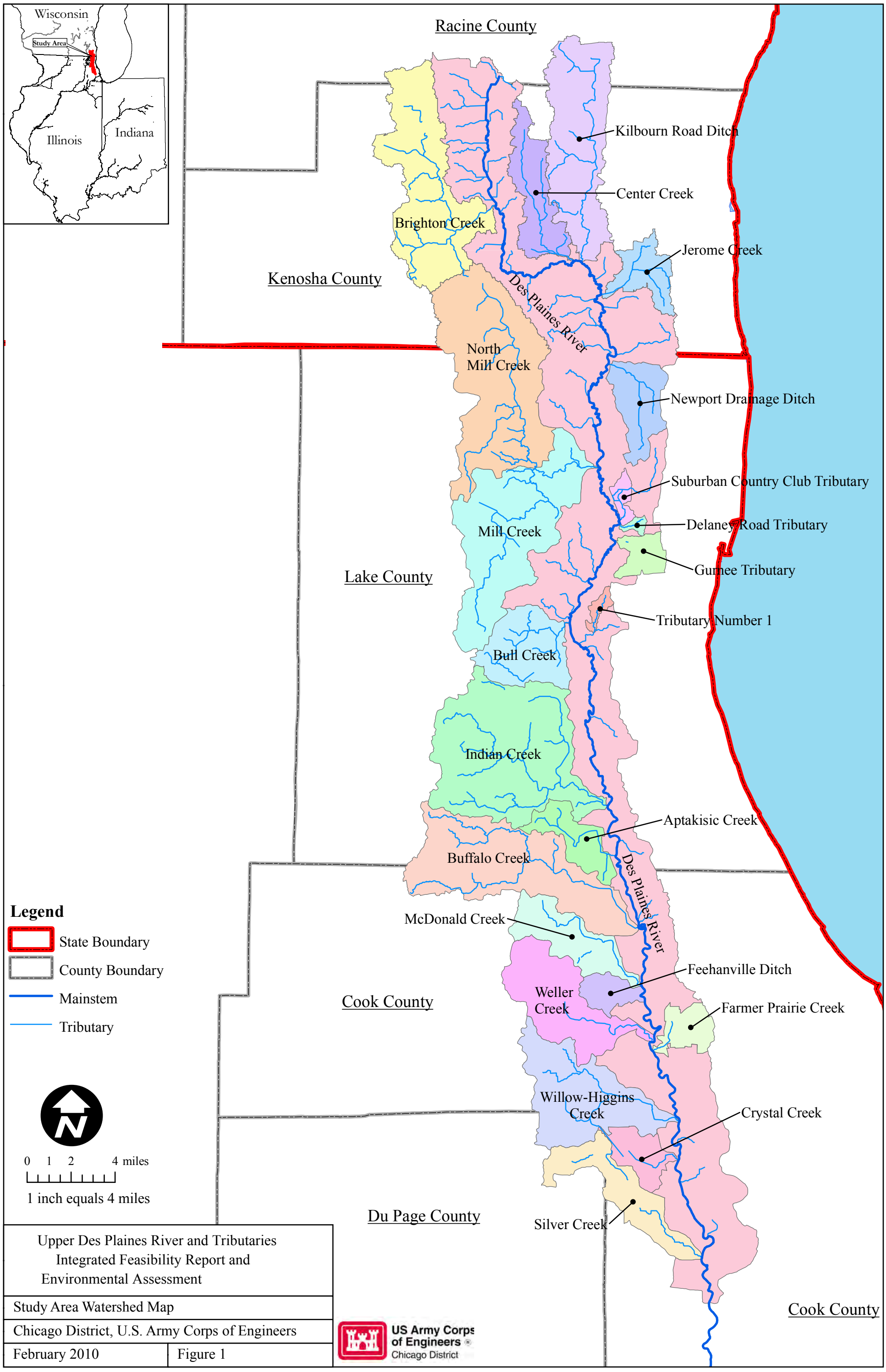
Attachment 4
Historical Aerial Photographs

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW ISSUES INVESTIGATION
DES PLAINES PHASE II – STRUCTURAL MODIFICATION, RESERVOIR, AND LEVEE/FLOODWALL SITES

Attachment 5
Site Visit Photographs

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW ISSUES INVESTIGATION DES PLAINES PHASE II – STRUCTURAL MODIFICATION, RESERVOIR, AND LEVEE/FLOODWALL SITES

Attachment 6
Supplemental IEPA Information

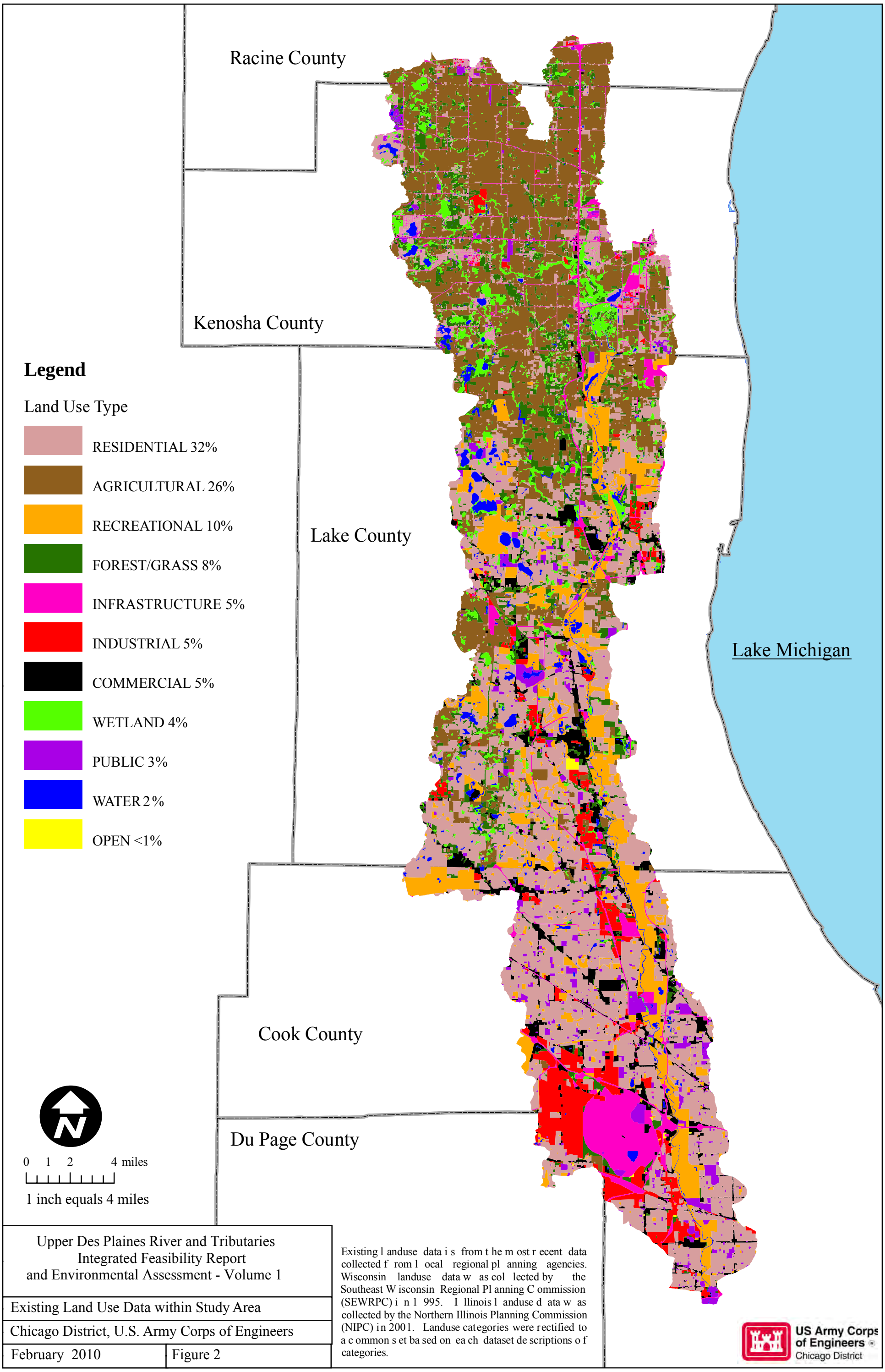


Upper Des Plaines River and Tributaries
Integrated Feasibility Report and
Environmental Assessment

Study Area Watershed Map

Chicago District, U.S. Army Corps of Engineers

February 2010 | Figure 1

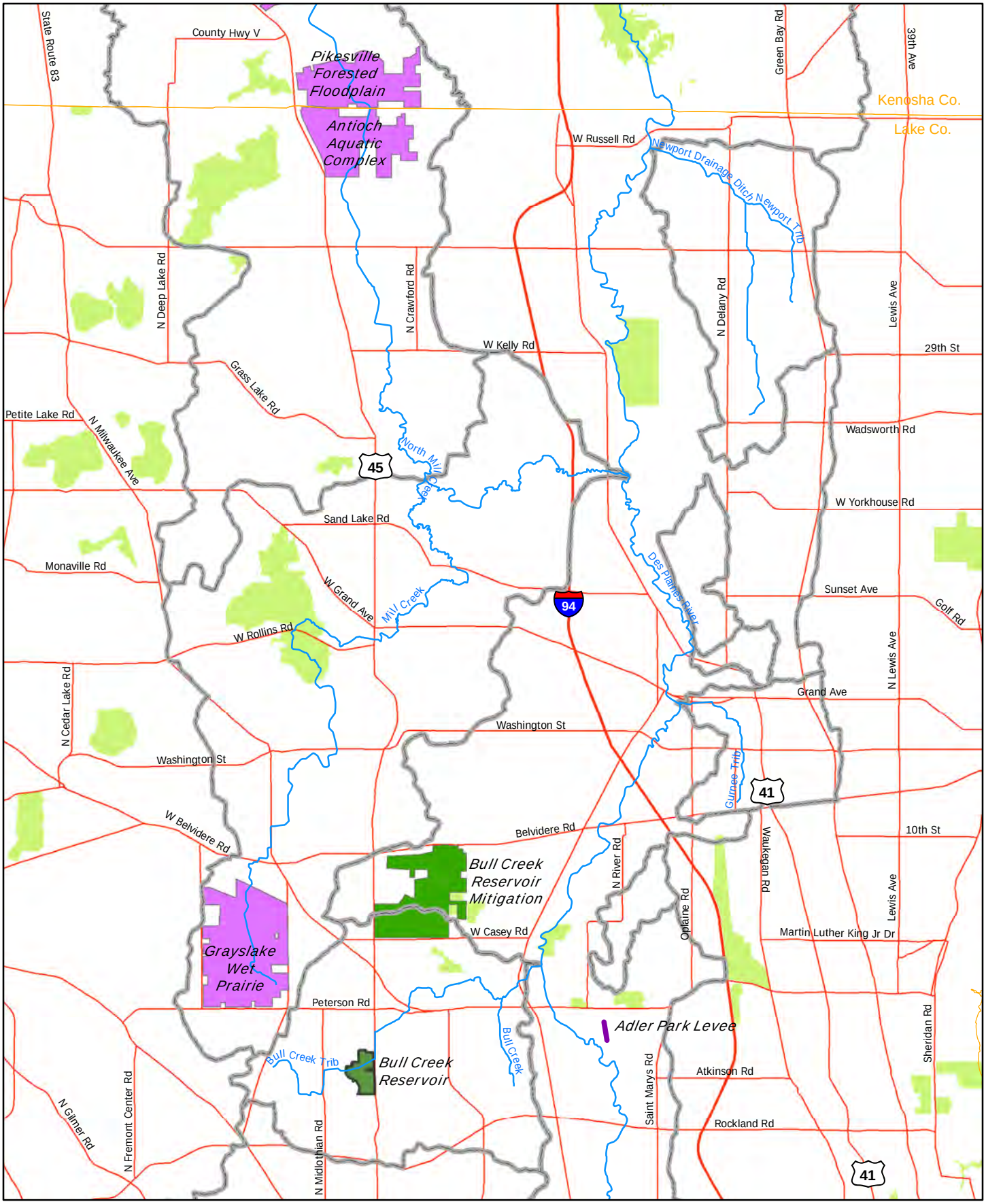


Upper Des Plaines River and Tributaries
Integrated Feasibility Report
and Environmental Assessment - Volume 1

Existing Land Use Data within Study Area

Chicago District, U.S. Army Corps of Engineers

February 2010 | Figure 2



NED SITES

- Floodwater Storage Site
- Structure Modification
- Road Raise / Bridge Modification
- Flood Protection
- Channel Improvement

NER SITES

- Ecosystem Restoration
- Dam Removal

GENERAL MAP SYMBOLS

- Streams
- Highways
- County Boundaries
- Subwatersheds
- Existing Natural Areas

0 0.45 0.9 Miles

US Army Corps of Engineers
Chicago District

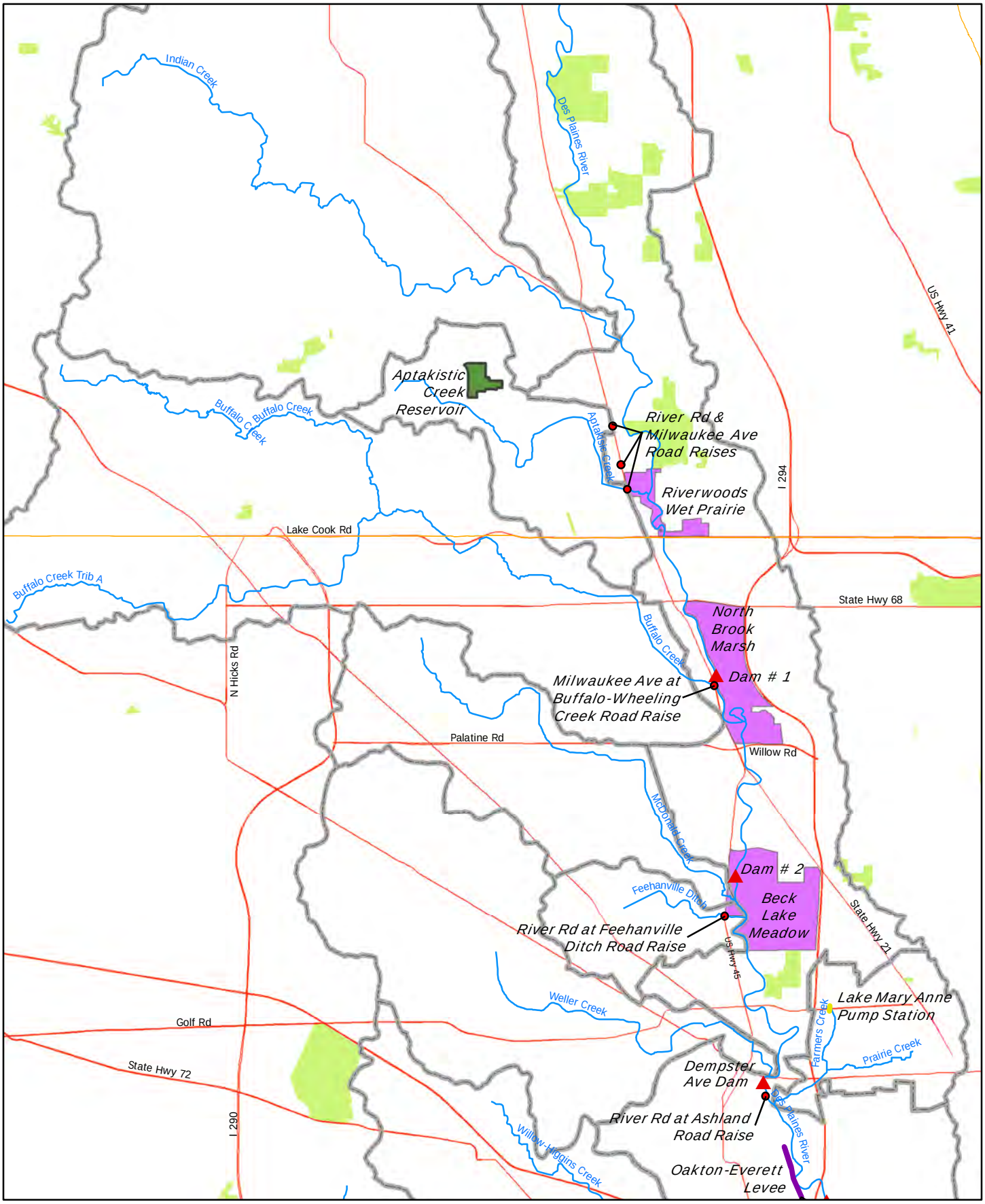
Upper Des Plaines River and Tributaries
Feasibility Report and Environmental Assessment
Volume 4 - Combined Plan

Combined Plan

Chicago District, U.S. Army Corps of Engineers

January 2011

Figure 3



NED MEASURES

- Floodwater Storage Site
- Structure Modification
- Road Raise / Bridge Modification
- Flood Protection
- Channel Improvement

NER MEASURES

- Ecosystem Restoration Site
- Dam Removal Site

GENERAL MAP SYMBOLS

- Streams
- Highways
- County Boundaries
- Subwatersheds
- Existing Natural Areas

0 0.45 0.9 Miles

US Army Corps of Engineers
Chicago District

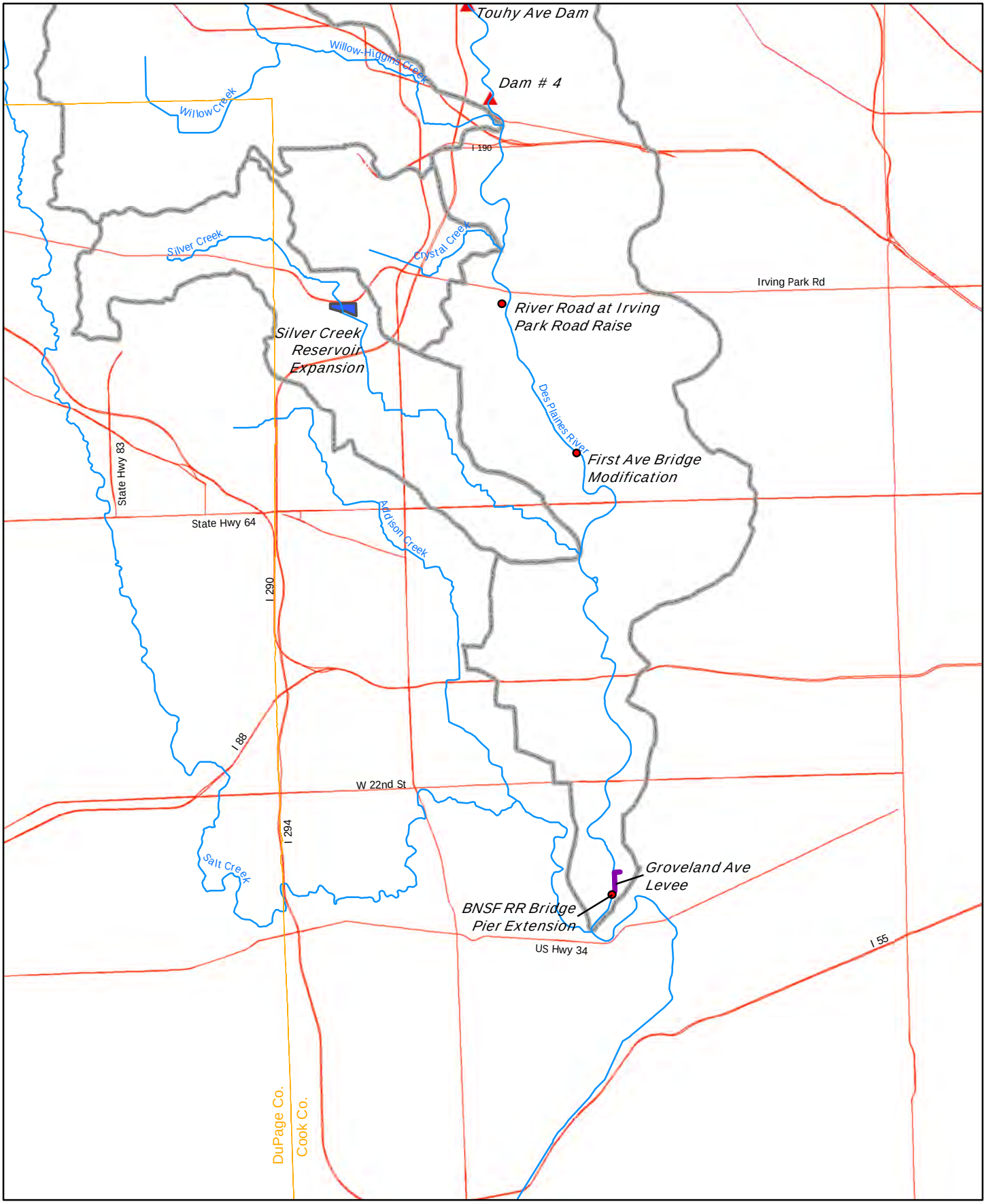
Upper Des Plaines River and Tributaries
Feasibility Report and Environmental Assessment
Volume 4 - Combined Plan

Combined Plan

Chicago District, U.S. Army Corps of Engineers

January 2011

Figure 4



NED MEASURES

- Floodwater Storage Site
- Structure Modification
- Road Raise / Bridge Modification
- Flood Protection
- Channel Improvement

NER MEASURES

- Ecosystem Restoration Site
- Dam Removal Site

GENERAL MAP SYMBOLS

- Streams
- Highways
- County Boundaries
- Subwatersheds
- Existing Natural Areas

0 0.5 1 Miles

US Army Corps of Engineers
Chicago District

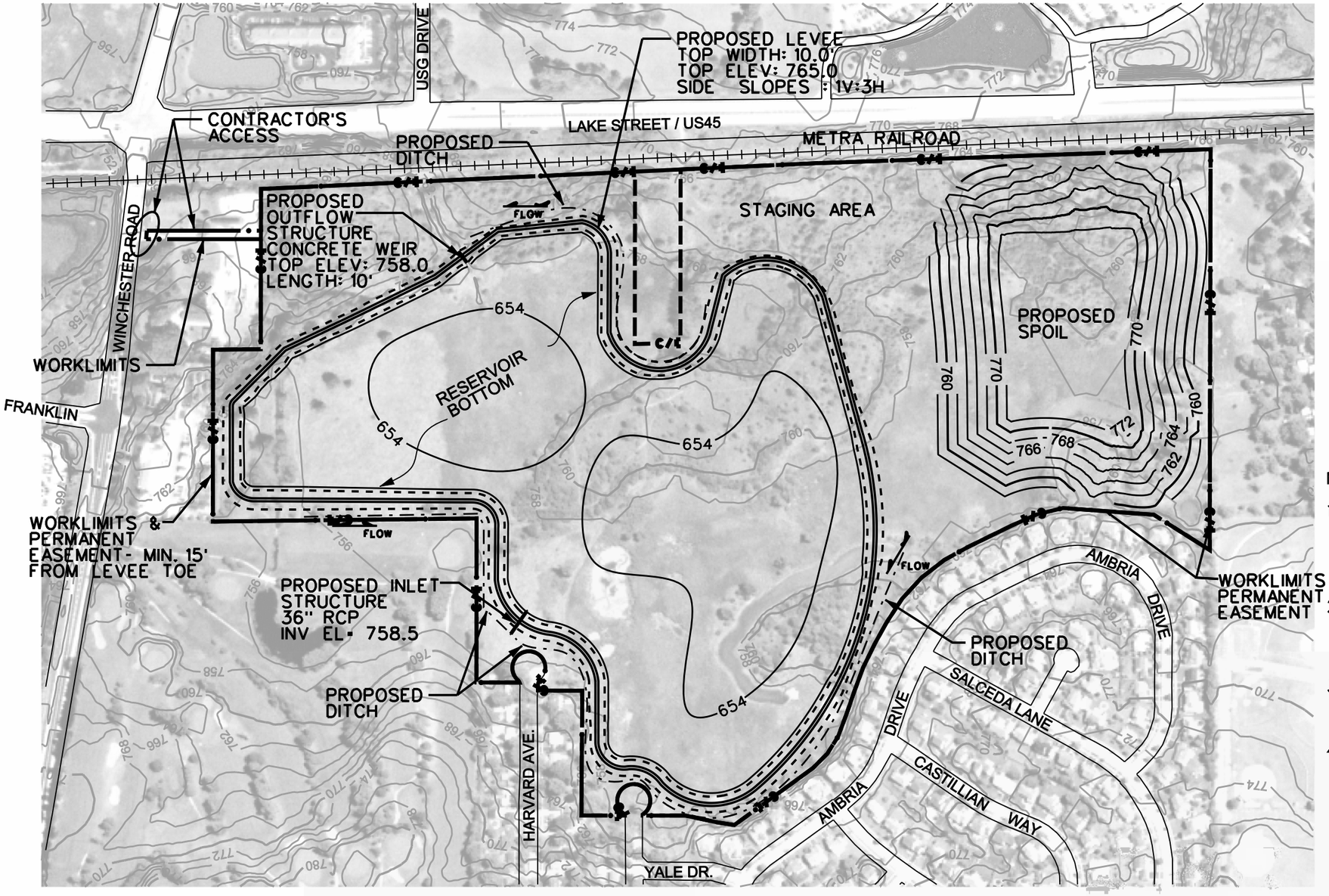
Upper Des Plaines River and Tributaries
Feasibility Report and Environmental Assessment
Volume 4 - Combined Plan

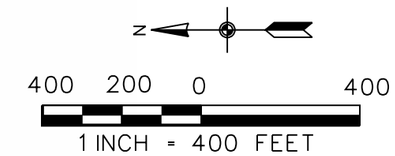
Combined Plan

Chicago District, U.S. Army Corps of Engineer

January 2011

Figure 5





RESERVOIR DATA

TOP AREA = 53 AC
BOTTOM AREA = 47.5 AC
RETENSION STORAGE = 177 AC-FT
DETENSION STORAGE = 166 AC-FT
(OVERFLOW)

OUTFLOW FLOW - 100 CFS

PERMANENT EASEMENT AREA = 111.4 AC

NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME. REFER TO THE CIVIL APPENDIX FOR THE SURVEY DATA SOURCES.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.)
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.
4. BASED ON THE SURFICIAL GEOLOGY AND NRCS SOIL MAPS, A CUTOFF WALL WILL BE PLACED ALONG THE PERIMETER OF THE RESERVOIR. FURTHER INVESTIGATIONS ARE REQUIRED FOR THE LOCATIONS AND DESIGN THE CUTOFF WALL.

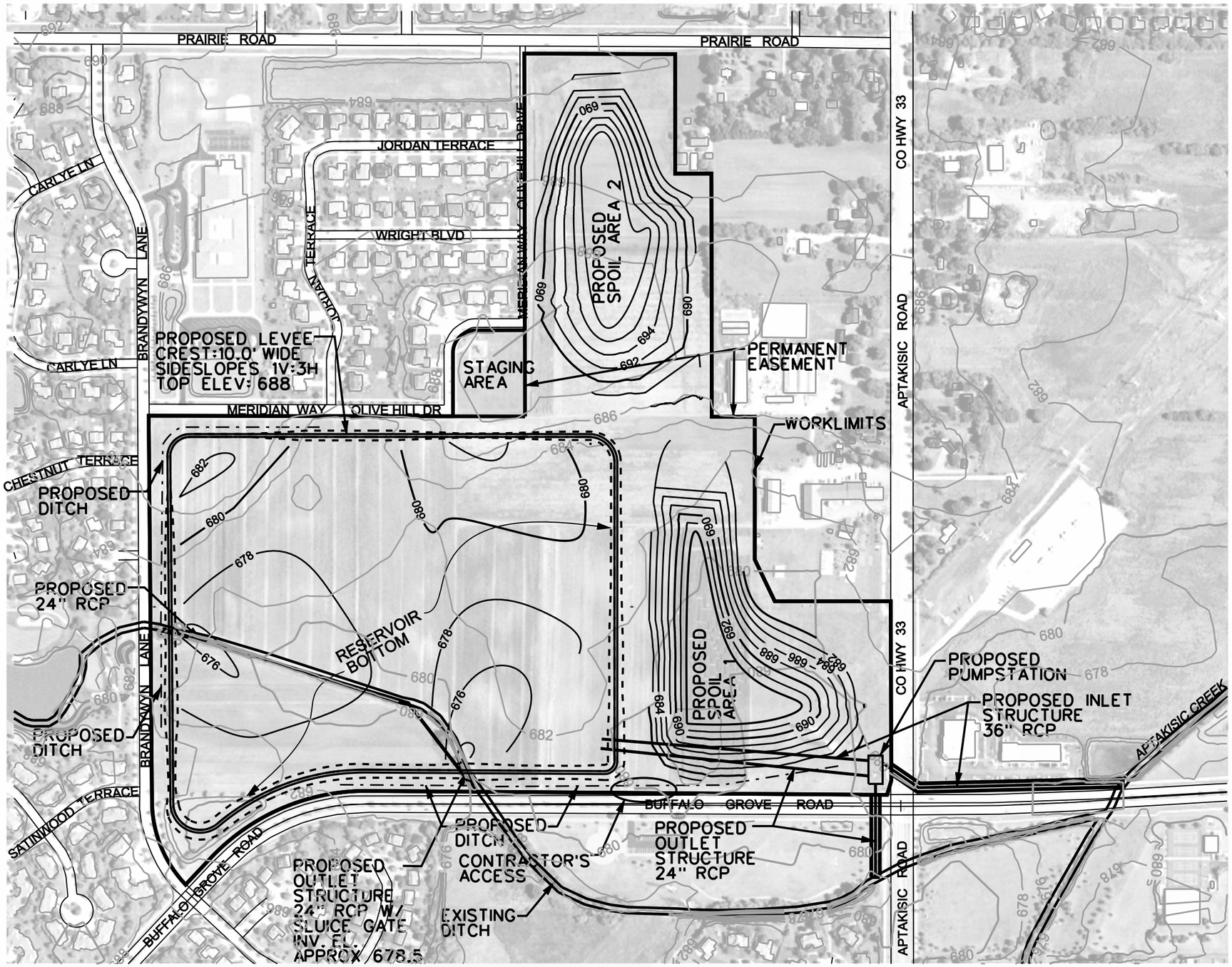
U.S. Army Corps of Engineers
Chicago District

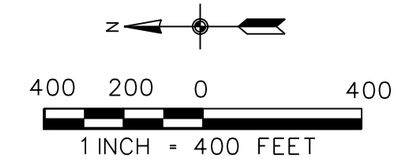
DES PLAINES II
FEASIBILITY STUDY
FLOOD DAMAGE REDUCTION

BCRS02 RESERVOIR
CONCEPTUAL SITE PLAN
MUNDELEIN, LAKE COUNTY, IL

SCALE:	DATE:	DRAWING CODE:
1 IN:400FT	JANUARY 2010	BCRS02_SITE PLAN.DGN

Figure 6





RESERVOIR DATA

TOP AREA = 42 AC
BOTTOM AREA = 40.2 AC
STORAGE = 405'8 AC-FT
INFLOW = 200 CFS
PERMANENT EASEMENT AREA = 49.3 AC
TEMPORARY EASEMENT AREA = 46.3 AC

NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME. REFER TO THE CIVIL APPENDIX FOR THE SURVEY DATA SOURCES.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.)
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.

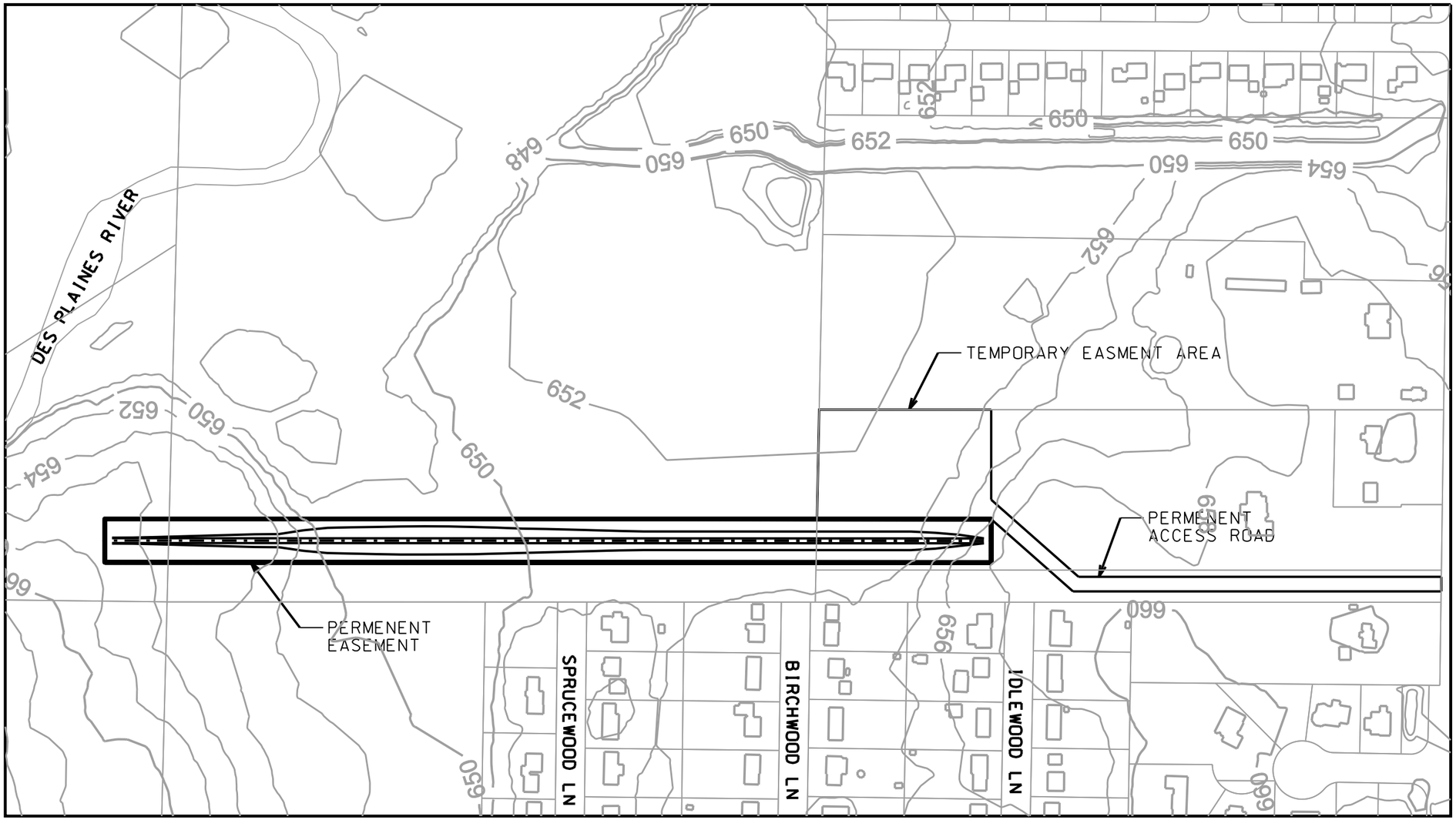
U.S. Army Corps of Engineers Chicago District

DES PLAINES II
FEASIBILITY STUDY
FLOOD DAMAGE REDUCTION

ACRS08 RESERVOIR
CONCEPTUAL SITE PLAN
BUFFALO GROVE, LAKE CTY, IL

SCALE:	DATE:	DRAWING CODE:
1 IN:400FT	JANUARY 2010	ACRS08_SITEPLAN.DGN

Figure 7



NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.
4. THE PROPOSED LEVEE IS 1.793 LF.
5. THE PERMANENT EASEMENT AREA IS 4 ACRES AND THE TEMPORARY EASEMENT AREA IS 3 ACRES.

N

20' 10' 0 20'

SCALE: 1'' = 20'-0"

U.S. Army Corps of Engineers Chicago District

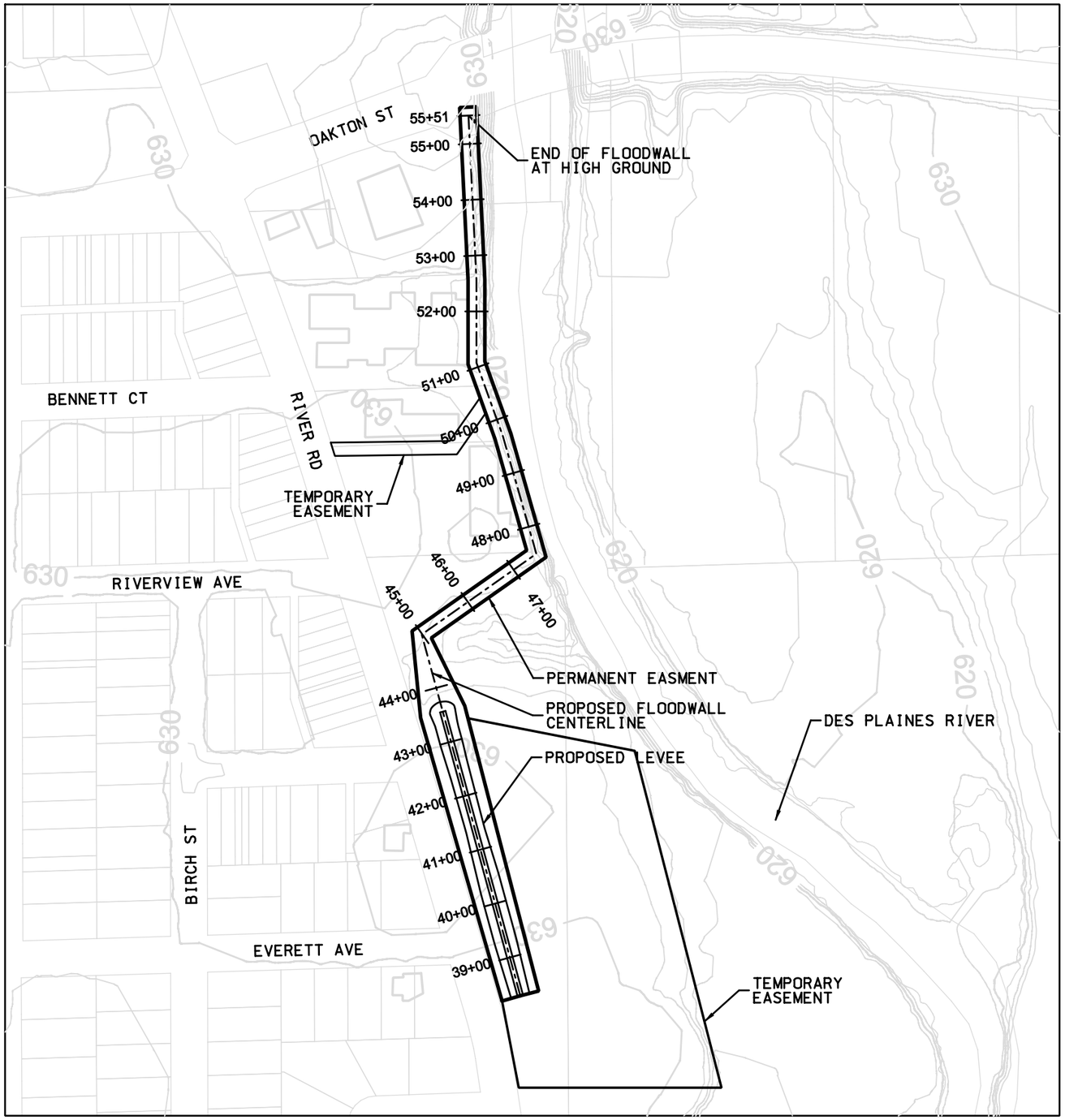
DES PLAINES II
FEASIBILITY STUDY
FLOOD DAMAGE REDUCTION

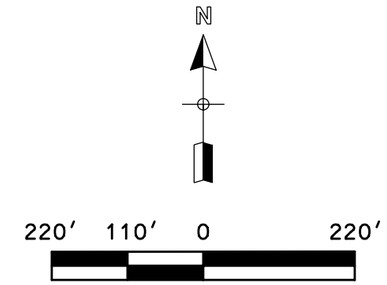
DPLV15 SITE PLAN
FOR PROPOSED LEVEE

SCALE:	DATE:	DRAWING CODE:
1" = 20'	MARCH 2010	DPLV15_SITEPLAN.DGN

Figure 8

DPLV15_SitePlan.dgn 3/21/2010 4:48:55 PM





SCALE: 1′′= 220′-0″

NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.
4. THE PROPOSED FLOODWALL IS 1,195 LF.
5. THE PROPOSED LEVEE IS 527 LF.
6. THE PERMANENT EASMENT AREA TOTALS 2 ACRES.
7. THE TEMPORARY EASMENT AREA TOTALS 4.5 ACRES.
8. THIS SITE IS ACTUALLY A PART OF THE DPLV09 SITE.

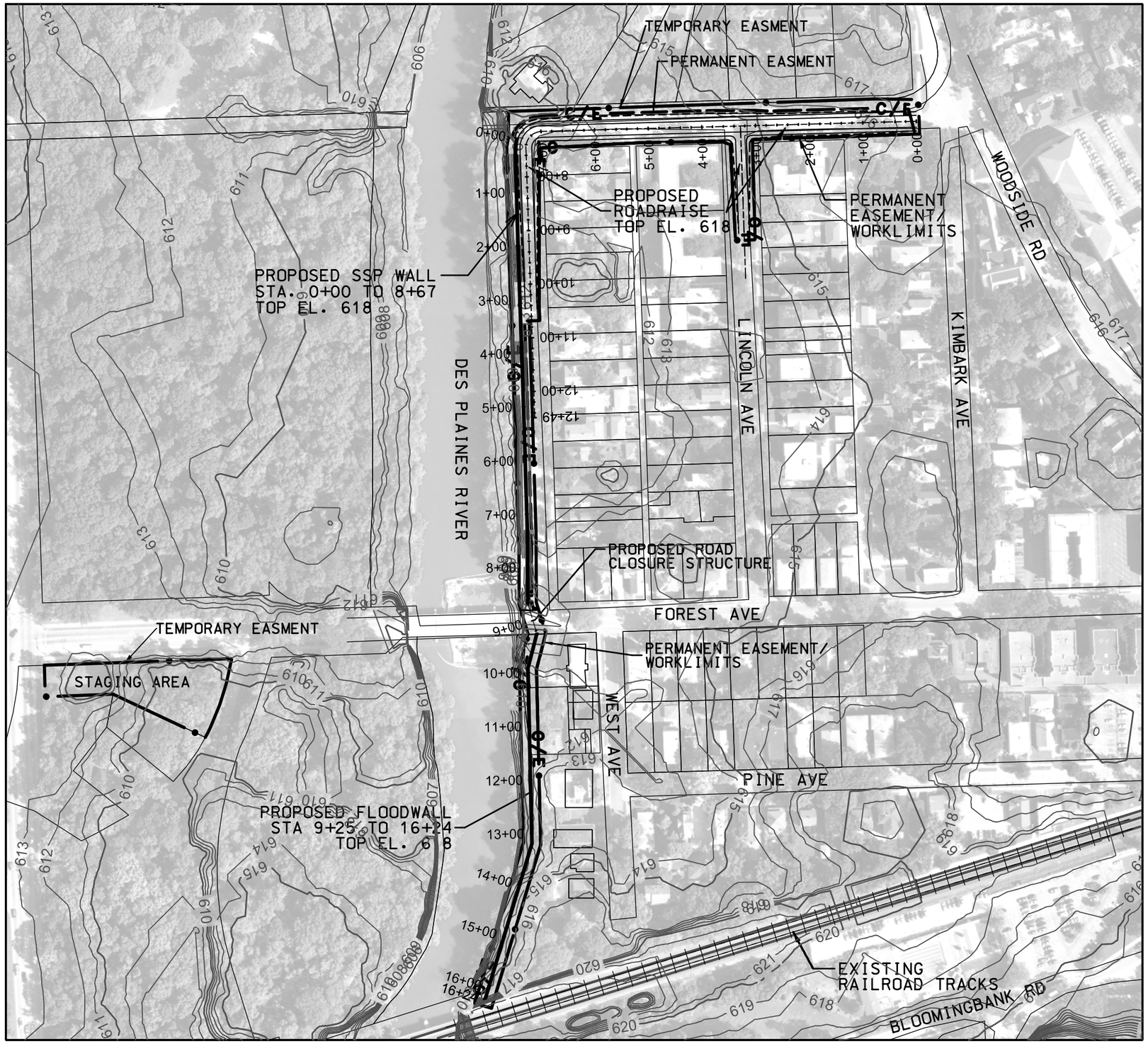
U.S. Army Corps of Engineers
Chicago District

DES PLAINES II
FEASIBILITY STUDY
FLOOD DAMAGE REDUCTION

DPLV07 SITE PLAN
FOR PROPOSED
LEVEE & FLOODWALL

SCALE:	DATE:	DRAWING CODE:
1IN=220FT	JANUARY 2010	DPL07_SitePLan.dgn

Figure 9



NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.
4. STEEL SHEET PILE WILL BE DRIVEN INTO THE EXISTING LEVEE ALONG GROVELAND AVE. TO RAISE THE TOP ELEVATION FROM 614 TO 618. THE LENGTH OF SHEET PILE IS 867 LF.
5. THE PROPOSED FLOODWALL ON THE SOUTH SIDE OF FOREST AVE HAS A LENGTH OF 699 LF AND TOP ELEVATION OF 618.
6. THE PROPOSED ROADRAISE HAS A TOP ELEVATION OF 618 AND SIDE SLOPES OF 1(V):2(H).
7. ONE ROAD CLOSURE STRUCTURE WILL BE REQUIRED AT FOREST AVE TO CONTINUE THE LINE OF FLOOD PROTECTION.
8. FEE AREA TOTALS 2.4 ACRE.
9. THE TEMPORARY EASMENT AREA TOTALS 1.0 ACRE.

N

200′ 100′ 0 200′

SCALE: 1′′= 200′-0″

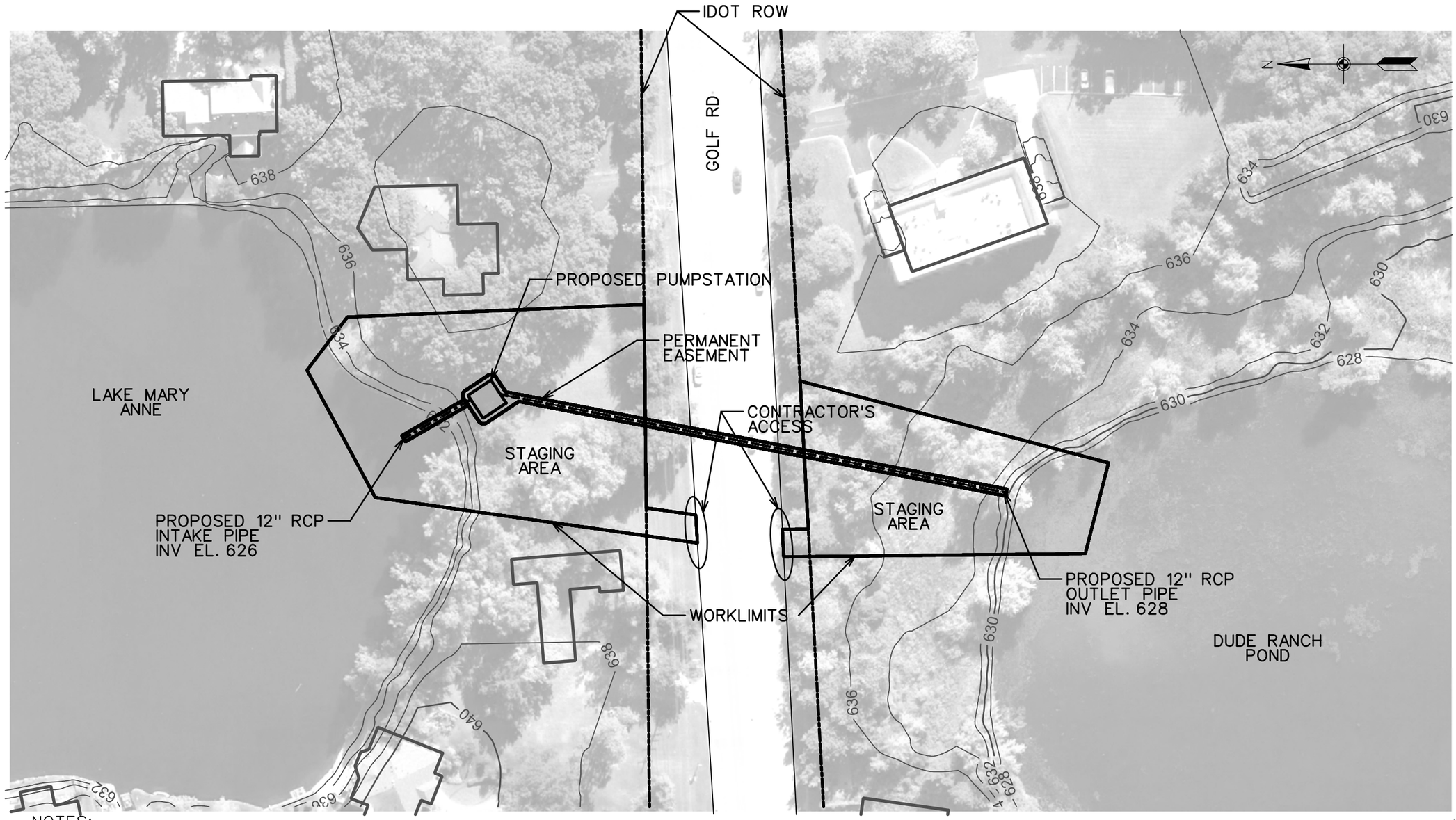
U.S. Army Corps of Engineers Chicago District

UPPER DES PLAINS RIVER AND TRIBUTARIES
FEASIBILITY REPORT
AND ENVIRONMENTAL ASSESSMENT
VOLUME 2 - NED PLAN

DPLV01 ROADRAISE AND FLOODWALL
CONCEPTUAL SITE PLAN
RIVERSIDE , COOK COUNTY, IL

SCALE:	DATE:	DRAWING CODE:
1″ = 200′	DECEMBER 2010	DPLV01 Siteplan.dgn

Figure 10



NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME. REFER TO THE CIVIL APPENDIX FOR THE SURVEY DATA SOURCES.

2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.)

3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.

4. THE 12" RCP UNDER GOLF RD. WILL BE PLACED BY PIPE JACKING.

FEE AREA = 1.46 AC

TEMPORARY EASEMENT =1.25 AC

80 40 0 80 160

1 INCH = 80 FEET

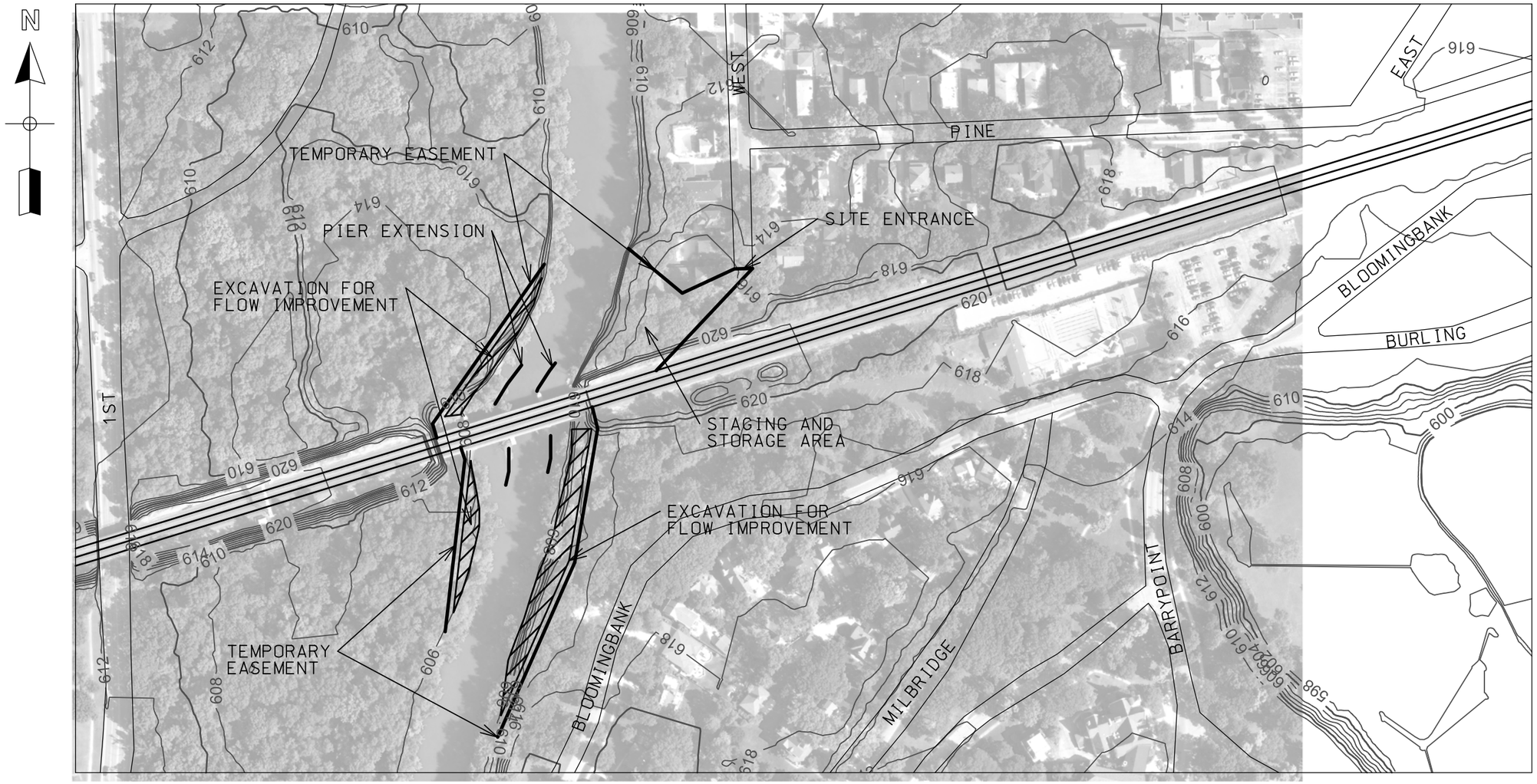
U.S. Army Corps of Engineers
Chicago District

UPPER DES PLAINES RIVER AND TRIBUTARIES
FEASIBILITY REPORT
AND ENVIRONMENTAL ASSESSMENT
VOLUME 2 - NED PLAN

FPCI01 PUMPSTATION
CONCEPTUAL SITE PLAN
DES PLAINES, COOK COUNTY, IL

SCALE:	DATE:	DRAWING CODE:
AS SHOWN	JUNE 2010	FPCI01_Site Plan.DGN

Figure 11



1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME

2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.

3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.

4. THE FEE AREA TOTALS .34 ACRES

5. THE TEMPORARY EASMENT AREA TOTALS 1.62 ACRES

6. LENGTH OF COMBINDED PIERS EXTENSION WOULD TOTAL 264 FT

200′ 100′ 0 200′

SCALE: 1′′= 200′-0″

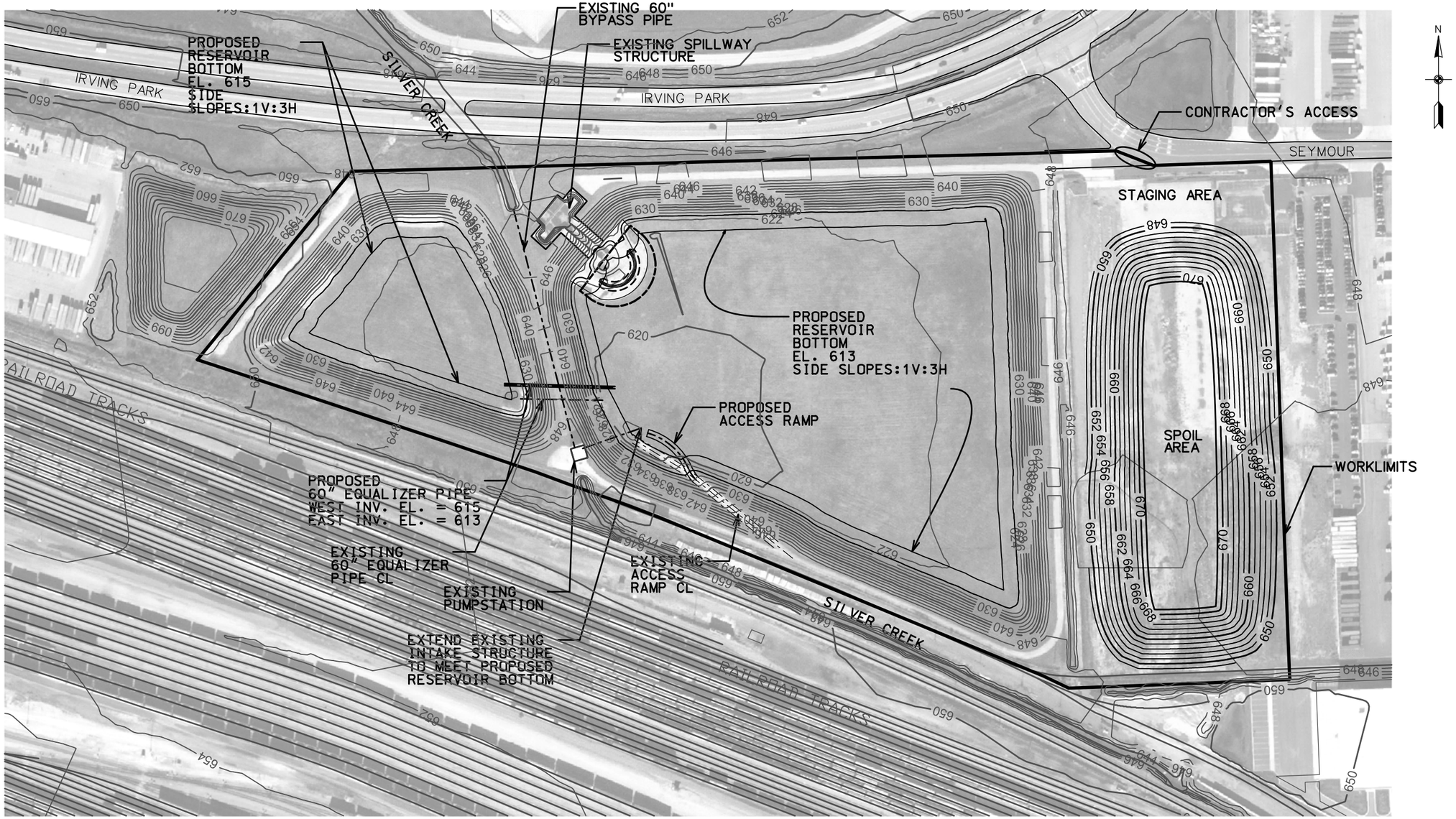
U.S. Army Corps of Engineers
Chicago District

UPPER DES PLAINES RIVER AND TRIBUTARIES
FEASIBILITY REPORT
AND ENVIRONMENTAL ASSESSMENT
VOLUME 2 - NED PLAN

DPBM01 BRIDGE PIER EXTENSION
CONCEPTUAL SITE PLAN
RIVERSIDE , COOK COUNTY, IL

SCALE:	DATE:	DRAWING CODE:
1″ = 200′	APRIL 2010	DPBM01 Sitepl1cp.dgn

Figure 12



NOTES:

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3.ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.

FEE = 44.4 AC

TERMPORARY EASEMENT = 0

250 125 0 250 500

1 INCH = 250 FEET

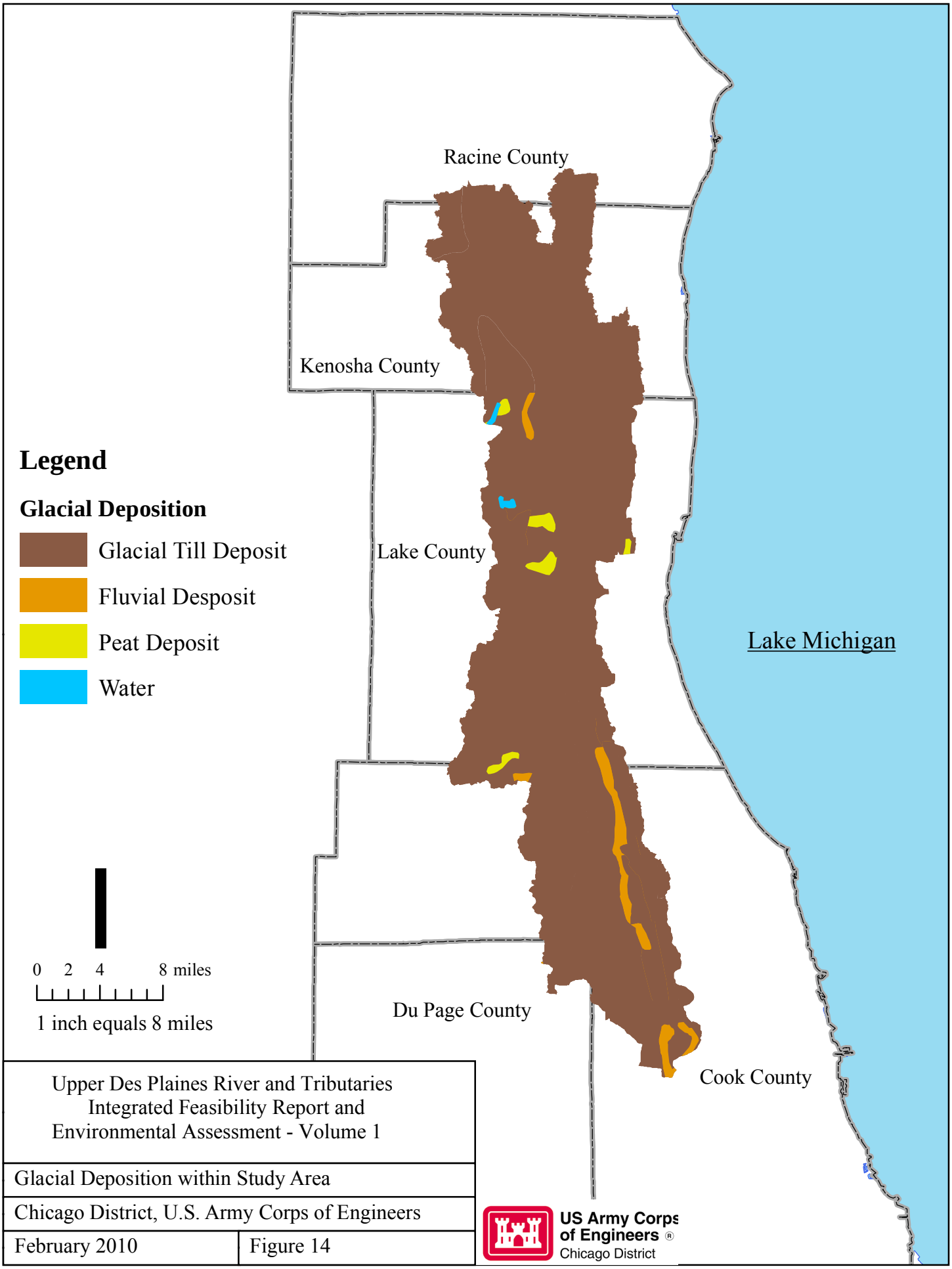
U.S. Army Corps of Engineers Chicago District

UPPER DES PLAINES RIVER AND TRIBUTARIES
FEASIBILITY REPORT
AND ENVIRONMENTAL ASSESSMENT
VOLUME 2 - NED PLAN

SCME02 RESERVOIR EXPANSION
CONCEPTUAL SITE PLAN
FRANKLIN PARK, COOK COUNTY IL

SCALE:	DATE:	DRAWING CODE:
AS SHOWN	APRIL 2010	FILENAME.DGN

Figure 13

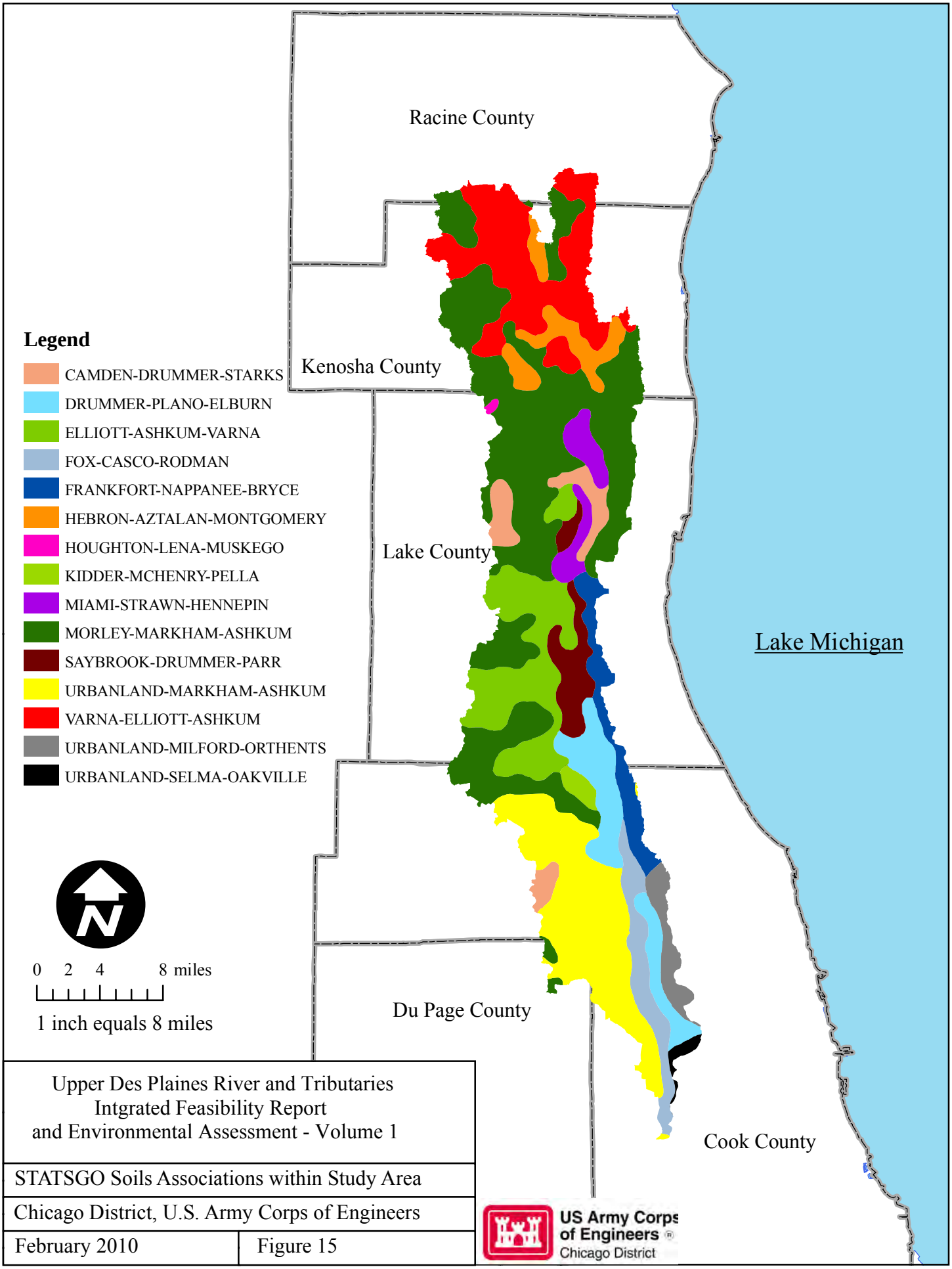


Upper Des Plaines River and Tributaries
Integrated Feasibility Report and
Environmental Assessment - Volume 1

Glacial Deposition within Study Area

Chicago District, U.S. Army Corps of Engineers

February 2010 | Figure 14



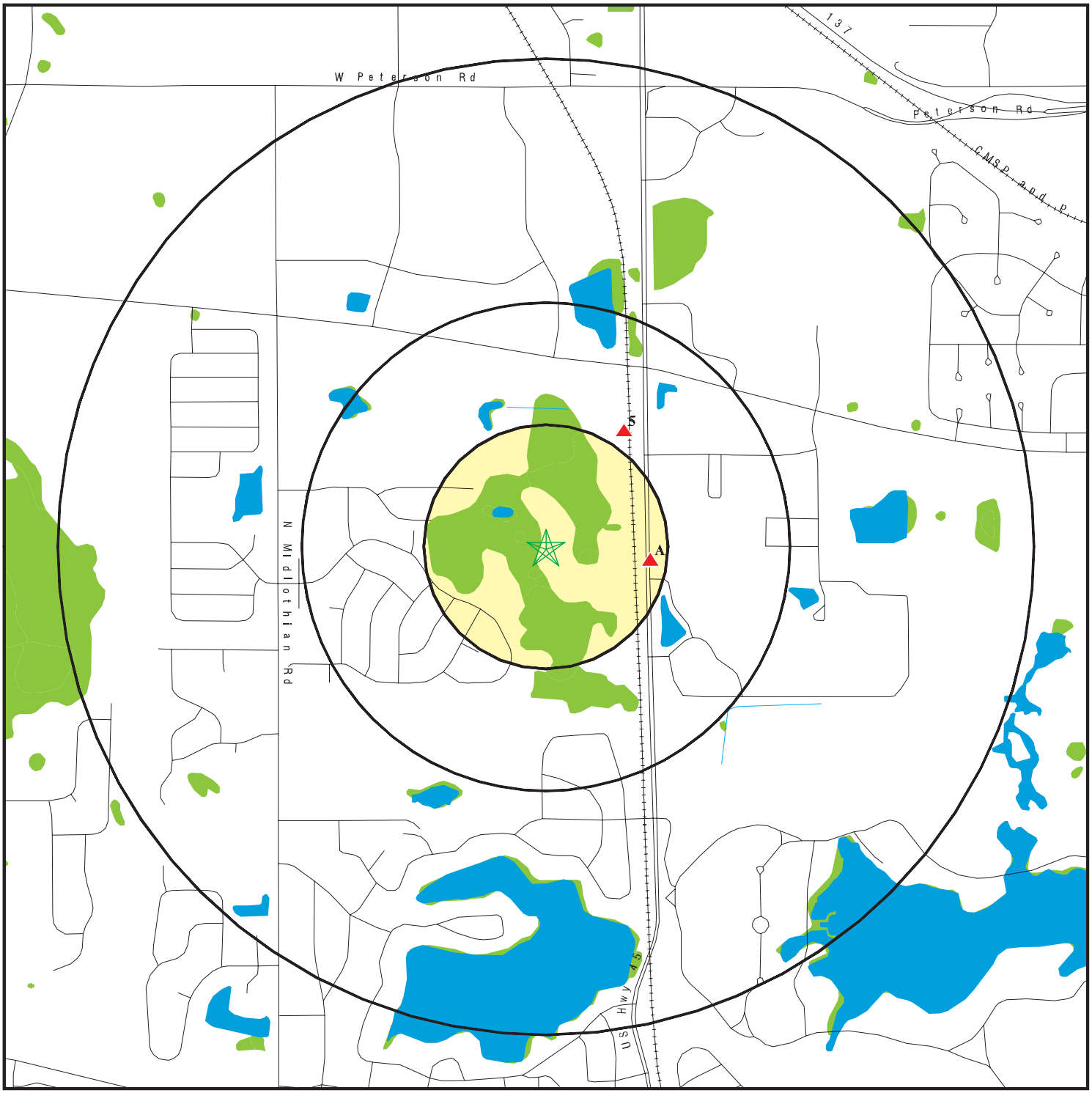
Upper Des Plaines River and Tributaries
Intgrated Feasibility Report
and Environmental Assessment - Volume 1

STATSGO Soils Associations within Study Area

Chicago District, U.S. Army Corps of Engineers

February 2010 | Figure 15

Figure 16



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

0 1/4 1/2 1 Miles

Indian Reservations BIA

Oil & Gas pipelines from USGS

National Wetland Inventory

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: Bull Creek Reservoir ADDRESS: Bull Creek Reservoir Mundelein IL 60060 LAT/LONG: 42.2924 / 88.0082	CLIENT: U.S. Army Corps of Engineers CONTACT: Casey Pittman INQUIRY #: 3145590.2s DATE: August 11, 2011 5:13 pm

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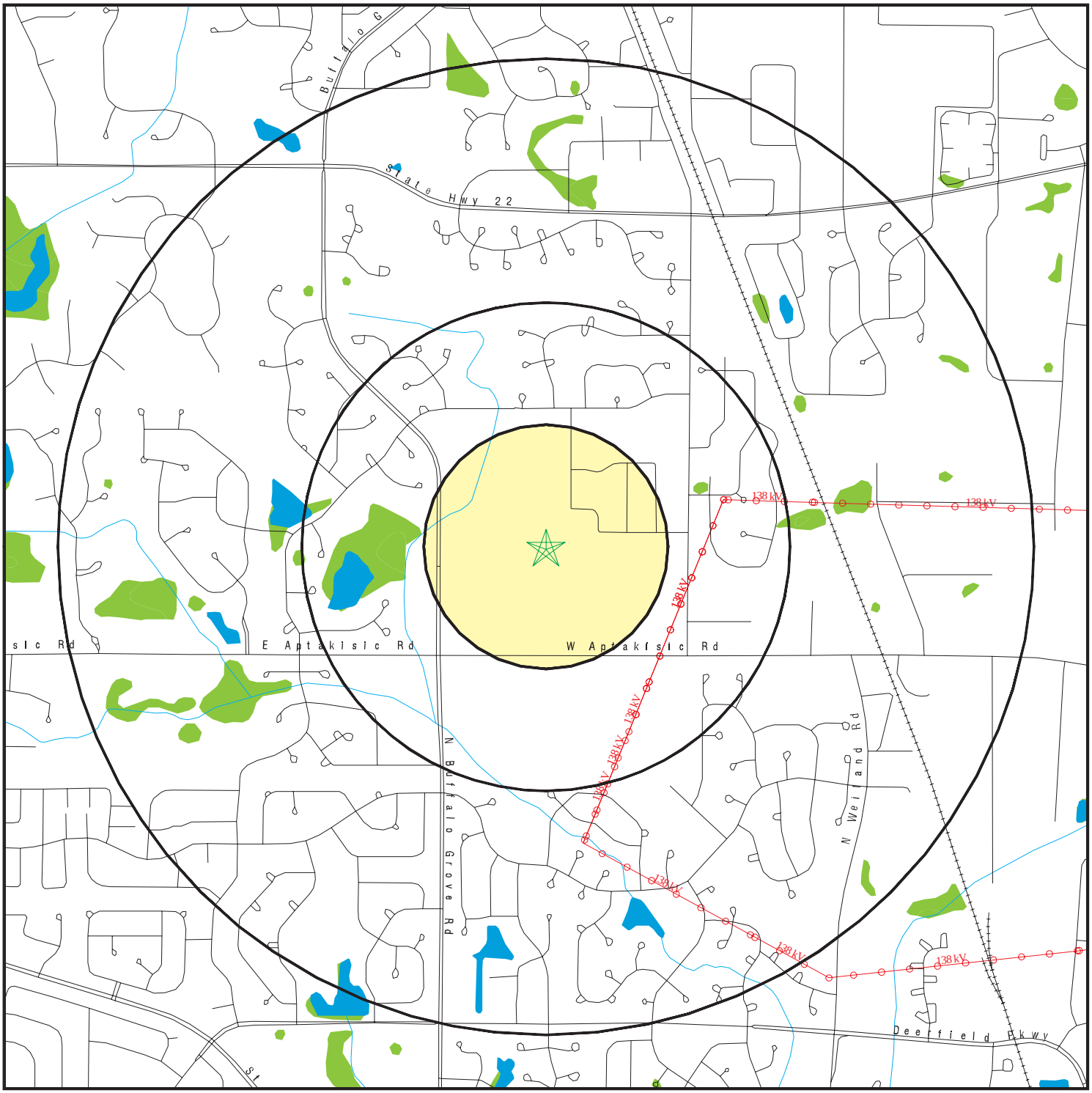
Figure 17



- 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
- Oil & Gas pipelines from USGS
- National Wetland Inventory

SITE NAME: Aptakistic Creek Reservoir	CLIENT: U.S. Army Corps of Engineers
ADDRESS: Aptakistic Creek Reservoir Lincolnshire IL 60069	CONTACT: Casey Pittman INQUIRY #: 3148353.1s
LAT/LONG: 42.1859 / 87.9611	DATE: August 16, 2011 11:45 am

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Figure 18

- 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
- Oil & Gas pipelines from USGS
- National Wetland Inventory

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: Adler Park Levee	CLIENT: U.S. Army Corps of Engineers
ADDRESS: Adler Park Levee Libertyville IL 60048	CONTACT: Casey Pittman
LAT/LONG: 42.3001 / 87.9411	INQUIRY #: 3145064.2s
	DATE: August 11, 2011 10:37 am

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Figure 19

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

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

SITE NAME: Oakton-Everett Levee ADDRESS: Oakton-Everett Levee Des Plaines IL 60018 LAT/LONG: 42.0231 / 87.8757	CLIENT: U.S. Army Corps of Engineers CONTACT: Casey Pittman INQUIRY #: 3147908.1s DATE: August 15, 2011 4:35 pm

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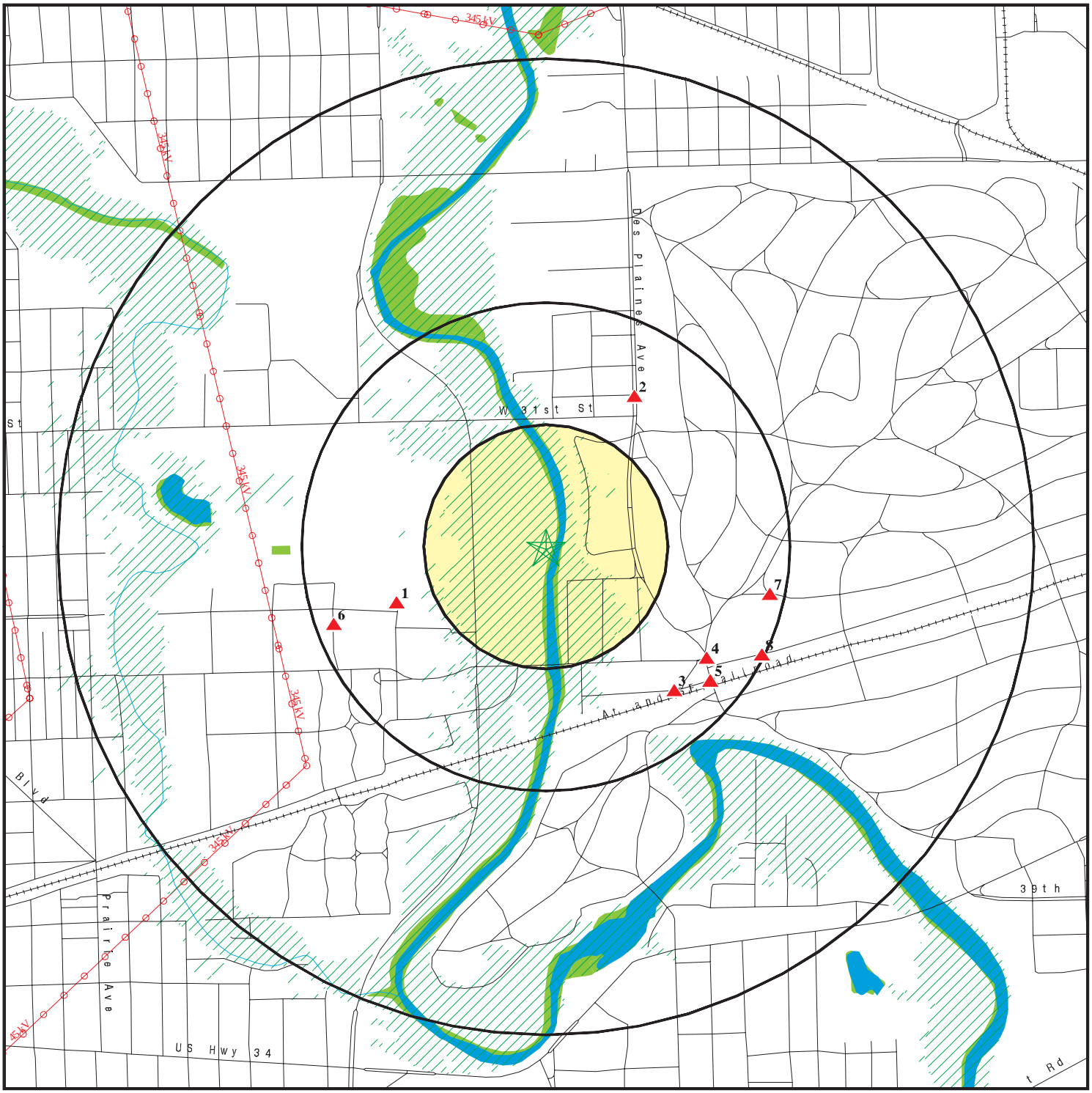
Figure 20



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

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

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: Groveland Ave Levee	CLIENT: U.S. Army Corps of Engineers
ADDRESS: Groveland Ave Levee Riverside IL 60546	CONTACT: Casey Pittman
	INQUIRY #: 3145177.93s
LAT/LONG: 41.8316 / 87.8261	DATE: August 11, 2011 12:14 pm

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Figure 21

0 1/4 1/2 1 Miles

- 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
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

SITE NAME: Lake Mary Anne Pump Station	CLIENT: U.S. Army Corps of Engineers
ADDRESS: Lake Mary Anne Pump Station Des Plaines IL 60016	CONTACT: Casey Pittman
	INQUIRY #: 3147780.1s
LAT/LONG: 42.0542 / 87.8627	DATE: August 15, 2011 3:05 pm

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Figure 22

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

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

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: BNSF Railroad Bridge Pier Extension	CLIENT: U.S. Army Corps of Engineers
ADDRESS: BNSF Railroad Bridge Pier Extension Riverside IL 60546	CONTACT: Casey Pittman INQUIRY #: 3145177.102s
LAT/LONG: 41.8265 / 87.8265	DATE: August 11, 2011 12:14 pm

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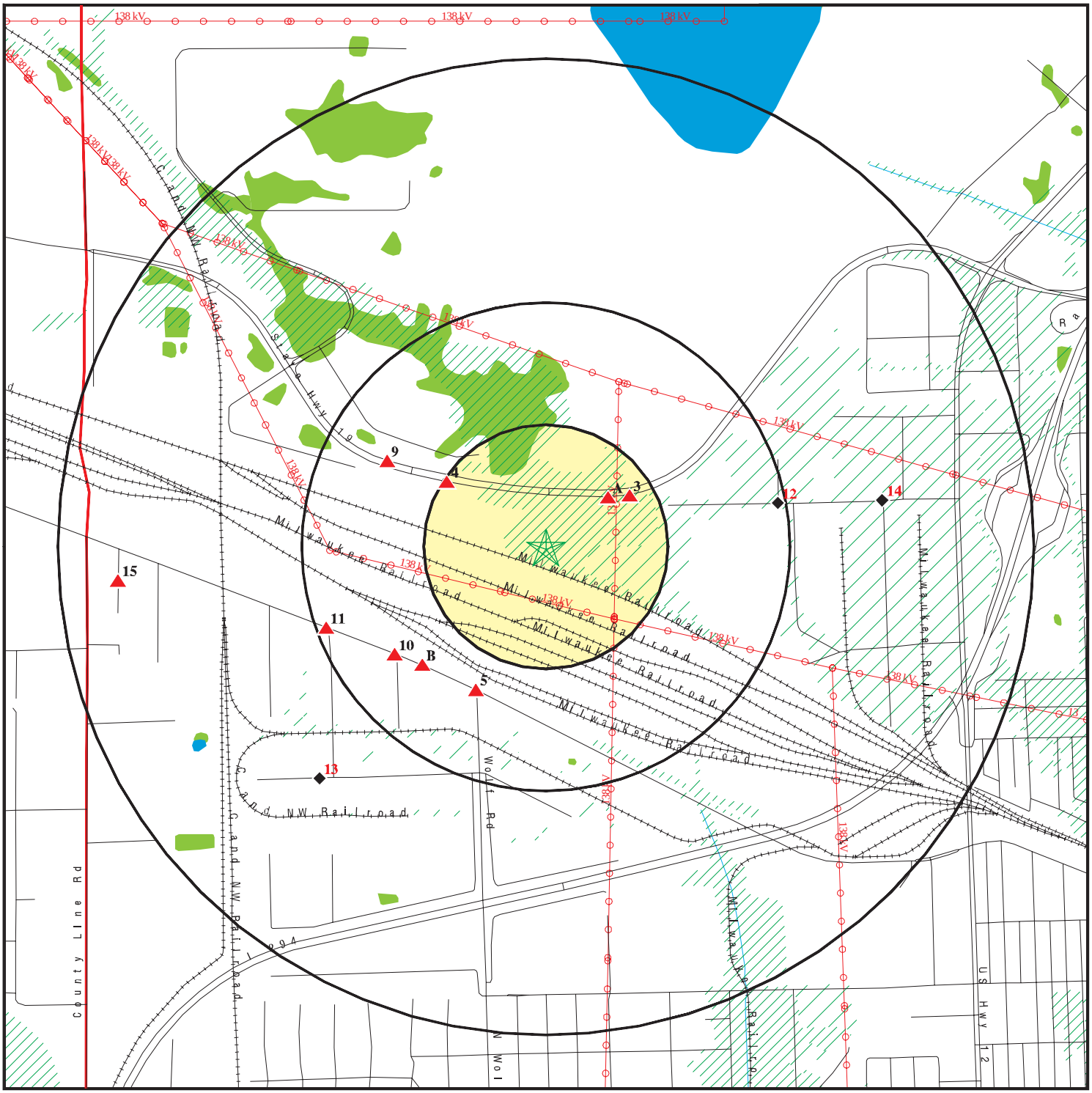
Figure 23



- 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
- County Boundary
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

0 1/4 1/2 1 Miles

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: Silver Creek Reservoir Expansion	CLIENT: U.S. Army Corps of Engineers
ADDRESS: Silver Creek Reservoir Expansion Franklin Park IL 60131	CONTACT: Casey Pittman
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HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW INVESTIGATION UPPER DES PLAINES RIVER AND TRIBUTARIES PHASE II FEASIBILITY STUDY

National Ecosystem Restoration (NER) and National Economic Development (NED) Ecosystem Restoration and Road Raise/Bridge Modification Sites

Hydraulic and Environmental Engineering Section (TS-DH)
U.S. Army Corps of Engineers, Chicago District

March 2012

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW INVESTIGATION DES PLAINES PHASE II – ECOSYSTEM RESTORATION AND ROAD RAISE SITES

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INTRODUCTION

The purpose of this report is to discuss the Phase I Environmental Site Assessment for the Upper Des Plaines and Tributaries Phase II Feasibility Study. This report identifies Recognized Environmental Conditions (RECs) and presents appropriate measures to resolve the issues. The methods used in performing the investigation are described in detail. Conclusions and recommendations regarding potential impacts due to RECs associated with the project sites are provided.

SCOPE OF REPORT

This report contains the results of the Phase I Environmental Site Assessment for the National Ecosystem Restoration (NER) and road raise/bridge modification sites located in Cook and Lake Counties, Illinois and Racine and Kenosha Counties, Wisconsin. Additional investigations were previously completed for the high-risk National Economic Development (NED) sites recommended for implementation as part of the Phase II feasibility report.

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. Therefore, HTRW and non-HTRW issues identified are discussed in this report.

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

GUIDANCE

Supplemental guidance was provided by the Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process (Designation: E 1527-05) prepared by the American Society for Testing of Materials (ASTM). The guidance defines a standard of good commercial and customary practice for conducting an environmental site assessment of a parcel of property; the goal of the process established

by this practice is to identify Recognized Environmental Conditions (RECs) through a records review, site visit, interviews, and report preparation. This report followed many of the ASTM E 1527-05 guidelines but not to the same level of detail described by the ASTM E 1527-05 guidance.

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 problems.

Non-Hazardous, Toxic, and Radioactive Waste

According to ER 165-2-132, non-HTRW environmental issues that do not comply with federal, state and local regulations should be discussed in the HTRW investigation along with HTRW issues. 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. RECs identified during the investigation are discussed in this report, along with resolutions and/or recommendations for resolving the issue.

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 a '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 stated in the definition of hazardous substance in the Environmental Statutes, 1988 Edition, the term does not include petroleum, including crude oil or any fraction thereof, which is not otherwise specifically listed or designated as a hazardous substance

under the definition. Underground Storage Tanks (USTs) are federally regulated under 40 CFR Part 280, which includes technical standards and corrective action requirements for owner and operators of USTs.

State

Illinois

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.

Wisconsin

The Wisconsin State regulations were examined to determine which regulations governed the state specific hazardous waste disposal, release, and cleanup requirements. Wisconsin regulates USTs under Wisconsin Administrative Code, Chapter NR 665 Hazardous waste treatment, storage, and disposal facility standards, Subchapter J – Tank Systems. 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 Chapter NR 665 except for those USTs excluded under s. Chapter NR 665.0000 and s. Chapter NR 665.1080.

SITE DESCRIPTION

The Upper Des Plaines River watershed originates in Racine and Kenosha counties of southeastern Wisconsin, in an agricultural landscape. The watershed extends south into Illinois through Lake County and then Cook County, where it converges with the Salt Creek Watershed near Riverside, Illinois. The Des Plaines River then flows southwest on to its confluence with the Kankakee River, where the two rivers combine to form the Illinois River. The watershed covers approximately 475 square miles, covering an area

that spans approximately 82 miles from north to south and 9 miles wide from east to west. The Upper Des Plaines River travels over 69 miles before its confluence with Salt Creek. Tributaries within the study area include about 331 miles of perennial and intermittent streams (see Figure 1).

The Upper Des Plaines River watershed land use is highly urbanized in the southern or downstream portions of the watershed and is rural/agricultural in the upstream areas to the north. In general, land use throughout the watershed is a mix of agricultural areas, urban areas, industrial and manufacturing areas, and natural areas (see Figure 2). As of 2001, land use in the Illinois portion of the watershed consists of 57.4% urban, 23% natural landscape, and 19.6% agriculture (USACE 2011). Landscape-scale changes in land-use, and subsequent hydrologic and hydraulic alterations, have led to increased flooding and subsequent flood damages, decreased habitat quality, degraded water quality and reduced species richness throughout the watershed.

PROJECT DESCRIPTION

The combined plan developed for the Upper Des Plaines and Tributaries Feasibility Study (Phase II Study) has been formulated to build on and extend the benefits achieved by the Upper Des Plaines River Flood Damage Reduction Feasibility Study (Phase I Study). The authorized plan developed in the Phase I Study addressed flood risk within the Upper Des Plaines River watershed in Illinois. The Phase II Study recommends a plan that further manages flood risk on the main stem of the Des Plaines River in both Illinois and Wisconsin, manages tributary flood risk, and, additionally, restores and enhances degraded ecosystems within the study area. The watershed scope of the study has allowed for a systems approach, evaluating the basin wide flood risk management and ecosystem restoration potential of each site. Separate plans were formulated to meet the flood risk management and ecosystem restoration study purposes resulting in national economic development (NED) and national ecosystem restoration (NER) plans. These plans have been combined into a single multipurpose plan.

NED Sites

The Phase II NED plan was formulated to manage flood risk on both the main stem Upper Des Plaines River and along its tributaries. The NED plan recommends two floodwater storage reservoirs, three levee/floodwalls, six road raises, and three modifications to existing structures be implemented throughout the watershed. A Phase I ESA was completed for the more high-risk sites (reservoirs, structure modifications, and levee/floodwalls) under separate cover. This report contains the results of the Phase I ESA for the six road raise/bridge modification sites located in Cook and Lake Counties, Illinois, including River Road raises at Ashland Avenue, Feehanville Ditch, and Irving Park Road, Milwaukee Avenue/River Road raise in Lake County, IL, Milwaukee Avenue bridge modification at Buffalo-Wheeling Creek, and First Avenue bridge modification. The locations of the sites are shown on Figures 3, 4 and 5. The following project features may be implemented on one or more sites:

- Excavation and fill required for raising roadway
- Bridge and/or other structural modifications
- Culvert placement

River Road and Milwaukee Avenue Road Raise (DPRR08/ DPBM11/ DPRR09)

The River Road and Milwaukee Ave Road Raises are located at the intersection of River Road and Milwaukee Avenue in Buffalo Grove and Long Grove, Lake County, IL. The NED plan recommends road raises or bridge modifications in three areas along River Road and Milwaukee Avenue (see Figure 6). The roadways currently overtop during a 10 year flood event; the NED plan recommends road raises above the 500 year flood elevation. This section of road includes a crossing at Aptakistic Creek; culverts will be placed to allow for existing floodplain connection and to prevent adverse impacts to surrounding structures.

Milwaukee Avenue Bridge Modification at Buffalo-Wheeling Creek (DPBM10)

The Milwaukee Ave at Buffalo Wheeling Creek Crossing Bridge Modification is adjacent to the main stem of the Des Plaines and is located near State Highway 21 in Wheeling, Cook County, IL (see Figure 7). The NED plan recommends raising Milwaukee Avenue Bridge at the Buffalo-Wheeling Creek inlet above the 25 year flood elevation; it currently overtops during a five year flood event.

River Road Bridge Modification at Feehanville Ditch (DPBM08)

The River Road at Feehanville Ditch Crossing Bridge Modification is located near the intersection of East Kensington Road and North Wolf Road in Wheeling, Cook County, IL (see Figure 8). The NED plan recommends raising River Road Bridge at Feehanville Ditch above the 100-year flood elevation; it currently overtops during a five year flood event. The plan will also allow for greater conveyance under the roadway for tributary flow.

River Road Raise at Ashland Avenue (DPRR05)

The River Road at Ashland Road Raise is located between Ashland and Walnut in Des Plaines, Cook County, IL (see Figure 9). The NED plan recommends raising River Road above the 500 year flood elevation; it is currently inundated by overbank flooding during a five year flood event. Culverts will be placed to allow for floodplain connectivity and prevent hydraulic impacts. The existing retaining wall will be extended south along Des Plaines River Road and the Des Plaines River.

River Road Raise at Irving Park Road (DPRR03)

The River Road at Irving Park Road Raise is located between Irving Park and Seymour in Schiller Park, Lake County, IL (see Figure 10). The NED plan recommends raising River Road above the 500 year flood elevation; it currently overtops by overbank flooding during a five year flood event.

First Avenue Bridge Modification (DPBM04)

The First Avenue Bridge Modification site crosses the main stem Des Plaines River near State Highway 64 in River Grove, Cook County, IL (see Figure 11). The NED plan recommends raising the First Avenue Bridge and the adjacent portion of River Road above the 500 year flood elevation. The bridge currently overtops during a two year frequency event.

NER Sites

The Phase II NER plan was formulated to restore degraded ecosystem structure, function, and dynamic processes to a less degraded, more natural condition. The plan that reasonably maximizes net benefits and is consistent with the Federal objective is identified as the NER plan. The NER plan initially identified 15 sites for restoration; five NER sites located in Wisconsin (Union Grove Wet Prairie, Sturtevant Wet Prairie, Bristol Marsh, Somers Marsh, and Pikeville Forested Floodplain), five NER sites located in Illinois (Antioch Aquatic Complex, North Brook Marsh, Riverwoods Wet Prairie, Beck Lake Meadow, and Grayslake Wet Prairie), and 5 dam removals (Dam #1, Dam #2, Dam #4, Touhy Dam, and Dempster Dam) along the Des Plaines River in Cook County, Illinois. Grayslake Wet Prairie was removed from consideration and is not analyzed in this report. The following restoration measures may be implanted on one or more sites:

- Agricultural drain tile disablement
- Drainage ditch filling and/or plugging
- Soil compaction, removal, or soil amendment
- Dam removal
- Cobble/riffle placement
- Stream remeandering
- Woody debris in-stream placement
- Herbaceous invasive species removal
- Tree/shrub (canopy) removal
- Installation of native plant species seed
- Installation of live native plants as plugs
- Installation of live native trees and shrubs

Antioch Aquatic Complex (L41)

Antioch Aquatic Complex is a 673 acre site located along I-45 and the Lake County/Kenosha County border in Antioch, IL (see Figure 12). The hydrology and riverine habitat of the site will be restored and invasive species control will be implemented along with sowing seeds for appropriate cover types and planting native herbaceous plugs as well as woody trees and shrubs. The hydrology will be restored through removal of farm drain tiles and compacted soil, filling unnatural ditches, adding cobble riffles to raise the groundwater table, and adding strategic ditch plugs. The riverine habitat will be restored by repairing the stream sinuosity, contouring the banks to a more natural condition, and placement of cobble riffles and woody debris.

Riverwoods Wet Prairie (L01)

Riverwoods Wet Prairie is a 219 acre site located along Peterson Road in Riverwoods and Buffalo Grove, Lake County, IL (see Figure 13). The site will be restored and urban areas will be converted to natural habitat types, restoring floodplain wetlands. The hydrology will be restored through removal of farm drain tiles and compacted soil, filling unnatural ditches, adding cobble riffles to raise the groundwater table, and adding strategic ditch plugs. Urban areas will be converted through removal of impervious surfaces and amendment of the substrate to support a native plant community

Northbrook Marsh (C09)

Northbrook Marsh is located at located at the intersection of State Highway 21 and Lake Cook Road in Wheeling, Cook County, IL (see Figure 14). The hydrology of the 815 acre site will be restored and urban areas will be converted to natural habitat types, restoring floodplain wetlands. The hydrology will be restored through removal of farm drain tiles and compacted soil, filling unnatural ditches, adding cobble riffles to raise the groundwater table, and adding strategic ditch plugs. Urban areas will be converted through removal of impervious surfaces and amendment of the substrate to support a native plant community. Floodplain wetlands will be restored by excavating to restore depressions and seeding and managing the area as emergent wetlands. Shrubs, trees and live herbaceous plugs will also be installed for appropriate cover types.

Beck Lake Meadow (C15)

Beck Lake Meadow is located at the intersection of State Highway 21 and State Highway 68 in Des Plaines and Glenview, Cook County, IL (see Figure 15). The hydrology of the 1,007 acre site will be restored and urban areas will be converted to natural habitat types, restoring floodplain wetlands. The hydrology will be restored through removal of farm drain tiles and compacted soil, filling unnatural ditches, adding cobble control structures to raise the groundwater table, and adding strategic ditch plugs. Urban areas will be converted through removal of impervious surfaces and amendment of the substrate to support a native plant community. Floodplain wetlands will be restored by excavating to restore depressions and seeding and managing the area as emergent wetlands. Shrubs, trees and live herbaceous plugs will also be installed for appropriate cover types.

Dam #1

Dam #1 is located in the Des Plaines River in Wheeling, Cook County IL (see Figure 16). The two foot high run-of-the-river Dam #1will be removed. The dam currently fragments the riverine habitat and prevents fish passage during low flows. Project implementation will restore the habitat to a more natural condition.

Dam #2

Dam #2 is located in the Des Plaines River in Des Plaines, Cook County, IL (see Figure 17). The two foot high run-of-the-river Dam #2 will be removed. The dam currently fragments the riverine habitat and prevents fish passage during low flows. Project implementation will restore the habitat to a more natural condition.

Dempster Ave Dam

The Dempster Dam is located in the Des Plaines River in Des Plaines, Cook County, IL (see Figure 18). This two foot high run-of-the-river dam will be removed. The dam currently fragments the riverine habitat and prevents fish passage during low flows. Project implementation will restore the habitat to a more natural condition.

Touhy Avenue Dam

The Touhy Avenue Dam is located in the Des Plaines River in Park Ridge, Cook County, IL (see Figure 19). The two foot high run-of-the-river dam will be removed. The dam currently fragments the riverine habitat and prevents fish passage during low flows. Project implementation will restore the habitat to a more natural condition.

Dam #4

Dam #4 is located in the Des Plaines River in Park Ridge, Cook County, IL (See Figure 20). This two foot high run-of-the-river dam will be removed. The dam currently fragments the riverine habitat and prevents fish passage during low flows. Project implementation will restore the habitat to a more natural condition.

Sturtevant Wet Prairie (R4)

Sturtevant Wet Prairie is located east of US-94 between Braun and County Line Roads in Sturtevant, Racine County, WI (see Figure 21). The hydrology and riverine habitat of this 724 acre site will be restored. The hydrology will be restored through removal of farm drain tiles and compacted soil, filling unnatural ditches, adding cobble riffles to raise the groundwater table, and adding strategic ditch plugs. The riverine habitat will be restored by repairing the stream sinuosity, contouring the banks to a more natural condition, and placement of cobble riffles and woody debris. Implementation at this site will not include invasive species control or the planting of any herbaceous or woody species.

Union Grove Wet Prairie (K33)

Union Grove Wet Prairie is located east of US-45 between County Line Road and State Route 142 in Union Grove, Kenosha County, WI (see Figure 22). The hydrology and riverine habitat of this 2,134 acre site will be restored and invasive species control will be implemented along with sowing seeds for appropriate cover types and planting native herbaceous plugs as well as woody trees and shrubs. The hydrology will be restored

through removal of farm drain tiles and compacted soil, filling unnatural ditches, adding cobble riffles to raise the groundwater table, and adding strategic ditch plugs. The riverine habitat will be restored by repairing the stream sinuosity, contouring the banks to a more natural condition, and placement of cobble riffles and woody debris.

Somers Marsh (K9)

Somers Marsh is located east of US-94 between County Line Road and County Highway A in Somers, Kenosha County, WI (see Figure 23). The hydrology and riverine habitat of this 628 acre site will be restored and invasive species control will be implemented along with sowing seeds for appropriate cover types and planting native herbaceous plugs as well as woody trees and shrubs. The hydrology will be restored through removal of farm drain tiles and compacted soil, filling unnatural ditches, adding cobble riffles to raise the groundwater table, and adding strategic ditch plugs. The riverine habitat will be restored by repairing the stream sinuosity, contouring the banks to a more natural condition, and placement of cobble riffles and woody debris.

Bristol Marsh (K47)

Bristol Marsh is located between County Highway C and US-45 in Bristol, Kenosha County, WI (see Figure 24). The hydrology and riverine habitat of this 1,619 acre site will be restored and invasive species control will be implemented along with sowing seeds for appropriate cover types and planting native herbaceous plugs as well as woody trees and shrubs. The hydrology will be restored through removal of farm drain tiles and compacted soil, filling unnatural ditches, adding cobble riffles to raise the groundwater table, and adding strategic ditch plugs. The riverine habitat will be restored by repairing the stream sinuosity, contouring the banks to a more natural condition, and placement of cobble riffles and woody debris.

Pikeville Forested Floodplain (K41)

Pikeville Forested Floodplain is located east of US-45 between Horton and State Line Road in Pikeville, Kenosha County, WI (see Figure 25). The hydrology and riverine habitat of this 689 acre site will be restored and invasive species control will be implemented along with sowing seeds for appropriate cover types. The hydrology will be restored through removal of farm drain tiles and compacted soil, filling unnatural ditches, adding cobble riffles to raise the groundwater table, and adding strategic ditch plugs. The riverine habitat will be restored by repairing the stream sinuosity, contouring the banks to a more natural condition, and placement of cobble riffles and woody debris.

Bull Creek Mitigation (L22)

Implementation of the Bull Creek Reservoir (BCRS02) NER project feature requires mitigation. The 112-acre wetland complex, although currently overridden with invasive plant species and secondary growth forest, provides habitat for marsh and prairie species of insect, amphibian, reptile, bird and mammal and hydrologic functions. Site L22,

analyzed in the NER plan (Figure 26), is within the Bull Creek watershed and has existing wet prairie and marsh community types and has been proposed as the mitigation site for work being conducted to construct Bull Creek reservoir. The site is also in public ownership, with the Lake County Forest Preserve and the Township of Libertyville both owning parcels. Both of these agencies have designated this 760-acre site as protected open space with primary purpose of ecological restoration. There are approximately 214-acres of marsh and 138-acres of wet prairie on this site. It was found most cost effective to restore those soils that were once formerly marsh and wet prairie on agricultural fields in current production, but are slated to terminate farming once restoration funds and plans were acquired. The actions associated with this alternative include disablement of drain tiles (112-acres), marsh seed sowing (60.8-acres), wet prairie seed sowing (50.4-acres), marsh plant plugs (60.8-acres), and five-years of spot herbiciding for invasive species control.

GENERAL METHODS

The following sections contain information that was requested and gathered in accordance with ASTM E 1527-05 for this assessment. The information was obtained from:

- Existing Information Review
- Database research
- Historical topographic map review
- Historical aerial photograph review
- Site visit

This information was used to determine if the measures selected for implementation for the road raise/bridge modification and ecosystem restoration sites included in the Phase II Study will have an impact on any RECs that may exist in the surrounding areas, and if any RECs will have an impact on the implementation of the project. The information gathered from the above list of sources is detailed in the following sections. For the purposes of this investigation, sites that are adjacent to each other, or within each other, were analyzed together. Combination sites are as follows:

- Sturtevant Wet Prairie (R4) and Somers Marsh (K9)
- Pikeville Forested Floodplain(K41) and Antioch Aquatic Complex(L41)
- North Brook Marsh (C09), Dam #1, and Milwaukee Avenue Bridge Modification at Buffalo-Wheeling Creek (DPBM10)
- Beck Lake Meadow (C15), Dam #2, and River Road Bridge Modification at Feehanville Ditch (DPBM08)
- River Road Raise at Ashland (DPRR05) and Dempster Dam

EXISTING INFORMATION REVIEW

Water Quality

Illinois

The Des Plaines River and tributaries are classified as general use water bodies in Illinois. The general use water quality standards apply to almost all waters of the state and are intended to protect aquatic life, wildlife, agricultural, primary contact, secondary contact, and most industrial uses. The general use standards are also designed to ensure the aesthetic quality of the aquatic environment and to protect human health from disease or other harmful effects that could occur from ingesting aquatic organisms taken from surface waters. Aquatic life use assessments in streams are typically based on the interpretation of biological information, physiochemical water data, and physical habitat information; the assessment of primary contact use is based on fecal coliform bacteria data. The assessment of fish consumption use is based on water body-specific fish tissue data and resulting fish-consumption advisories issued by the Fish Contaminant Monitoring Program (FCMP). Public and food processing water supply is only assessed in water bodies where the use is currently occurring (as evidenced by the presence of an active intake).

Various portions of the study area in Illinois have been assessed for all, or some, of their designated uses. The Des Plaines River, Willow Creek, Higgens Creek, Buffalo Creek, and Indian Creek are listed as impaired streams in the Illinois Environmental Protection Agency (IEPA) draft Integrated Water Quality Report and 303(d) list (IEPA 2010) due to inability to achieve and reach the applicable general use water quality standards. Mill Creek and Bull Creek have been assessed for aquatic life use and fully support this function. Smaller systems, including McDonald, Silver, Crystal, and North Mill Creeks have not been assessed by IEPA.

Within the Illinois portion of the study area, some segments of the Des Plaines River do not support the aquatic life, fish consumption, or primary contact designated uses. The potential causes for aquatic life impairment include elevated levels of chloride, nitrogen, phosphorous, total dissolved and suspended solids, zinc, and silver, and excessive sedimentation and siltation caused primarily from combined sewer overflows, municipal point source discharges, urban runoff, storm sewers, highway/road/bridge runoff, site clearance and land development, hydrostructure flow regulation, and the presence of sediment contaminated with various chemicals. Sediments with elevated concentrations of mercury and PCBs of unknown origin have resulted in several fish consumption advisories issued in several reaches of the study area, and elevated levels of fecal coliform, resulting from combined sewer overflows, urban runoff, and storm sewers have impaired primary contact recreation in many areas.

Willow Creek is an aquatic life impaired waterway due to the presence of elevated levels of phosphorous and dissolved solids from municipal point sources, urban runoff, and storm sewers; the same types of sources impact Higgens and Buffalo Creeks. Higgens Creek is an aquatic life and primary contact impaired waterway due to the presence of

elevated levels of chloride, fluoride, nickel, nitrogen, phosphorous, silver, total dissolved solids, zinc, and fecal coliform. Buffalo Creek is aquatic life and primary contact impaired due to the presence of elevated levels of manganese, silver, and fecal coliform. Indian Creek is aquatic life impaired due the presence of contaminated sediment containing endrin, methoxychlor, and nitrogen above highly elevated levels.

Wisconsin

The Wisconsin Department of Natural Resources (WDNR) is responsible for protecting, maintaining, improving and managing the state's surface waters, including the Des Plaines River and its tributaries. WDNR establishes water quality standards for individual surface waters based on the potential, or attainable uses of the water, such as fish and aquatic life, recreational, public health and welfare, and wildlife uses. Ideally, all surface waters in the state should meet the water quality standards associated with the proposed Diverse Fish and Aquatic Life (DFAL) use sub-category. DFAL surface waters are generally warm and cool water ecosystems with the potential to contain fish and macroinvertebrate communities that include some species relatively intolerant of low dissolved oxygen levels. This use designation encompasses a large range of aquatic communities, habitats, and ecosystem types (WI 2004). The stream reaches in the Des Plaines River watershed are recommended to meet the warmwater-sportfish full recreational use objective. Some portions of the main stem of the Des Plaines River downstream do not fully meet water quality standards associated with the recommended water use objectives during and prior to 1975. More recent data available for the period of 1979 through 2001 indicate that the standards associated with the recommended water use objective were also not fully achieved during that period. Violations of the dissolved oxygen, total phosphorus, and fecal coliform levels occurred on the main stem of the Des Plaines River just south of the Wisconsin-Illinois border. However, based upon review of the water quality sampling and water quality simulation data developed under the regional water quality management plan and the state of implementation of that plan, it is likely that violations of the dissolved oxygen, fecal coliform, and phosphorus standards also occurred at upstream stations. This finding is consistent with the presence of pollution-tolerant fish species in the Des Plaines River watershed.

Very tolerant aquatic life ecosystems (VTAL) do not have the potential to maintain a fish community and have either limited natural capacity or irretrievable water quality conditions that prevent them from fully supporting aquatic life forms. These waters may contain macroinvertebrate communities dominated by species that are very tolerant of low levels of dissolved oxygen. Some VTAL or limited aquatic life (LAL) waters may briefly contain a few stray fish during high-flow periods when water quality and habitat conditions allow for their existence. These waters may have extreme variation in flow, temperature and/or water quantity, yet may contain macroinvertebrate communities dominated by very tolerant species. The Pleasant Prairie tributary and one other unnamed tributary to the Des Plaines River, in Wisconsin, are proposed for listing as LAL waters. This designation indicates the surface water only supports a small number of forage fish species and other non-fish aquatic like species that are very tolerant to organic pollutants.

The Des Plaines River and its tributaries in Wisconsin are not listed in the states 303(d) list of impaired waterways.

Geology

The study area was created and modified by four major glaciation events, lasting from approximately 1.6 million to 10,000 years ago. These glaciers produced a rounded topography by scraping away at the bedrock in some areas and depositing the accumulated debris in other areas. The underlying bedrock of the study area is covered by various depths of a complex layering of beds and lenses of outwash with different layers of till left by surging and retreating glaciers. In addition, the study area is laced with several clustered end moraines (ridges left by retreating glaciers), which are oriented in a north-south direction that roughly parallels the shore of Lake Michigan (see Figure 27). The importance of glacial history is the profound effect that the deposited drift, left by glaciers, had on the area's modern and moderately productive soils. These deposits range from 20 to 35 feet thick and some extend down to bedrock. The properties of loess (windblown silt) and till, mainly a compact matrix of clay, silt and sand mixed with other larger sized grains, form the parent material for soils of this area. Depending on the properties of these soils and glacial deposits, water could either be absorbed directly into the ground and stored in an aquifer or run off into nearby streams.

Soil Quality

There are 13 soil associations found within the study area (see Figure 28). One of the most important factors affecting soils of the study area is extensive urbanization. Many soils throughout the project area and within Cook County, Illinois are affected by human activities, which are overlaid by a few feet of miscellaneous fill and/or regraded top soil. The environmental soil quality at each of the project sites is largely unknown.

Sediment Quality

Sampling upstream of the five dams proposed for removal as part of the Phase II project conducted in July 2011 suggests that the impounded materials upstream of the dams consist primarily of sand and gravel bed load overlaying compacted clay (see Attachment 1 for a trip report and site visit photos from dam site visits). Sand and gravel bed load does not likely contain environmental contaminants; this material should be allowed to move downstream naturally when dam removal occurs. Isolated areas where fine-grained materials are present may require additional sediment management techniques to stabilize stream conditions. Fine-grained and organic materials appear to be located just upstream of the Touhy Dam and Dam #4 in the areas of the near shore banks. In addition, some of the substrate collected upstream of Dam #1 consists of a combination of fines and sand in the active channel.

Sediment samples were collected upstream of Hofmann Dam (Des Plaines River in Riverside) in 2001, 2006, and 2011. Results of the sediment investigations are included in Attachment 2. Results of sediment analysis for metals, semi-volatiles, pesticides, and

PCBs in the sediment samples collected suggest that PNAs and metals are present in the fine grained sediment of the downstream portions of the Des Plaines River above the "normal" background for the Chicago Area. In addition, PCB concentrations in the fine grained sediment range from non-detect to 20 mg/kg.

DATABASE SEARCH

A search of available environmental records was conducted utilizing the Environmental Database Resources, Inc. (EDR) online for each of the project sites. EDR searched federal and state databases using the minimum search distances issued in the ASTM E 1527-00 guidelines. Table 1 notes the recommended ASTM search distance for federal and state databases. A description of information included in each database is included below.

Table 1 – Minimum Search Distance for Federal and State Database Searches

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, for various reasons.

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.

ERNS

The Emergency Response Notification System (ERNS) database lists information on reported releases of oil and hazardous substances.

SHWS

The State Hazardous Waste Sites (SHWS), or State Oversight List, are the state equivalent to CERCLIS and NPL. These sites may or may not have already been listed on the federal CERCLIS list.

SWF/LF

The Illinois Environmental Protection Agency (IEPA) and the Wisconsin Department of Natural Resources (WDNR) record 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.

LUST/UST

The Illinois State Fire Marshall and the Wisconsin Department of Commerce maintain a listing of registered underground storage tanks (UST), as required by RCRA Subtitle I. The Illinois Environmental Protection Agency and the Wisconsin Department of Natural Resources maintain a listing of leaking underground storage tank reports (LUST).

IL 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). The database search located one SRP sites within the search distance. This site is also listed in the Engineering Controls (ENG CONTROL) database maintained by the IEPA.

IL NIPC

Northeastern Illinois Planning Commission (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 that previously had never been identified largely because, prior to 1971, there was no obligation to register such sites. The data come from the Northeastern Illinois Planning Commission's Solid Waste Landfill Inventory.

WI BRRTS

The Wisconsin Bureau for Remediation and Redevelopment Tracking System (BRRTS) is a tracking system of contaminated sites. It holds key information for finding out more about a site or an activity. Activity types included are:

- Abandoned Container - An abandoned container with potentially hazardous contents recovered from a site. No discharge to the environment occurs. If the container did release a hazardous substance, a spill would be associated with the site.
- Superfund - is a federal program created by Congress in 1980 to finance cleanup of the nation's worst hazardous waste sites.
- VPLE - Voluntary Property Liability Exemptions apply to sites in which a property owner conducts an environmental investigation and cleanup of an entire property and then receives limits on their future liability.
- General Property - Environmental actions which apply to the property as a whole, rather than a specific source of contamination, such as the LUST or environmental repair site. Examples would be off-site letters, municipal liability clarification letters, lease letters, voluntary party liability exemption actions, and general liability clarification letters.

WI ERP

The Wisconsin Emergency Repair Program (ERP) Database contains a listing on non - LUST sites with contaminated soil or groundwater. Often these are historic releases to the environment.

WI LAST

The Wisconsin LAST list is a listing of leaking aboveground storage tank sites maintained by the Department of Natural Resources.

WI AST

The Wisconsin Aboveground Storage Tank (AST) database contains registered ASTs. The data comes from the Department of Industry, Labor & Human Resources' List - All Aboveground Storage Tanks Except for Fuel Oil.

WI CRS

A Wisconsin Closed Remediation Site (CRS) is parcel of land at which the groundwater has become contaminated and which is affected by a particular type of legal restriction. Specifically, certain steps have been taken to stabilize/remediate the contamination, and the state is satisfied that no further efforts are necessary provided that the property is not used for certain purposes.

WI AUL

The AUL listing contains sites with a deed restriction issued at site closeout. The extent of soil contamination is known but impracticable to remove now, or an engineering control is required to be maintained, or NR720 industrial standards are applied. Property use restrictions are in place at the site or require future actions.

WI WRRSER

The Wisconsin Remedial Response Site Evaluation Report (WRRSER) provides information about location, status, and priority of sites or facilities in the state which are known to cause of have a high potential to cause environmental pollution.

WI SHWIMS

Information on Solid & Hazardous Waste Information Management System (SHWIMS) sites, and facilities operating at sites, that are regulated by the State of Wisconsin Waste Management program.

FINDS

The FINDS database (facility index system/facility registry system) contains facility information and pointers to other sources that contain more detail. The EDR report includes the following FINDS databases in the report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (Statement Environmental Laws and Statues), and PADS (PCB Activity Data System).

Others

Various other databases are searched that include supplemental information to the above databases, including: CERCLA consent decrees, National Priority list deletions, Nuclear Regulatory Commission's database of sites possessing radioactive materials, Superfund Liens, PCB Activity Database, Department of Defense sites, Brownfield's, Toxic Chemical Release Inventory, FIFRA/TSCA tracking system, oil and gas pipelines,

electric transmission lines, sensitive receptors, flood zone data, and the national wetlands inventory.

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.

Phase II Project Review

The EDR overview map displaying the project areas and the search results are given in Figures 29 through 42. The comprehensive EDR database reports are provided in Attachment 3. Analysis of information included in the EDR database, the status of the sites, and a summary of the potential project impacts are included in Tables 2 through 15. It appears, based on the analysis provided that there are several RECs associated with results of the database information:

- River Road Raise at Ashland – the EDR database report suggests that there are several LUSTs (EDR #45, 48 and M49) with the recommended search distance and hydraulically up gradient to the project area. The scope, scale, and status of the LUST activities are unknown; additional information has been requested from IEPA but was not received by the time of this report. Given the nature of proposed activities required for project implementation (which includes excavation for the construction/extension of the existing retaining wall) the status of these facilities should be confirmed during design.

- River Road Raise at Irving Park Road – the EDR database report suggests that there are two SRP sites within the recommended search distance with unknown status (EDR #D16-18 and #20). It is unlikely that SRP activities will impact project implementation because no significant excavation is expected for road raise construction; however, these assumptions, and the status of the sites, should be confirmed during design. In addition, there are several USTs associated with facilities adjacent to the road raise alignment along River Road; the location of USTs should be confirmed during design to avoid disturbance of these facilities during construction.

- Riverwoods – there is one SRP site (Hester International – EDR #4) that may be within the project limits, however, it is unclear the exact location of the site. It is likely that the site is located within a developed area along River Road that has been specifically excluded from the proposed ecosystem restoration area. Given the nature of the activities that may be conducted for ecosystem restoration, which may include removal of soils and drain tile, and the proximity of site and unknown scope and scale of SRP action, the status of facility was requested through IEPA. Additional

information not available at the time of this report. The status of this site should be confirmed during design.

- Riverwoods – the Hoffelder Landfill, EDR #B5 was previously enrolled in the IEPA SRP program and is adjacent to the project area to the north. USACE was notified by the Forest Preserve District that the landfill facility is located within the original USACE project limits. The limits of the restoration project have been revised so that the landfill area is not included within the project area and should continue to be excluded from the USACE project area.

- Milwaukee Avenue Bridge Modification at Buffalo-Wheeling Creek – there are several LUSTs and USTs within the recommend search distance and along the road raise/bridge modification alignment. During evaluation of the EDR report it was assumed that no significant upland excavation is expected for bridge modification/road raise construction. This assumption, and the location of USTs along the alignment, should be confirmed during design.

- Beck Lake Meadow, River Road at Irving Park, and First Avenue bridge Modification – there are FUDS sites located within the recommended search distances for these projects. Camp Pine POW camp is located within the project limits for Beck Lake Meadow. Nike sites C-76 and C-82 are located near the First Avenue Bridge Modification and River Road Raise at Irving Park project areas, respectively. FUDS sites are discussed later in this report.

- Rural project areas, such as Sturtevant, Somer's Marsh, Union Grove, Bristol Marsh, and Bull Creek Mitigation area, where ecosystem restoration activities are proposed, contain multiple USTs on adjacent properties that have been excluded from the USACE project areas. While the nature of ecosystem restoration activities does not typically involve significant excavation, if excavation is proposed for soil or drain tile removal near the USTs associated with the adjacent, the USTs locations should be confirmed during design to avoid disturbance.

River Road and Milwaukee Avenue Road Raise (DPRR08/ DPBM11/ DPRR09)

Table 2 – River Road and Milwaukee Avenue Road Raise EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST	1	Glenwood Tree Experts	*Along alignment*	Not a past or current RCRA facility	Unlikely facility activities have impacted project area
MANIFEST	A2	Veterinary Specialty	*1/8 mile west*	Not a past or current RCRA facility	Unlikely facility activities have impacted project area
MANIFEST	A3	Long Island Productions	*1/8 mile west*	Not a past or current RCRA facility	Unlikely facility activities have impacted project area
RCRA-SQG FINDS	A4	Okamoto Corporation	*1/8 mile west*	Current SQG with no violations	Unlikely facility activities have impacted project area
MINES	5	Aptakisic Sand Corporation	*Adjacent to west*	Sand mining	Unlikely facility activities have impacted project area
LUST	6	Maki, Fran	*Adjacent to north (down gradient)*	Non-LUST status dated 3/16/1995	Confirmed site status through IEPA online database. After additional reporting by owner, it appears site is determined to be non-LUST. Unlikely activities have impacted project area.
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

River Road Raise at Ashland Avenue (DPRR05) and Dempster Dam

Table 3 – River Road Raise at Ashland and Dempster Dam EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
RCRA-CESQG FINDS UST	A1	River Chevrolet	*<1/8 mile east*	CESQG, previous generator with no violations. Facility closed, USTs removed.	Unlikely facility activities have impacted project area
LUST MANIFEST	A2	Park Plaines Chevrolet	*<1/8 mile east*	LSUT NFA/NFR letter dated 9/28/1993	Unlikely facility activities have impacted project area
ENG CONTROLS INST CONTROLS SRP LUST MANIFEST	B3 B4	Ray Hoven	*1/8 to ¼ mile east (down gradient)*	Engineering controls (industrial/commercial): foundation barrier and groundwater use restriction SRP NFR letter dated 8/23/2010 LUST NFA/NFR letter dated 5/6/1993	Unlikely facility activities have impacted project area or will impact implementation. Any remaining contamination is down gradient and hydrologically disconnected by the Des Plaines River.
UST	B5	Advent Electronics	*1/8 to ¼ mile east*	Facility closed (see B4/B5 for additional site information). UST removed.	Unlikely facility activities have impacted project area
MANIFEST	C6	Hi Tech Paintless Dent Removal	*1/8 to ¼ mile east*	Not a past or current RCRA facility	Unlikely facility activities have impacted project area
UST	C7	Delta Technical Products	*1/8 to ¼ mile east*	Facility closed, UST removed	Unlikely facility activities have impacted project area
RCRA-SQG FINDS LUST	C8	Par Engineering Co.	*1/8 to ¼ mile east (down gradient)*	Current SQG – no violations. LUST NFA/NFR letter dated	Unlikely facility activities have impacted project area or will impact implementation. Any remaining contamination will not likely

MANIFEST INST CONTROL SRP AIRS				3/14/2011 SRP NFR letter dated 1/24/011 (industrial commercial), with groundwater use restriction.	be encountered - the project area is hydrologically disconnected by Des Plaines River.
MANIFEST RCRA-SQG FINDS	D9 D13	Gaunt, Gerald	*1/8 to ¼ mile north*	RCRA SQG, no violations	Unlikely facility activities have impacted project area
CERCLIS	D10	Mill Street Mercury Spill Site	*1/8 to ¼ mile north*	Removal action complete 7/16/2003	Unlikely facility activities have impacted project area
MANIFEST RCRA-nongen FINDS	D11 D12	Pines Condo Association	*1/8 to ¼ mile north*	Past RCRA LQG with violations, corrected in D10 above.	Unlikely facility activities have impacted project area
UST	E14	American Service Bureau	*1/4 to ½ mile east*	Heating oil tanks onsite, exempt from registration	Unlikely facility will impact project implementation
UST	F15	SS #5321 FAC#10805	*<1/8 mile northwest*	Facility closed, 4 on-site tanks removed (BP)	Unlikely facility activities have impacted project area
MANIFEST	E16 E17 E18	GA Auto, Inc. Action Auto Reconstruction	*1/4 to ½ mile east*	CESQG – no violations	Unlikely facility activities have impacted project area
RCRA-LQG FINDS AIRS MANIFEST	E19 E20	Precision Instruments, Inc.	*1/4 to ½ mile east*	Air emitter (particulates, Cr) – no violations. LQG – no violations.	Unlikely facility activities have impacted project area
MANIFEST RCRA-SQG FINDS	F21 F22	Europe Autobody	*<1/8 mile northwest*	SQG – no violations	Unlikely facility activities have impacted project area.

MANIFEST AIRS RCRA-CESQG FINDS	G23 G24	Mid-states Recycling, Inc.	*¼ to ½ mile east*	Air discharger (particulates), no violations No RCRA violations.	Unlikely facility activities have impacted project area
UST	25	5 Flat Apartment Building	*1/8 to ¼ mile west*	Heating oil tank on-site, exempt from registration	Unlikely facility activities have impacted project area
MAINFEST RCRA-SQG FINDS	G26 G27	Chicago Quadrill Co.	*¼ to ½ mile east*	RCRA – no violations	Unlikely facility activities have impacted project area
LUST MANIFEST	H28	Science & Arts Academy	*¼ to ½ miles east*	Heating Oil Letter dated 10/11/2007	IEPA online LUST database: the site contains a heating oil storage tank for on-site use and is not subject to remediation
UST	H29	Vacant Commercial Property	*¼ to ½ mile east*	2-heating oil tanks on-site, exempt from registration	Unlikely facility activities have impacted project area
RCRA-nongen FINDS UST LUST MANIFEST	I30 I31 I32	Elmers Union Service, Inc.	*1/8 to ¼ mile northwest*	Former LQG with no violations. Facility closed, tanks removed from site. LUST NFA/NFR letter dated 10/9/1996	Unlikely facility activities have impacted project area
RCRA-SQG FINDS	J33	Bills Auto and Truck RPR	*1/8 to ¼ mile north*	RCRA – no violations	Unlikely facility activities have impacted project area
MANIFEST	J34	River Mill LLC	*1/8 to ¼ mile north*	Not a past or current RCRA facility	Unlikely facility activities have impacted project area
MANIFEST RCRA-SQG FINDS	K35	Busse Autobody	*¼ to ½ mile east*	RCRA – no violations	Unlikely facility activities have impacted project area

MANIFEST RCRA-SQG FINDS	K37 K38	P&M Auto Body Repair	*¼ to ½ mile east*	RCRA – no violations	Unlikely facility activities have impacted project area
MANIFEST	K39	Circuit Service, Inc.	*¼ to ½ mile east*	Not a past or current RCRA facility	Unlikely facility activities have impacted project area
LUST MANIFEST	L40	Alto Building Corp.	*1/8 to ¼ mile northwest*	LUST NFA/NFR letter dated 6/20/2006	Unlikely facility activities have impacted project area
US BROWNFIELDS	L41	Des Plaines Rand and Pine Road Property	*1/8 to ¼ mile northwest*	Additional information: 1900 – farmland, filling station, USTs	Property mismapped in EDR report. Located at Des Plaines Road/Rand Road (3/4 mile north – Envirofacts online). Property has been assessed (2.5 acres) but no clean-up implemented. Given the proximity of the property to the project area, it's unlikely to impact project implementation.
LUST MANIFEST	L42	Mt. Prospect National Bank	*1/8 to ¼ mile northwest*	LUST NFA/NFR letter dated 9/27/2006	Unlikely facility activities have impacted project area
LUST	L43	Des Plaines Public Works	*1/8 to ¼ mile northwest*	LUST NFA/NFR letter dated 10/16/1990	Unlikely facility activities have impacted project area
LUST MANIFEST	44	Ameritech Corp	*¼ to ½ mile west*	LUST NFA/NFR letter dated 12/18/1997	Unlikely facility activities have impacted project area
LUST MANIFEST SPILLS	45	City of Des Plaines	*¼ to ½ mile north (up gradient)*	Unknown LUST status (0310635537)	IEPA LUST database: no additional information. Up gradient to project area. Given the activities conducted for construction of retaining wall (excavation), and unknown scope and scale of LUST, the status of facility was requested through IEPA. Additional information not available

					at time of report.
LUST UST MANIFEST	46	Ameritech	*¼ to ½ mile east*	Heating Oil Letter dated 11/13/1998	IEPA online LUST database: the site contains a heating oil storage tank for on-site use and is not subject to remediation
LUST MANIFEST	47	Gallucci, Virginia	*¼ to ½ mile northwest*	LUST NFA/NFR letter dated 11/6/1995	Unlikely facility activities have impacted project area
LUST MANIFEST	48	St. Mary's Church	*¼ to ½ mile west*	LUST status unknown (0310635423)	IEPA LUST database: no additional information. Up gradient to project area. Given the activities conducted for construction of retaining wall (excavation), and unknown scope and scale of LUST, the status of facility was requested through IEPA. Additional information not available at time of report.
LUST	M49	Community School District #62	*¼ to ½ mile north*	LUST status unknown (0310635380)	IEPA LUST database: no additional information. Up gradient to project area. Given the activities conducted for construction of retaining wall (excavation), and unknown scope and scale of LUST, the status of facility was requested through IEPA. Additional information not available at time of report.
MANIFEST ENG CONTROLS INST CONTROL SRP	50	City of Des Plaines	*¼ to ½ mile northwest*	SRP NFR letter dated 7/13/2007 with groundwater use restriction and soil barriers (residential)	Given the proximity of the facility to the site, it is unlikely site activities will impact project implementation

LUST	M51	Shell Oil Co.	*¼ to ½ mile north*	LUST NFA/NFR letter dated 8/11/1999	Unlikely facility activities have impacted project area
LUST MANIFEST	52	Babe Bicycle Shop	*¼ to ½ mile west*	LUST NFA/NFR letter dated 12/22/1993	Unlikely facility activities have impacted project area
RCRA-nongen FINDS LUST MANIFEST	53	Shell Oil Co. Car Wash	*¼ to ½ mile north*	RCRA – no violations LUST NFA/NFR letter dated 8/11/1999	Unlikely facility activities have impacted project area
LUST LUST TRUST	N54	City of Des Plaines	*¼ to ½ mile east*	LUST NFA/NFR letter dated 9/8/2010	Unlikely facility activities have impacted project area
SWF/LF MANIFEST	N55	Des Plaines Compost Facility	*¼ to ½ mile east*	Facility accepts leaves, wood chips, clean C&D debris	Unlikely facility activities have impacted project area
LUST UST MANIFEST	56	1st United Methodist Church	*¼ to ½ mile northwest*	LUST NFA/NFR letter dated 6/16/1993 2-tanks removed	Unlikely facility activities have impacted project area
MANIFEST ENG CONROLS INST CONTROL SRP	57	Berry Property	*¼ to ½ mile northwest*	SRP NFR letter dated 12/28/2001 with soil barriers on-site (industrial commercial)	Given the proximity of the facility to the site, it is unlikely site activities will impact project implementation.
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

River Road Raise at Irving Park Road (DPRR03)

Table 4 – River Road Raise at Irving Park Road EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
EDR HIST MANIFEST UST LUST RCRA-SQG	A1/A2/ A3/A4/ 5	Amoco Oil #15670 (previously Standard Oil)	*Along road raise alignment (up gradient)*	5-USTs previously removed at facility, 3-USTs currently in use. LUST NFA/NFR letter dated 11/13/1998 RCRA generator with no violations	No indications that facility operations have impacted project area. Confirm tank locations and status during design.
UST	6	Water Pump House	*Adjacent to west*	Diesel fuel tank removed	Unlikely facility activities have impacted the project area
UST	B7	Comfort Inn Suites	*Along road raise alignment (up gradient)*	Heating oil tank on premises exempt from registration	Unlikely facility activities have impacted the project area. Confirm tank location during design.
MANIFEST LUST	B8/B9	Tarra Investments International	*Along road raise alignment (up gradient)*	Not a past or current RCRA generator LUST NFA/NFR letter dated 05/24/2001	Unlikely facility activities have impacted the project area.
RCRA-SGQ FINDS	C10	Dres Well Cleaners	*< 1/8 mile west*	RCRA generator with no violations	Unlikely facility activities have impacted the project area
UST	C11	State Oil Company #121	*< 1/8 mile west*	3-USTs currently in use	Unlikely facility activities will impact project implementation
MANIFEST	C12	Clark Retail Enterprises	*< 1/8 mile west*	Not a past or current RCRA generator	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
RCRA-SQG FINDS	13	Schiller Park Automotive SVC	*< 1/8 mile west*	RCRA generator with no violations	Unlikely facility activities have impacted project area
RCRA-SQG FINDS NPDES MANIFEST	D14/ D15	Speco Corporation	*<1/8 mile west*	RCRA generator with no violations Current NPDES industrial stormwater permit (general)	Unlikely facility activities have impacted the project area
SRP RCRA-Nongen FINDS MANIFEST AIRS	D16/ D17/ D18	3940 Willow Road Midwest Lacquer	*<1/8 mile west (up gradient)*	RCRA non-generator, previous LQG with no violations AIRS – facility ceased operations in 1998 SRP – enrolled 0.36 acres in 2000 (unknown scope/scale/status)	Unlikely SRP activities will impact project implementation (no significant excavation is expected for road raise construction). Confirm status and assumptions during design.
UST	19	Ultra Soft Carwash	*<1/8 mile west*	3-USTS reported but not installed at property	Unlikely facility activities have impacted project area
SRP	20	Schiller Park Heat Treating	*1/8 to ¼ mile west (up gradient)*	Enrolled 0.5 acres in 2004 (unknown scope/scale/status)	Unlikely SRP activities will impact project implementation (no significant excavation is expected for road raise construction). Confirm status and assumptions during design.
LUST MANIFEST	21	Moffitt Co.	*1/8 to ¼ mile west*	57.5(g) letter dated 6/14/1995	According to IEPA online database, the site contains a heating oil storage tank for on-site use and is not subject to remediation. Given the proximity and type of activity, it is unlikely to impact project implementation.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST MANIFEST	22	Arron Equipment Co.	*1/8 to ¼ mile west*	LUST NFA/NFR letter dated 1/21/2009	Unlikely facility activities have impacted project area
INST CTRL SRP	E23	Hughes Communications, Inc.	*¼ to ½ mile west*	SRP NFA/NFR letter dated 12/17/2001 6 acres worker caution advised with groundwater use restriction on-site	Unlikely facility activities will impact project implementation (no significant excavation is expected for road raise construction).
RCRA-nongen FINDS LUST	E24	Zenith Products	*¼ to ½ mile west*	RCRA nongen, previous LQG with no violations LUST NFA/NFR letter dated 1/27/1995	Unlikely facility activities have impacted project area
LUST MANIFEST	25	VLK Construction, Inc.	*1/8 to ¼ mile west (up gradient)*	Unknown LUST status	IEPA online LUST database: no additional information. Unlikely LUST activities will impact project implementation (no significant excavation is expected for road raise construction). Confirm status and assumptions during design.
CERCLIS	26	Anchor Metal Finishing	*1/8 to ¼ mile west (up gradient)*	Removal Action complete 1/24/2011 (260 drums)	Unlikely facility activities have impacted project area
LUST	27	Village of Schiller Park	*¼ to ½ mile west (up gradient)*	Unknown LUST status (0312855144)	IEPA online LUST database: no additional information. Unlikely LUST activities will impact project implementation (no significant excavation is expected for road raise construction). Confirm status and assumptions during design.
LUST MANIFEST	28	Industrial and Wholesale Lumber	*¼ to ½ mile west (up gradient)*	LUST NFA/NFR letter dated 2/11/1997	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
CERCLIS RCRA nongen FINDS SSU MANIFEST	F29 F30	Refinery Products	*¼ to ½ mile northwest*	Not on NPL – site assessed in 1984 and given low priority for further assessment. SSU transferred to another program (SRP) but not enrolled.	IEPA online databases: no additional information. Unlikely site activities will impact project implementation (no significant excavation is expected for road raise construction). Confirm status and assumptions during design.
LUST	F31	Soo Line Railroad	*¼ to ½ mile west (up gradient)*	Heating Oil Letter dated 9/12/1996	IEPA online LUST database: the site contains a heating oil storage tank for on-site use and is not subject to remediation
INST CONTROL SRP	32	Eclipse Lighting	*1/8 to ¼ mile southwest*	NFR letter dated 5/3/2003 (industrial/commercial) with groundwater use restriction imposed	Unlikely site activities will impact project implementation (no significant excavation is expected for road raise construction)
RCRA-TSDF CORRACTS RCRA-nongen FINDS LUST UST MANIFEST AIRS	33	HSP Commercial Realty	*1/8 to ¼ mile southwest*	Facility not a current generator, but previous LQG, and TSDF, with violations. RFA complete 2009, RFI not necessary. LUST NFA/NFR letters dated 6/18/1997 and 9/23/1996. Facility closed 1998, tanks removed.	Unlikely site activities will impact project implementation (no significant excavation is expected for road raise construction)
FUDS	34	C-82 H&G PN 67, Schiller Park	*¼ to ½ mile north*	9.65-acre housing and gun site position no. 67, NIKE site C-82. CCFPD, Robinson Woods South.	Review historical maps to confirm location of FUDS site. Confirm status through USACE chain.
CORRACTS RCRA-nongen	35	Amco Engineering Co,	*½ to 1 mile west (up gradient)*	Facility not a current generator, but previous LQG with violations. RFA	Given the proximity of the facility to the site, it is unlikely site activities will impact project implementation (no significant

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
FINDS AIRS				complete 1992, RFI not necessary (2009). Facility ceased operations 2007.	excavation is expected for road raise construction).
CORRACTS RCRA-SQG	36	Victor Fluid Power – Dukes Division	*½ to 1 mile south*	Facility current SQG generator, but previous LQG with violations. RFA complete, RFI not necessary (2010).	Given the proximity of the facility to the site, it is unlikely site activities will impact project implementation (no significant excavation is expected for road raise construction).
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

First Avenue Bridge Modification (DPBM04)

Table 5 – First Avenue Bridge Modification EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
RCRA-SQG FINDS	1	Shea Kenny Kiewit, JV	*1/8 to ¼ mile west*	RCRA - no violations	Unlikely facility activities have impacted the project area
SWF/LF MANIFEST SPILLS	2	2314 River Road	*¼ to ½ mile northwest*	Facility closed and covered (unpermitted/ unauthorized)	Unlikely site activities will impact project implementation (given proximity to site and no significant upland excavation is expected for bridge modification/road raise construction).
LUST	3	Carini Construction, Inc.	*¼ to ½ mile north*	Unknown LUST status (0312645050)	IEPA online LUST database: no additional information. Unlikely site activities will impact project implementation (given proximity to site and no significant upland excavation is expected for bridge modification/road raise construction).
LUST	4	2474, Inc.	*¼ to ½ mile north*	LUST NFA/NFR letter dated 8/28/2000 Unknown LUST status (incident 20040519)	IEPA online LUST database: IEPA issued a non-LUST letter for the incident dated 9/29/2004. Unlikely facility activities have impacted the project area.
RCRA-SQG FINDS LUST SRP	A5 A6	Triton College West Campus	*¼ to ½ mile north*	Current SQG, previous LQG, no violations. LUST status unknown (0312643003) SRP status 4(y) letter dated 3/22/1993.	IEPA online LUST database: no additional information. IEPA SRP database, site issued a 4(y). 4(y) letters are NFR letters for site enrolled in SRP prior to 1996. Unlikely site activities will impact project implementation (given proximity to site and no significant upland excavation is expected for bridge modification/road raise construction).

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
FUDS	7	C-76 H&G PN 57, River Grove	*¼ to ½ mile south*	9.18-acre housing and gun site position no. 57, NIKE site C-76. CCFPD, Sunset Bridge Meadow.	Review historical maps to confirm location of FUDS site. Confirm status through USACE chain.
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

Riverwoods Wet Prairie (L01)

Table 6 – Riverwoods Wet Prairie EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	1	Great Lakes Remediation Services, Inc.	*Adjacent to west*	LUST NFA/NFR letter dated 1/19/2005	Unlikely LUST activities have impacted project area
LUST (2) LUST TRUST SPILLS	A2/ A3	SuperAmerica #4248	*Adjacent to west*	LUST NFA/NFR letter dated 10/17/2003 LUST NFA/NFR letter dated 10/13/2010	Unlikely facility activities have impacted project area
SRP	4	Hester International	*Adjacent to west*	Scope, scale and impact of SRP action unknown (0971455006) – 0.76 acres - site enrolled 1/9/2004 and active.	IEPA SRP database facility located at 1105 Milwaukee Avenue (north of project area across Deerfield Road – facility is mismapped in EDR report). Location contains 2008 construction (medical office building for lease). Given the proximity of site to ecosystem restoration activities (after deleting landfill area ~ ½ mile), it is unlikely that facility activities will impact project implementation.
SRP	B5	Hoffelder Landfill	*Adjacent to west*	Scope, scale and impact of SRP action unknown (0971455007) – 38 acres – site enrolled 12/20/2005 and not active.	IEPA SRP database: no additional information. USACE was notified by the Forest Preserve District of Lake County that the landfill facility is located within the original USACE project limits. *The limits of the restoration project will be revised so that the landfill area is not included within the project limits (confirm).*
INST CONT SRP	B6	Eva Cleaners and Tailors	*Adjacent to west*	SRP NFR dated 11/14/2006 with groundwater use restriction on-site	Unlikely facility activities have impacted project area or will impact project implementation

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MGP	7	North Shore Gas Deerfield Station	*Adjacent to west*	Manufactured gas plant	Unlikely facility activities have impacted project area
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

Northbrook Marsh (C09), Dam #1, and Milwaukee Avenue Bridge Modification at Buffalo-Wheeling Creek (DPBM10)

Table 7 – Northbrook Marsh, Dam #1, and Milwaukee Avenue Bridge Modification EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	1	Ronald Borden & Co	*½ to 1 mile northwest*	NFA/NFR letter dated 3/28/1994	Unlikely LUST activities have impacted project area
MANIFEST RCRA-nongen FINDS	2	Bernard Courtesy Sewer	*¼ to ¼ mile northwest*	RCRA non-gen, no violations	Unlikely facility activities have impacted project area
MANIFEST LUST	3	Village of Wheeling	*¼ to ½ mile west*	Not a current or past RCRA generator LUST NFA/NFR letter dated 10//22/2002	Unlikely facility activities have impacted project area
UST MANIFEST RCRA-SQG FINDS	3	Duxler Tire	*¼ to ½ mile west*	5-heating oil tanks removed RCRA- no violations	Unlikely facility activities have impacted project area
UST MANIFEST	3	Precision Sharpening	*¼ to ½ mile west*	Heating oil tank removed.	Unlikely facility activities have impacted project area
UST	3	IDOT #80345	*¼ to ½ mile west*	Heating oil tank removed.	Unlikely facility activities have impacted project area
UST RCRA non-gen FINDS LUST	3	Mobil Oil SS 05-BD5	*¼ to ½ mile west*	Tanks removed, two LUST incidences with NFA/NFR letters (12/5/2002) RCRA – no violations	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
UST	3	Empty Building (271 E Dundee)	*¼ to ½ mile west*	Heating oil tank out of service	Facility not on or adjacent to project, unlikely facility will impact project implementation
UST RCRA-nongen FINDS LUST	3	Wheeling Shopping Center	*¼ to ½ mile west*	Heating oil tanks on-site RCRA, previous LQG, no violations LUST NFA/NFR letter dated 4/27/2011	Facility not on project site, if UST remains. Unlikely facility will impact project implementation.
SRP DRYCLEANERS MANIFEST	3	Wheeling Cleaners	*¼ to ½ mile west*	SRP unknown scope/scale/impacts (0314975086)	IEPA SRP database: no additional information. The SRP site is physically and hydrologically separated from the ecosystem restoration project area by the Des Plaines River and several roadways. It is unlikely that any contamination at the site will impact implementation of the restoration project.
UST	3	Wheeling Industrial Clinic	*¼ to ½ mile west*	Heating oil tank onsite	Facility not on project site, if UST remains. Unlikely facility will impact project implementation.
MANIFEST SPILLS	3	315 E Dundee	*¼ to ½ mile west*	Unknown scope/scale of spill at shopping center	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
RCRA-CESQG	3	3X Copy Center	*¼ to ½ mile west*	RCRA – no violations	Unlikely facility activities have impacted project area
ENG CONTROLS SRP MANIFEST	3	Milwaukee-Dundee Associates, LLC	*¼ to ½ mile west*	SRP NFR letter dated 2/15/2000 with soil barriers onsite (industrial/commercial)	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST RCRA-nongen	3	Klemm Tank Lines (spill)	*¼ to ½ mile west*	RCRA non-gen, previous LQG, no violations	Unlikely facility activities have impacted project area
LUST	3	IDOT	*¼ to ½ mile west*	Non-LUST letter dated 8/20/1997	Confirmed site status through IEPA online database. After additional reporting by owner, it appears site is determined to be non-LUST. Unlikely activities have impacted project area.
RCRA-CESQG FINDS UST MANIFEST LUST	3	Village of Wheeling Auto Building/IDOT (18 N Milwaukee)	*¼ to ½ mile west*	RCRA - no violations USTs on-site, some removed, some exempt from registration LUST NFA/NFR letter dated 1/29/2003	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
LUST	4	Shell Oil	*½ to 1 mile west*	NFA/NFR letter dated 9/5/2007	Unlikely LUST activity has impacted project area
LUST	4	Jiffy Lube International	*½ to 1 mile west*	Unknown LUST status (0314975163)	IEPA LUST database: no additional information. The LUST site is physically and hydrologically separated from the ecosystem restoration project area by the Des Plaines River and several roadways. It is unlikely that any contamination at the site will impact implementation of the restoration project.
LUST TIER 2	4	Illinois Bell Telephone	*½ to 1 mile west*	NFA/NFR letter dated 5/22/2006 Facility stores lead, diesel fuel, sulfuric acid onsite.	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
UST	5	Vacant Lot	*¼ to ½ mile west*	Heating oil tank onsite	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
RCRA-SQG FINDS	6	Quik Mart 30111	*Adjacent to east (marsh)*	RCRA – no violations	Unlikely facility activities have impacted project area
LUST	7	Equilon Enterprises, LLC	*¼ to ½ mile east*	NFA/NFR letters dated 6/22/2007, 10/9/2002	Unlikely facility activities have impacted project area
LUST MANIFEST	7	Shell Oil Co.	*¼ to ½ mile east*	NFA/NFR letter dated 6/22/2007	Unlikely facility activities have impacted project area
LUST	7	Amoco Oil Co #9858	*¼ to ½ mile east*	NFA/NFR letter dated 4/10/2000	Unlikely LUST activity has impacted project area
LUST SPILLS	7	BP Products North America	*¼ to ½ mile east*	Unknown LUST status (0312075144)	IEPA LUST database: no additional information. Given the proximity of the LUST activity to the project area, its unlikely LUST activities will impact project implementation.
MANIFEST ENG CONTROLS INST CONTROL SRP	8	First Cleaners	*¼ to ½ mile east*	SRP NFR letter dated 6/29/2009 with groundwater use restriction, soil barriers (industrial/commercial)	Unlikely facility activities have impacted project area
UIC MANIFEST SRP DRYCLEA	9	One Hour Martinizing	*¼ to ½ mile east*	Aquifer remediation onsite (2002) SRP scope/scale/status unknown	IEPA SRP database: no additional information. Given the proximity of the SRP activity to the project area, its unlikely SRP activities will impact project implementation.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
NERS				(0312075056)	
LUST FINDS UST MANIFEST	10	GWA Auto Group	*1/8 to ¼ mile west*	NFA/NFR letter dated 3/17/2011 3-USTs removed, 1-exempt from registration	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
RCRA-SQG FINDS	10	Denglo Marathon	*1/8 to ¼ mile west*	RCRA – no violations	Unlikely facility activities have impacted project area
MANIFEST	10	Euro Tire Boutique	*1/8 to ¼ mile west*	Not a current or previous RCRA generator	Unlikely facility activities have impacted project area
NIPC	10	Wheeling Dump	*1/8 to ¼ mile west*	Unknown status	Review historical maps for more information. Check site status during site visit
UST	10	Guttilla John	*1/8 to ¼ mile west*	5-USTs onsite, all exempt from registration	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
FINDS NPDES MANIFEST	10	Superdawg Drive-in	*1/8 to ¼ mile west*	ILR10 permit expires 2013 (stormwater runoff) Not a current or previous RCRA generator	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
FTTS HIST FTTS FINDS	10	Harrison Supply	*1/8 to ¼ mile west*	Citizen complaint, TSCA, no violation found upon inspection	Unlikely facility activities have impacted project area
MANIFEST FINDS	11	Lake Cash Register, Inc.	*1/8 to ¼ mile west*	Not a current or previous RCRA generator	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST	12	Village of Wheeling	*1/8 to ¼ mile west*	Not a current or previous RCRA generator	Unlikely facility activities have impacted project area
SRP	13	Foxboro Apartment Embankment	*½ to 1 mile west*	SRP status 4(y) letter dated 5/18/1999.	Additional information obtained from IEPA online database. 4(y) letters are NFR letters for site enrolled in SRP prior to 1996. Unlikely site activities will impact project implementation.
UST MANIFEST	14	Astor Place	*1/8 to ¼ mile west*	1-UST removed, 3-USTs exempt from registration.	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
LUST FINDS	14	Kimball Hill Homes, Inc.	*1/8 to ¼ mile west*	NFA/NFR letters dated 12/22/2000, 8/29/2002	Unlikely facility activities have impacted project area
RCRA-CESQG FINDS LUST	14	Skyview Wholesale Nursery Co.	*1/8 to ¼ mile west*	RCRA – no violations LUST status NFA/NFR letter dated 12/22/2000 Heating Oil letter dated 12/12/1995	Unlikely facility activities have impacted project area
FINDS NPDES	14	Fox Point MHP STP-Wheeling	*1/8 to ¼ mile west*	Privately owned, NPDES permit STP discharger to DP River, expired 10/31/2009	Unlikely to impact project implementation
LUST	15	Former Ashland Oil Inc (RE124)	*1/8 to ¼ mile west marsh* *¼ to ½ mile north bridge mod/dam*	NFA/NFR letter dated 1/7/2009 Facility closed 4-USTs removed	Unlikely facility activities have impacted project area
FINDS AIRS	15	Super-America Group	*1/8 to ¼ mile west marsh* *¼ to ½ mile north bridge mod/dam*	Permit expired 2/1997	Unlikely to impact project implementation

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
SRP	16	Palwaukee Municipal Airport	*½ to 1 mile west*	SRP NFR letter dated 2/13/1998 (Industrial/commercial)	Unlikely facility activities have impacted project area
LUST	17	Wheeling Park District	*<1/8 mile from marsh, dam, and bridge mod sites*	Unknown LUST status (0313240023)	IEPA online LUST database: no additional information. Unlikely site activities will impact project implementation (given no significant upland excavation is expected for bridge modification/road raise construction). Ecosystem restoration project area (excavation likely) is hydrologically separated from site. Verify assumptions during design.
UST MANIFEST RCRA-CESQG FINDS	17	Chevy Chase Golf Course	*<1/8 mile from marsh, dam, and bridge mod sites*	Facility closed, tank removed RCRA – no violations	Unlikely facility activities have impacted project area
MANIFEST	17	Bon Ton Foods	*<1/8 mile from marsh, dam, and bridge mod sites*	Facility not a current or past RCRA generator	Unlikely facility activities have impacted project area
MANIFEST RCRA-nongen FINDS	17	Ramirez Inc.	*<1/8 mile from marsh, dam, and bridge mod sites*	RCRA-nongen, previous LQG – no violations	Unlikely facility activities have impacted project area
MANIFEST RCRA-SQG FINDS	17	Advanced Transmission	*<1/8 mile from marsh, dam, and bridge mod sites*	RCRA – no violations	Unlikely facility activities have impacted project area
MANIFEST	17	Tanzillo Contractors, Inc.	*<1/8 mile from marsh, dam, and bridge mod sites*	Not a current or previous RCRA generator	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
RCRA-CESQG FINDS MANIFEST TEIR2	17	Speedway 7649	*<1/8 mile from marsh, dam, and bridge mod sites*	CESQG, previous SQG, no violations Facility stores diesel and gasoline onsite	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
LUST	17	Emro Marketing	*<1/8 mile from marsh, dam, and bridge mod sites*	Non-LUST letter dated 6/30/1992	Confirmed site status through IEPA online database. After additional reporting by owner, it appears site is determined to be non-LUST. Unlikely activities have impacted project area.
FINDS TIER2	17	Wheeling (Verizon)	*<1/8 mile from marsh, dam, and bridge mod sites*	Facility stores sulfuric acid onsite	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
MANIFEST RCRA-SQG	18	Ensar Handi Fiol	*<1/8 mile west*	RCRA – no violations	Unlikely facility activities have impacted project area
RCRA-LQG FINDS	18	Spectrum Manufacturing	*<1/8 mile west*	RCRA – written informal violations, compliance achieved	Unlikely facility activities have impacted project area
MANIFEST AIRS TIER 2	18	Accellent Endoscopy Whl	*<1/8 mile west*	Title 5 emitter Facility stores sulfuric acid and nitric acid onsite Current RCRA LQG (RCRIS) no violations	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
MANIFEST RCRA-SQG FINDS	19	Wheel Inn Autobody	*Along alignment*	RCRA – no violations	Unlikely facility activities have impacted the project area
UST RCRA-SQG FINDS	19	R Rudnick & Co	*Along alignment*	2-USTs out of service, unknown status RCRA – no violations	No indications that facility operations have impacted project area. Confirm tank locations and status during design.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST UST MAINFEST	19	McCann Power & Equipment (Case Power & Equipment)	*Along alignment*	LUST NFA/NFR letter dated 12/19/2003 4-possible USTs onsite	No indications that facility operations have impacted project area. Confirm tank locations and status during design.
RCRA-SQG FINDS MANIFEST	19	Maaco Auto Painting	*Along alignment*	RCRA – no violations	Unlikely facility activities have impacted the project area
LUST UST MANIFEST	20	Foundation Drilling, Inc.	*1/8 to ¼ mile west*	Facliity closed, USTs removed, LUST NFA/NFR letter dated 5/30/1996	Unlikely facility activities have impacted the project area
RCRA-SQG FINDS LUST MANIFEST	20	Maco Roofing	*1/8 to ¼ mile west*	RCRA – no violations LUST unknown status (0314975010)	IEPA online LUST database: no additional information. Unlikely site activities will impact project implementation (given no significant upland excavation is expected for bridge modification/road raise construction). Ecosystem restoration project area (excavation likely) is hydrologically separated from site. Verify assumptions during design.
LUST UST	20	Dan Stoltzner, mason contractor	*1/8 to ¼ mile west*	2-USTs exempt from registration, LUST NFA/NFR letter dated 7/22/2010	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
MANIFEST	20	Miller Services, Inc.	*1/8 to ¼ mile west*	Not a current or previous RCRA generator	Unlikely facility activities have impacted the project area
MANIFEST	20	Speedy Auto Service	*1/8 to ¼ mile west*	Not a current or previous RCRA generator	Unlikely facility activities have impacted the project area
MANIFEST	20	Cancun Automotive	*1/8 to ¼ mile west*	Not a current or previous RCRA generator	Unlikely facility activities have impacted the project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST	20	Julio Gonzalez	*1/8 to ¼ mile west*	Not a current or previous RCRA generator	Unlikely facility activities have impacted the project area
LUST	20	Duropave Construction Co.	*1/8 to ¼ mile west*	LUST unknown status (0313247544)	IEPA online LUST database: no additional information. Unlikely site activities will impact project implementation (given no significant upland excavation is expected for bridge modification/road raise construction). Ecosystem restoration project area (excavation likely) is hydrologically separated from site. Verify assumptions during design.
LUST	20	KL Property	*1/8 to ¼ mile west*	LUST unknown status (0313240021)	IEPA online LUST database: no additional information. Unlikely site activities will impact project implementation (given no significant upland excavation is expected for bridge modification/road raise construction). Ecosystem restoration project area (excavation likely) is hydrologically separated from site. Verify assumptions during design.
LUST UST MANIFEST	20	Paragon Aquatech LTD	*1/8 to ¼ mile west*	LUST unknown status (0314977622) 2-USTs removed	IEPA online LUST database: no additional information. Unlikely site activities will impact project implementation (given no significant upland excavation is expected for bridge modification/road raise construction). Ecosystem restoration project area (excavation likely) is hydrologically separated from site. Verify assumptions during design.
NPDES SRP	20	West Coast Charters	*1/8 to ¼ mile west*	SRP NFR letter dated 11/16/2004 (industrial/commercial)	Unlikely facility activities have impacted the project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
				Active NPDES (Chicago Executive Airport)	
LUST UST	20	Chicago Executive Airport	*1/8 to ¼ mile west*	3-USTs removed, 2-USTs active LUST NFA/NFR letter dated 12/9/2008	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
LUST UST	21	Signature Flight Support	*¼ to ½ mile west*	LUST NFA/NFR letter dated 9/23/1997 2-USTs removed from site, 1-UST active	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
LUST MANIFEST	21	Sam Mormino, Corp.	*¼ to ½ mile west*	LUST NFA/NFR letter dated 5/26/1998	Unlikely facility activities have impacted the project area
MANIFEST RCRA-nongen	22	Ashland Specialty Chemical	*¼ to ½ mile west*	Previous RCRA LQG – no violations	Unlikely facility activities have impacted the project area
MANIFEST	22	Kanzler Earth Moving (spill)	*¼ to ½ mile west*	Not a current or previous RCRA generator	Unlikely facility activities have impacted the project area
MANIFEST	22	Service Aviation	*¼ to ½ mile west*	Not a current or previous RCRA generator	Unlikely facility activities have impacted the project area
RCRA-LQG PADS FINDS LUST MANIFEST UST	22	Set Environmental Inc	*¼ to ½ mile west*	RCRA – multiple violation notices (primarily written informal) – all in compliance PCB transporter LUST unknown status (0313240007) 2-USTs removed from site	IEPA online LUST database: no additional information. Unlikely site activities will impact project implementation (given no significant upland excavation is expected for bridge modification/road raise construction). Ecosystem restoration project area (excavation likely) is hydrologically separated

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
					from site.
CERC-NFRAP CORRACTS RCRA-SQG FINDS	22	Former Set Liquid Waste Systems, Inc.	*¼ to ½ mile west*	CERCLA action NFRAP – deferred to RCRA program. RCRA – violations assigned low priority in 1992. RFA complete 2009, no need for RFI.	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
SWF/LF UIC MANIFEST TIER2 LUST	22	Waste Management	*¼ to ½ mile west*	Facility accepts municipal waste, recyclables, landscape waste, C&D debris UIC system (septic-sanitary waste) Facility stores fuel oils, transmission fluid and other equipment fluids, fuels, waste oils, and motor oils onsite. LUST NFA/NFR letter dated 2/11/2010.	Given the proximity of the site to the project area (facility not on or adjacent to project site), and the nature of activities being conducted, it is unlikely facility activities will impact project implementation.
MANIFEST	23	American Flyers	*1/8 to ¼ mile south road raise, <1/8 mile west marsh*	Not a current or previous RCRA generator	Unlikely facility activities have impacted project area
RCRA-SQG SPILLS MANIFEST LUST	23	Signature Flight Support (Chicago Executive Airport)	*1/8 to ¼ mile south road raise, <1/8 mile west marsh*	RCRA – no violations Unknown scope scale of spill LUST unknown status (0314977693)	IEPA online LUST database status: 20 and 45-day reports submitted (2011). Not closed to date. Check status of site during design.
MANIFEST SPILLS UST	24	Signature Flight Support (Chicago Executive Airport)	*<1/8 west marsh, 1/8 to ¼ mile south road raise*	Multiple USTs onsite, some removed, some currently in use. Unknown scope and scale of	Given the proximity of the site to the project area (facility not on or adjacent to project site), and the nature of activities being

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST				spill incidents. LUST NFA/NFR letters dated 1/12/2011	conducted, it is unlikely facility activities will impact project implementation. Verify assumptions during design.
MANIFEST RCRA-CESQG	24	Palwaukee Flyers	*<1/8 west marsh, 1/8 to ¼ mile south road raise*	RCRA – no violations	Unlikely facility activities have impacted project area
LUST	25	Priestar Aviation	*¼ to ½ mile south road raise, west marsh*	LUST NFA/NFR letter dated 3/31/2011	Unlikely facility activities have impacted project area
RCRA-SQG FINDS	26	Northfield WDS Sanitary District	*Adjacent to marsh (east)*	RCRA – no violations	Unlikely facility activities have impacted project area
LUST	27	Palwaukee Aviation	*Adjacent to marsh (west)*	NFA/NFR letter dated 9/6/1991	Unlikely facility activities have impacted project area
FINDS SWF/LF MANIFEST	28	Heffelder, Walter	*Adjacent to marsh (east)*	Facility exempt from permitting, closed, final cover	Confirm location of facility during site visit and review historical maps.
RCRA-SQG FINDS MANIFEST	28	Lasalle Partners	*Adjacent to marsh (east)*	RCRA – no violations	Unlikely facility activities have impacted project area
UST	28	Caremark Towers	*Adjacent to marsh (east)*	1-UST removed	Unlikely facility activities have impacted project area
RCRA-SQG FINDS	29	IMC Corp Corporate HQ	*Adjacent to marsh (east)*	RCRA – no violations	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST	29	Doulen Corp	*Adjacent to marsh (east)*	Not a current or previous RCRA generator	Unlikely facility activities have impacted project area
RCRA-nongen FINDS UST LUST	30	Culligan International Co	*Adjacent to marsh (east)*	Previous RCRA-LQG, no violations. Facility listed as closed – 2-USTs removed. LUST NFA/NFR letter dated 4/4/2002	Unlikely facility activities have impacted project area
RCRA-SQG FINDS LUST UST MANIFEST	31	Tech Cor, Inc.	*½ mile west*	RCRA – no violations. LUST NFA/NFR letter dated 3/13/1995. 5-USTs removed.	Unlikely facility activities have impacted project area
RCRA-CESQG FINDS MANIFEST	32	Semeria Imports, Inc.	*1/8 to ¼ mile west*	RCRA – no violations.	Unlikely facility activities have impacted project area
FINDS BROWNFIELDS	33	Village of Schiller Park	*Adjacent to marsh (south)*	Paint and lacquer manufacturer, unknown status of Brownfield. Appears facility mismapped.	Facility location confirmed through EPA FINDS. Facility is located on Willow Road south of Irving Park Road in Schiller Park (not Willow Road in the Glenview/Wheeling area).
RCRA-CESQG FINDS MANIFEST	35	Trailwood Auto Body	*Adjacent to marsh (southwest corner)*	RCRA – no violations.	Unlikely facility activities have impacted project area
RCRA-nongen FINDS UST	35	Cairo Jerry (vacant lot)	*Adjacent to marsh (southwest corner)*	UST – removed RCRA – no violations	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST					
UST	35	Fries Automotive Service, Inc.	*Adjacent to marsh (southwest corner)*	5 – USTs currently in use	No indications that facility operations have impacted project area. Confirm tank locations and status during design.
UST MANIFEST	35	Voyager RV Center, Inc.	*Adjacent to marsh (southwest corner)*	1-UST removed	Unlikely facility activities have impacted project area
UST RCRA-SQG FINDS	36	Willow & Sanders Lift Station (Northfield Woods Sanitary Dist)	*Adjacent to marsh (southeast corner)*	1-UST removed RCRA – no violations	Unlikely facility activities have impacted project area
RCRA-nongen FINDS LUST	36	Amoco 15680	*Adjacent to marsh (southeast corner)*	Previous SQG – no violations. LUST NFA/NFR letter dated 9/6/2000. Multiple USTs onsite, some removed, some currently in use.	No indications that facility operations have impacted project area. Confirm tank locations and status during design.
MANIFEST AIRS	36	JS Paluch Co, Inc.	*Adjacent to marsh (southeast corner)*	Operations ceased 2005.	Unlikely facility activities have impacted project area
LUST	36	Board of Trustees	*Adjacent to marsh (southeast corner)*	Unknown LUST status (0312075137)	IEPA LUST database: no additional information. Given the activities proposed for restoration, it is unlikely that LUST activities will impact project implementation.
MANIFEST	37	Xplo-tec, Inc.	*1/8 to ¼ mile south*	Not a current or previous RCRA generator	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST	37	Excell	*1/8 to ¼ mile south*	Not a current or previous RCRA generator	Unlikely facility activities have impacted project area
ENG CONTROLS INST CONTROLS SRP MANIFEST DRYCLEANERS RCRA-SQG	37	Dot Dry Cleaners	*1/8 to ¼ mile south*	SRP NFR letter dated 11/19/2004 with soil barriers and groundwater use restrictions onsite. RCRA – no violations.	Unlikely facility activities have impacted project area
LUST UST	38	Household International	*¼ to ½ mile south*	NFA/NFR letters dated 8/2/1996, 9/4/1997, 2/15/1995 3-USTs removed	Unlikely facility activities have impacted project area
The listing of orphan sites was not reviewed due to the extensive orphan listing given in the EDR report. Recommend reviewing orphan list, and above information and assumptions, during design to confirm that the orphan sites are not RECs for the projects.					

Beck Lake Meadow (C15), Dam #2, and River Road Bridge Modification at Feehanville Ditch (DPBM08)

Table 8 – Beck Lake Meadow, Dam #2, and River Road Bridge Modification at Feehanville Ditch EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST MANIFEST	1	Dinucci Builders	*¼ to ½ mile north*	NFA/NFR letter dated 8/6/1997	Unlikely facility activities have impacted project area
LUST	2	Amoco Oil Co.	*¼ to ½ mile north*	NFA/NFR letter dated 12/17/1998	Unlikely facility activities have impacted project area
LUST LUST TRUST UST	3	Shell #137111	*Adjacent to marsh (northwest corner)*	Closed service station, 4-USTs removed. LUST NFA/NFR letters dated 11/5/2009, 4/6/2006	Unlikely facility activities have impacted project area
RCRA-SQG FINDS MANIFEST	3	Equilon Enterprises, LLC	*Adjacent to marsh (northwest corner)*	RCRA – no violations	Unlikely facility activities have impacted project area
MANIFEST	4	Studianos Hair Design	*<1/8 mile west*	Not a past or current RCRA generator	Unlikely facility activities have impacted project area
RCRA-nongen FINDS ENG CONTROLS INST CONTROLS SRP DRYCLEANERS	4	Bliss Cleaners	*<1/8 mile west*	RCRA – previous LQG, no violations. SRP NFR letter dated 7/17/2007 with groundwater use and soil barrier restrictions (industrial/ commercial)	Unlikely facility activities will impact project implementation

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST					
MANIFEST	4	Evanston Northwestern Healthcare	*< 1/8 mile west*	Not a past or current RCRA generator	Unlikely facility activities have impacted project area
UST MANIFEST	4	Mount Prospect Auto Sales & Service	*<1/8 mile west*	5-USTs removed, facility listed as closed.	Unlikely facility activities have impacted project area
LUST	4	Union 76	*<1/8 mile west*	Unknown LUST status (0311985100)	Unlikely facility activities have impacted project area
LUST	5	Marriott Corp.	*¼ to ½ mile north*	NFA/NFR letter dated 10/1/2001	Unlikely facility activities have impacted project area
MANIFEST ENG CONTROLS INST CONTROLS SRP	6	Lovely Cleaners	*<1/8 mile north*	SRP NFR letter dated 7/13/2006 with soil barrier and groundwater use restriction (industrial/commercial)	Unlikely facility activities have impacted project area
UST	6	Shell Service Station	*<1/8 mile north*	4-USTs removed, facility listed as closed.	Unlikely facility activities have impacted project area
LUST MANIFEST	6	Equiva Services, LLC	*<1/8 mile north*	NFA/NFR letter dated 3/27/2001	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST	7	Glenview Park District	*<1/8 mile east*	Not a past or current RCRA generator	Unlikely facility activities have impacted project area
INST CONTROL SRP	8	Image Cleaners	*¼ to ½ mile west*	SRP NFR letter dated 8/16/2007 with groundwater us restriction.	Unlikely facility activities have impacted project area
RCRA-CESQG FINDS LUST UST MANIFST	9	FPDCC Des Plaines Division	*Adjacent to marsh (west)*	RCRA – no violations. LUST NFA/NFR letter dated 7/31/2001. 3-USTs removed.	Unlikely facility activities have impacted project area
UST MANIFEST	10	River Trails School District #26	*<1/8 mile west*	1-UST removed	Unlikely facility activities have impacted project area
RCRA-SQG FINDS LUST UST MANIFEST	11	Life Source (Blood Center of NIL)	*1/8 to ¼ mile east*	RCRA – no violations. LUST NFA/NFR letter dated 3/31/1993. 1-UST removed.	Unlikely facility activities have impacted project area
FINDS	12	Ala Carte Entertainment	*Adjacent to marsh (west)*	No additional information.	Check status during site visit
FUDS	13	Camp Pine POW Camp – Mount Prospect	*On marsh property*	1937-1942 Camp, 1943-1945 POW and training camp. Returned to CCFPD 1945.	Camp Pine is located without the project boundaries. Confirm site status through USACE chain.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST AIRS FINDS SWL/LF	14	Glenview Transfer Station (SWANCC HHW collection)	*Adjacent to marsh (west)*	Facility accepts municipal and landscape waste. Discharge permit. Orphan listing RCRA-SQG, no violations.	Check the limits of facility on historical maps and during site visit. EDR map notes unnatural area to the east of the identifier within the project area. Facility may be within the project limits.
RCRA-SQG FINDS MANIFEST	15	Central Car Clinic	*<1/8 mile east*	RCRA – no violations	Unlikely facility activities have impacted project area
MANIFEST AIRS	15	Jims Body Shop	*<1/8 mile east*	Facility ceased operations. No additional information.	Unlikely facility activities have impacted project area
RCRA-CESQG FINDS MANIFEST AIRS	15	Electroplated Metal Solutions	*<1/8 mile east*	Facility ceased operations 1999. RCRA – no violations.	Unlikely facility activities have impacted project area
MANIFEST FINDS SRP	16	Partnership VPY	*Adjacent to marsh (south)*	SRP NFR letter dated 10/27/1999 (residential)	Unlikely facility activities have impacted project area
CERC-NFRAP MANIFEST AIRS	17	Sexton John Landfill	*Adjacent to marsh (south)*	NFRAP – does not quality for NPL (1983 hazard ranking - 310630001) Orphan information: facility is 160 acres closed with final cover, and is a permitted facility). GW monitoring being	Check the limits of facility on historical maps and during site visit

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
				conducted.	
UST MANIFEST	18	Maryville Academy	*1/8 to ¼ mile west*	2-USTs removed 2-USTs in use.	Facility not on or adjacent to project site. Unlikely facility activities will impact project implementation.
LUST	19	Carmelite Monastery	*1/8 to ¼ mile southwest*	Unknown LUST status (0310635485)	IEPA LUST database: no additional information. The LUST site is physically and hydrologically separated from the ecosystem restoration project area by the Des Plaines River and several roadways. It is unlikely that any contamination at the site will impact implementation of the restoration project. Also unlikely to affect dam removal and road raise, due to proximity.
LUST	20	Catholic Cemeteries	*1/8 to ¼ mile southwest*	NFA/NFR letter dated 12/18/2000	Unlikely facility activities have impacted project area
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. Additional information was obtained for possible RECs discussed above. Recommend reviewing orphan list, and above information and assumptions, during design to confirm that the orphan sites are not RECs for the projects.					

Touhy Avenue Dam

Table 9 – Touhy Avenue Dam EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST	A1	Continental Offices, Ltd.	½ mile south	Not a past or current RCRA generator	Unlikely facility activities have impacted project area
MANIFEST	A2	Chemline Deliver Service	½ mile south	Not a past or current RCRA generator	Unlikely facility activities have impacted project area
UST	A3	Regency Office Plaza	*½ mile south*	Facility closed, 1-UST removed.	Unlikely facility activities have impacted project area
RCRA-CESQG FINDS MANIFEST	A4 A6	Autologic	*½ mile south*	RCRA – no violations	Unlikely facility activities have impacted project area
CERC-NFRAP	A5	Zeigler Coal Mine #4	*½ mile south*	NFRAP – does not qualify for NPL (1987)	Due to the proximity of the facility to the dam, and nature of dam removal activities, it is unlikely that any remaining contamination will impact project implementation.
CERC-NFRAP	7	Holly Mining Corp	*½ - 1 mile south*	NFRAP – does not quality for NPL (1990)	Due to the proximity of the facility to the dam, and nature of dam removal activities, it is unlikely that any remaining contamination will impact project implementation.
IL NIPC	8	Dee Road/Talcott Road	*½ - 1 mile southeast*	No additional information	Due to the proximity of the facility to the dam, it is unlikely that site will impact project implementation

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	9	Illinois State Toll HWY Authority	*¼ to ½ mile southwest*	NFA/NFR letter dated not reported (0310635296)	IEPA online database notes IEMA date 1992. Due to the proximity of the facility to the dam, and nature of dam removal activities, and date of action, it is unlikely that site will impact project implementation.
LUST	10	Arvey Corp Div of International Paper	*½ to 1 mile south*	NFA/NFR letter dated 9/13/2005	Unlikely facility activities have impacted project area
LUST	B11	Exxon Mobil Oil	*¼ to ½ mile southwest*	LUST NFA/NFR letters reported 6/12/1991 and 10/30/2007 at same address. Most recent action (2010) 20-day and 45-day report received.	Additional information obtained from IEPA online LUST database. Due to the proximity of the facility to the dam, and nature of dam removal activities, it is unlikely that site will impact project implementation.
LUST MANIFEST	B12	Mobil Oil Corp	*¼ to ½ mile southwest*	NFA/NFR letter dated 10/30/2007, 6/12/1991	Unlikely LUST activities have impacted project area
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No pertinent information or other sites of concern were found.					

Dam #4

Table 10 – Dam #4 EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
UST MANIFEST	1	Riverway-Phase II	*¼ to ½ mile southeast*	Facility closed, 1-UST removed	Unlikely facility activities have impacted project area
UST MANIFEST RCRA-SQG FINDS	A2 A3	Comdisco Inc.	*¼ to ½ mile south*	Facility closed, 1-UST removed RCRA – no violations	Unlikely facility activities have impacted project area
UST	A4	Riverway	*¼ to ½ mile south*	Facility closed, 1-UST removed.	Unlikely facility activities have impacted project area
MANIFEST	A5	Duke Realty Corp-Riverway East	*¼ to ½ mile south*	Not a past or current RCRA generator	Unlikely facility activities have impacted project area
UST MANIFEST RCRA-SQG FINDS	B6 B7	Marriott Suites Hotel	*¼ to ½ mile south*	Facility closed, 1-UST removed. RCRA – no violations	Unlikely facility activities have impacted project area
CERC-NFRAP RCRA-SQG FINDS MAINFEST AIRS	A8 A9	Red Devil Manufacturing	*¼ to ½ mile south*	NFRAP – does not quality for NPL (1990). RCRA – no violations.	Due to the proximity of the facility to the dam, and nature of dam removal activities, it is unlikely that any remaining contamination will impact project implementation.
MANIFEST RCRA-nongen FINDS	C10 C11	Arc Disposal Co, Inc.	*¼ to ½ mile south*	RCRA – no violations.	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
INST CONTROL SRP	12	Westin Hotel Ohare Cleaners	*¼ to ½ mile south*	SRP NFA/NFR letter dated 6/22/2011 with groundwater use restriction (industrial /commercial)	Unlikely facility activities have impacted project area
CERC-NFRAP RCRA-CESQG FINDS	D13	Riverway Project	*1/8 to ¼ mile south*	NFRAP – does not qualify for NPL (1989).	Due to the proximity of the facility to the dam, and nature of work, it is unlikely that any remaining contamination will impact project implementation
LUST RCRA-SQG FINDS	D14 D15 D16	Exxon Mobil Oil	*1/8 to ¼ mile south*	LUST status unknown (0312765047) RCRA – no violations.	Due to the proximity of the facility to the dam, and nature of work, it is unlikely that any remaining contamination will impact project implementation
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No pertinent information or other sites of concern were found.					

Sturtevant Wet Prairie (R4) and Somers Marsh (K9)

Table 11 – Sturtevant Wet Prairie and Somers Marsh EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
UST	1	13144 Braun Road	*Adjacent to north*	1-UST, gasoline, in use on-site. Residential.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.
UST	2	13027 Braun Road	*Adjacent to north*	1-UST, gasoline, in use on-site. Agricultural.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.
SHWIMS	3	Danny Baker Trucking (former)	*Adjacent to north*	Facility closed.	WDNR SHWIMS online database: facility is inactive, previous HW transporter. Unlikely facility activities have impacted project area.
UST	4	11508 Braun Road	*Adjacent to north*	3-USTs removed from site.	Unlikely facility activities have impacted project area
LUST	4	Lamparek, Linda Residence	*Adjacent to north*	NFA/NFR letter dated 1/31/1995	Unlikely facility activities have impacted project area
UST	5	1200 S Braun Road	*Adjacent to north*	1-UST, in use on site, gasoline. Residential.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.
UST	6	14505 1st	*1/8 to ¼ mile from site boundary to west*	1-UST, gasoline, in use on-site. Agricultural.	Unlikely facility activities have impacted project area
UST	7	12646 County Line Road	*Adjacent to west*	1-UST removed from site.	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
UST AST	8	991 120th Ave.	*1/8 to ¼ mile from site boundary to west*	1-UST in use onsite, several ASTs in use onsite	Unlikely facility activities have impacted project area
UST	9	9610 7th St.	*Adjacent to south*	2-USTs, diesel & gasoline, in use on-site. Agricultural.	Unlikely facility activities have impacted project area. Confirm tank location and status during design
UST	10	11518 7th St.	*Adjacent to south*	1-UST, fuel oil, in use on-site. Residential.	Unlikely facility activities have impacted project area. Confirm tank location and status during design
UST	11	11021 7th St.	*Adjacent to south*	1-UST, gasoline, in use on-site. Residential.	Unlikely facility activities have impacted project area. Confirm tank location and status during design
LUST	12	Burr Oak Greenhouse	*¼ to ½ mile south*	Oversight of medium or low risk petroleum cleanup transferred to the Wisconsin Department of Commerce 12/19/1996. RA complete and site closed 10/20/1997.	Unlikely facility activities have impacted project area
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No pertinent information or other sites of concern were found.					

Union Grove Wet Prairie (K33)

Table 12 – Union Grove Wet Prairie EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
RCRA-SQG FINDS SHWIMS MANIFEST	1	ECM Motor Co.	*Adjacent to north*	RCRA nongen, previous SQG, no violations. SHWIMS, closed.	Unlikely facility activities have impacted project area
UST	2	19010 Cth KR	*Adjacent to north*	1-UST, gasoline, closed/removed.	Unlikely facility activities have impacted project area
UST	3	19709 1st	*Adjacent to north*	1-UST, diesel, in use onsite. Agriculture.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.
AST LUST UST	4	18411 1st St (Great Lakes Dragaway)	*Adjacent to north*	Multiple ASTs onsite, some currently in use, some removed. 1-UST closed/removed. LUST NFA/NFR letter dated 1/30/1998.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.
LUST WRRSER	5	Vara, Frank Property	*Adjacent to north*	LUST NFA/NFR letter dated 8/29/1994.	Unlikely facility activities have impacted project area
UST	6	18618 County Line Road	*Adjacent to north*	1-UST, in use on site, fuel oil. Residential.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.
RCRA-nongen RCRA-LQG FINDS ERP	7 10	Strip Rite Inc.	*Adjacent to north*	RCRA-non, previous LQG, violations. All violations in compliance. ERP - Lead contamination onsite (soil and	WDNR online database: HW generator. ERP database – ongoing restoration, vapor intrusion (Sep 2011 report results). Given the proximity of the facility to the project area, with impacts onsite only, it is unlikely facility

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST				groundwater) unknown status.	activities have impacted project area.
FINDS	8	Cooperative Plus, Inc.	*Adjacent to north*	No additional information.	Check status during site visit
SHWIMS	9	Willkomm Excavating & Grading, Inc.	*Adjacent to north*	Facility operating. No additional information.	Additional information obtained from WDNR online. Facility is a solid waste transporter. Unlikely facility activities have impacted project area. Check status during site visit.
RCRA-SQG AST	11	Paris Generating Station	*Adjacent to east*	RCRA – no violations. 1-AST in use onsite.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.
UST	12	1008 200th Ave	*Adjacent to west*	1-UST, gasoline, in use on-site. Agriculture.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.
FINDS	13	Stumble Inn	*Adjacent to west*	No additional information.	Check status during site visit
FINDS	14	Paris Motel	*Adjacent to west*	No additional information.	Check status during site visit
UST	15	2616 200th Ave.	*Adjacent to west*	1-UST, gasoline, in use on-site. Agriculture.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.
UST AST ERP LUST	16	19813 Burlington Road (Car Country)	*1/8 to ¼ mile west*	2-USTs and 1-AST closed/removed from site. LAST - Chlorinated solvents found during	WI BRRTS online database: site contains residual soil and groundwater contamination. ERP action – ongoing remediation, vapor intrusion. Given the proximity of the facility

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LAST CRS AUL				LUST action (NFA letter dated 11/16/1999). LUST NFA 11/29/2004. Remaining ERP for chlorinated solvents.	to the project area, it's unlikely that activities at this site will impact project implementation. Check status during site visit.
AST	17	16607 Burlington Road	*Adjacent to south*	1-AST, diesel, in use onsite.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.
UST	18	RTE 2	*1/8 to ¼ mile west*	2-USTs, diesel and gasoline, in use onsite. Agriculture.	Unlikely facility activities have impacted project area
BRRTS	19	Stollenberg Farm	*Adjacent to south*	UST closure, no remedial action required.	Unlikely facility activities have impacted project area
UST	19	15906 Burlington Road	*Adjacent to south*	1-UST closed/removed.	Unlikely facility activities have impacted project area
UST	20	14502 Burlington Road	*1/8 to ¼ mile east*	1-UST closed/removed.	Unlikely facility activities have impacted project area
LUST SHWIMS	21	Paris Consolidated School	*1/8 to ¼ mile southeast*	LUST NFA/NFR letter dated 2/3/1999. SHWIMS – operating.	Additional information obtained from WDNR online. Site is current very small HW generator. Unlikely facility activities have impacted area.
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No pertinent information or other sites of concern were found.					

Bristol Marsh (K47)

Table 13 – Bristol Marsh EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	1	Gureczny, Lillian Property	*Adjacent (northwest corner)*	LUST NFA/NFR letter dated 2/17/1989.	Unlikely facility activities have impacted project area
RCRA-nongen FINDS SHWIMS	1	Countryside Market	*Adjacent (northwest corner)*	RCRA nongen, previous SQG, no violations. SHWIMS, operating.	Unlikely facility activities have impacted project area
UST	1	20015 93rd St.	*Adjacent (northwest corner)*	3-USTs, diesel and gasoline, in use onsite. Gas/Retail sales.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.
ERP	1	Bristol Substation	*Adjacent (northwest corner)*	ERP – site closed NFA letter dated 10/21/2009.	Unlikely facility activities have impacted project area
FINDS	2	Western Kenosha Senior Center	*Adjacent to north*	No additional information.	Check status during site visit
UST	3	18901 93rd St.	*Adjacent to north*	1-UST in use onsite, gasoline. Agriculture.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.
UST	4	16800 104th St.	*Adjacent (southeast corner)*	1-UST closed/removed.	Unlikely facility activities have impacted project area
UST	5	16313 104th St	*1/8 to ¼ mile east*	1-UST, diesel, and 2-USTs, gasoline in use onsite. Agriculture.	Unlikely facility activities have impacted project area. Confirm tank location and status during design.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
UST	6	10434 Baistol Rd.	*1/8 to ¼ mile northwest*	1-UST, fuel oil, in use onsite. Residential.	Unlikely facility activities have impacted project area
SPILLS	7	HWY45 & Cth JS	*Adjacent to east*	100-gallon diesel fuel spill. NFA dated 2/16/2005.	Unlikely facility activities have impacted project area
BRRTS UST	8	Winfield Aviation	*Adjacent (south - onsite)*	12/14/1991 4000 gallon aviation fuel tank closure. No investigation required.	Unlikely facility activities have impacted project area
LUST SHWIMS	9	Goffman, Goffman & Witt	*¼ to ½ mile southeast*	LUST status – open. Soil contamination onsite. Remediation ongoing.	WDNR online database: very small HW generator. LUST database – ongoing restoration, vapor intrusion (Sep 2011 report results). Given the proximity of the facility to the project area, and soil impacts onsite only, it is unlikely facility activities have impacted project area.
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No pertinent information or other sites of concern were found.					

Pikeville Forested Floodplain (K41) and Antioch Aquatic Complex (L41)

Table 14 – Pikeville Forested Floodplain and Antioch Aquatic Complex EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
BRRTS SHWIMS	1	Neol Elfering	*Adjacent (northeast corner)*	Solid/Hazardous Waste Landfill licensed under DNR Bureau of Waste Management OR a Historic Fill Site that was established before 1970 and never licensed by DNR. No remedial action required (2003).	Unlikely facility activities have impacted project area. Check location during site visit to confirm not within project limits.
HWAR	2	Jim Weber Trucking	*Adjacent to east*	HWAR – no additional information.	Facility not RCRA generator. Likely transporter. Check status during site visit.
FINDS	3	Red School Café	*Adjacent to west*	No additional information.	Unlikely facility activities have impacted project area. Check status during site visit.
FINDS	4	Grizzly's Saloon	*Adjacent to west*	No additional information.	Unlikely facility activities have impacted project area. Check status during site visit.
LUST FINDS	5 6	Johnny's State Line Tavern	*<1/8 mile west*	NFA/NFR letter dated 2/27/2006	Unlikely facility activities have impacted project area
UST HWAR	6	Kulack John	*Adjacent to west*	2-USTs onsite exempt from registration HWAR – no additional information.	Unlikely facility activities have impacted project area. Confirm tank location and status during design. Facility not RCRA generator. Likely HW transporter. Check status during site visit.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
HWAR	7	Glen Nelson Estate	*Adjacent to south*	HWAR – no additional information.	Facility not RCRA generator. Likely HW transporter. Check status during site visit.
LUST	8	Koeune's Greenhouse	*¼ to ½ mile south*	NFA/NFR letter dated 9/30/2004.	Unlikely facility activities have impacted project area
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No pertinent information or other sites of concern were found.					

Bull Creek Mitigation (L22)

Table 15 – Bull Creek Mitigation EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST MANIFEST (orphan)	1	J&L Oil Inc.	*½ to 1 mile north*	LUST NFA/NFR letter not reported (0970255059)	Additional information from IEPA LUST database: 20 and 45-day reports submitted (1995 and 2004). No NFR. Due to proximity to project area, it's unlikely this LUST has impacted the project area.
RCRA-nongen FINDS LUST	1	Lee's Automotive Service	*½ to 1 mile north*	RCRA- no violations. LUST NFA/NFR letter dated 6/2/2011	Unlikely facility activities have impacted project area
LUST	2	Kirby, Kieran (same address as Lee's above)	*¼ to ½ mile north*	LUST NFA/NFR letter dated 6/2/2011	Unlikely LUST activities have impacted project area
RCRA-SQG FINDS	3	S&S Body Shop	*Adjacent to north*	RCRA – no violations	Unlikely facility activities have impacted project area
LUST	4	State Oil Co.	*<1/8 mile north*	LUST NFA/NFR letter not reported (0970255029)	Additional information obtained from IEPA online LUST database. IEMA report dated 1/15/1991. Unlikely site activity has impacted project area.
UST	5	BP 45	*1/8 to ¼ mile northwest*	3-USTs currently in use at site	Unlikely facility activities have impacted project area
UST	5	Lake County Fair Association	*1/8 to ¼ mile northwest*	1-UST onsite, heating oil.	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	5	McDonald's Corp.	*1/8 to ¼ mile northwest*	LUST NFA/NFR letter dated 2/8/2011	Unlikely LUST activities have impacted project area
MANIFEST	6	Robinson	*1/8 to ¼ mile*	No additional information	Facility is not RCRA generator. Unlikely facility activities have impacted project area.
UST	7	Denniston William B	*Adjacent to west*	1-UST, gasoline, removed from site	Unlikely facility activities have impacted project area
UST	8	Donnelley Gaylord	*Adjacent to east*	1-UST, exempt from registration, on site.	Unlikely facility activities have impacted project area. Confirm tank location during design.
LUST FINDS	9	Keating, Eleanor Trust of	*Adjacent to south*	LUST NFA/NFR letter not reported (0970905111)	Additional information obtained from IEPA online database: Site was declared a non-LUST on 12/29/1993. Unlikely activity has impacted project area.
UST	10	Calanca Oscar V	*Adjacent to south*	1-UST, exempt from registration, on site.	Unlikely facility activities have impacted project area. Confirm tank location during design.
SSU MANIFEST (orphan)	11	EDCO	*½ to 1 mile west*	19-acre landfill, complete 2001	Given the proximity of the facility to the project area, it is unlikely that activities conducted at the site will impact project implementation.
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

HISTORICAL TOPOGRAPHIC MAP 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 dumping activities, and locating extensive areas that lack vegetation can determine indications of a potential REC. Historical topographic maps for each of the project sites are included in Attachment 4.

River Road and Milwaukee Avenue Road Raise (DPRR08/ DPBM11/ DPRR09)

Historical topographic maps were reviewed from the period between 1900 and 1993. The project site (Milwaukee Road) appears to contain limited development in the 1900 topographic map. The Des Plaines River is noted near its current alignment and several major roadways and railways are noted in the map. There are a few small structures along Des Plaines River Road. Surrounding communities, such as Wheeling, North Wheatfield, Prairie View, Aptakisic, and Half Day are developing. In 1947, Milwaukee Road is noted as highway (21) and there are multiple structures adjacent to the roadways. Secondary roadways are developing from 21 to the west and east within the project area; however, development seems to be limited to schools and other isolated single structures. Aptakisic Creek and open water/marsh areas are present west of Milwaukee Road. There are no changes in the topography between 1947 and 1948. In 1953 the structures located along Milwaukee Road are denser and there are structures along the secondary unnamed roads leading from Milwaukee Avenue. Chevy Chase golf club and residential development is present south of the project area. In 1963 the area continues disturbance with the addition of structures and gravel pits along Milwaukee Road (southeast of Deerfield/Milwaukee, north of Deerfield, west of Milwaukee, and northwest of Milwaukee/Aptakisic Road). A residential development was constructed between 1953 and 1963 on the southwest corner of Deerfield and Milwaukee Avenue. With the exception of continued disturbance around the gravel pits, there are no significant changes in topography on the project site between 1963 and 1972. Between 1972 and 1980, residential development expanded south along Milwaukee. Between 1980 and 1993 significant industrial development occurred west of Milwaukee Road and south of the large gravel pit at Milwaukee/Aptakisic. A small residential development was completed on the northeast corner of Deerfield/Milwaukee. Current aerial photograph review (Google Earth) suggests that business along Milwaukee Avenue consist of commercial, office complexes, residential, and undeveloped properties.

River Road Raise at Ashland Avenue (DPRR05) and Dempster Dam

Historical topographic maps were reviewed from the period between 1900 and 1995. The 1900 topographic notes that the project area has established roadways along the Des Plaines River in Des Plaines. The Chicago and Northwestern railroad is present to the north of the project area, and Des Plaines, Referee Park, and Park Ridge have established communities. The 1927 topographic map resolution is more refined than 1900 map and indicates that the area contains a variety of small and large structures along Des Plaines River Road and adjacent areas. The limits of Des Plaines community are small and development is primarily adjacent to the Des Plaines River. Development continues west

between 1927 and 1946 with roadways and the Dempster Dam appears to be constructed between 1946 and 1953. From 1953 to 1963 development continues west and north with the incorporation of areas containing residents, schools, parks, and shopping areas. Between 1963 and 1980, open areas to the west are developed, with little opportunity for expansion in the adjacent areas after 1972 (with the exception of designated parks surrounding the project area – Forest preserve, Lions Woods, Big Bend Lake, Chautauqua Park, Campground Road Woods). Because the project area appears to be developed as early as 1900, the topography of the site does not appear to have been significantly altered over time.

River Road Raise at Irving Park Road (DPRR03)

Historical topographic maps were reviewed from the period between 1901 and 1997. The site appears to be undeveloped in the 1901 topographic map. The Des Plaines River is noted near its current alignment and several major roadways and railways are noted in the map. There are a few small structures along Irving Park and Des Plaines River Road. Surrounding communities, such as Franklin Park and Norwood Park are developing (minor). In 1928, Irving Park Road and Des Plaines River Road are noted as highways and there are multiple structures adjacent to the roadways. There is a separate street connecting Irving Park and River Roads. Adjacent communities such as Schiller Park, Franklin Park, and Fairview are establishing to the far east. The area adjacent to the east is mostly undeveloped. Between 1928 and 1953 there is continued development to the west of River Road; in 1953 the area east of River Road is noted as Forest Preserve. There are modifications to the River Road /Irving Park Road intersection between 1978 and 1993 and continued development in the surrounding area until 1997 when the adjacent property is fully developed. Development north of Irving Park Road appears to consist primarily of residential and commercial facilities; development to the south appears to consist primarily of residential, commercial and industrial facilities. The FUDS site located in Robinson Woods (EDR #34 north) is not located on the historical maps provided and is presumed to be outside the range of the maps and project area.

First Avenue Bridge Modification (DPBM04)

Historical topographic maps were reviewed from the period between 1901 and 1997. The 1901 topographic map shows the alignment of the Des Plaines River and surrounding developing communities (Franklin Park, River Grove, Ellsworth, Melrose, and River Forest), in addition to several rail lines through the area (Milwaukee and St. Paul RR, Northwestern RR, Great Western RR, Wisconsin Central, and Central RR). East-west roadways are also noted (*Belmont and North Avenues*). Between 1901 and 1928, there was significant development in areas adjacent to the project. Additional roadways and surrounding residential communities expand, Oak Park Country Club is noted north and east of the project area, and industry is developed near southwest. Between 1928 and 1948 First Avenue and Dees Plaines River Road are constructed. There is no development along the project corridor. In 1953 the area east of the Des Plaines River is noted as Fullerton Woods (and is noted as natural area or floodplain) and a drive-in theater is located adjacent and southwest of the First Avenue/Des Plaines River Road

intersection. Structures are noted northwest of the intersection of North and First Avenues to the south. In 1963 the communities surrounding now include hospitals, shopping centers, and schools with no changes in the topography on the project site. Two structures (*perhaps dams*) are noted in the Des Plaines River adjacent. There are few changes in topography between 1963 and 1973; in 1993 the area that was once the drive-in theater is now developed with several large structures to the north (*remain to date*) and Kiddieland Park to the south. There are no topographical changes to the adjacent property or site after 1993. The FUDS site located in Sunset Bridge Meadow (EDR #7) is not located on the historical maps provided and is presumed to be outside the range of the maps and project area.

Riverwoods Wet Prairie (L01)

Historical topographic maps were reviewed from the period between 1900 and 1993. The 1900 topographic map shows only the surrounding area and does not indicate site-specific topography. Current Milwaukee Avenue is noted (western boundary of project). The 1947/1948 topographic map indicates that there are several small structures adjacent to the project area west along Milwaukee Avenue. The project area contains several wetland/open water areas and the surrounding properties are mostly undeveloped. The 1953 map indicates several trails or roadways entering the project area from the north and east; development continues along the Milwaukee Avenue corridor and a gravel pit is located across the Des Plaines River along Lake-Cook Road (within the project boundaries). Wheeling is developing to the far southwest. The 1963 topographic map indicates flourishing residential development sometimes between 1953 and 1963, especially north and east of the project area (Riverwoods). A second gravel pit is located adjacent and west of the Des Plaines River along Deerfield Road. With the exception of continued growth in the surrounding area, there are no changes in topography at the project site between 1963 and 1993.

Northbrook Marsh (C09), Dam #1, and Milwaukee Avenue Bridge Modification at Buffalo-Wheeling Creek (DPBM10)

Historical topographic maps were reviewed from the period between 1900 and 1995. The project site appears to be undeveloped in the 1900 topographic map. Structures align Milwaukee Avenue to the west, and there appears to be several structures adjacent to the ecosystem restoration site to the east. The Des Plaines River is noted, but the Buffalo-Wheeling Creek inlet is not noted on the map (area of bridge modification). Dam #1 is noted earliest on the 1927 map. Wheeling Drainage Ditch is also noted on the 1927 map, and there is an unimproved roadway constructed on the eastern portion of the project area with isolated structures surrounding (likely existing residence) outside the project limits. The 1947 topographic map indicates four additional unimproved roadways extending from Sanders Road into property adjacent to the east. The site does not appear to contain relief in the topography; besides the Des Plaines River, the project area consists of green space. Structures align Milwaukee Road and Dundee Road. In 1953 the Palwaukee airport is located adjacent to the Wheeling Creek Ditch modification area to the southwest. A structure is located within the limits of the restoration project area along

Willow Road. Multiple structures are present adjacent to unimproved roadways adjacent to the project are (to the east) outside of the project limits. A secondary roadway extends from Dundee Road to Dam #1 within the forest preserve. Between 1953 and 1963, the tri-state toll way is constructed and forms the eastern boundary of the USACE project area. Additional structures are constructed along the residential area adjacent to the east (along Saunders), and the facility located along Willow Road (within the USACE project area) has been developed to include four isolated structures. The facility and structures were removed between 1963 and 1972. There are no other changes to the site topography between 1963 and 1993.

Beck Lake Meadow (C15), Dam #2, and River Road Bridge Modification at Feehanville Ditch (DPBM08)

Historical topographic maps were reviewed from the period between 1900 and 1993. The site appears to be undeveloped in the 1900 topographic map. The Des Plaines River is noted near its current alignment. Several major roadways and railways are noted in the map, and surrounding communities, such as Mt. Prospect and Des Plaines are developed (minor). In 1927/1929 topographic maps, Dam #2 is noted with a trail that leads from Milwaukee Avenue to the Dam from the east. A trail or roadway also appears in the southeast quadrant of the site, along with two small structures. Central Road is present (southern project limit) and a building is present adjacent to the Des Plaines River (on landfill property). Between 1929 and 1946, Lake Street/Euclid Road was constructed (northern project limit) and surrounding areas are developing, several schools are noted. There are no other topographic changes to the site until 1953 when Camp Pine (and a ring-style road or trail), is noted located on the project site adjacent to the Des Plaines River along with multiple structures (northwest corner section 31 T42N R12E). The woods are named "Allison Woods and Dam #2 Woods", and a path "bridle path" extends from north to south along the Des Plaines River. Between 1953 and 1963, Beck Lake (with island) is constructed in the southeast corner of the project area, a residential community is established northeast of the project area, a north-south roadway from Central Avenue is established (southwest quadrant) and two small structures are removed from the southeast quadrant, and minor topographic changes are noted in the southwest quadrant (building is no longer present). Project area is labeled forest preserve and contains several different park names. In the 1972 topographic map, Camp Pine no longer contains structures, the southwest quadrant contains an area labeled "pit" and an additional east-west roadway is established in the area. Permanent roadways are established to Beck Lake. In the 1980 topographic map, there are few changes to the topography of the site; the southwest contains not a "pit" but a fill activity that is clearly outlined and removed from the surrounding forest preserve designation. Topography of the landfill is established in the 1993 topographic map at 650 (originally 635). This area is presumed to be the Sexton John Landfill (EDR #17). The landfill facility is 160 acres, closed with final cover, and is a permitted facility. GW monitoring is currently being conducted at the site as part of the closure requirements. There are very few topographic changes to the site between 1980 and 1995.

Touhy Avenue Dam

Historical topographic maps were reviewed from the period between 1900 and 1997. The 1900 topographic map shows only the surrounding area and does not indicate site-specific topography. Surrounding communities, such as Des Plaines, Mt. Prospect, and Park Ridge are under development. The 1929 topographic map indicates that the area surrounding the Touhy Avenue Dam is mostly undeveloped. Des Plaines River Road and Touhy Avenue are indicated, and a series of minor roads or trail are noted west of the River (near current 294) and east of the River (current trail). The Touhy Avenue dam is noted in the 1953 topographic map, in the "Marine Reserve" parkland. Properties directly east and west of the dam remain undeveloped and stay that way until 1963, when the toll way is present and Axewood Lake is created (southeast corner of Des Plaines River Road and Touhy Avenue). The topography of the site is lower after the development of the toll way. The Dam appears in Iroquois Woods Forest Preserve. Residential/commercial/industrial development flourishes in this time as areas become incorporated into adjacent cities. There are no changes in the topography of the project area identified between 1963 and 1997.

Dam #4

Historical topographic maps were reviewed from the period between 1901 and 1997. The 1901 topographic map shows only the surrounding area and does not indicate site-specific topography. The 1928 topographic map indicates that the areas surrounding the Dam #4 location is mostly undeveloped. River School and All Saints Cemetery are located downstream of the Dam location. Higgins Road and Des Plaines River Road are developed in addition to some of the surrounding communities (Park Ridge and Fairview). Review of 1928 to 1963 historical photos suggest that the property adjacent to the dam site to the east remained undeveloped and forest preserve, the property to the north, west and south continue development, and the Dam (Dam #4 woods appears sometime between 1953 and 1963). It is unclear from the topographic maps when the dam was constructed. Camp Ft. Dearborn appears south of the dam site within the forest preserve (Boy Scout camp) in 1963. There are no changes in the topography of the project area after the Dam #4 Woods is identified (from 1963 to 1997).

Sturtevant Wet Prairie (R4) and Somers Marsh (K9)

Historical topographic maps were reviewed from the period between 1905 and 1994. The 1905 topographic map indicates that the property and surrounding areas are undeveloped. The Chicago Milwaukee and St. Paul Railroad are present. Few structures appear along primary roadways along with minor development of towns (Corliss, Somers). Kilbourn Ditch appears in a natural unditched condition. There are few changes in the topography between 1905 and 1907. In 1959, Des Moines School is located in the Sturtevant property on the western side, and the Herzog School is located along the northern boundary, and major roadways are developed (US-45 to the west). Kilbourn Road Ditch appears to be channelized in several areas, primarily on the Sturtevant property (northern sections), but remains mostly natural in the Somer's Marsh property. Floodplain and

open water are present with little to no development (isolated structures appear along major roadways). Between 1959 and 1971 a trailer park is established in the northwest quadrant of the Somer's marsh area (though this is outside the limits of the USACE project). There are no changes in topography between 1971 and 1994.

Union Grove Wet Prairie (K33)

Historical topographic maps were reviewed from the period between 1906 and 1971. In 1906/1907 the topographic maps indicate that the property is undeveloped. The Des Plaines River and its floodplain are noted on the map. The adjacent area is relatively flat and undeveloped with the exception of a small town to the north (Union Grove). Isolated structures (*likely farmhouses*) are noted on adjacent properties and roadways developed surrounding the site. In 1960 the property contains the Great Lakes Dragaway (center of site outside USACE work area). There are several areas south of the dragaway where there appears to be river channelization, or some other identified feature, present in the center of the site. It is unclear if these structures or roads are associated with the dragaway. Several utilities (*and poles*) bisect the property and a cemetery is noted in the southwest quadrant. There are several more structures, *likely farmhouses*, in the general vicinity of the project; however, the USACE project limits appear to specifically exclude any developed properties along the adjacent roadways. There are no changes in the site topography between 1960 and 1971. Review of current aerial photography suggests that there are portions of the site that may contain debris from adjacent activities. It also appears that the site may be regularly used by ATVs and other off-road vehicles; a variety of trails are visible. There may also be isolated structures present in the USACE project area. One property along 172nd street appears to remain in the USACE project area but contains several structures and associated debris.

Bristol Marsh (K47)

Historical topographic maps were reviewed from the period between 1906 and 1976. In 1906/1907 the topographic maps indicate that the property is undeveloped. George Lake and Dutch Gap Canal (*current North Mill Creek*) and its floodplain are noted on the map. The area is relatively flat and undeveloped with the exception of an elevated area in the northeast quadrant of the site. The adjacent major roadways are developed and there are small structures located along the adjacent roadways. In 1959/1960 there is a residential development surrounding George Lake. There are structures along the adjacent roadways. The eastern portion of the site contains "gravel pit" with open water. The remainder of the site (interior) remains undeveloped. There are few changes in the topography of the site between 1960 and 1976. USACE project limits appear to specifically exclude any developed properties along the adjacent roadways.

Pikeville Forested Floodplain (K41) and Antioch Aquatic Complex (L41)

Historical topographic maps were reviewed from the period between 1906 and 1993. In 1906/1907 the topographic maps indicate that the property is undeveloped. George Lake and Dutch Gap Canal (*current North Mill Creek*) and its floodplain are noted on the map.

The area is relatively flat and undeveloped. The adjacent major roadways are developed and there are small structures located along the adjacent roadways. In 1923 there is an unimproved roadway in the northern section of the Antioch property and union cemetery is noted to the south. The 1947 map does not indicate substantial change, but the floodplain is noted on the map and indicates that the southern portion of the Pikeville property may contain a secondary stream hydraulically connected to Deer Lake (south). The unimproved roadway is no longer present in the 1959/1960 topographic map. There are few changes in the topography of the site between 1960 and 1993. Development continues on the roadways adjacent to the restoration site; however, the USACE project limits appear to specifically exclude any developed properties along the adjacent roadways.

Bull Creek Mitigation (L22)

Historical topographic maps were reviewed from the period between 1908 and 1993. The 1908 topographic map indicates that there is no development within the project area. Adjacent areas are also undeveloped. Belvidere Road, Casey Road, Wright School, Haver's Corners and Gages Lake are the significant topographic features in the project area. The project site itself has some relief with much of the lower depressional areas open water. By 1960 most of the open water areas are gone but isolated areas are noted as floodplain on the site. Development on the western portion of the site (residential) is started, though with only a few structures noted in 1960. Adjacent communities have flourished with development (Wildwood, Grayslake, Valley Lake, and Twin Lakes). In 1972 there are 50+ homes located in the development to the west. In addition, there are several structures in the northeast quadrant of the site and along Belvidere Road, and two structures in the southeast quadrant of the site. There are few changes in the topography at the site between 1972 and 1980 with the exception of one additional structure in the southeast quadrant. By 1993, development continued in the southeast quadrant of the site, though review of the ecosystem restoration maps indicate that areas of development appear outside of the project limits (i.e. project limits do not include development along Belvidere Road and other private property in the southeast quadrant). Much of the open water area that did not appear in the 1960 through 1980 historical maps has returned in the 1993 map.

HISTORICAL AERIAL PHOTOGRAPH REVIEW

Indications of a potential REC 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 dumping activities, and locating extensive areas that lack vegetation can determine indications of a potential REC. Historical aerial photographs are included in Attachment 5.

River Road and Milwaukee Avenue Road Raise (DPRR08/ DPBM11/ DPRR09)

Historical aerial photographs were reviewed from the period between 1952 and 2007. In the 1952 aerial photograph, the corridor along Milwaukee Road is lightly developed.

Adjacent properties along the roadways appear to be mostly undeveloped and farmed. Between 1952 and 1962 there is disturbance in the land with the addition of several gravel pits in adjacent areas. Additional development along Milwaukee Road continued between 1962 and 1972, and residential development in adjacent areas is prevalent. The quality of the 1981 aerial photograph precludes its use for land use review. Between 1972 and 1988, industrial development was established west of the Milwaukee Road corridor and several commercial buildings and residential development continued along Milwaukee. The area of land disturbance associated with the gravel pits increased until 1993 when the largest along Milwaukee appears to contain windrowed materials, then future buildings, development, and retention ponds. Undeveloped areas adjacent to Milwaukee Road continue to develop through 2007.

River Road Raise at Ashland Avenue (DPRR05) and Dempster Dam

Historical aerial photographs were reviewed from the period between 1951 and 2007. In the 1951 aerial photograph, Des Plaines River Road is established and is parallel with the Des Plaines River to the east; development occurs to the west and appears to be school, park, and residential structures. Dempster Dam is visible in the 1951 photograph. Development is dense industrial/manufacturing along the adjacent railroad to the northeast and residential areas contain dense housing to the west and northwest. Aerial photographs from 1967 through 2007 suggests that the area remains developed, and open pockets of land that were not developed in 1951 are developed later (with the exception of forest preserves and parks). Property adjacent to the project alignment appears to be a mix of residential and commercial properties to the west, Des Plaines River and forest preserves, and housing, to the east. Access to the Dempster Dam, through bike trail to the east, was established between 2005 and 2007.

River Road Raise at Irving Park Road (DPRR03)

Historical aerial photographs were reviewed from the period between 1951 and 2007. In the 1951 aerial photograph, Des Plaines River Road is developed, as is Irving Park Road. Adjacent properties along the roadways appears to be mostly undeveloped, with the exception is a building on the southwest corner of River Road and Irving Park, forest preserve entrance east of River Road and north of Irving Park, and residential structures in the surrounding areas. Industrial development appears in historical aerials between 1951 and 1962 along with road raise alignment south of Irving Park Road. The building in the 1951 photo has been removed and there are other developments along River Road north of Irving Park. Residential development occurred in the surrounding area between 1962 and 1972 on the southwest corner of the River Road Irving Park intersection and there is continued industrial development on southern portions of the project. Buildings and facilities northwest of the intersection have changed; it appears that commercial (or other development) occurs on adjacent properties between 1962 and 2005. The nature of the development adjacent to Des Plaines River Road is difficult to distinguish in the historical maps. Review of current aerial photographs (Google Earth 2010) suggest that the properties adjacent to the road raise north of Irving Park Road consist of school facility, park, residential, and commercial land uses. South of Irving Park Road appears

to be high density residential housing, commercial/industrial buildings, and forest preserve.

Comparison of historical aerial photographs and current (2010 Google Earth) aerial photographs suggest that there is/was a clearing in the vegetation north of the project area within Robinson Woods that may be the FUDS site noted in the EDR Report (EDR #34). This site is not within nor adjacent to the boundaries of the road raise project.

First Avenue Bridge Modification (DPBM04)

Historical aerial photographs were reviewed from the period between 1951 and 2007. In the 1951 aerial photograph, First Avenue and Des Plaines River Road are developed. The area adjacent to the roadways is mostly undeveloped with the exception of the driven-in theater to the southwest along First Avenue. The properties adjacent are vegetated. There are no changes to the project area until the 1983 aerial photograph when the drive-in theater is no longer present and the area is developed for industrial/commercial use. In 1999 the property adjacent Des Plaines River Road and adjacent to the project area is highly disturbed and vegetation removed (including the staging area). This area remains disturbed in the 2005 aerial photograph, and activities seem to be complete in the 2007. It is unclear what activities were conducted on the site at this time; however though the topographic maps don't indicate a change in topography on this property, review of current design maps note that there are several areas where the topography at the site has changed from 625 (*average*) to a maximum of 640, indicating filling at the site. It is unclear where the fill materials originated. The FUDS site included in the EDR report (EDR #7) could not be located in the historical aerial photographs.

Riverwoods Wet Prairie (L01)

Historical aerial photographs were reviewed from the period between 1962 and 2007. In the 1962 aerial photograph, residential development is present east of the northern portions of the project area. Southern portions of the project area are vegetated. West of the Des Plaines River one large gravel pit is noted along Deerfield Road. Development along Milwaukee is a combination of agriculture and single-family residence. With the exception of the types of farming, there are few changes on the project site or near the project area between 1962, 1967, and 1972. The most significant change occurs on the property on the northwest corner of Milwaukee and Deerfield Roads. The gravel pit that was once present appears to be filled (within the project limits). This area is presumed to be the Hoffelder Landfill (EDR #B5). There is also an area of disturbance south of the landfill to the south of the small creek (Aptakisic) entering the Des Plaines River – it is unclear if this area is within the project limits. The quality of the 1981 historical aerial precludes it use for land use review purposes; however, there does appear to be a commercial building north of the landfill along Deerfield Road. In 1988 the Hoffelder Landfill and other disturbed area appear to be fully or partially vegetated. Between 1988 and 2007, the project area does not exhibit significant changes. The landfill area is

vegetated and businesses develop along the Milwaukee Avenue corridor in previous areas of disturbance (west of the Des Plaines River and along Aptakisic Creek).

Northbrook Marsh (C09), Dam #1, and Milwaukee Avenue Bridge Modification at Buffalo-Wheeling Creek (DPBM10)

Historical aerial photographs were reviewed from the period between 1951 and 1993. In the 1951 aerial photograph, the site is mostly undeveloped. The Des Plaines River and backwater areas to the east are primarily vegetated (natural) and agriculture, while areas to the west along River Road are starting to develop with a combination of commercial, residential, and industrial uses. The southeast corner of the USACE project area appears to contain a business with buildings and roadways. In 1962 a residential community is located east of the USACE project area limit just north of agriculture property that is part of the USACE project area along Sanders Road. A series of drainage ditches are present on northern portions of the project area, and the tri-state toll way is constructed. An area where a structure is located, according to topographic maps, along Dundee Road south of Portwine, within the project limits, is clear of vegetation. In 1967 the vegetation at the site consists primarily of mature trees with the exception of the trails within the forest preserve, the dam access road, agriculture areas on the southeast corner, and the unknown business along Willow Road. Besides removal of the business along Willow Road between 1967 and 1972, the site use does not change between 1967 and 1993. Review of current aerial photographs suggests that the foundation of structures remain on the project site along Willow Road where the unknown business was located between 1951 and 1972. Though topographic maps suggest the structure located within the project area long Dundee Road remains, it does not appear in current aerial photographs. Remnants of the drive leading from Dundee are visible.

Beck Lake Meadow (C15), Dam #2, and River Road Bridge Modification at Feehanville Ditch (DPBM08)

Historical aerial photographs were reviewed from the period between 1951 and 1994. In the 1951 aerial photograph, the site is mostly undeveloped. A creek and other small water bodies appear to be present in the southern portions of the site. The project area is vegetated with forest or agriculture, with the exception of Camp Pine, which is located adjacent to the Des Plaines River in the northwest quadrant. There are multiple structures associated with Camp Pine. The site contains a series of trails. Between 1951 and 1967 Camp Pine structures appear to be removed, there is land disturbance in the Sexton John Landfill area, the residential community northeast of the USACE project area is developed, and Beck Lake is constructed. The solids waste transfer facility adjacent to the southwest is present in 1967. There are few changes in the historical aerial photographs between 1967 and 1994, with the exception of continued changes and disturbance in the landfill. Most areas within the project limits (besides Camp Pine POW camp and the landfill) are vegetated between 1951 and 1994.

Touhy Avenue Dam

Historical aerial photographs were reviewed from the period between 1951 and 2007. In the 1952 aerial photograph, Touhy Avenue Dam is located in the Des Plaines River. The surrounding property appears to be mostly vegetated with farming on adjacent properties to the west. Review of historical aerials suggests little to no change in the land use adjacent to the Touhy Avenue Dam site. The property appears to be undeveloped and vegetated in all photographs. The dam is not always visible in the historical photographs, likely due to the conditions of the Des Plaines during the time of the photograph or the quality of the photo. The 294 expressway (and detention pond/lake southeast intersection of 294 & Touhy) was constructed sometime between 1962 and 1967. There appears to be an area of soil disturbance (and little vegetation) northeast of the dam within the forest preserve in 1988; the nature of the activity conducted at the site is unclear.

Dam #4

Historical aerial photographs were reviewed from the period between 1952 and 2007. In the 1952 aerial photograph, Dam #4 can be located in the Des Plaines River. The property to the east is vegetated. Review of historical aerials suggests little to no change in the land use adjacent to Dam #4 site. The property appears to be undeveloped and vegetated in all photographs. The dam is not always visible in the historical photographs, likely due to the conditions of the Des Plaines during the time of the photograph or the quality of the photo.

Sturtevant Wet Prairie (R4) and Somers Marsh (K9)

Historical aerial photographs are available for the general project area from 1955, 1976, and 1992; however, the quality and scale of the photographs make it difficult to identify specific changes on the project property. The USACE project area appears to be mostly undeveloped; surrounding areas and project area appear to be primarily agriculture or natural area. Kilbourn Road Ditch appears to be channelized in the 1992 aerial photograph on both the Sturtevant and Somer's Marsh properties (or lined).

Bristol Marsh (K47)

Historical aerial photographs are available for the general project area from 1955, 1971, and 1992; however, the quality and scale of the photographs make it difficult to identify specific changes on the project property. In 1955, the USACE project area appears to be mostly undeveloped. In 1971 the area surrounding George Lake is developed. Eastern portions of the site (near gravel pits) appear to be densely vegetated forest. Several roads or trails (or perhaps ranches) appear in the 1992 aerial photograph.

Pikeville Forested Floodplain (K41) and Antioch Aquatic Complex (L41)

Historical aerial photographs were reviewed from the period between 1941 and 1993. In 1941 the USACE project area appears to be mostly undeveloped and a combination of natural area, open water ditch, agriculture and a few structures (likely farmhouses). Adjacent developments appear to consist of single-family dwellings. There are remnants of natural meandering streams in the area of the Dutch Gap Canal. The unimproved roadway noted in the historical topographic maps appears to be an access road for farming. There are few changes to the project area use in 1950, 1956, 1963, 1969, 1972, 1979, 1980 and 1993. The property appears to be used primarily for agriculture and associated features, with no indications of industrial use. While there appear to be remnants of meandering streams and natural floodplain on the USACE project area, Dutch Gap Canal appears to be channelized as early as 1941.

Bull Creek Mitigation (L22)

Historical aerial photographs are available for the general project area from 1946, 1972, and 1993; however, the quality and scale of the photographs make it difficult to identify specific changes on the project property. In 1946 the USACE project area appears to be mostly undeveloped and a combination of natural area, open water, agriculture and a few structures (likely farmhouses). In 1972 the property includes a large residential subdivision of the western quadrant (outside of the USACE project area). In 1993, additional isolated structures are present on the adjacent properties; however these areas appear to be outside the limits of ecosystem restoration (i.e. the USACE project area specifically excludes developed properties). The site is a combination of agriculture and natural area.

SITE VISIT

Environmental engineering section staff members visited the project sites on October 24, October 25, and November 15, 2011. The purpose of the trips was to overview the current site conditions and to examine the area for evidence of potential recognized environmental concerns (RECs). Site visit photographs are included at Attachment 6.

River Road and Milwaukee Avenue Road Raise (DPRR08/ DPBM11/ DPRR09) and Riverwoods Wet Prairie (L01)

Members of the TS-DH team (Pittman and Rauwerdink) visited the River Road and Milwaukee Avenue Road Raise and Riverwoods Wet Prairie project sites on October 24, 2011. The area along the road raise alignment is accessible and developed with a mix of residential and commercial properties. All facilities adjacent to the road raise alignment appear to be well-kept and free of RECs. There was limited accessibility at the Riverwoods Wet Prairie project area at the time of the site visit; the area was viewed primarily from adjacent roadways; however, the Des Plaines River walking trail was used to gain entry to the prairie from the north. The northern portion of the site consists

primarily of landfill (mapped as Hoffelder landfill – EDR #B5) surrounded by dense vegetation and the Des Plaines River trail network. The 38-acre landfill area is currently listed for-sale, and a survey company and crew were onsite on the day of the visit. The area is marked "no trespassing". Riverwoods area to the south along the Des Plaines River and Lake-Cook Road (where there is USACE involvement) is heavily wooded. Facilities adjacent to the Riverwoods Wet Prairie project area appear to be well-kept and free of objectionable environmental conditions. No signs of trash or debris were visible in the project area; however, due to the limitations (size of site and timing of the investigation), the entire site was not investigated during the site visit.

Northbrook Marsh (C09), Dam #1, and Milwaukee Avenue Bridge Modification at Buffalo-Wheeling Creek (DPBM10)

Members of the TS-DH team (Pittman and Rauwerdink) visited the Northbrook Marsh, Dam #1, and Milwaukee Avenue Bridge Modification at Buffalo-Wheeling Creek project areas on October 24, 2011. There appears to be little to no development along the Milwaukee Avenue corridor where the bridge modification project is planned. The airport is visible from the bridge modification location to the west, but is some distance, from the roadway. Dam #1 conditions are documented in a separate site visit trip report included as Attachment 1. Northbrook Marsh consists primarily of forest preserve and mixed use areas such as picnicking, shelter, and natural undeveloped vegetated or forested areas. The vegetation at the site is dense and there were no signs of RECs. No signs of trash or debris were visible in the project area; however, due to the limitations (size of site and timing of the investigation), the entire site was not investigated during the site visit.

Surrounding areas appear to be well-kept and free of RECs. EDR sites #7 (BP Products of North American) and #9 (one-hour Martinizing) were investigated during the site visit. While the status of the sites are unknown, they appear to be well-kept and in use. The proximity of the sites to the project area (beyond Interstates 294) makes it unlikely that any remaining contamination at these sites is impacting the project area; the project area does not have visible indications of impact. EDR site #10 and #28 (Wheeling Dump, and Heffelder) were investigated during the site visit; Heffelder (#28) may be slightly mismapped in the EDR report. This facility is believed to be an area of land disturbance east of the project area along the northwest quadrant of 294 and Willow Road and is outside of the USACE project area. The area identified as Wheeling Dump appears to contain an empty lot that is currently undeveloped and fenced. This area is physically separated from the project area by US 45 and the Des Plaines River and is unlikely to impact project implementation. There are no indications that the adjacent LUST at EDR #36 (Board of Trustees) is impacting the project area; the area is currently being used as a gas station.

Beck Lake Meadow (C15), Dam #2, and River Road Bridge Modification at Feehanville Ditch (DPBM08)

Members of the TS-DH team (Pittman and Rauwerdink) visited the Beck Lake Meadow, Dam #2, and River Road Bridge Modification at Feehanville Ditch project areas on October 25, 2011. The project area was accessed using several forest preserve entryways into Dam #2 Woods, Camp Pine Woods, and Camp Baden Powell and the associated walking trails. The forest preserve maintains a building for storing materials and other activities south of Dam #2 along River Road and appears to be well-kept. There is ongoing restoration at the site in the northwest corner, and dense vegetation on northern portions of the meadow. The northern and eastern portions of meadow are heavily vegetated, well-kept, and there were no signs of trash or debris on the site. The southern portion of the site contains Beck Lake and associated recreational areas (southeast) and a landfill (southwest). EDR #17 (Sexton John Landfill or John Sexton Landfill) is mapped adjacent to the meadow to the south; however, the facility is located within the USACE project boundary. Additional information on the status of the landfill is below. A building a visible beyond the tree line on the west side of the landfill. Results of the EDR report suggest that the groundwater at the site is being actively monitored at the site. Search of IEPA database suggest that the landfill was entered into IEPA system on 3/13/1984 (BOL ID# 0310630001) and is a permitted municipal solid waste disposal facility. Current monitoring activities include groundwater monitoring and air quality monitoring (for compliance with Title V permit).

The Des Plaines Landfill is located in Cook County, Illinois, about 30 minutes northwest of downtown Chicago. The landfill is located at 9800 Central Road between River Road and Interstate 294. The Des Plaines River and a cemetery abut the landfill on the west side, and the Oakton Community College is located across Central Road south of the landfill. Its use as a privately operated landfill began in the early 1960's, and ceased accepting waste by 1986.

The site is owned by the Archdiocese of Chicago, and was operated by John Sexton Sand and Gravel. The site has a waste footprint of about 130 acres, with an existing waste-in-place volume of about 11.6 million cubic yards. The site accepted municipal solid waste (MSW) throughout its active life. Waste received included small quantities of construction and demolition debris, and some liquid waste.

The site is an unlined landfill that was constructed consistent with practices current at the time operations began and therefore without a bottom leachate collection system, geomembrane liner, or a re-compacted soil bottom liner. The natural existing in-situ clay has provided the lining for the landfill. A leachate management system has been installed in recent years. A low permeability soil cover with a minimum thickness of 3 feet was placed over the intermediate cover when the site stopped accepting MSW. The actual soil cover in-place at the landfill is reported to be from 8 feet up to 20 feet in total thickness.

Approximately 200 landfill gas (LFG) extraction wells are in place covering the perimeter and most interior areas of the Des Plaines landfill. Initially, LFG was collected around the edge of the landfill and then vented to the atmosphere in order to prevent migration of LFG to neighboring properties. In 1998, with the aim to develop an electricity generation project, some of the emissions were collected to measure emissions volume and flow rates.

A flare was installed to destroy the LFG until it could eventually be used in a power generating unit. The emission reduction project, comprising the aggregate LFG collection and destruction capacity operating at the Des Plaines landfill now uses most of the LFG to produce electrical energy. By 2002, vertical gas extraction wells, laterals, header lines, condensate driplegs, and a blower/flare unit were installed, and Sexton Energy had replaced the older flare as part of the project. The replacement utility flare device is located on the south side of the landfill.

The blower/flare unit was installed to collect the LFG from the wells and burn off the collected LFG thus reducing net emissions of LFG. The unit consists of a trailer-mounted 8-inch diameter utility flare with a single centrifugal gas fan-type blower manufactured by Aerovent, and a control panel. The blower is powered by a 50 HP direct drive electric motor. Flow is measured at the flare (and is now measured at the generator, see below) using a flow meter manufactured by the Sponsler Company (Model SP6-CB-PH7-D-4X) rated to measure flows in the range of 250 to 2,900 cubic feet per minute (cfm) as indicated on the flow meter nameplate.

The location supports the project's 3500 kilowatt electrical generation facilities. In 2004, operations started to generate electricity using the LFG. A power plant is housed in a building located adjacent to the landfill on land provided by the Archdiocese. It has 2 internal combustion engines of 1750 kilowatts each that turn electric generators to produce and deliver the power output to Commonwealth Edison (Com Ed). Sexton Energy LLC has a contract with Com Ed in which Com Ed takes all of the output from the facility. This Project's energy is being sold to Com Ed for inclusion in the local distribution of electricity, without conveying to Com Ed any rights to the emissions reductions associated with capturing and destroying the LFG (Atmosclear 2008).

Camp Pine Woods former POW FUDS site (EDR#13) was not located on the site in the northern woods during the site visit. Photos found on the internet suggest that there are remnants of buildings present within the forest preserve (see photo 1 below). Attachment 7 contains additional information obtained from CELRL on the past FUDS activities conducted under at Camp Pine. Camp Pine was initiated around 1937 as a Civilian Conservation Corps (CCC) Camp Area. In 1942 the CCC program ended and in 1943 the site was reopened as a prisoner of war camp and contained 15/16 buildings according to reports. A portion of the site was used as a military police training camp and housing area. The FPDCC leveled the buildings on site sometimes between 1963 and 1970; it is unclear if underground utilities were removed. Based on a site visit conducted in 1996 and review of historical documents, two USTs used to store heating fuel/oil were thought to be present on the project site. A geophysical investigation suggested several anomalies present underground at the site; however, field investigations, which included excavation in areas of anomalies, did not result in the removal of USTs from the site. USTs were not found and the FUDS UST project at the site was closed out by IEPA.

Photo 1 – Camp Pine Woods

EDR #14 (SWANCC transfer station) was investigated during the site visit and found to be well-kept and physically separated from the USACE project area by fencing. The Feehanville Ditch Bridge Modification site appears to occur in the area of low elevation of Des Plaines River Road. The structure appeared well-kept, and areas upstream of the bridge along the ditch were recently stabilized. There were no indications of any RECs in the Feehanville Ditch project area. More information for conditions at Dam #2 can be found in Attachment 1.

River Road Raise at Ashland Avenue (DPRR05)

Members of the TS-DH team (Pittman and Rauwerdink) visited the River Road Raise at Ashland project area on October 25, 2011. The vehicle was parked at Henry Avenue and team members walked the alignment of the road raise. The Des Plaines River is adjacent to the project area to the east; residential structures are present to the west along River Road. There were various utilities along the Des Plaines River corridor including a Deep Tunnel drop shaft. There was very little debris or trash present along the roadway and no signs of RECs.

River Road Raise at Irving Park Road (DPRR03)

Members of the TS-DH team (Pittman and Rauwerdink) visited the River Road Raise at Irving Park Road project area on October 25, 2011. The vehicle was parked at several places along the roadway alignment to access different portions of the project area. River Road traffic prevented access to all areas. The Des Plaines River is adjacent to the project area to the east and is visible along the road raise alignment in the northern portions of the project area (at the Irving Park Road canoe landing); residential structures and commercial structures are present to the west along River Road. There was very little debris or trash present along the roadway and no signs of RECs. A culvert under River Road connecting stormwater drainage areas to the Des Plaines River appeared to be eroding just downstream of the River Road crossing.

TS-DH team members tried to locate EDR #34 (Schiller Park FUDS site) mapped north of the project area. The EDR report suggests the site is located south of Lawrence along the east side of Des Plaines River Road and is now part of the Cook County Forest Preserve District. There were no signs of visible RECs in the FUDS area; the Nike C-82 area is presumed to be the forest preserve entrance and associated property vegetated with turf. No structures were noted in the area. Documentation obtained from USACE Louisville District suggests that a historical document review was conducted, a geophysical survey performed, a UST field investigation conducted, and a UST removal action occurred at the site. This area is located outside the limits of the USACE project area; given the status and location of the Nike C-82 H&G site, it is unlikely to affect project implementation.

First Avenue Bridge Modification (DPBM04)

Members of the TS-DH team (Pittman and Rauwerdink) visited the First Avenue Bridge Modification project area on October 25, 2011. The road raise alignment was inaccessible due to the volume of traffic present on Des Plaines River Road and First Avenue and lack of public sidewalks. Access was gained to portions of the project site (First Avenue Bridge) through the temporary access road (Des Plaines River trail network) for the Armitage Dam removal project. Surrounding areas are heavily forested and showed no signs or dumping. The First Avenue bridge project area contains riverbank that appears free of debris. Silt has accumulated under the bridge and adjacent to the piers. While the banks of the River do not appear to be heavily vegetated, this is likely due to the flashy nature of the Des Plaines River and a result of recent storm events. There was no evidence of RECs in the area of the project.

TS-DH team members located EDR #7 (Sunset Bridge Meadow FUDS site Nike C-76) mapped north of the project area. EDR report suggests that the site is physically located at the intersection of North Avenue and East of First Avenue and is part of the Cook County Forest Preserve District (and is now known as Sunset Bridge Meadow). There are no structures (beyond recreational shelters) present in the area, with the exception of a concrete pad visible on the surface of the site. The FUDS area is vegetated with turf grass and vegetation does not appear to be stressed. There were no signs of visible RECs

in the FUDS area. Documentation obtained from USACE Louisville District suggests that a geophysical survey was conducted at the site. This area is located outside the limits of the USACE project area; given the location of the Nike C-76 H&G site, it is unlikely to affect project implementation.

Touhy Avenue Dam, Dempster Dam, and Dam #4

Members of the TS-DH team visited the Touhy Avenue Dam, Dempster Dam, and Dam #4 with members of the Des Plaines II study team on July 12, 2011; results of the trip report are included in Attachment 1. No additional site investigations were determined necessary to complete this investigation.

Sturtevant Wet Prairie (R4) and Somers Marsh (K9)

Members of the TS-DH team (Pittman and Rauwerdink) visited the Sturtevant Wet Prairie and Somers Marsh project areas on November 15, 2011. Areas of the site were viewed from adjacent roadways. The project area consists primarily of undeveloped natural areas that area densely vegetated or actively farmed. The site is bisected by the Kilbourn Creek. Abandoned structures were noted on the property (foundations, fencing, and old farm structures). No attempt was made to identify material characteristics or environmental conditions of structures. Adjacent properties consist of light commercial, residential, and agriculture. The site and adjacent properties appear to be well-kept and free of RECs. No signs of trash or debris were visible in the project area; however, due to site limitations (size of site and timing of the investigation) the entire site was not investigated during the site visit.

Union Grove Wet Prairie (K33)

Members of the TS-DH team (Pittman and Rauwerdink) visited the Union Grove project area on November 15, 2011. Areas of the site were viewed from adjacent roadways. The project area consists primarily of undeveloped natural areas that area densely vegetated or actively farmed. The site is bisected by the Des Plaines River. A drag racing facility is located in the area, but outside of the USACE project boundaries, south of County Line Road. The site and adjacent properties investigated as follow-up from the EDR report (EDR #8, 9, 13, and 14) appear to be well-kept and free of RECs. Two properties (EDR #13 and #14) were mismapped in the EDR report and were found south of the mapped location. Car Country (located on Burlington Road) and listed as EDR site # 16 appears to be a previous automobile repair or other similar-type facility and is actively used. The facility is mismapped in the EDR report and is located south of the USACE restoration area along Burlington Road (SR 142). No signs of trash or debris were visible in the project area; however, due to site limitations (size of site and timing of the investigation) the entire site was not investigated during the site visit.

Bristol Marsh (K47)

Members of the TS-DH team (Pittman and Rauwerdink) visited the Bristol Marsh project area on November 15, 2011. Areas of the site were viewed from adjacent roadways. The

project area consists primarily of undeveloped natural areas that area densely vegetated or actively farmed. Winfield Airport is located within the project boundaries; the property also contains Bristol Marsh Park, Pringle Nature Center, and associated parking and recreational areas. The Bristol Marsh Park and Pringle Nature Center area are actively used for Girl and Boy Scout "nature" activities and classes. The project area is surrounded by light commercial, agricultural, and residential properties. North Mill Creek bisects the property. The site and adjacent properties investigated as follow-up from the EDR report (EDR #2) appear to be well-kept and free of RECs. No signs of trash or debris were visible in the project area; however, due to site limitations (size of site and timing of the investigation) the entire site was not investigated during the site visit.

Pikeville Forested Floodplain (K41) and Antioch Aquatic Complex (L41)

Members of the TS-DH team (Pittman and Rauwerdink) visited the Pikeville Forested Floodplain and Antioch Aquatic Complex project areas on November 15, 2011. Areas of the site were viewed from adjacent roadways. The project area consists primarily of undeveloped natural areas that area densely vegetated or actively farmed. Portions of the property are being used for stables and pastures (horses). Signs of wildlife use at the site were visible on the day of the site visits (birds, squirrely, geese, and deer). The property is bisected by North Mill Creek. Portions of Antioch complex within the project limits on the east are currently being developed (see photo from Crawford Avenue) for what appears to be a residential community. Portions of the Antioch site contain areas of fill placement on the northwest (and some portions of these areas appear to be gated for Metra use only). Small fill piles are also located on the Pikeville property. Abandoned structures were noted on the Antioch property (foundations, fencing, and old farm structures are visible from US 45). No attempt was made to identify material characteristics or environmental conditions of structures. Adjacent properties consist of light commercial, residential, agriculture, and forest preserve (in Illinois). A waste impoundment facility (EDR #1) was located north of Horton Road and not within the project limits (north of the Pikeville project area). The site and adjacent properties investigated as follow-up from the EDR report (EDR # 2, 3, 4) appear to be well-kept and free of RECs. EDR site #6 and #7 could not be located and are likely mismapped. No signs of trash or debris were visible in the project area; however, due to site limitations (size of site and timing of the investigation) the entire site was not investigated during the site visit.

Bull Creek Mitigation (L22)

Members of the TS-DH team (Pittman and Rauwerdink) visited the Bull Creek Mitigation project area on October 24, 2011. The project area consists primarily of undeveloped natural areas that area densely vegetated, or open water. Signs of wildlife use at the site were visible on the day of the site visits (birds, squirrely, geese, and deer). The property contains several types of uses such as Almond Marsh Preserve – 15 acres on the northwest portion of the project area, natural resources areas and associated buildings, and agriculture, with isolated residences and farmhouses, and a kennel and pet store within the project limits. Internal portions of the project area are accessible on

internal roadways, but most areas of the site were viewed from adjacent roadways. The site, and adjacent properties, appears to be well-kept and free of RECs. No signs of trash or debris were visible in the project area; however, due to site limitations (size of site and timing of the investigation), the entire site was not investigated during the site visit.

FINDINGS AND CONCLUSIONS

This Phase I Environmental Site Assessment was performed to determine if the selected measures for the Phase II National Ecosystem Restoration (NER) and road raise/bridge modification sites located in Cook and Lake Counties, Illinois and Racine and Kenosha Counties, Wisconsin will have an impact on any RECs that may exist in the surrounding areas, and if RECs will have an impact on the implementation of the projects. 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. Recommendations for future actions and results of the investigation are summarized in Table 16.

Existing information available for review suggests that the Des Plaines River, Willow Creek, Higgens Creek, Buffalo Creek, and Indian Creek are listed as impaired streams in the Illinois Environmental Protection Agency Integrated Water Quality Report and 303(d) list (IEPA 2010) due to inability to achieve and reach the applicable general use water quality standards. Mill Creek and Bull Creek have been assessed for aquatic life use and fully support this function. Smaller systems, including McDonald, Silver, Crystal, and North Mill Creeks have not been assessed by IEPA. The Des Plaines River and its tributaries in Wisconsin are not listed in the state 303(d) list of impaired waterways.

Existing information available for review suggests the study area was created and modified by four major glaciation events, lasting from approximately 1.6 million to 10,000 years ago. These glaciers produced a rounded topography by scraping away at the bedrock in some areas and depositing the accumulated debris in other areas.

Review of existing information suggests that there are 13 soil associations found within the study area. Many soils throughout the project area have been affected by anthropogenic sources. The environmental quality of soil at each project location is unknown. Currently soil or unnatural fill removal is being considered on several of the NER sites. Due to the unknown quantity and quality of potentially excavated materials, on-site management of spoil materials generated for restoration of the NER sites is advised. Possible future soil sampling may be required if spoils cannot be managed on site.

Sediment probing upstream of the 5 dams proposed for removal suggest that the impounded materials just upstream of the dams consists mostly of sand and gravel bed load overlaying compacted clay. Sand and gravel bed load does not likely contain environmental contaminants and this material should be allowed to move downstream

when dam removal occurs. However, fine-grained and organic materials appear to be located just upstream of the Touhy Dam and Dam #4 in the areas of the near shore banks. In addition, some of the substrate collected upstream of Dam #1 consists of a combination of fines and sand in the channel. Minor amounts of sediment removal may be necessary if the fine-grained materials found in the channel bank areas cannot be stabilized in-place prior to dam removal. Sediments within the Des Plaines River have been sampled as part of other dam removal projects and fine grained sediments have shown to contain elevated levels of metals, PNAs, and PCBs above Chicago area background concentrations, but not above any regulatory thresholds. Sediment in the Des Plaines River is not hazardous waste; however, because it would be considered "grey" material, any sediment recommended for removal would likely require special waste disposal. Future sediment sampling may be required to confirm the quality of fine-grained sediment requiring removal.

Review of information provided in the EDR database suggests that there are several LUSTs (EDR #45, 48 and M49) with the recommended search distance and hydraulically up gradient of River Road Raise at Ashland with unknown or unresolved status. It is unclear if any of these sites have the potential to impact project implementation. Additional information about the sites was requested through the IEPA but was not available at the time of this report. Given the nature of proposed activities required for project implementation (which includes excavation for the construction/extension of the existing retaining wall) the status of these facilities should be confirmed. A phase II investigation may be required at the project site to determine scope and scale of site impacts from adjacent activities and to determine if restrictions or special consideration are required during construction.

Review of information provided in the EDR database suggests that there are two SRP sites within the recommended search distance for the River Road Raise at Irving Park Road project with unknown status (EDR #D16-18 and #20). It is unlikely that SRP activities will impact project implementation because no significant excavation is expected for road raise construction; however, these assumptions, and the status of the sites, should be confirmed during the design phase of the project. In addition, there are several USTs associated with facilities adjacent to the road raise alignment along River Road; the location of USTs should be confirmed during the design phase of the project to avoid disturbance of these facilities during construction.

Review of information provided in the EDR database suggests that the Hoffelder Landfill, EDR #B5, was previously enrolled in the IEPA SRP program and is within the USACE Riverwoods project area to the north. During completion of this report, USACE was notified by the Forest Preserve District that the landfill facility is located within the USACE project limits. The limits of the restoration project should be revised to exclude the landfill area on the northwest quadrant of the site west of the Des Plaines River (identified for prairie, marsh, and savanna restoration) due to the regulatory status of the site (see Figure 43).

Review of information provided in the EDR database suggests that the Milwaukee Avenue Bridge Modification at Buffalo-Wheeling Creek project site has several LUSTs and USTs within the recommend search distance and along the road raise/bridge modification alignment. During evaluation of the EDR report it was assumed that no significant upland excavation is expected for bridge modification/road raise construction. This assumption, as well as the status and location of LUSTs and USTs along the alignment, should be confirmed during the design phase of the project.

Review of information provided in the EDR database suggests Beck Lake Meadow, River Road at Irving Park, and First Avenue Bridge Modification project sites have FUDS sites located within the ASTM recommended search distances. Camp Pine POW camp, located within the project limits for Beck Lake Meadow, is identified in Figure 44. Nike sites C-76 and C-82 are located near the First Avenue Bridge Modification and River Road Raise at Irving Park project areas, respectively, but are not within the USACE project area. Investigations and/or removal actions have been conducted at Nike C-76 and C-82 sites. Given the proximity of the sites to the project areas, it is unlikely that Nike sites C-76 and C-82 will impact project implementation. Investigations have also been conducted within the Camp Pine Woods area; though two USTs were thought to be present at the site, they were not found during field investigations and the project was closed out. Given the nature of proposed activities required for project implementation (which does not include excavation for restoration of this portion of the Beck Lake Meadow), it is unlikely that the presence of USTs will affect project implementation. This assumption should be confirmed during the design phase of the project.

Review of information provided in the EDR database suggests that rural project areas, such as Sturtevant, Somer's Marsh, Union Grove, Bristol Marsh, and Bull Creek Mitigation area, where ecosystem restoration activities are proposed, contain multiple USTs on adjacent properties that have been excluded from the USACE project areas. While the nature of ecosystem restoration activities does not typically involve significant excavation, if excavation is proposed for soil or drain tile removal near the USTs associated with the adjacent properties, the USTs locations should be confirmed during the design phase of the project to avoid disturbance.

Review of historical aerial photographs and topographic maps indicate the project areas were undeveloped prior to 1900. The majority of the sites identified for ecosystem restoration are contained within forest preserves (in Illinois) and/or open space (undeveloped/agricultural) in Wisconsin and do not appear to have been used for industrial/manufacturing purposes. Several RECs were identified as part of this investigation:

- Historical topographic maps suggest that the south portion of the Beck Lake Meadow site contains the John Sexton municipal solid waste landfill, a 160-acre facility that was initially noted as a "pit" on early topographic maps (1972) but later maps confirm changes in project area consistent with fill activities. Results of the EDR report suggest that the groundwater is being actively monitored at the

site. Search of IEPA database suggest that the landfill was entered into IEPA regulatory database on 3/13/1984 (BOL ID# 0310630001) and is a permitted municipal solid waste unlined disposal facility. Restoration of this property to prairie is not consistent with current land use; this area should be excluded from the USACE project area due to the regulatory status of the site (see Figure 44).

- Historical aerial photographs suggest that between 1999 and 2007, the property adjacent Des Plaines River Road and adjacent to the First Avenue Bridge Modification project and staging area, is highly disturbed and vegetation removed. It is unclear what activities were conducted on the site; however, though the topographic maps don't indicate a change in topography on this property, review of current design maps note that there are several areas where the topography at the site has increased, indicating filling at the site. It is unclear where the fill materials originated. The landowner should be identified and past and current uses of the property identified; a phase II investigation may be required at the project site if the project activities disturb the property where fill has been placed.

- Historical topographic maps suggest that in 1953, a structure is located within the limits of the restoration project area along Willow Road within the Northbrook Marsh project area. Three additional structures are constructed between 1953 and 1963 at the facility; the facility and structures were removed between 1963 and 1972. Historical aerial photographs confirm that the southeast corner of the USACE project area appears to contain a business with buildings and roadways as early as 1951; structures and ancillary facilities were removed between 1967 and 1972. Review of current aerial photographs suggests that the foundation of structures remain on the project site along Willow Road where the unknown business was located. The nature of the business and potential impacts to the site are unknown. This information should be obtained early in the design phase on the project.

Environmental engineering section staff members visited the project sites on October 24, October 25, and November 15, 2011. The purpose of the trips was to overview the current site conditions and to examine the area for evidence of potential RECs and other environmental issues. Results of the site visits suggest that the project areas investigated appear to be clean and generally free of trash and debris; however, due to the size of a majority of the NER sites, these sites were not investigated in their entirety during the site visit. Portions of the Antioch site contain abandoned structures and areas of fill placement gated for "Metra use only"; small fill piles are also located on the Pikeville property. No attempt was made to identify material characteristics of fill or environmental conditions of structures. More site-intensive field visits should be conducted when the restoration design is identified to determine if there are any isolated RECs onsite that may impact project implementation. If any abandoned structures are found and confirmed for removal as part of the USACE project, the type, volume, and presence of hazardous materials, such as lead or asbestos, associated with the structures must be determined prior to demolition. All demolition debris should be disposed in

accordance with Federal, State, and local laws and regulations. As previously discussed, Phase II soil investigations may be necessary to determine the quality of the soils and disposal options at NER sites where soil or unnatural fill removal is being considered, if soils will be cannot be managed on-site as part of the ecosystem restoration design.

No investigation can wholly eliminate uncertainty regarding the potential for encountering a REC associated with a project area. Performance of this investigation is intended to reduce, but not eliminate, uncertainty regarding the potential for encountering a REC in connection with a project area.

Table 16 – Summary Phase I Results and Future Recommendations

Site	Issue	Short-Term Data Needs	Potential Future Actions
Touhy Dam **Dam#4** **Dempster Dam** **Dam #1** **Dam #2**	Sediment within project limits *(fine-grained sediments in DP River contain elevated PNAs, metals, and PCB)*	None	1. Conduct sediment investigations during design to determine the volume of fine-grained sediment impounded upstream of the dams. 2. If significant quantities of fine-grained sediment are present and cannot be stabilized prior to dam removal, sediment sampling and geotechnical/environmental analysis may be necessary to determine disposal options for sediments.
River Road Raise at Ashland	LUSTs hydraulically up gradient to project within recommended search distance with unknown status	Confirm scope and scale of the LUST incidents with IEPA	Perform phase II investigation to determine scope and scale of site impacts from adjacent regulated LUST activities, if required.
River Road Raise at Irving Park Road	SRPs within recommended search distance with unknown status	Confirm scope and scale of the SRP incidents with IEPA	1. Confirm design/excavation assumptions 2. Perform phase II investigation to determine scope and scale of site impacts from adjacent regulated activities, if required.
	USTs along road raise alignment	None	Confirm the location of adjacent USTs during design phase to avoid disturbance of utilities during construction
Riverwoods Wet Prairie	Landfill located within project limits	Revise the restoration limits to exclude the Hoffelder landfill area on the northwest quadrant of the site from the USACE restoration area (Figure 43)	
Milwaukee Avenue Bridge Modification at Buffalo-Wheeling Creek	LUSTs hydraulically up gradient to project within recommended search distance with unknown status	Confirm scope and scale of the LUST incidents with IEPA	1. Confirm design/excavation assumptions 2. Perform phase II investigation to determine scope and scale of site impacts from adjacent regulated LUST activities, if required.

Site	Issue	Short-Term Data Needs	Potential Future Actions
	USTs along alignment	None	Confirm the location of adjacent USTs during design phase to avoid disturbance of utilities during construction
Beck Lake Meadow	John Sexton Landfill	Revise the restoration limits to exclude the landfill area on the southwest quadrant of the site from the USACE restoration area (Figure 44)	
	Camp Pine Woods POW FUDS	None	1. Confirm design/excavation assumptions 2. Conduct additional phase II investigations, if required.
Sturtevant Somer's Marsh Union grove Bristol Marsh Bull Creek Mitigation	USTs adjacent	None	Confirm the location of adjacent USTs during design phase to avoid disturbance of utilities during restoration
First Avenue Bridge Modification	Historical aerial photographs suggest that between 1999 and 2007 property adjacent to Des Plaines River Road (staging area) are highly disturbed and vegetation removed. Current topographic maps indicate filling; it is unclear where the fill materials originated.	The landowner should be identified and past and current uses of the property identified.	Phase II investigation may be required at the project site if the project activities disturb the property where fill has been placed.

Site	Issue	Short-Term Data Needs	Potential Future Actions
Northbrook Marsh	Historical topographic maps indicate business present along Willow Road 1953 and 1972 with foundations remaining onsite	Confirm the scope and scale of activity with land owner	1. Collect all demolition debris during restoration and dispose in accordance with Federal, State, and local laws and regulations. 2. Perform phase II investigation to determine scope and scale of site impacts from regulated activities, if required.
NER sites	Site visit	None	More intensive field visits should be must when the restoration design is identified to determine if there are any isolated RECs onsite that may impact project implementation.
	Abandoned structures onsite	None	1. If any abandoned structures are found and confirmed for removal as part of the USACE project, the type, volume, and presence of hazardous materials, such as lead or asbestos associated with the structures, must be determined prior to demolition. 2. All demolition debris should be disposed in accordance with Federal, State, and local laws and regulations.
	Fill and debris piles on-site	None	1. Phase II soil investigations may be necessary to determine the quality of the soils and disposal options at NER sites where soil or unnatural fill removal is being considered, if soils will be cannot be managed on-site as part of the ecosystem restoration design. 2. All site debris should be disposed in accordance with Federal, State, and local laws and regulations.

REFERENCES

American Society for Testing of Materials. Publication E 1527-00. 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.

Illinois Draft Integrated Water Quality Report and Section 303(d) List - 2010; Clean Water Act Sections 303(d), 305(b) and 314 Water Resource Assessment Information and Listing of Impaired Waters Volume I: Surface Water. April 2010.

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

U.S. Army Corps of Engineers. Upper Des Plaines River and Tributaries: Integrated Feasibility Report and Environmental Assessment. January 2011 (Draft).

http://www.atmosclear.org/projects_vers/desplaines_landfill

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW INVESTIGATION UPPER DES PLAINES RIVER AND TRIBUTARIES PHASE II FEASIBILITY STUDY

National Ecosystem Restoration (NER) and National Economic Development (NED)
Ecosystem Restoration and Road Raise/Bridge Modification Sites

Attachment 1
Dam Site Visit Trip Report

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW INVESTIGATION UPPER DES PLAINES RIVER AND TRIBUTARIES PHASE II FEASIBILITY STUDY

National Ecosystem Restoration (NER) and National Economic Development (NED)
Ecosystem Restoration and Road Raise/Bridge Modification Sites

Attachment 2
Sediment Data Des Plaines River

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW INVESTIGATION
UPPER DES PLAINES RIVER AND TRIBUTARIES
PHASE II FEASIBILITY STUDY

National Ecosystem Restoration (NER) and National Economic Development (NED)
Ecosystem Restoration and Road Raise/Bridge Modification Sites

Attachment 3
EDR Database Search

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW INVESTIGATION UPPER DES PLAINES RIVER AND TRIBUTARIES PHASE II FEASIBILITY STUDY

National Ecosystem Restoration (NER) and National Economic Development (NED)
Ecosystem Restoration and Road Raise/Bridge Modification Sites

Attachment 4
Historical Topographic Maps

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW INVESTIGATION
UPPER DES PLAINES RIVER AND TRIBUTARIES
PHASE II FEASIBILITY STUDY

National Ecosystem Restoration (NER) and National Economic Development (NED)
Ecosystem Restoration and Road Raise/Bridge Modification Sites

Attachment 5
Historical Aerial Photographs

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW INVESTIGATION
UPPER DES PLAINES RIVER AND TRIBUTARIES
PHASE II FEASIBILITY STUDY

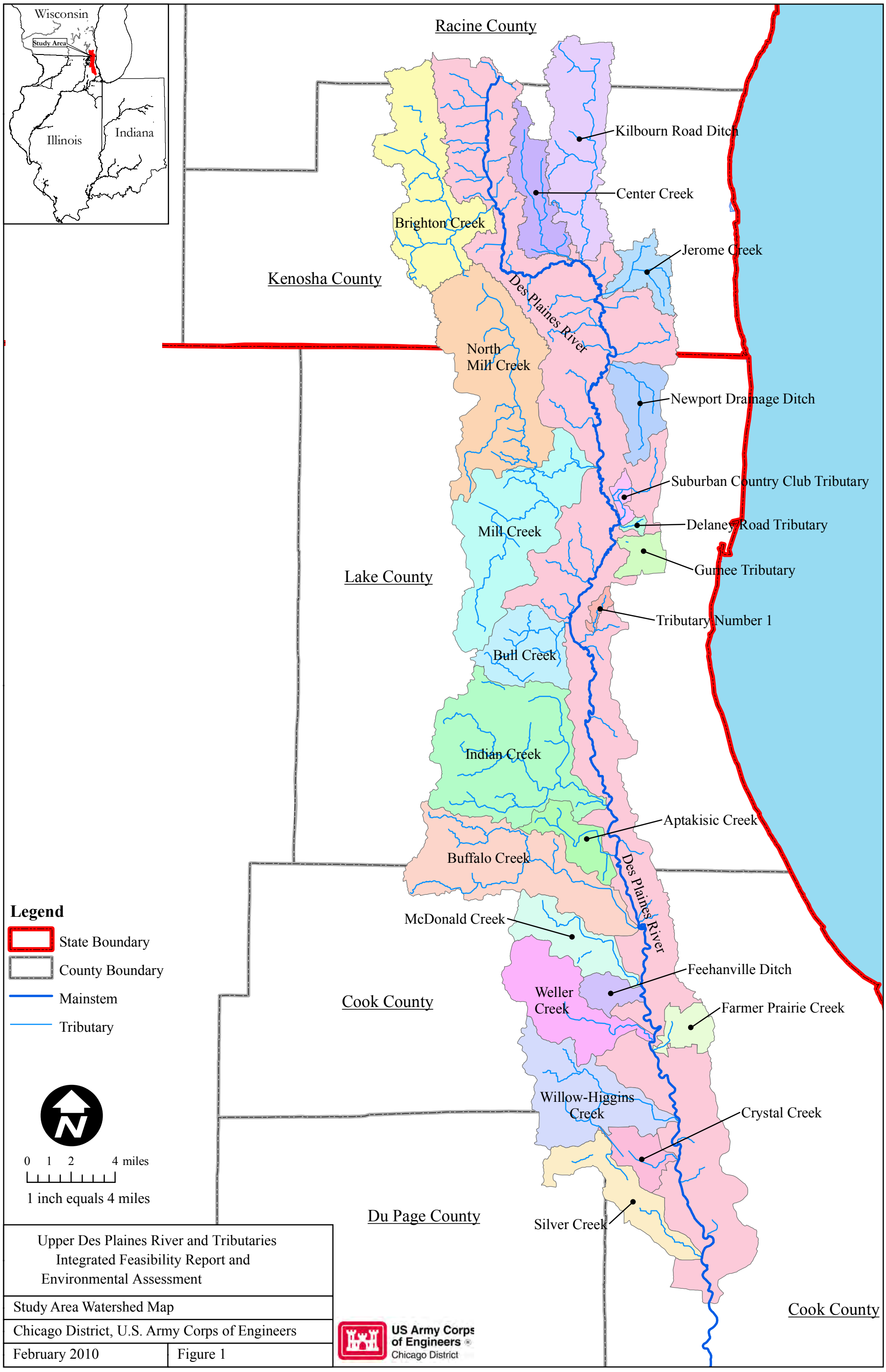
National Ecosystem Restoration (NER) and National Economic Development (NED)
Ecosystem Restoration and Road Raise/Bridge Modification Sites

Attachment 6
Site Visit Photographs

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW INVESTIGATION
UPPER DES PLAINES RIVER AND TRIBUTARIES
PHASE II FEASIBILITY STUDY

National Ecosystem Restoration (NER) and National Economic Development (NED)
Ecosystem Restoration and Road Raise/Bridge Modification Sites

Attachment 7
Camp Pine POW FUDS Supplemental Information

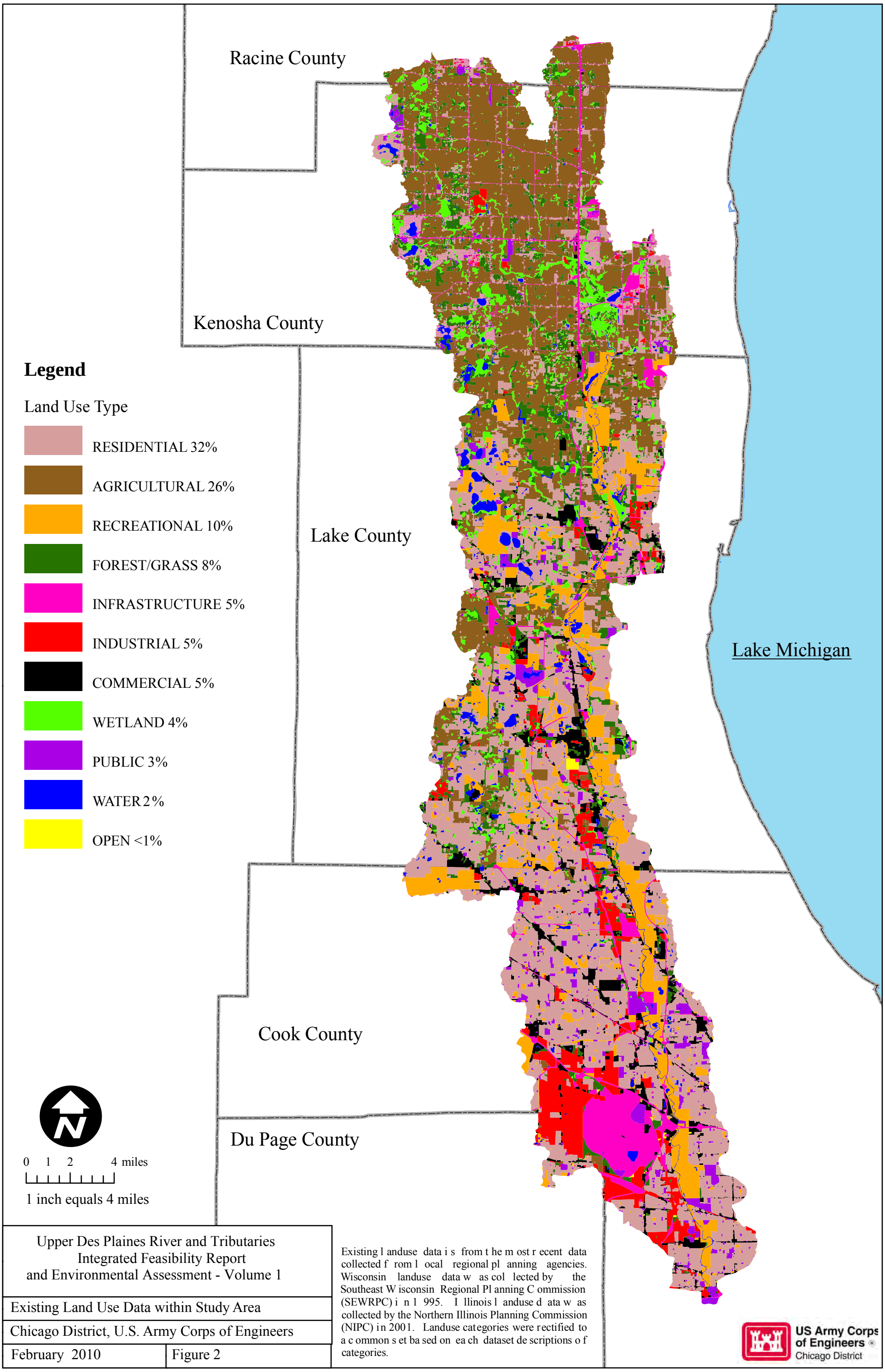


Upper Des Plaines River and Tributaries
Integrated Feasibility Report and
Environmental Assessment

Study Area Watershed Map

Chicago District, U.S. Army Corps of Engineers

February 2010 | Figure 1

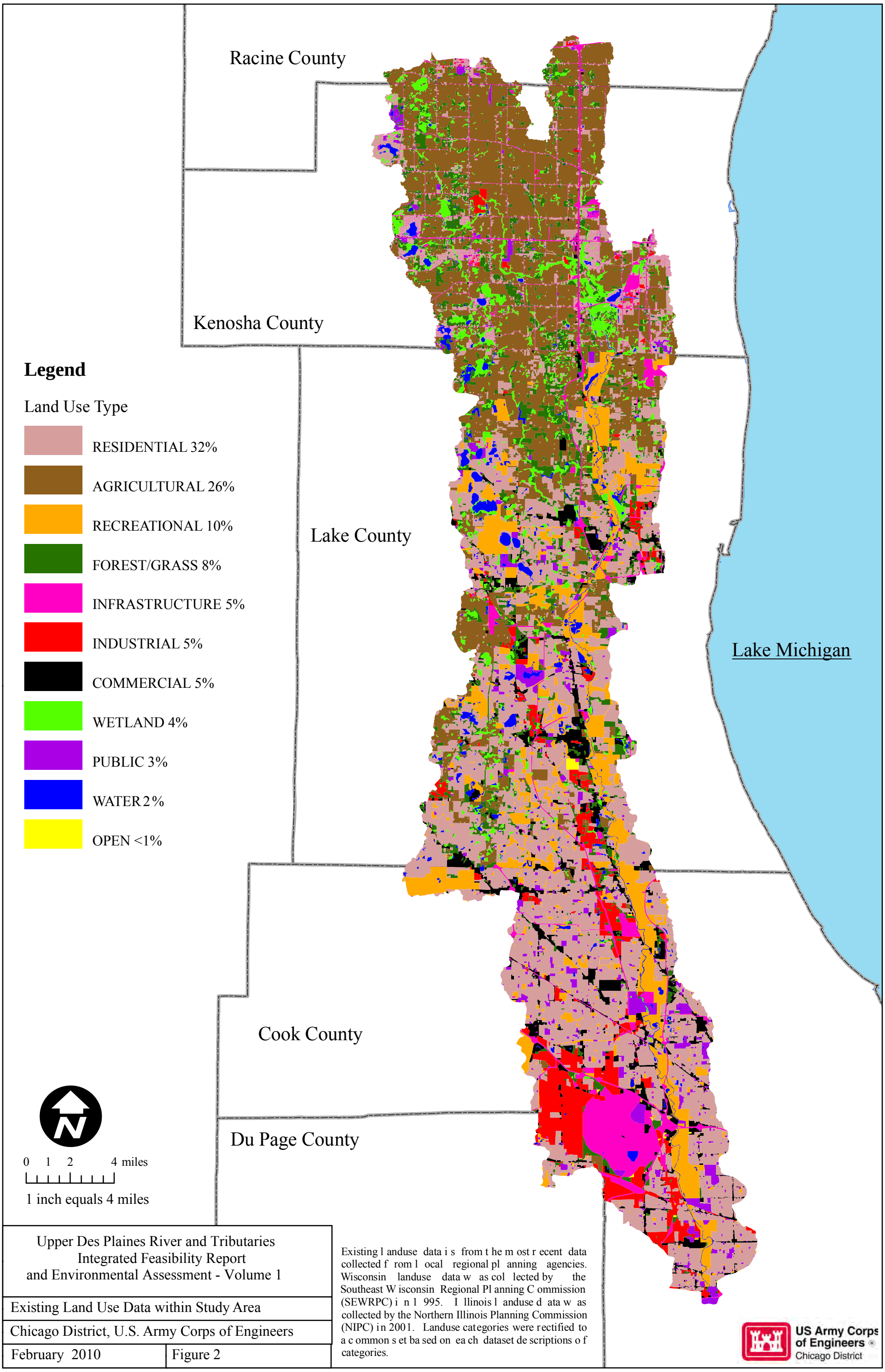


Upper Des Plaines River and Tributaries
Integrated Feasibility Report
and Environmental Assessment - Volume 1

Existing Land Use Data within Study Area

Chicago District, U.S. Army Corps of Engineers

February 2010 | Figure 2

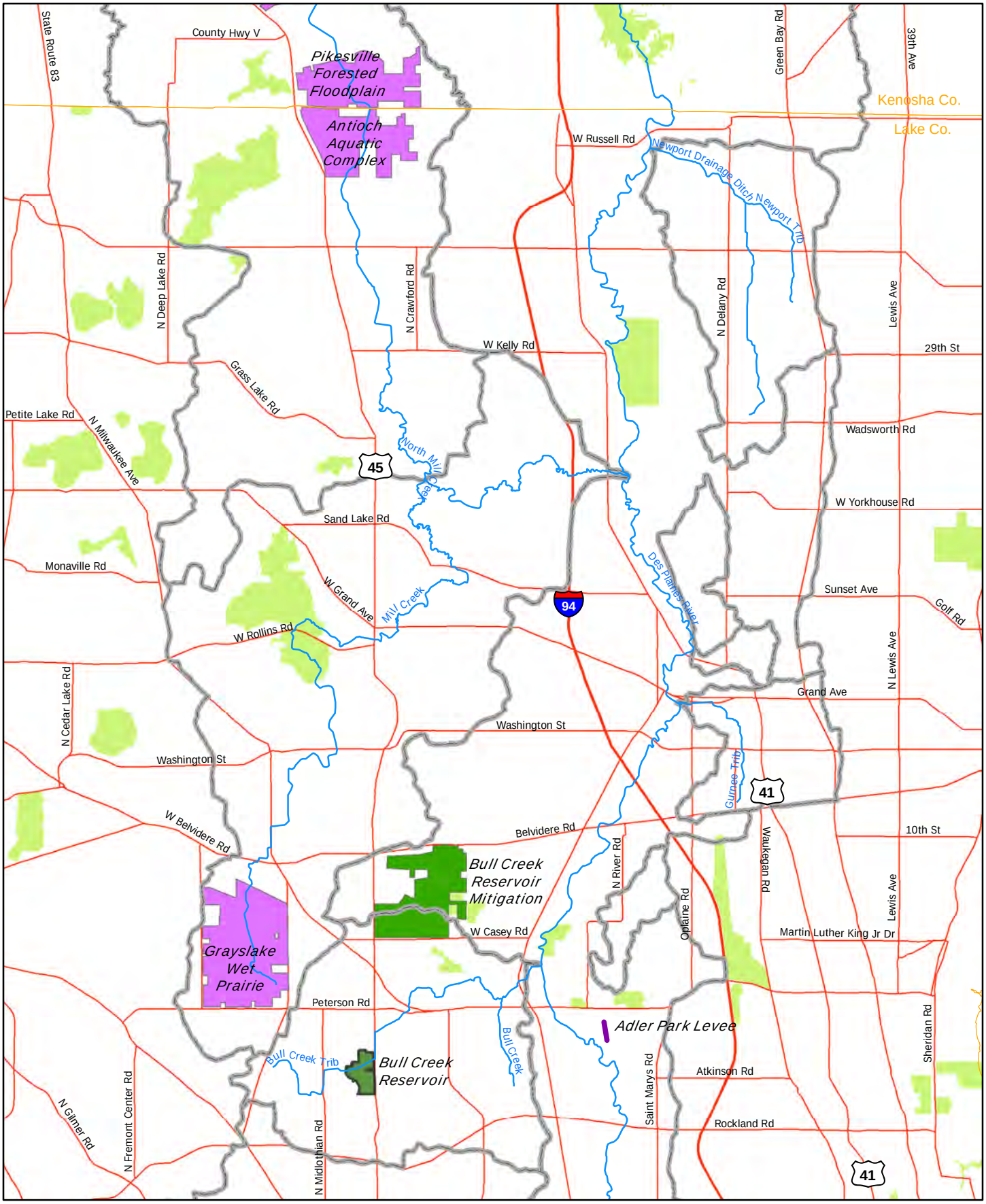


Upper Des Plaines River and Tributaries
Integrated Feasibility Report
and Environmental Assessment - Volume 1

Existing Land Use Data within Study Area

Chicago District, U.S. Army Corps of Engineers

February 2010 | Figure 2



NED SITES

- Floodwater Storage Site
- Structure Modification
- Road Raise / Bridge Modification
- Flood Protection
- Channel Improvement

NER SITES

- Ecosystem Restoration
- Dam Removal

GENERAL MAP SYMBOLS

- Streams
- Highways
- County Boundaries
- Subwatersheds
- Existing Natural Areas

0 0.45 0.9 Miles

US Army Corps of Engineers
Chicago District

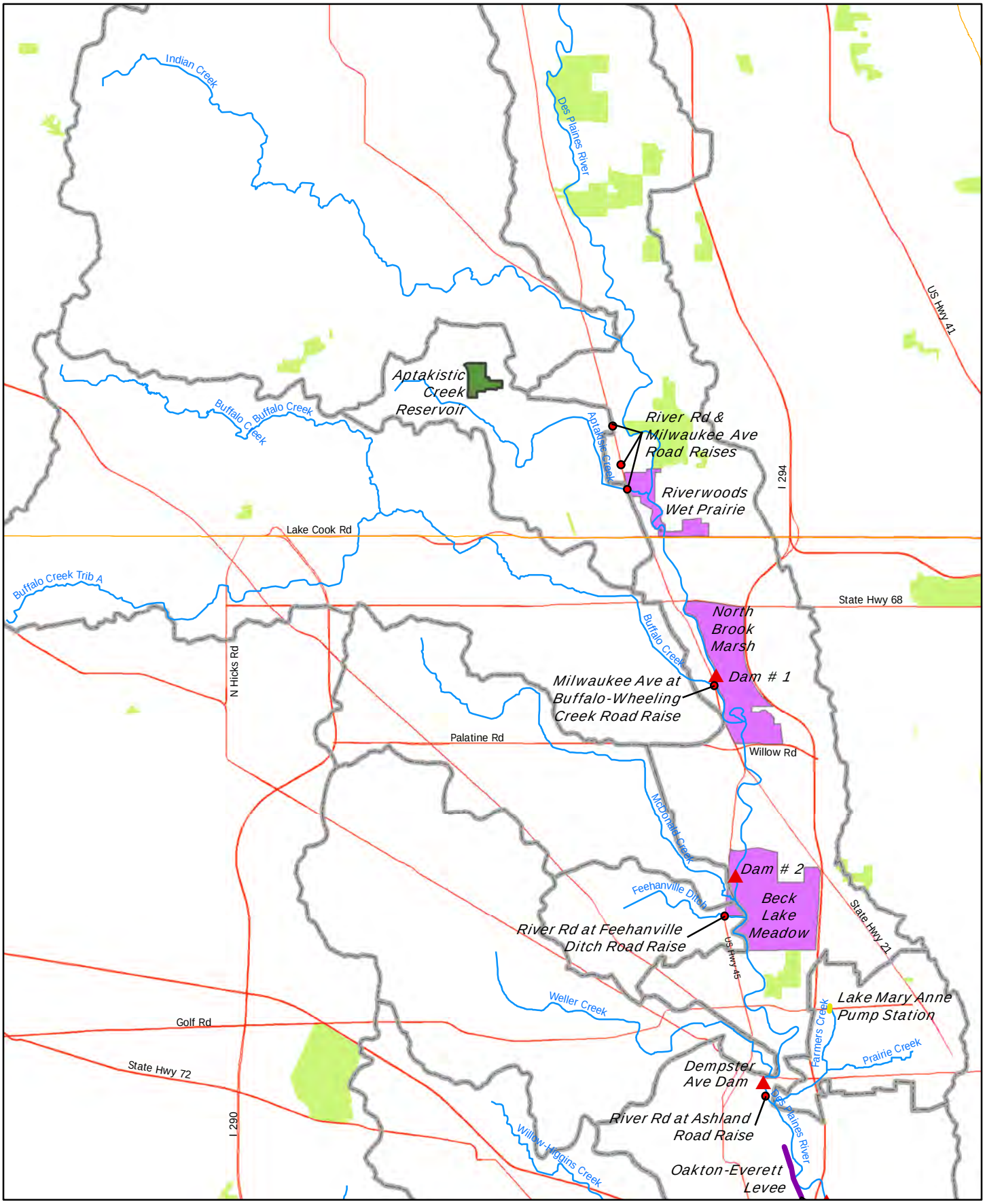
Upper Des Plaines River and Tributaries
Feasibility Report and Environmental Assessment
Volume 4 - Combined Plan

Combined Plan

Chicago District, U.S. Army Corps of Engineers

January 2011

Figure 3



NED MEASURES

- Floodwater Storage Site
- Structure Modification
- Road Raise / Bridge Modification
- Flood Protection
- Channel Improvement

NER MEASURES

- Ecosystem Restoration Site
- Dam Removal Site

GENERAL MAP SYMBOLS

- Streams
- Highways
- County Boundaries
- Subwatersheds
- Existing Natural Areas

0 0.45 0.9 Miles

US Army Corps of Engineers
Chicago District

Upper Des Plaines River and Tributaries
Feasibility Report and Environmental Assessment
Volume 4 - Combined Plan

Combined Plan

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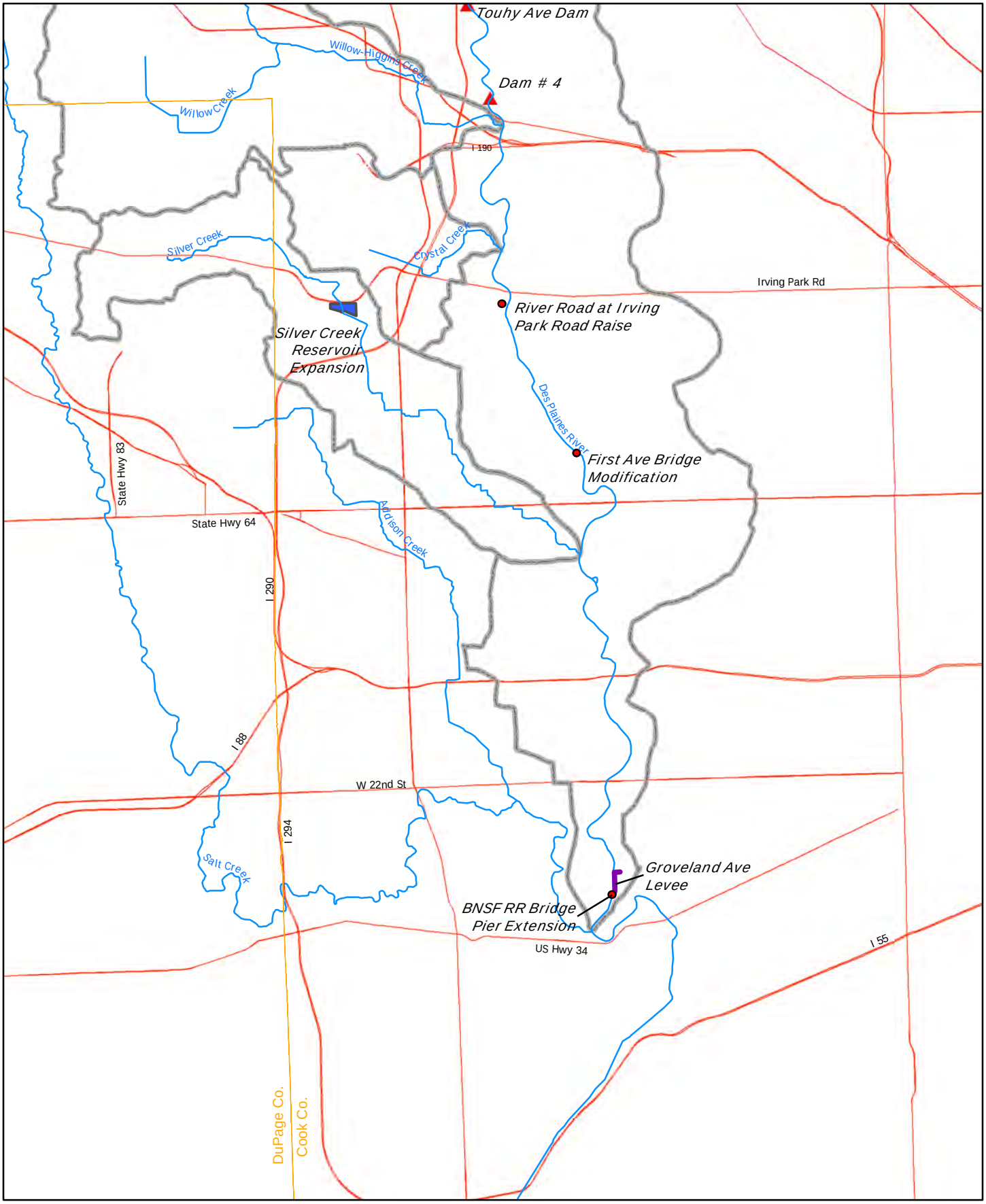
January 2011

Figure 4



NED MEASURES

- Floodwater Storage Site
- Structure Modification
- Road Raise / Bridge Modification
- Flood Protection
- Channel Improvement

NER MEASURES

- Ecosystem Restoration Site
- Dam Removal Site

GENERAL MAP SYMBOLS

- Streams
- Highways
- County Boundaries
- Subwatersheds
- Existing Natural Areas

0 0.5 1 Miles

US Army Corps of Engineers
Chicago District

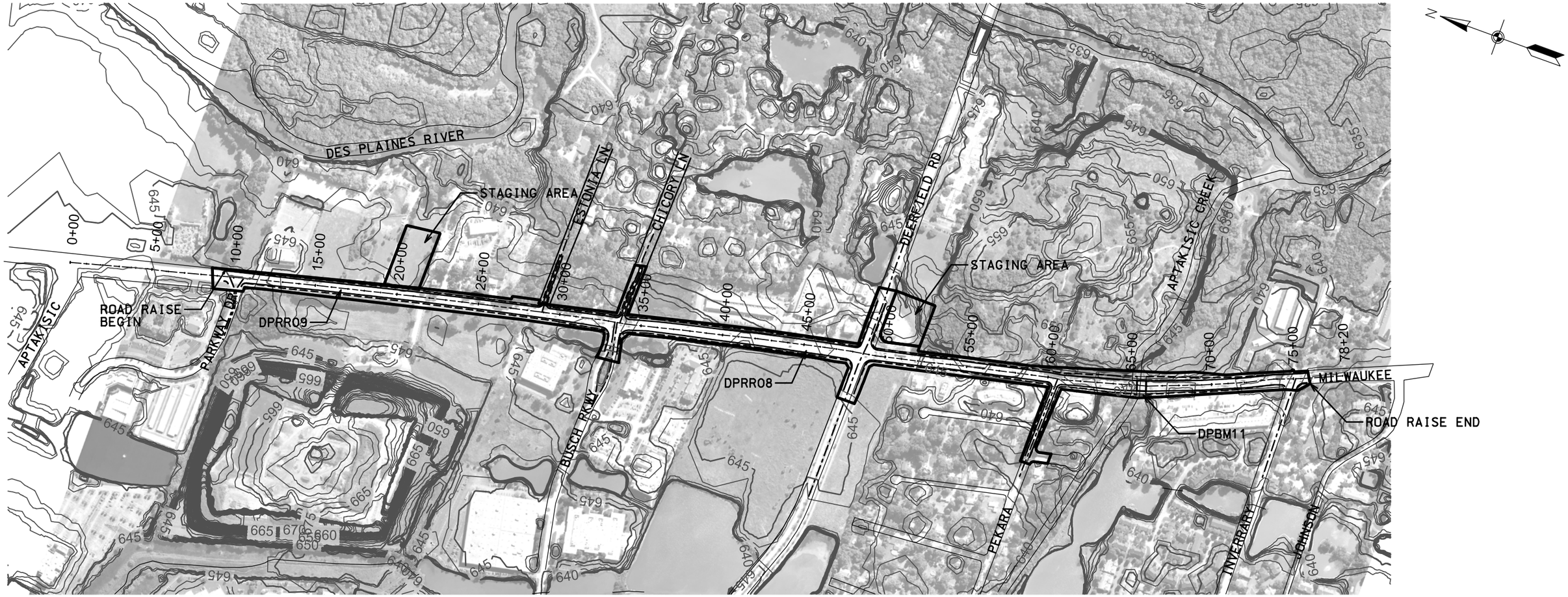
Upper Des Plaines River and Tributaries
Feasibility Report and Environmental Assessment
Volume 4 - Combined Plan

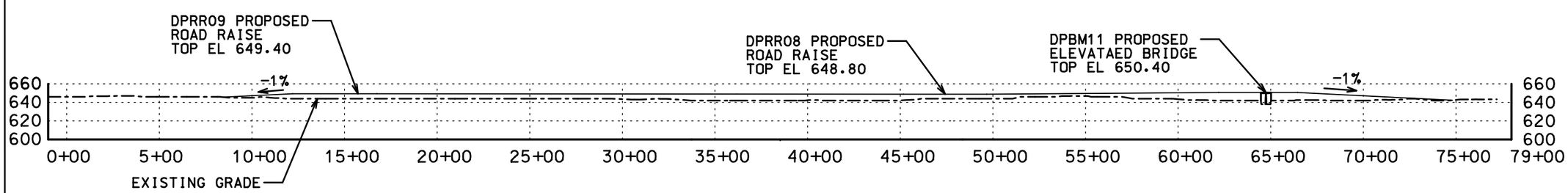
Combined Plan

Chicago District, U.S. Army Corps of Engineer

January 2011

Figure 5





MILWAUKEE AVE PROPOSED BRIDGE MODIFICATION AND ROAD RAISE'S CENTERLINE PROFILE

NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.)
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.

FEE AREA= 22.14 AC

TEMPORARY EASEMENT= 3.45 AC

600 300 0 600 1200

1 INCH = 600 FEET

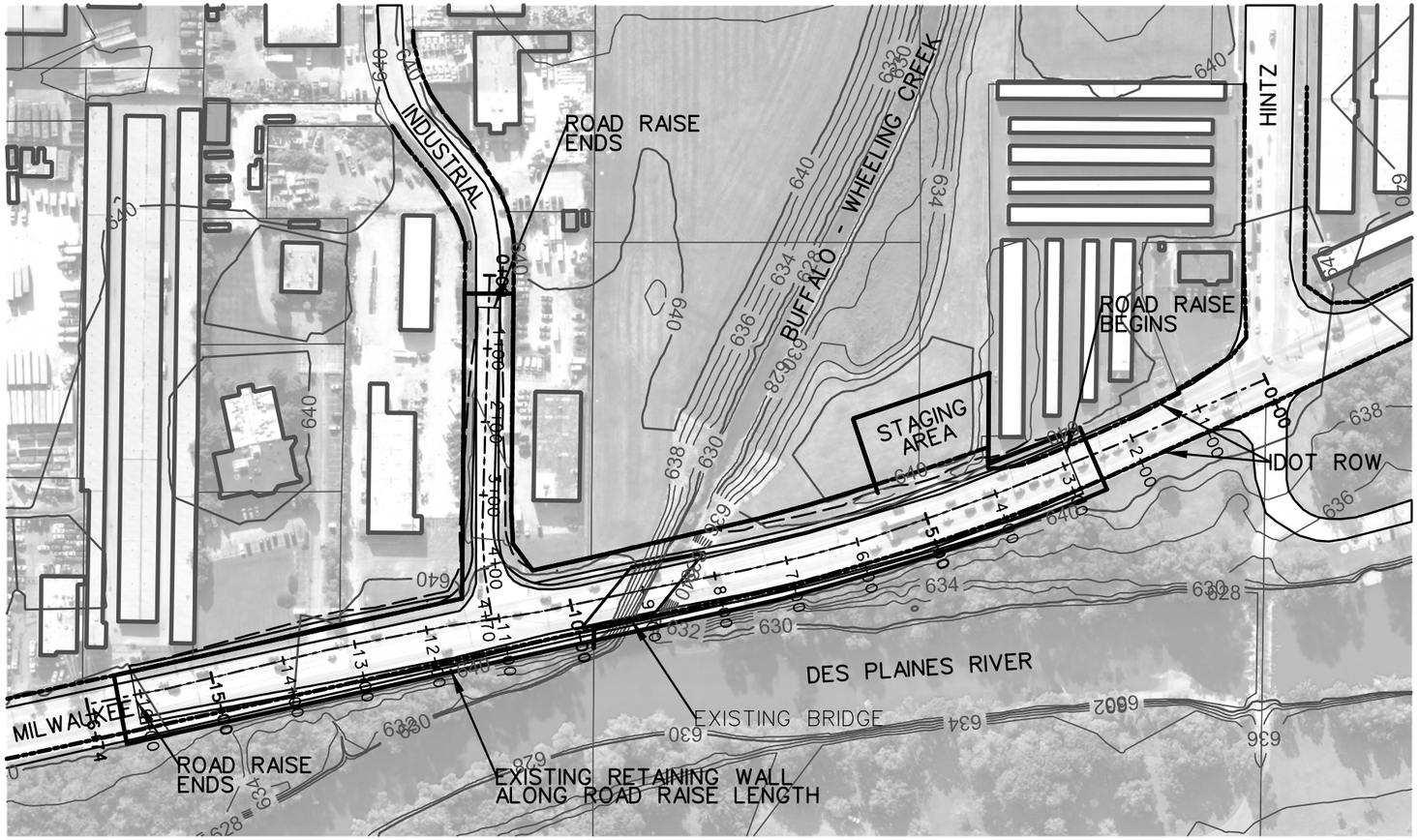
U.S. Army Corps of Engineers
Chicago District

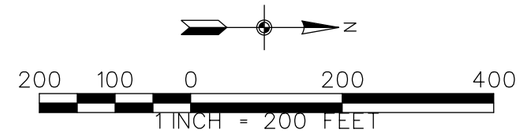
UPPER DES PLAINES RIVER AND TRIBUTARIES
FEASIBILITY REPORT
AND ENVIRONMENTAL ASSESSMENT
VOLUME 2 – NED PLAN

DPRR09, DPRR08, AND DPBM11
CONCEPTUAL SITE PLAN
DEERFIELD, LAKE COUNTY, IL

SCALE:	DATE:	DRAWING CODE:
AS-SHOWN	JUNE 2010	DPBM04_Siteplan.dgn

Figure 6 - River Road and Milwaukee Road Raise and Bridge Mod Layout





NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENT CONDITIONS EXISTING AT THAT TIME. REFER TO THE CIVIL APPENDIX FOR THE SURVEY DATA SOURCES.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.

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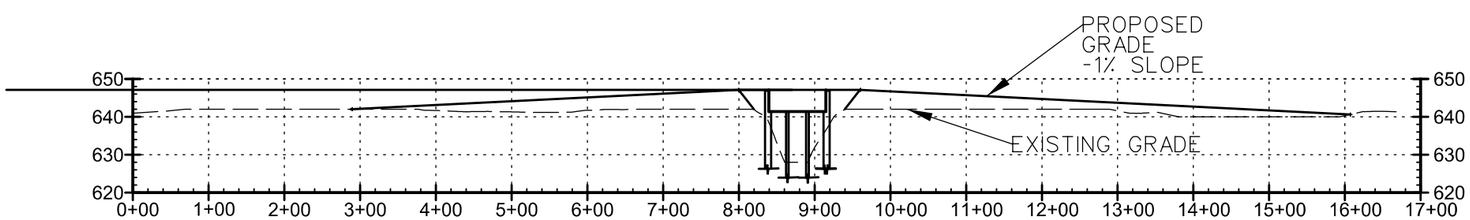
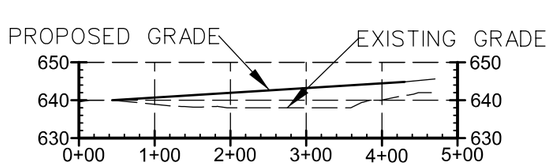
TEMPORARY EASEMENT AREA=0.39 AC



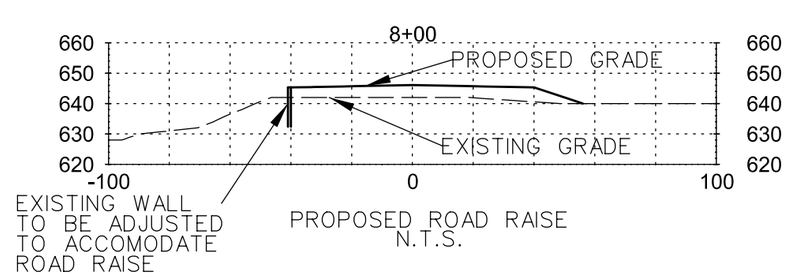
MILWAUKEE AVE PROPOSED ROAD RAISED CENTERLINE PROFILE

VERTICAL SCALE: 1" = 40'



INDUSTRIAL LN PROPOSED ROAD RAISED CENTERLINE PROFILE

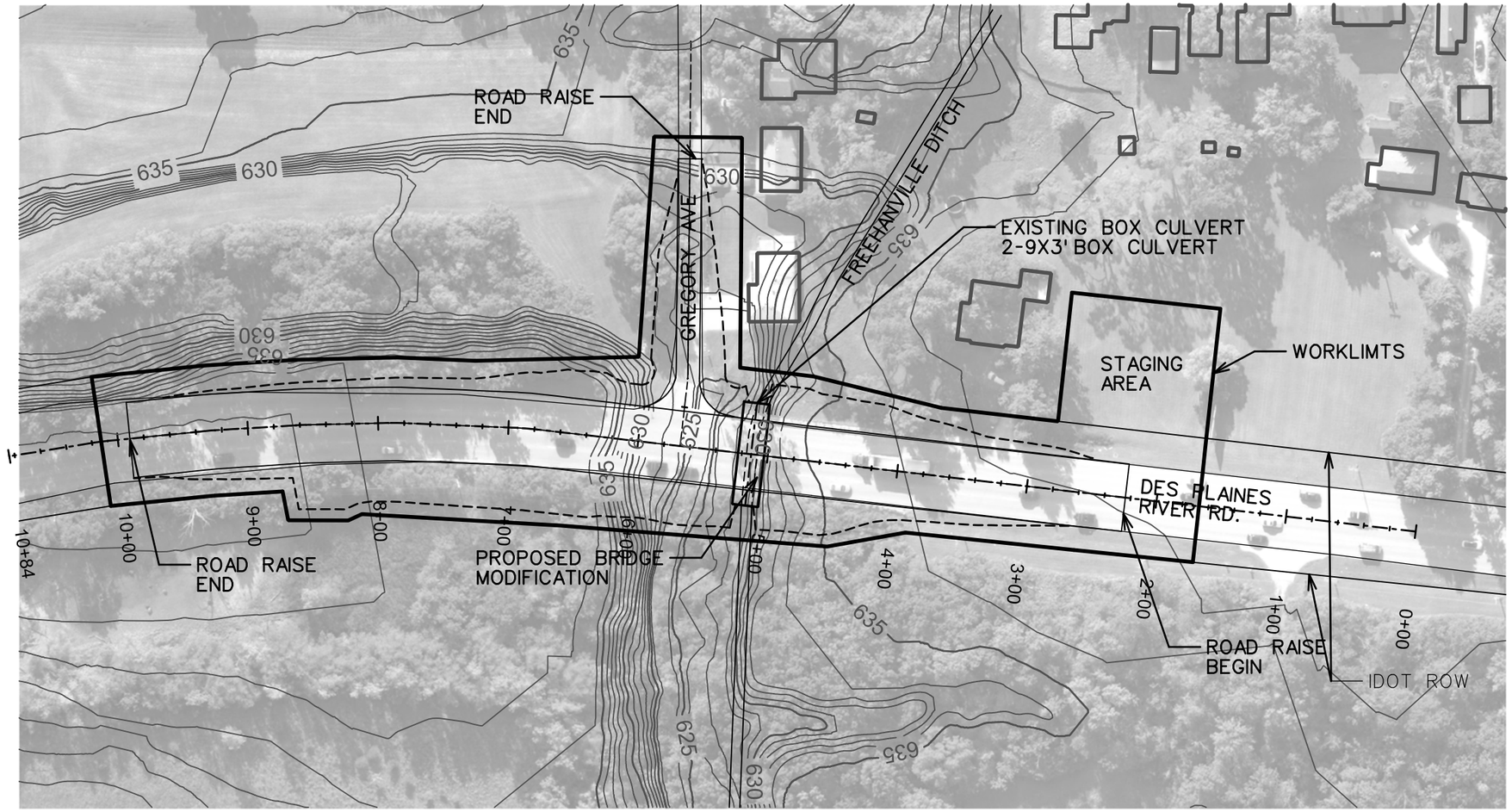
VERTICAL SCALE: 1" = 40'

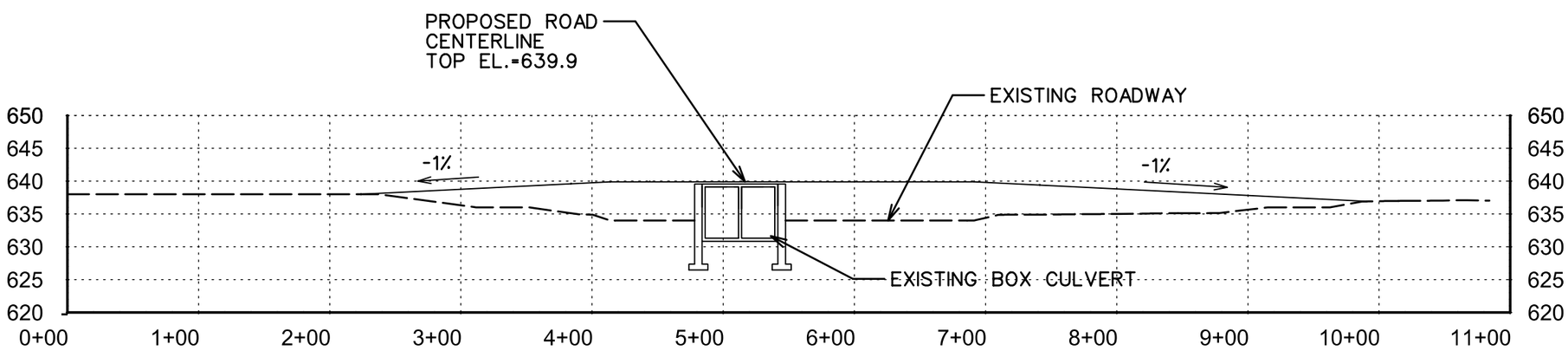


PROPOSED ROAD RAISE
N.T.S.

U.S. Army Corps of Engineers Chicago District	UPPER DES PLAINES RIVER AND TRIBUTARIES FEASIBILITY REPORT AND ENVIRONMENTAL ASSESSMENT VOLUME 2 - NED PLAN	
DPBM10 BRIDGE & ROAD RAISE CONCEPTUAL SITE PLAN WHEELING, COOK COUNTRY, IL		
SCALE: AS-SHOWN	DATE: APRIL 2010	DRAWING CODE: DPBM10_Siteplan.dgn

Figure 7 - Milwaukee Road Bridge Modification at Wheeling-Buffalo Creek Layout





DES PLAINES RIVER ROAD PROPOSEED BRIDGE MODIFICATION AND ROAD RAISE CENTERLINE PROFILE

VERTICAL SCALE: 1IN=20FT

NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME. REFER TO THE CIVIL APPENDIX FOR THE SURVEY DATA SOURCES.

2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.)

3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.

FEE AREA = 2.48 AE
TEMPORARY EASEMENT AREA = 0.26 AE

100 50 0 100 200

1 INCH = 100 FEET

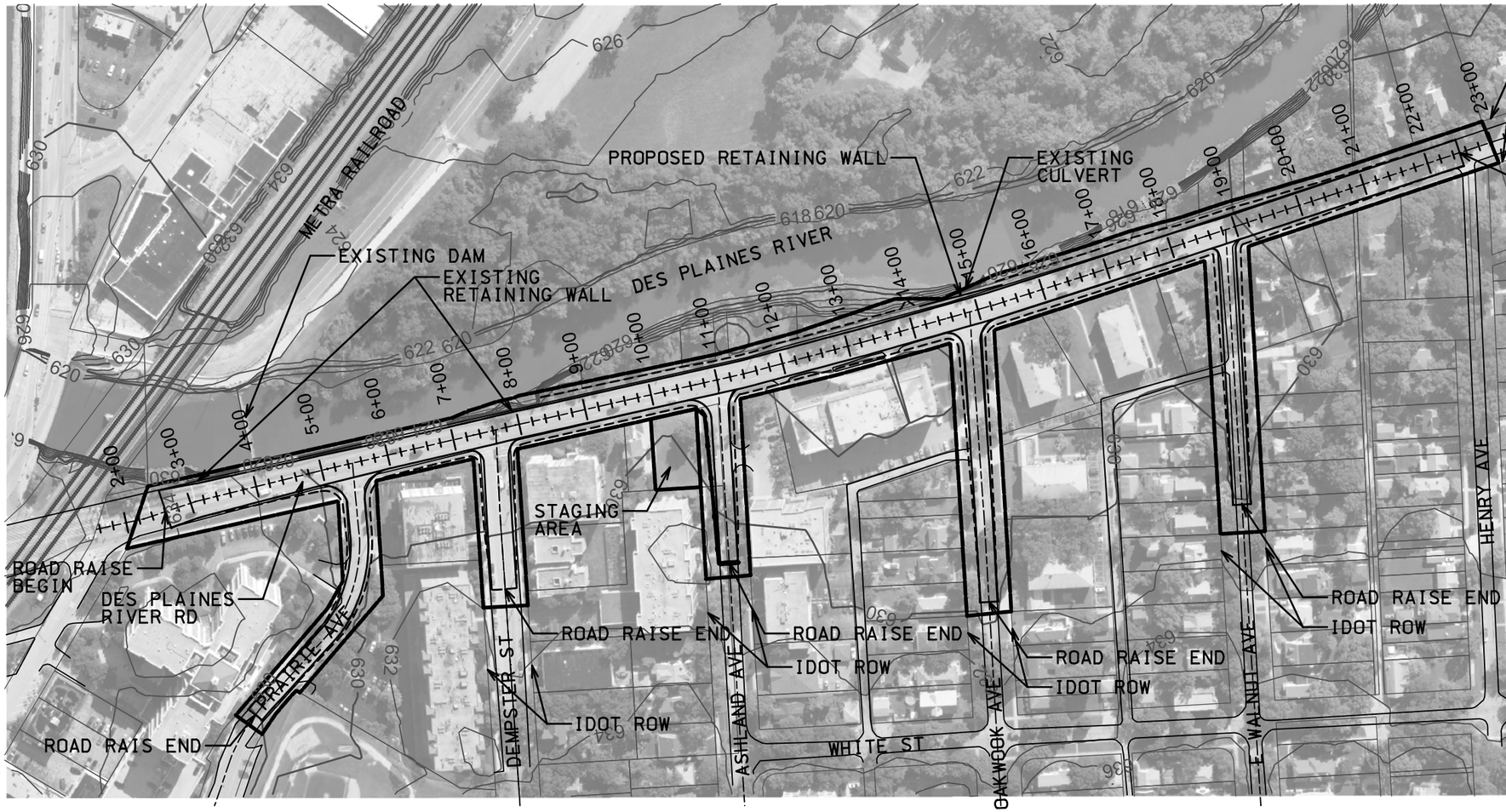
U.S. Army Corps of Engineers
Chicago District

UPPER DES PLAINES RIVER AND TRIBUTARIES
FEASIBILITY REPORT
AND ENVIRONMENTAL ASSESSMENT
VOLUME 2 – NED PLAN

DPBM08 BRIDGE AND ROAD RAISE
CONCEPTUAL SITE PLAN
WHEELING, COOK COUNTY, IL

SCALE:	DATE:	DRAWING CODE:
1" = 100'	JUNE 2010	DPBM08_Siteplan.dgn

Figure 8 - River Road Bridge Modification at Feehanville Ditch Layout



LEGEND
------ ROADRAISE TOE
-·-·-·- ROADWAY CENTERLINE
------ IDOT ROW

NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME.
2. ALL COORDINATES SHOWN ARE REFRENCED TO THE ILLINOS STATE PLANE COORDINATE SYSTEM EAST ZONE NORTH AMERICAN DATUM OF 1983 (NAD83) U.S.FEET.
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.

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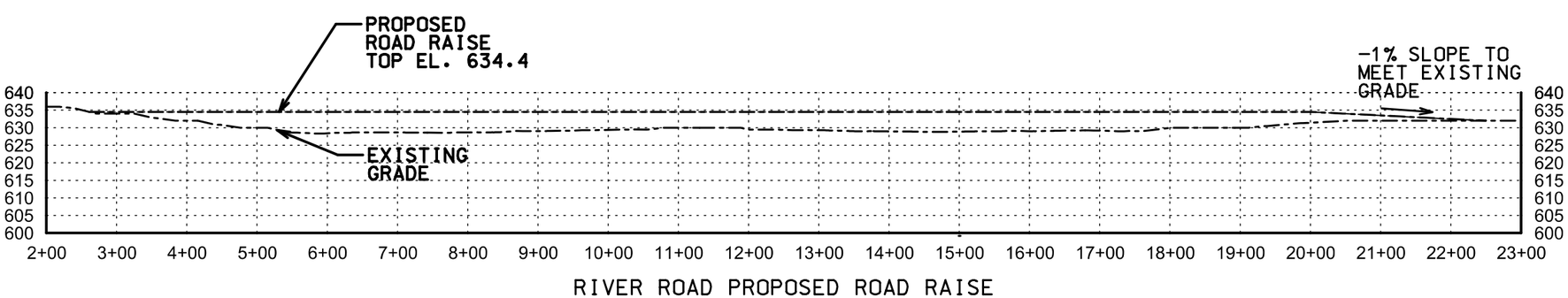
TEMPORARY EASEMENT = 0.17 AC



200′ 100′ 0 200′
SCALE: 1′′= 200′-0″

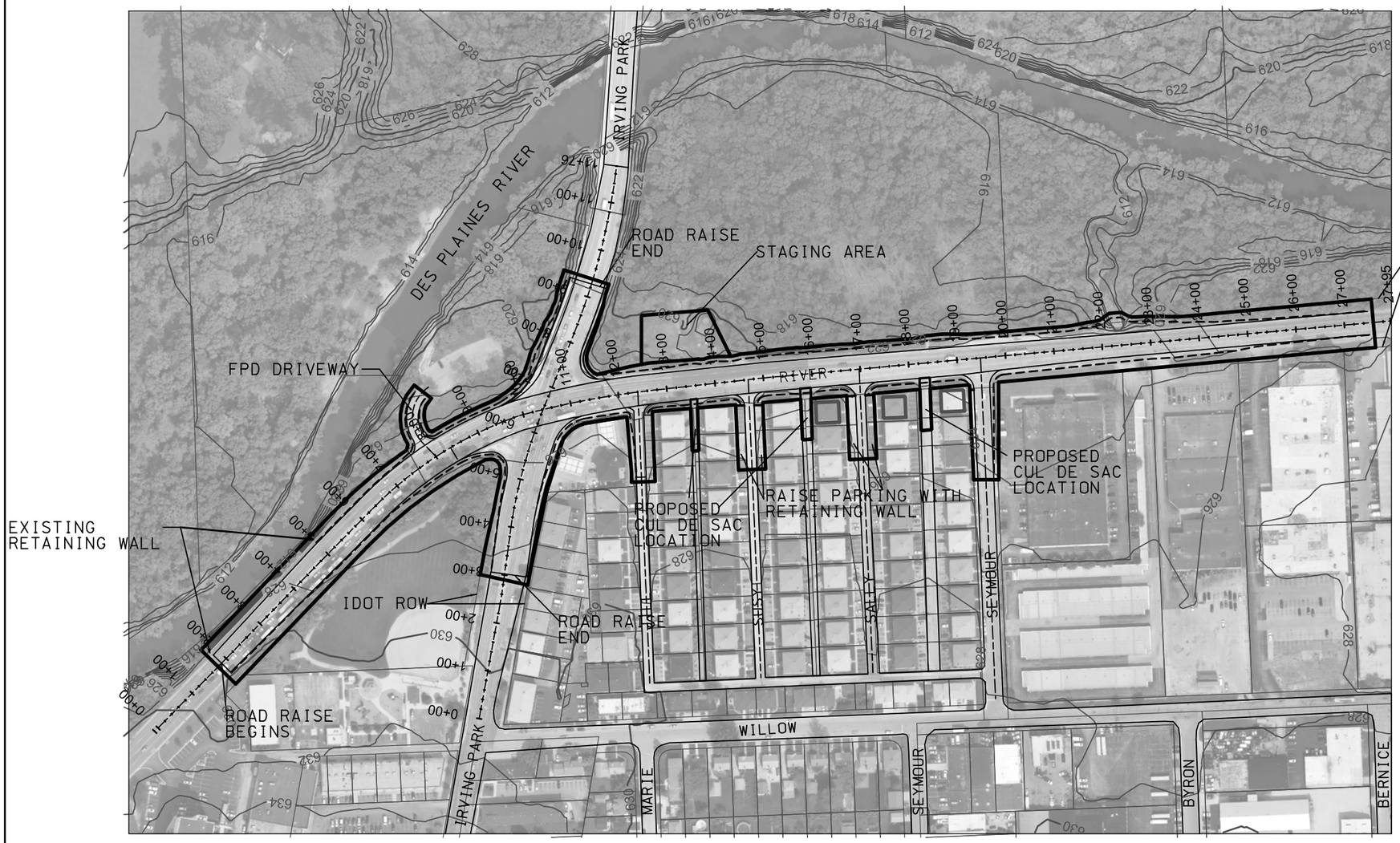
U.S. Army Corps of Engineers
Chicago District

UPPER DES PLAINES RIVER AND TRIBUTARIES
FEASIBILITY REPORT
AND ENVIRONMENTAL ASSESSMENT
VOLUME 2 - NED PLAN

DPRR05 ROAD RAISE
CONCEPTUAL SITE PLAN
DES PLAINES, COOK COUNTY , IL

SCALE:	DATE:	DRAWING CODE:
1"=200'	JUNE 2010	DPRR05_Siteplan.DGN

Figure 9 - River Road Raise at Ashland Layout



250′ 125′ 0 250′

SCALE: 1′′= 250′-0″

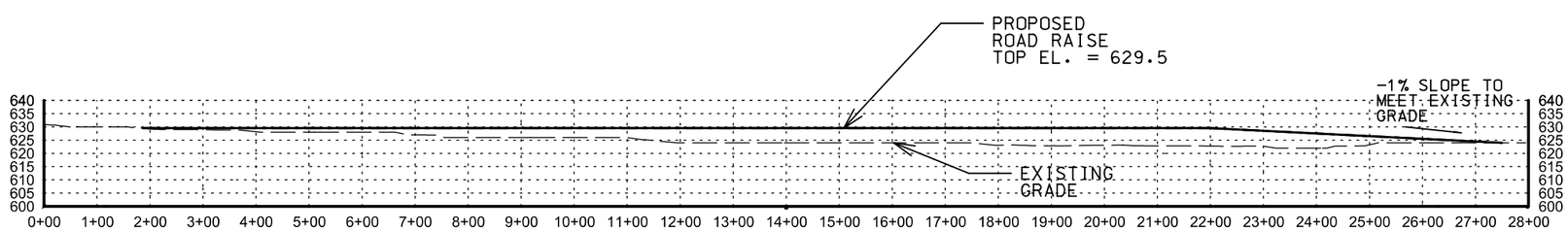
LEGEND

- ROADRAISE TOE
- ROADWAY CENTERLINE
- IDOT ROW

NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME.
2. ALL COORDINATES SHOWN ARE REFRENCED TO THE ILLINOS STATE PLANE COORDINATE SYSTEM EAST ZONE NORTH AMERICAN DATUM OF 1983 (NAD83) U.S.FEET.
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.

FEE AREA = 8.3 AC
TEMPORARY EASEMENT = 0.36 AC



RIVER ROAD PROPOSED ROAD RAISE

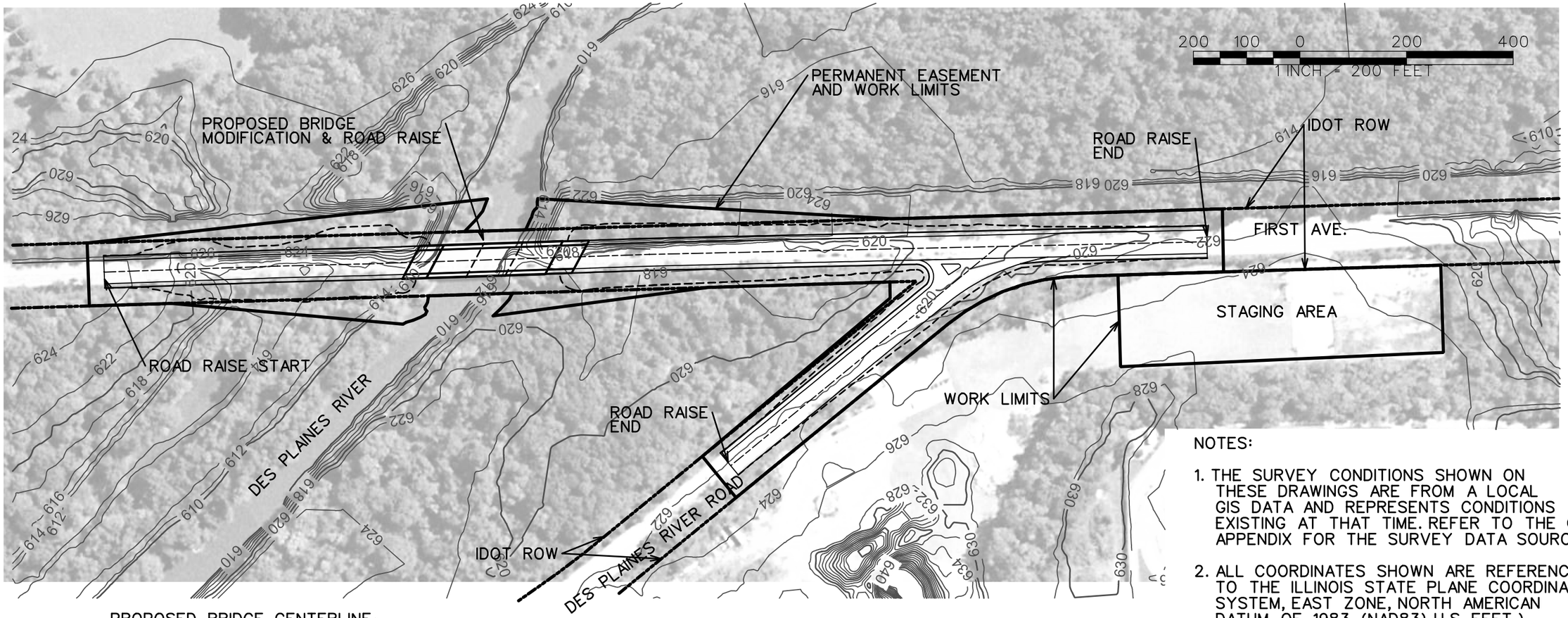
U.S. Army Corps of Engineers
Chicago District

UPPER DES PLAINES RIVER AND TRIBUTARIES
FEASIBILITY REPORT
AND ENVIRONMENTAL ASSESSMENT
VOLUME 2 – NED PLAN

DPRR03 ROAD RAISE
CONCEPTUAL SITE PLAN
SCHILLER PARK, LAKE COUNTY, IL

SCALE:	DATE:	DRAWING CODE:
1″ = 250′	JUNE 2010	DPBM04_Siteplan.dgn

Figure 10 - River Road Raise at Irving Park Layout

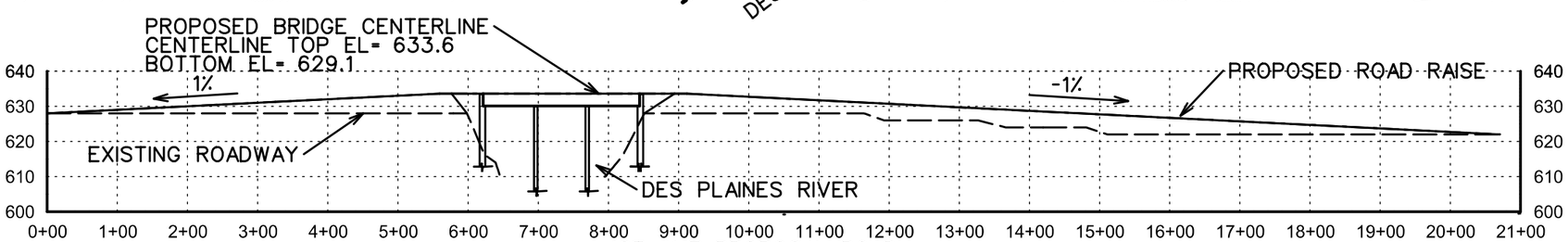


NOTES:

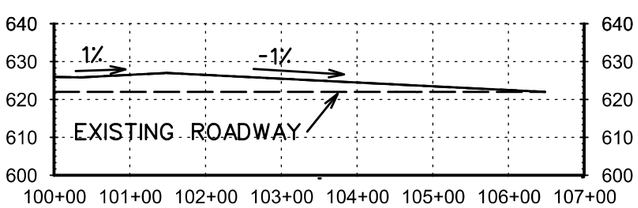
1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME. REFER TO THE CIVIL APPENDIX FOR THE SURVEY DATA SOURCES.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.)
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.

FEE AREA= 8.7 AC

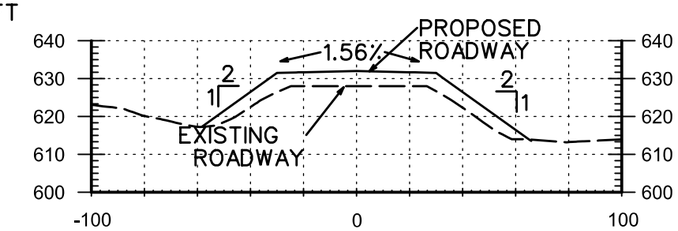
TEMPORARY EASEMENT AREA= 2.3 AC



1ST AVE PROPOSAL ROAD RAISE CENTERLINE PROFILE
VERTICAL SCALE: 1IN = 40 FT



RIVER ROAD PROPOSED ROAD RAISE CENTERLINE PROFILE
VERTICAL SCALE: 1IN = 40FT



PROPOSED ROAD RAISE TYPICAL SECTION
NTS

U.S. Army Corps of Engineers Chicago District

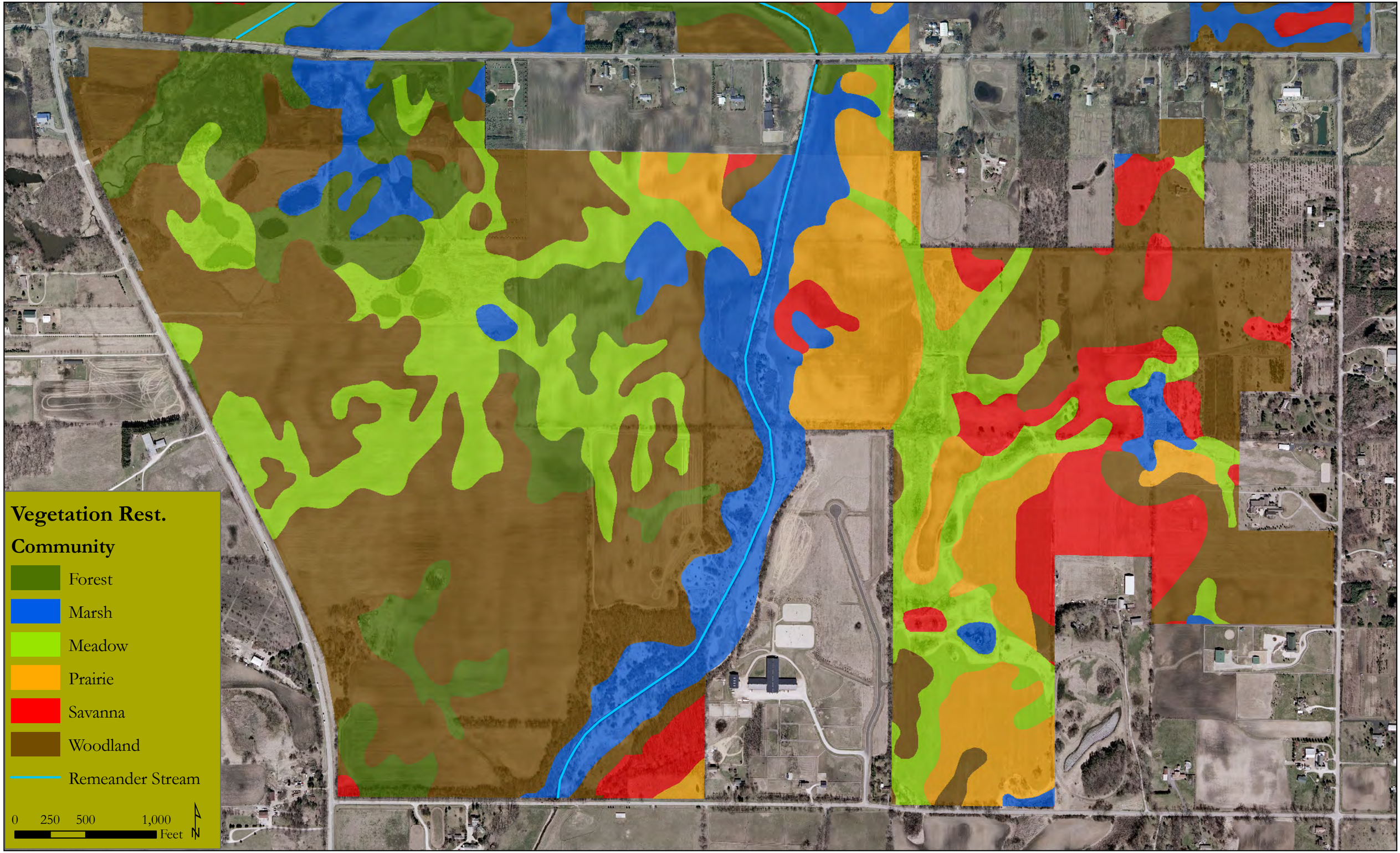
UPPER DES PLAINES RIVER AND TRIBUTARIES
FEASIBILITY REPORT
AND ENVIRONMENTAL ASSESSMENT
VOLUME 2 – NED PLAN

DPBM04 BRIDGE & ROAD RAISE
CONCEPTUAL SITE PLAN
LEYDEN, COOK COUNTY IL

SCALE:	DATE:	DRAWING CODE:
AS-SHOWN	JUNE 2010	DPBM04_Siteplan.dgn

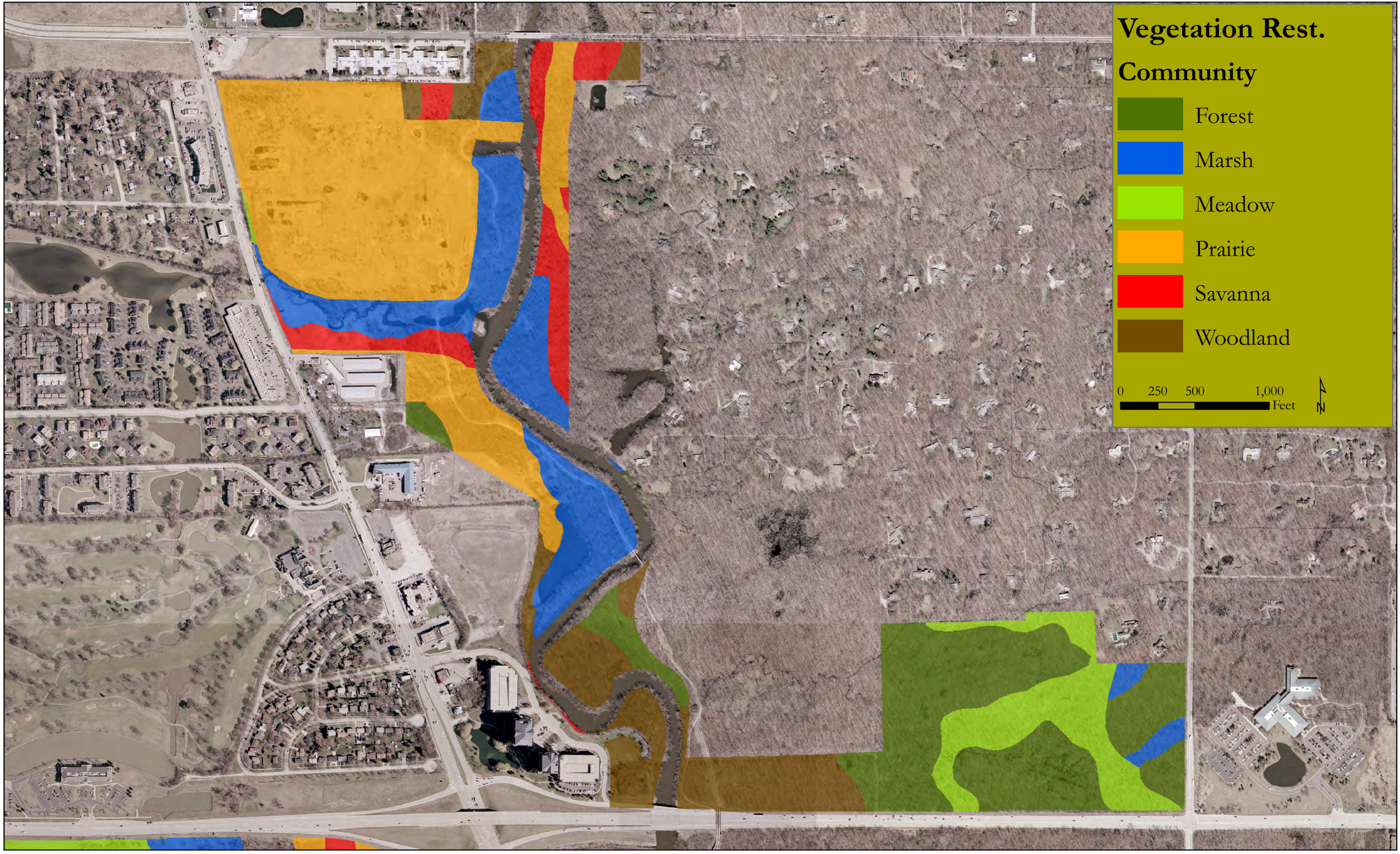
Figure 11 - First Avenue Bridge Modification Layout

Figure 12 - Antioch Aquatic Complex Layout



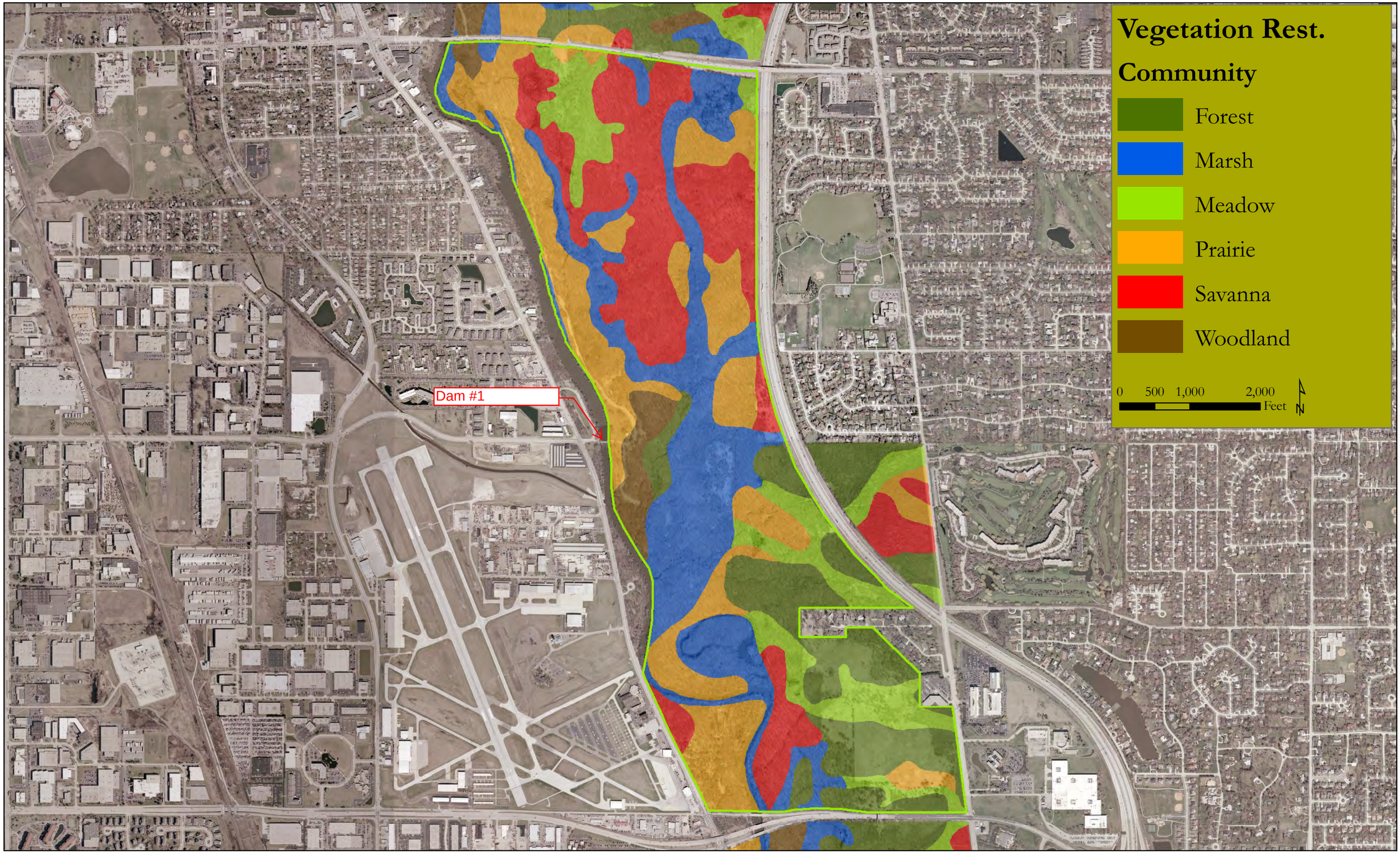
FMV 16MAR2010

Figure 13 - Riverwoods Wet Prairie Layout



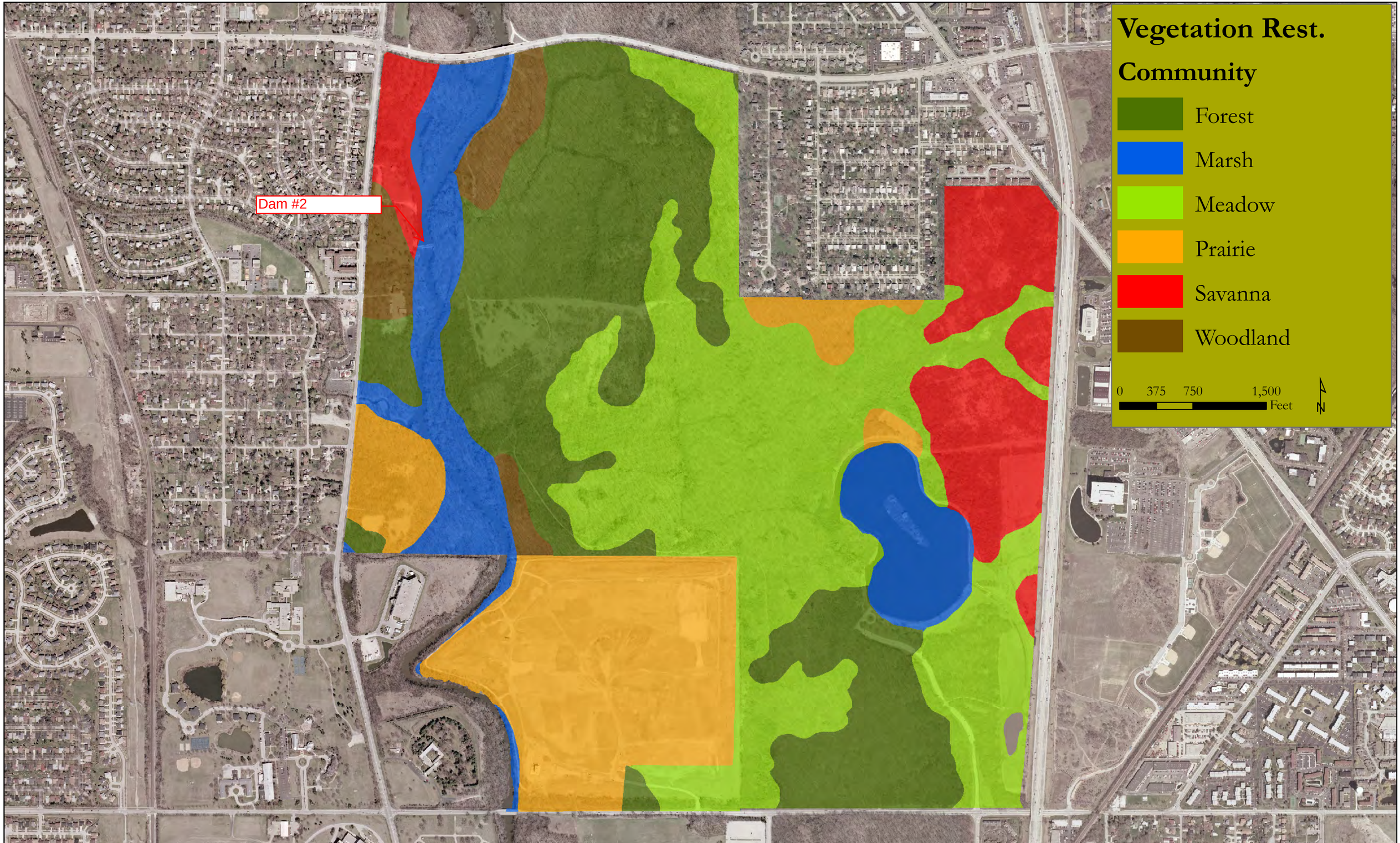
FMV 16MAR2010

Figure 14 - North Brook Marsh Layout



FMV 16MAR2010

Figure 15 - Beck Lake Meadow Layout



FMV 16MAR2010

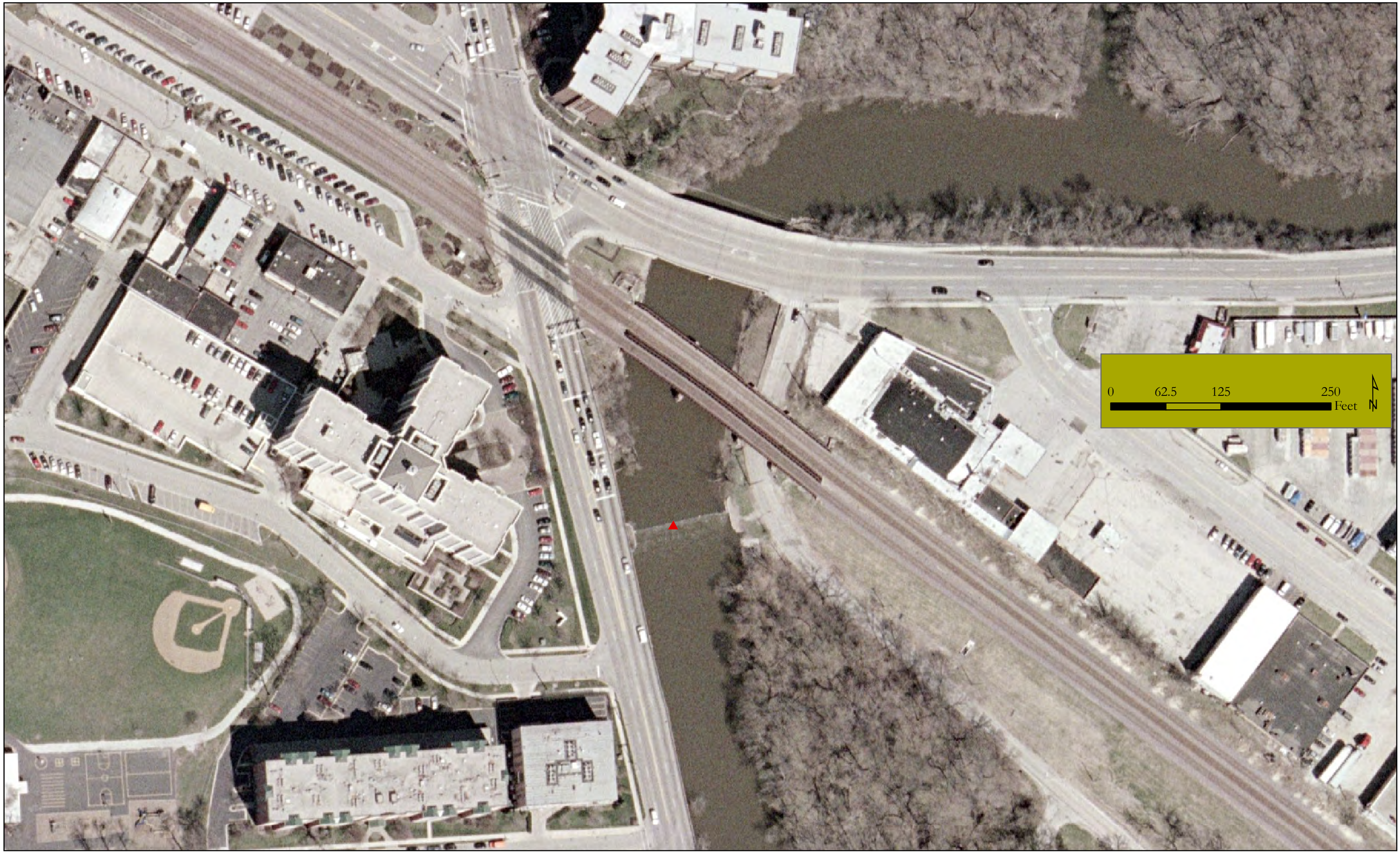
Figure 16 - Dam#1

FMV 16MAR2010

Figure 17 - Dam #2

FMV 16MAR2010

Figure 18 - Dempster Dam



FMV 16MAR2010

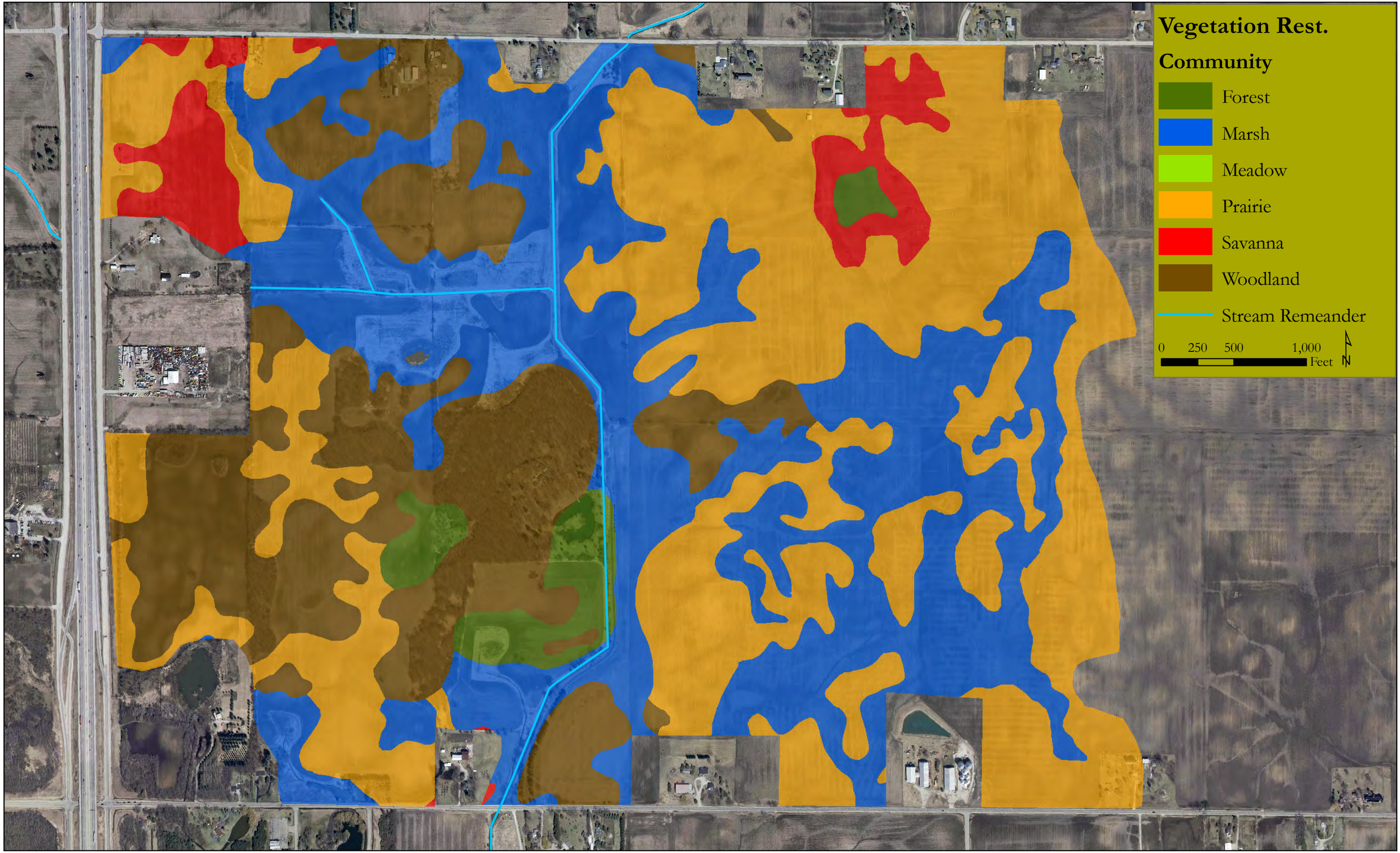
Figure 19 - Touhy Dam

FMV 16MAR2010

Figure 20 - Dam #4

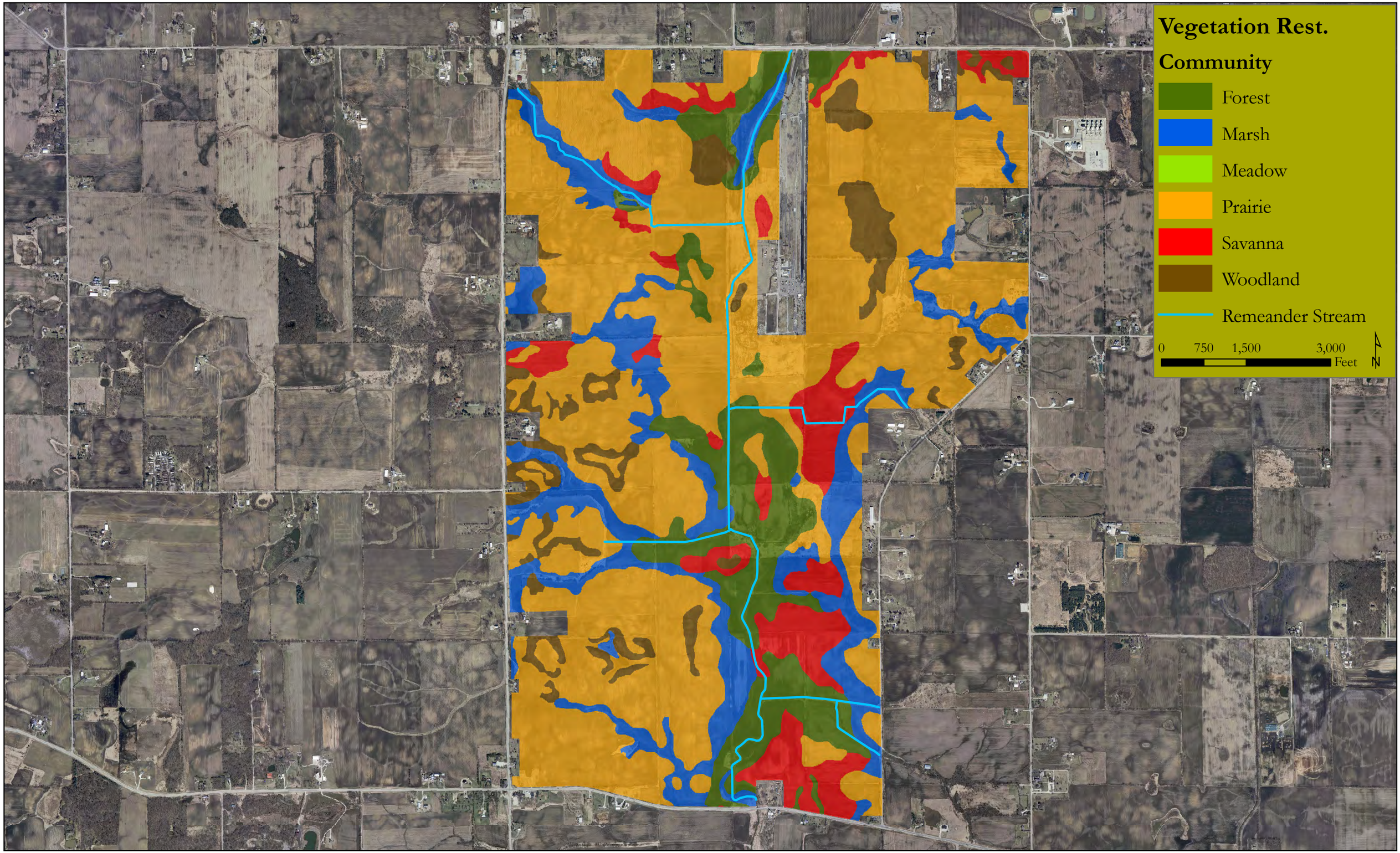
FMV 16MAR2010

Figure 21 - Sturtevant Wet Prairie Layout



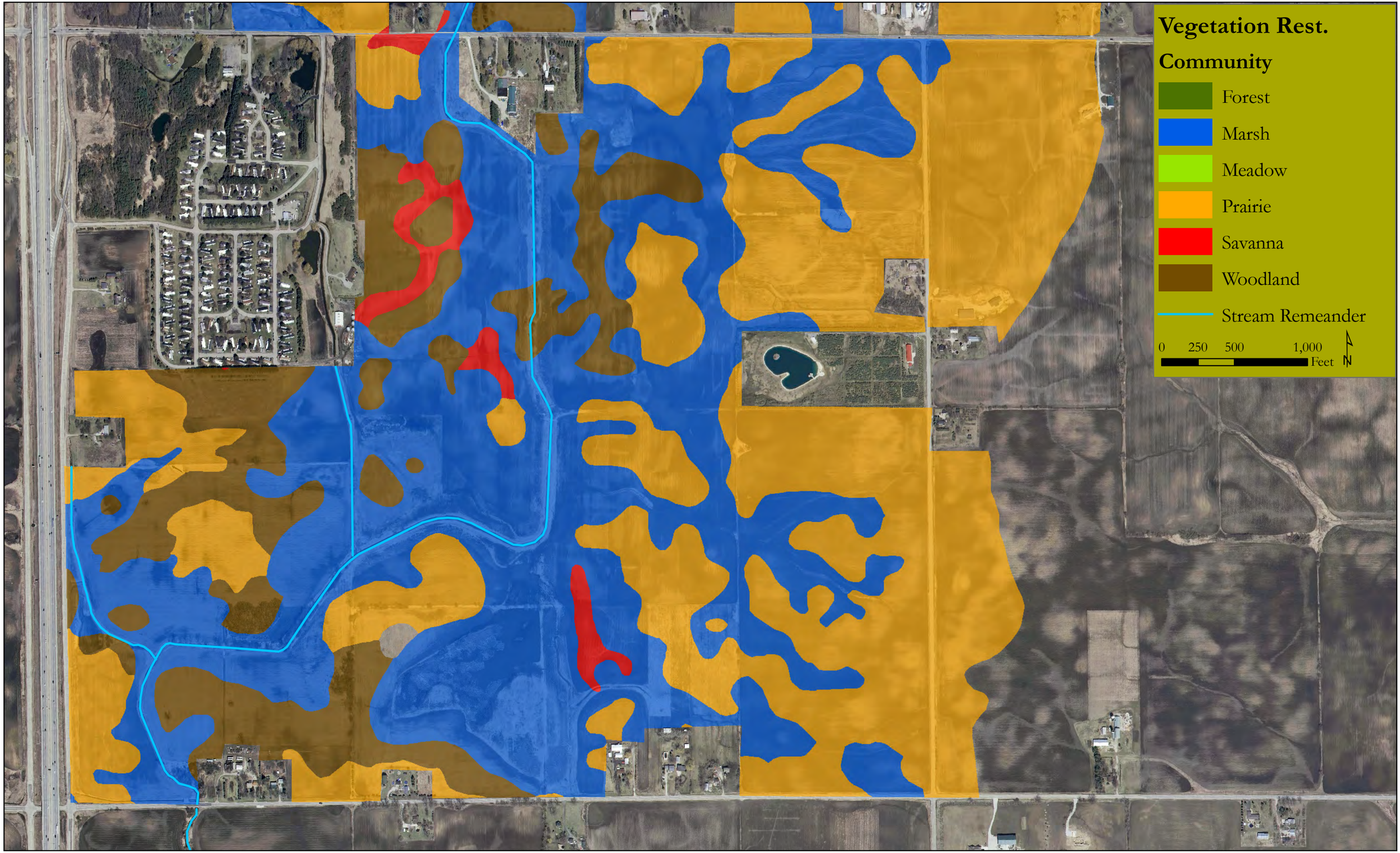
FMV 16MAR2010

Figure 22 - Union Grove Wet Prairie Layout



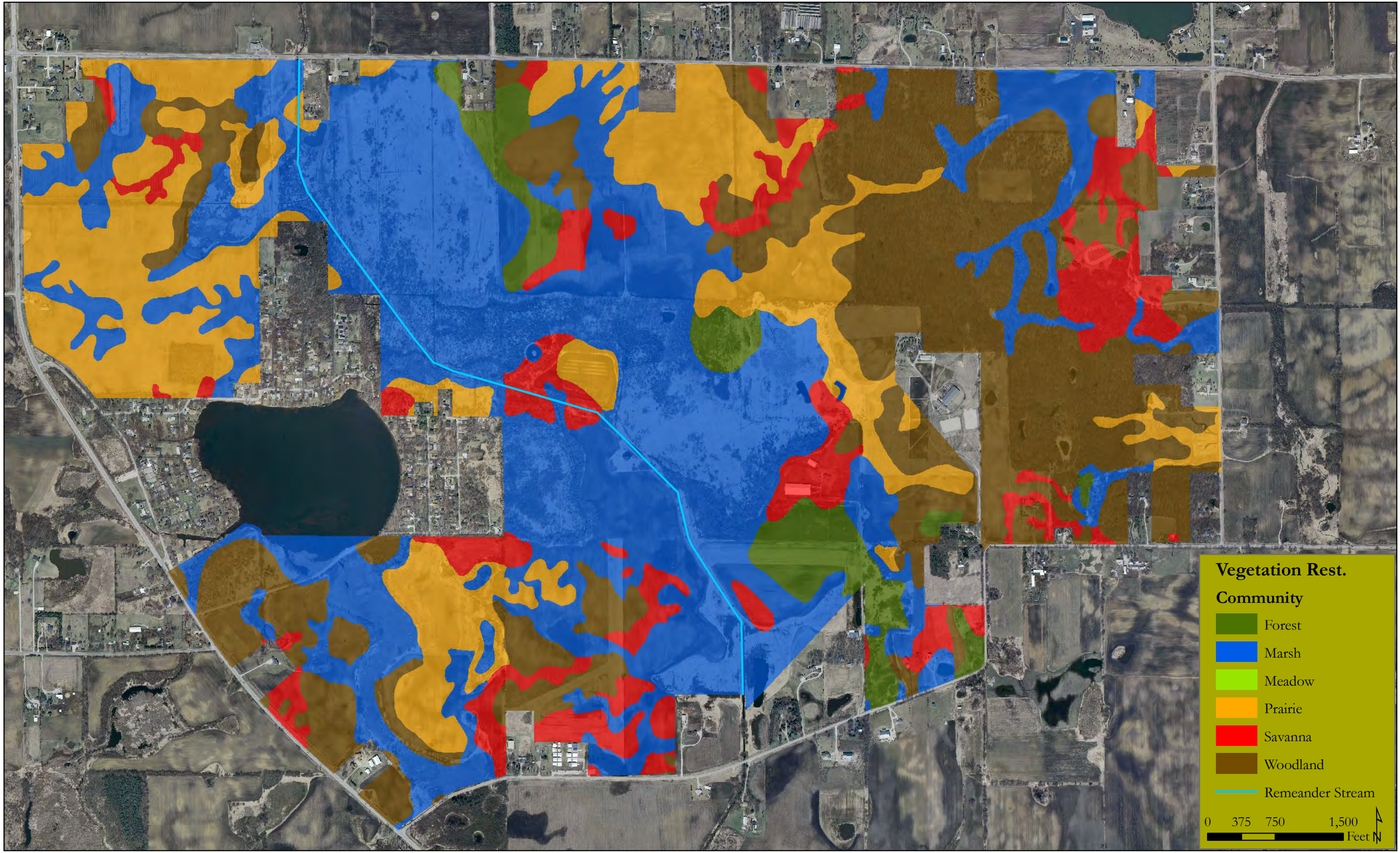
FMV 16MAR2010

Figure 23 - Somers Marsh Layout



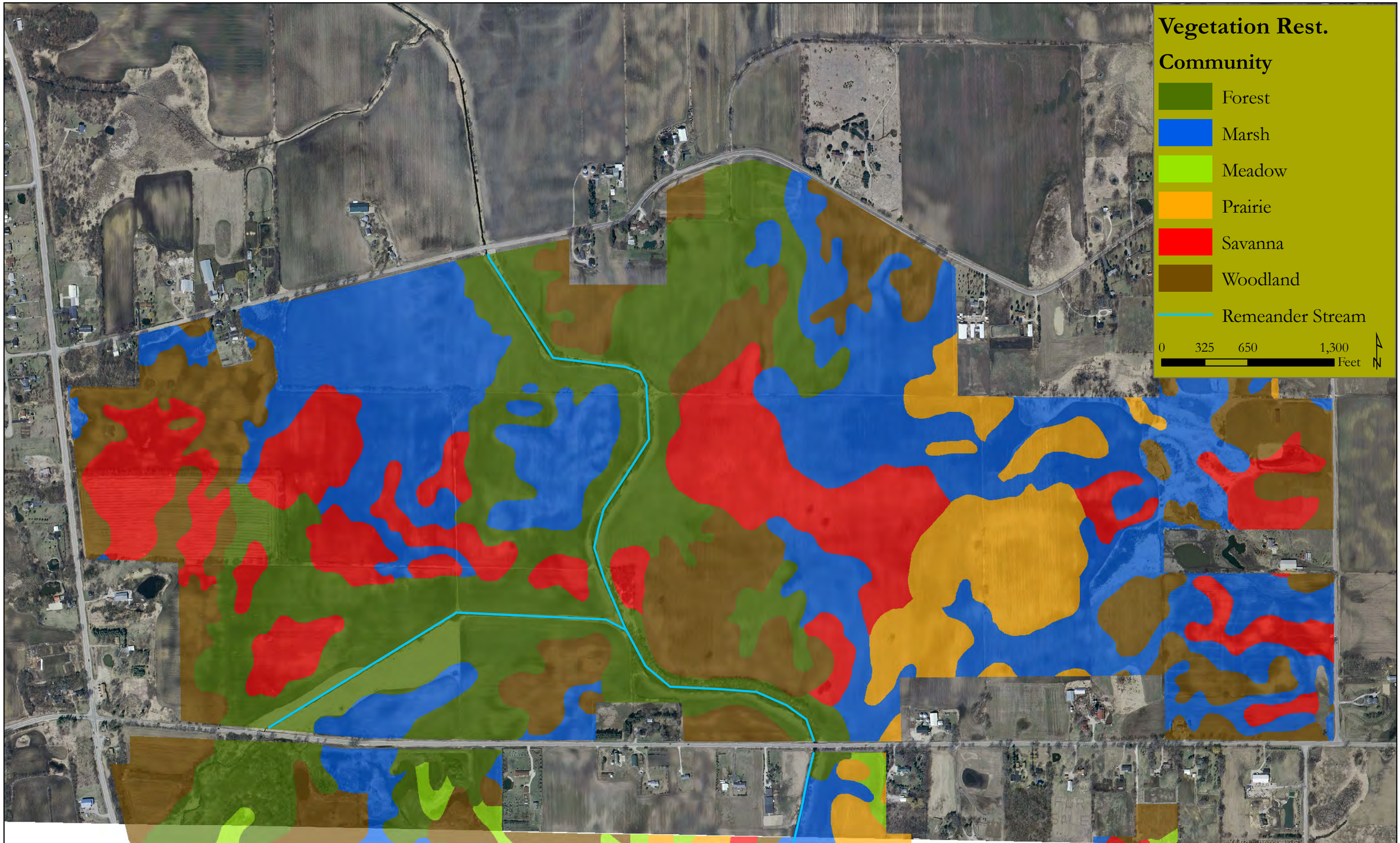
FMV 16MAR2010

Figure 24 - Bristol Marsh Layout

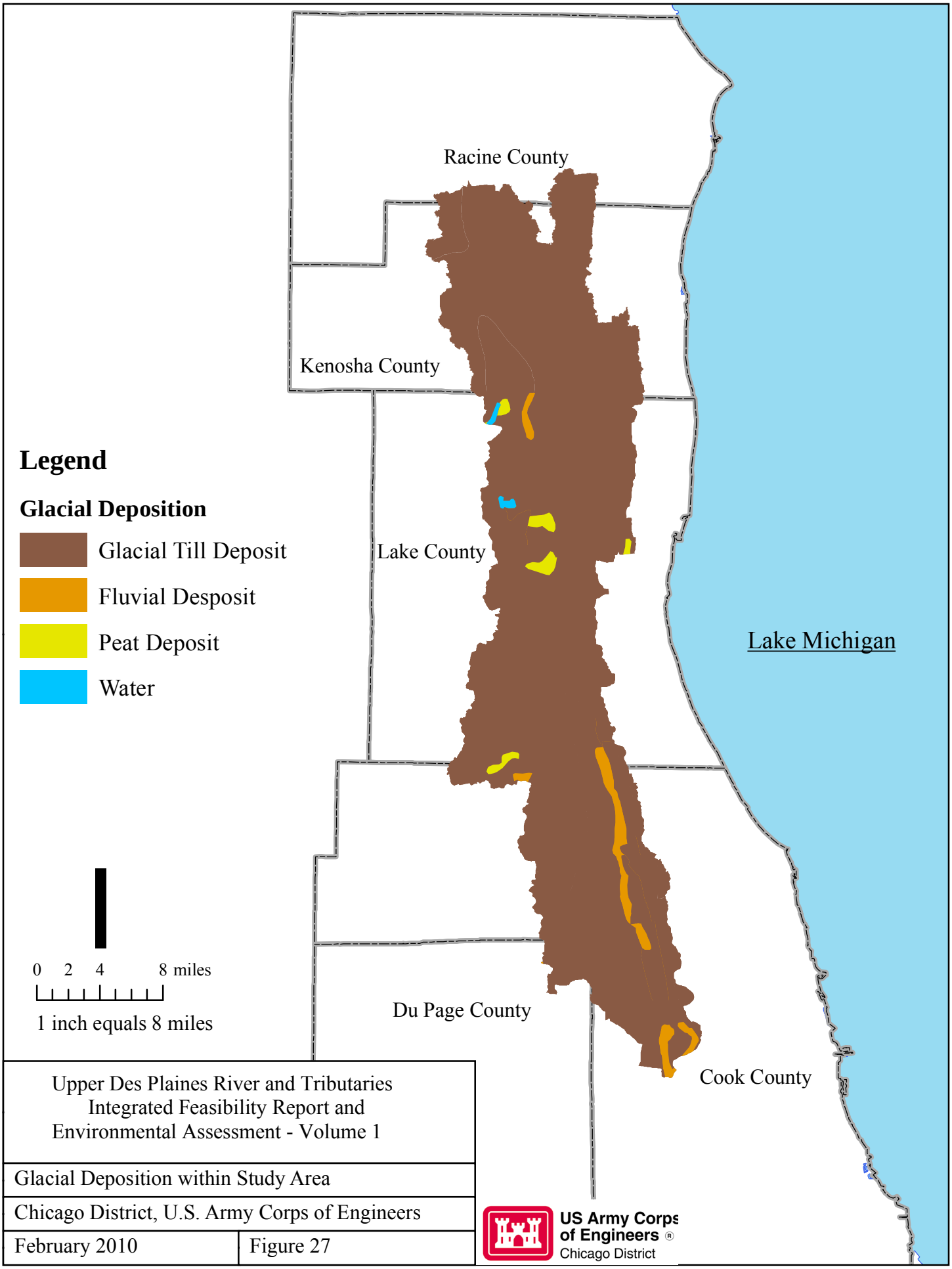


FMV 16MAR2010

Figure 25 - Pikeville Forested Floodplain Layout



FMV 16MAR2010

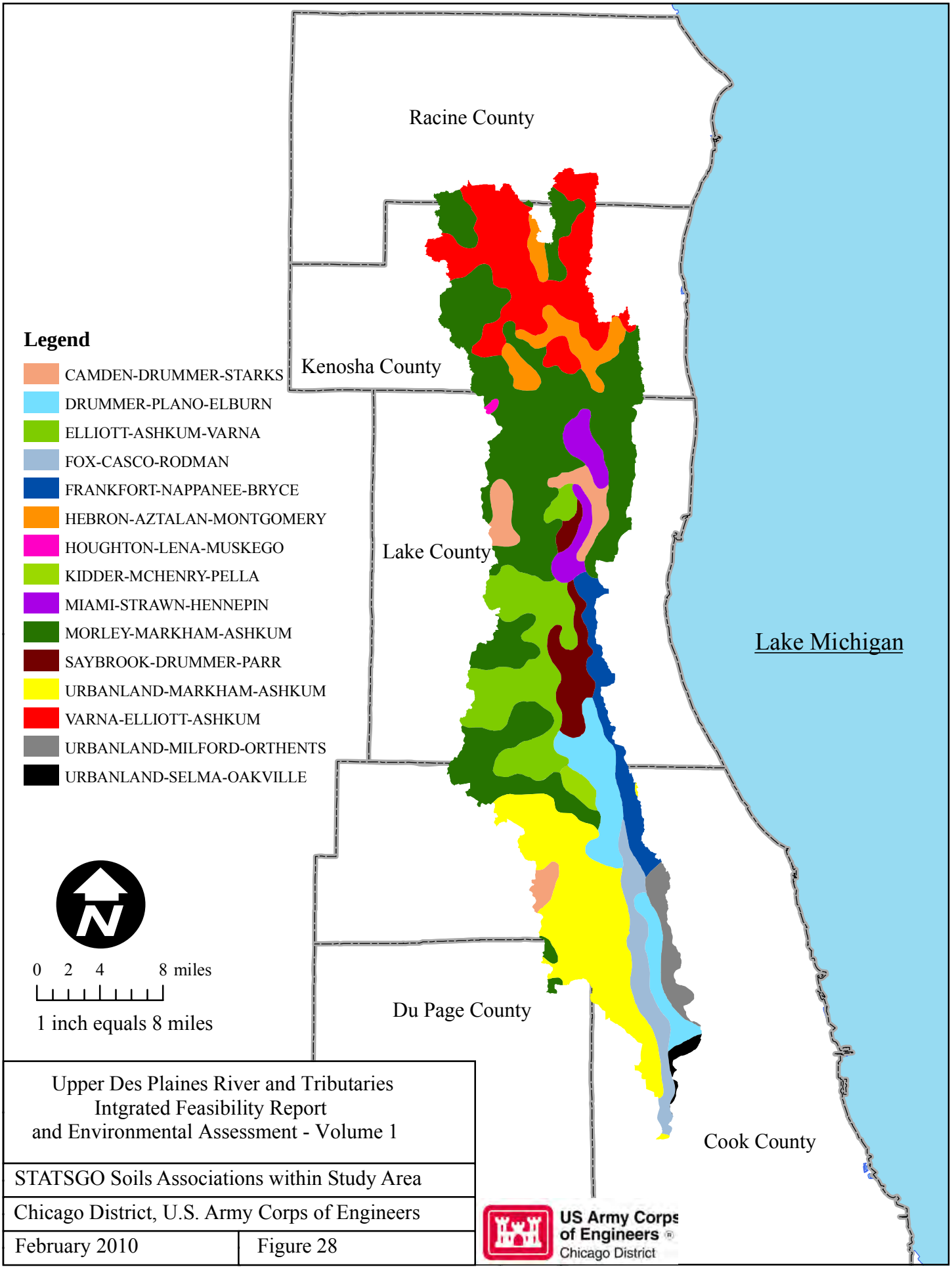


Upper Des Plaines River and Tributaries
Integrated Feasibility Report and
Environmental Assessment - Volume 1

Glacial Deposition within Study Area

Chicago District, U.S. Army Corps of Engineers

February 2010 | Figure 27



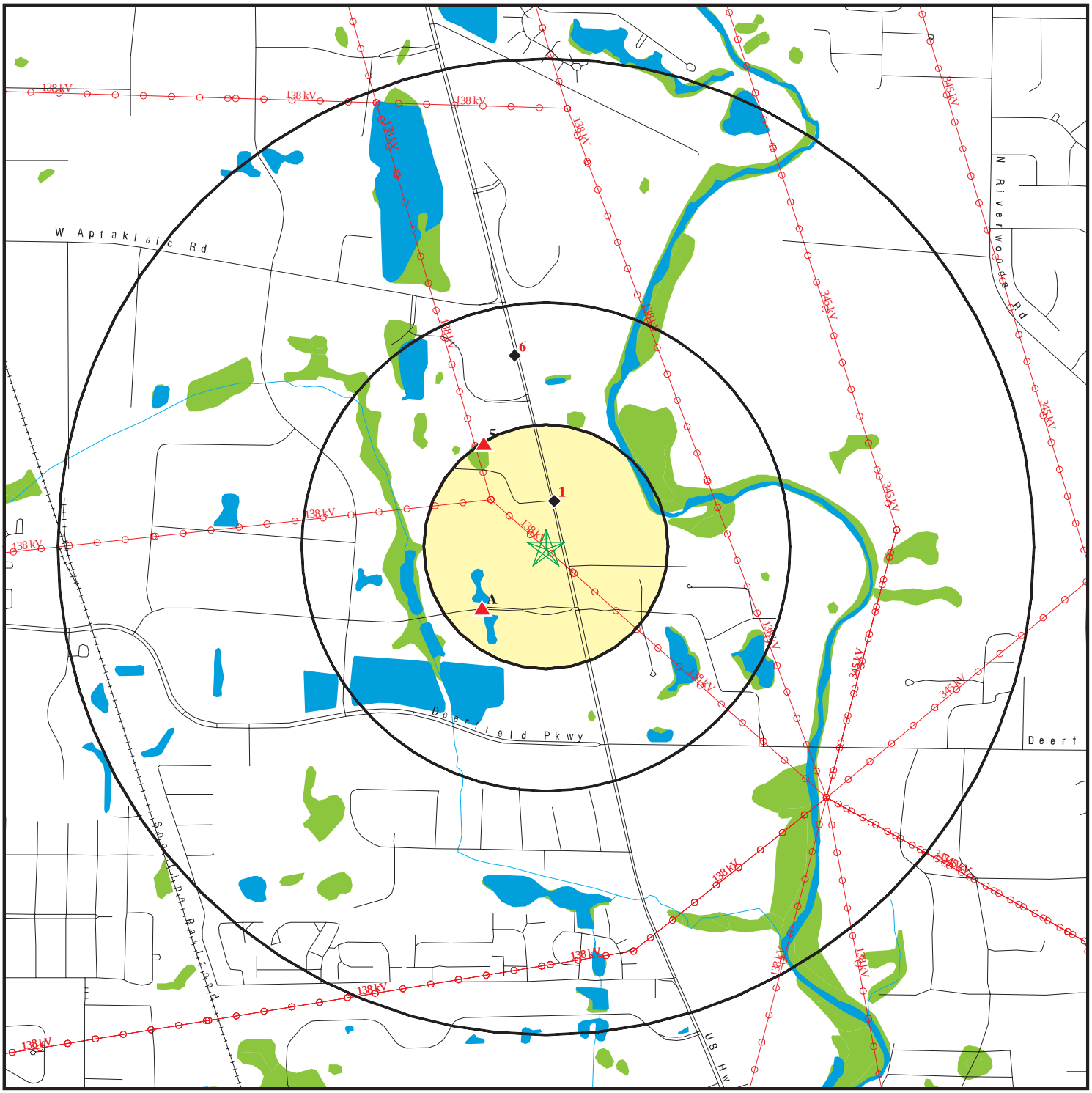
Upper Des Plaines River and Tributaries
Intgrated Feasibility Report
and Environmental Assessment - Volume 1

STATSGO Soils Associations within Study Area

Chicago District, U.S. Army Corps of Engineers

February 2010 | Figure 28

Figure 29 - River Road and Milwaukee Avenue Road Raise Radius Map



- 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
- Oil & Gas pipelines from USGS
- National Wetland Inventory

0 1/4 1/2 1 Miles

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:	River Road and Milwaukee Ave Road Raise	CLIENT:	U.S. Army Corps of Engineers
ADDRESS:	River Road and Milwaukee Ave Road Raise Lincolnshire IL 60069	CONTACT:	Casey Pittman
		INQUIRY #:	3145177.12s
LAT/LONG:	42.1736 / 87.9242	DATE:	August 11, 2011 12:10 pm

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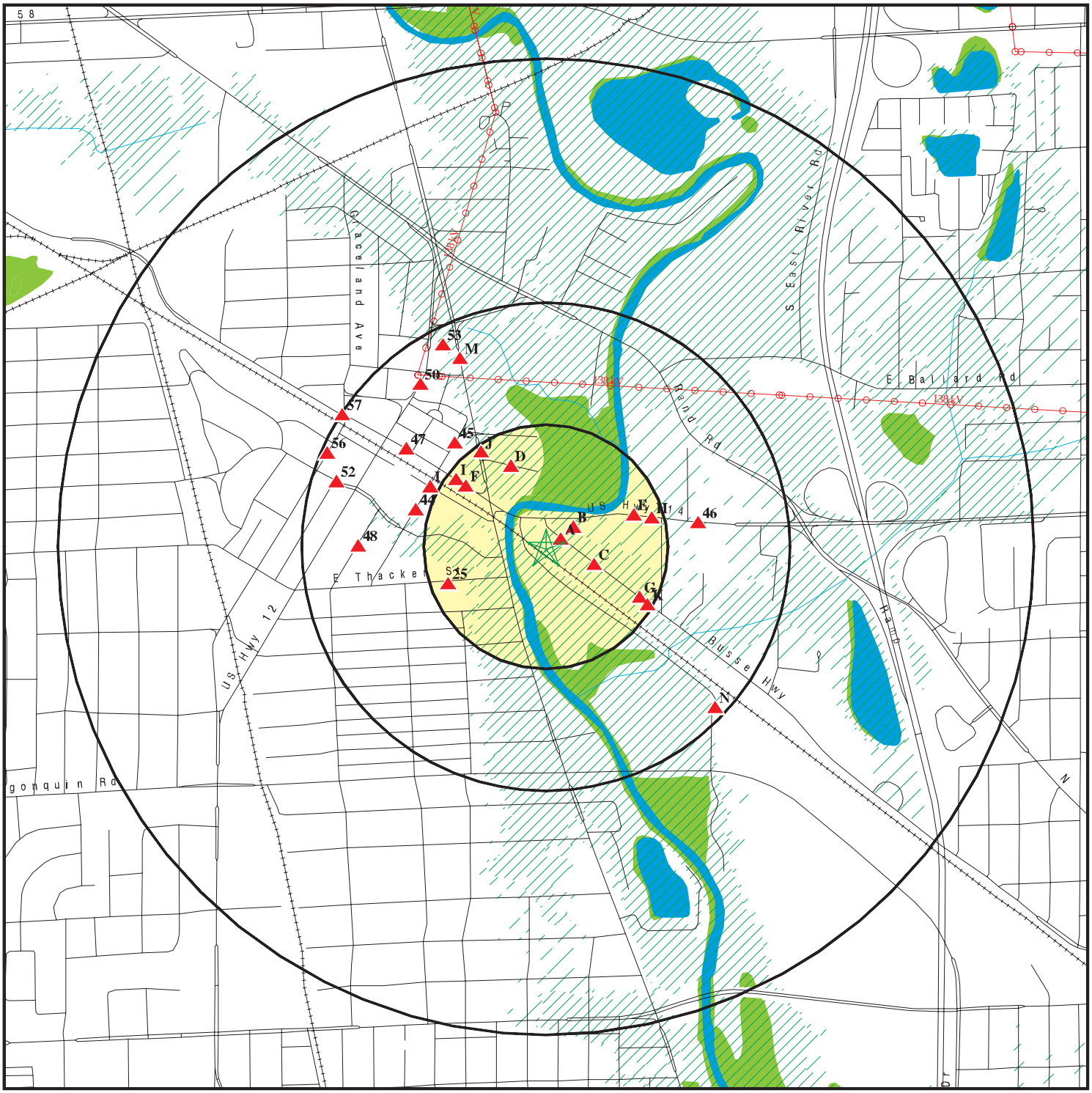
Figure 30 - River Road Raise at Ashland and Dempster Dam Radius Map



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

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

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:	Dempster Ave Dam Removal	CLIENT:	U.S. Army Corps of Engineers
ADDRESS:	River Road At Ashland Road Raise Des Plaines IL 60016	CONTACT:	Casey Pittman
		INQUIRY #:	3145177.21s
LAT/LONG:	42.0384 / 87.8813	DATE:	August 11, 2011 12:12 pm

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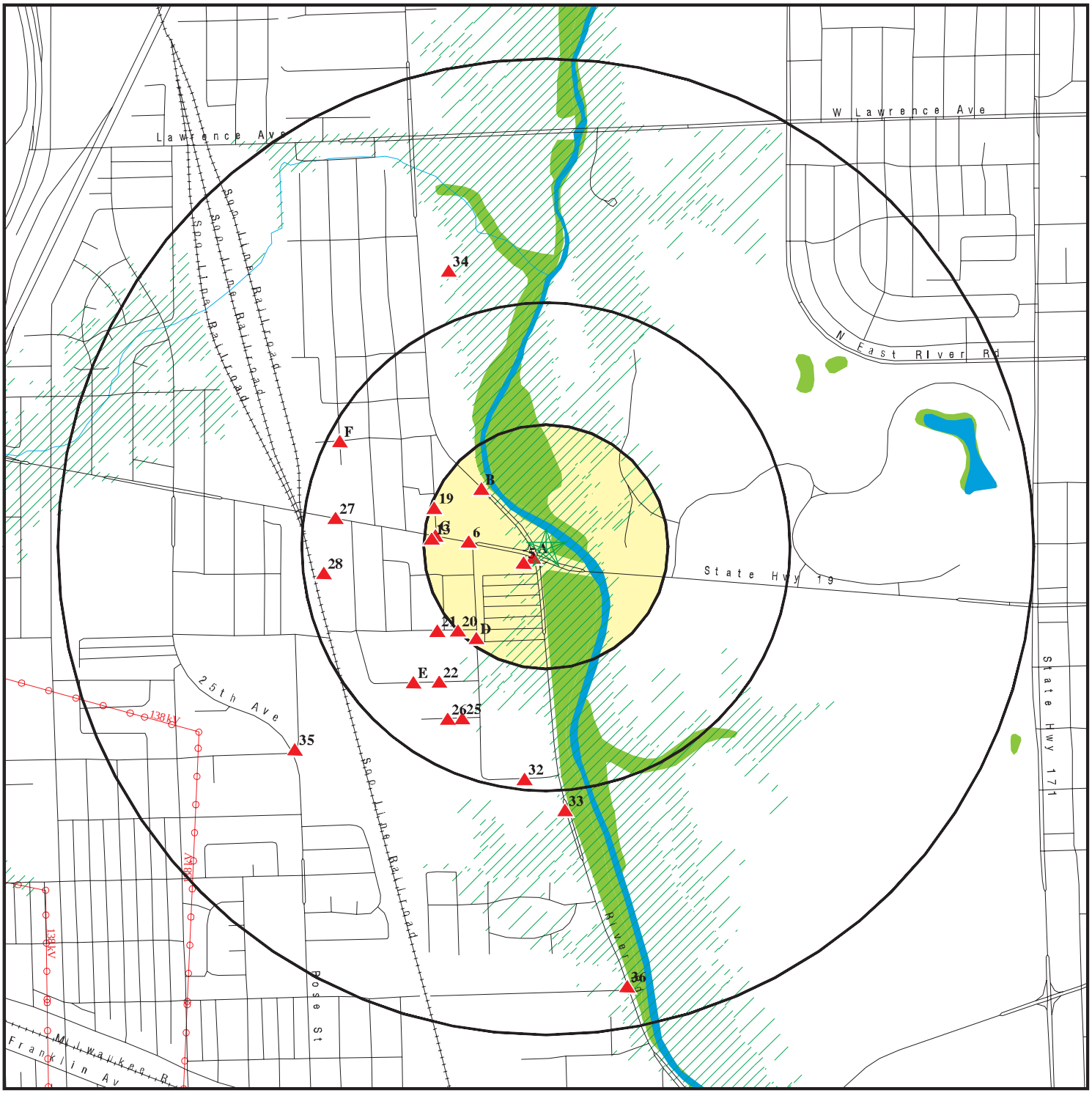
Figure 31 - River Road Raise at Irving Park Radius Map



0 1/4 1/2 1 Miles

- 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
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

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:	River Road At Irving Park Road Raise	CLIENT:	U.S. Army Corps of Engineers
ADDRESS:	River Road At Irving Park Road Raise Schiller Park IL 60176	CONTACT:	Casey Pittman
		INQUIRY #:	3145177.66s
LAT/LONG:	41.9538 / 87.8562	DATE:	August 11, 2011 12:12 pm

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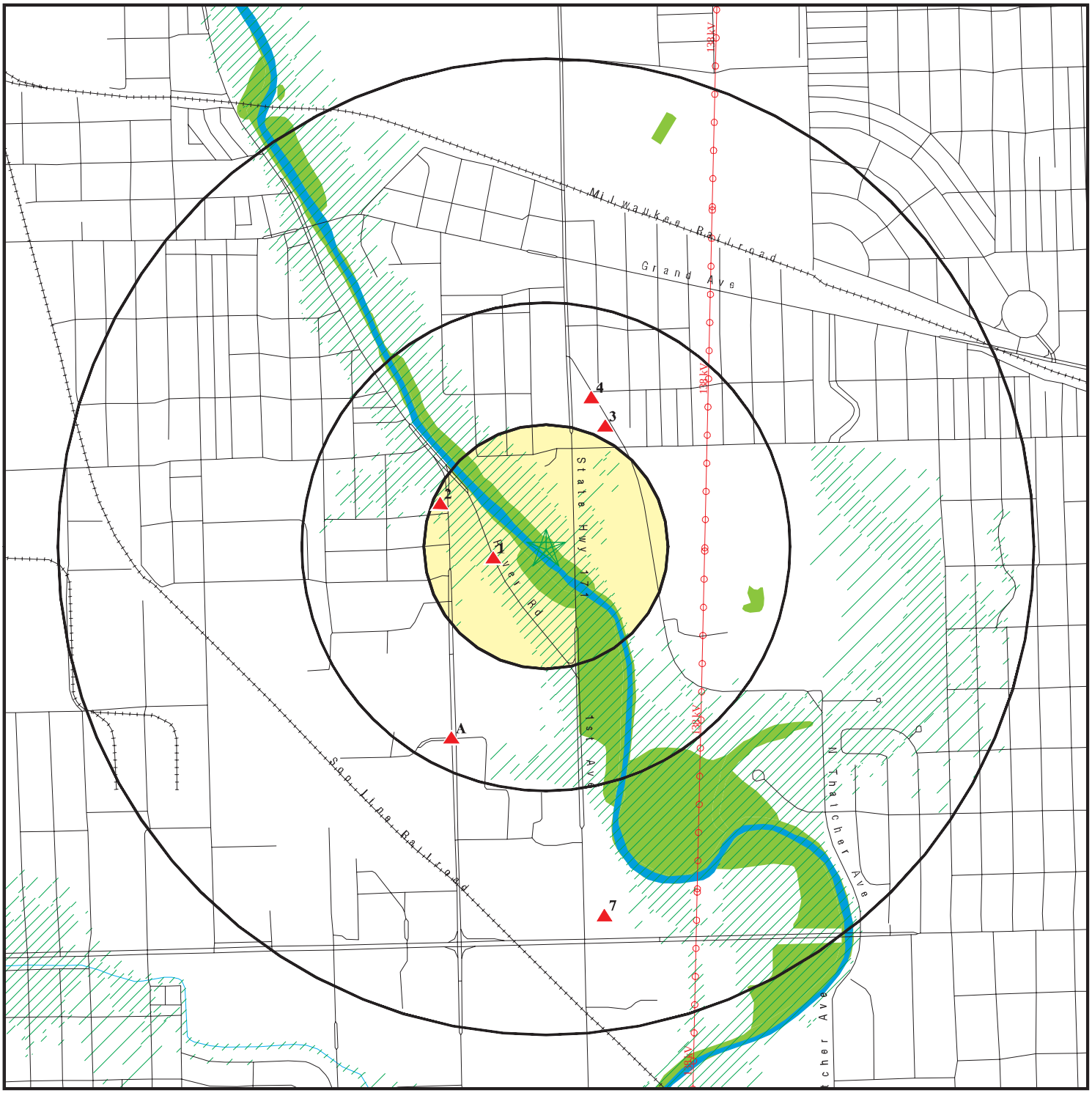
Figure 32 - First Avenue Bridge Modification Radius Map



0 1/4 1/2 1 Miles

- 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
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

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: First Ave Bridge Modification	CLIENT: U.S. Army Corps of Engineers
ADDRESS: First Ave Bridge Modification River Grove IL 60171	CONTACT: Casey Pittman
LAT/LONG: 41.9201 / 87.8365	INQUIRY #: 3145177.75s
	DATE: August 11, 2011 12:14 pm

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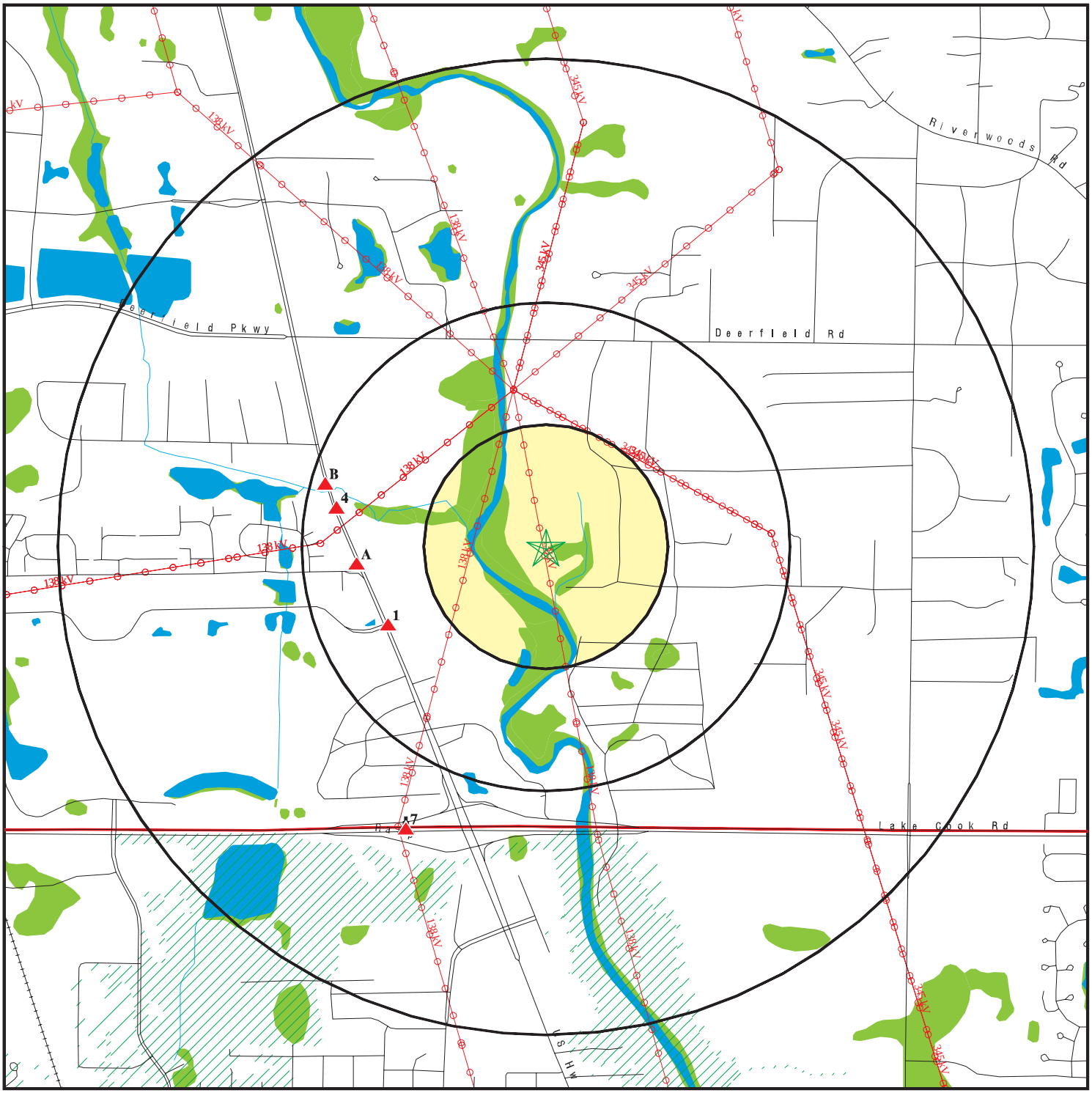
Figure 33 - Riverwoods Radius Map



0 1/4 1/2 1 Miles

- 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
- County Boundary
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

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: Riverwoods Wet Prairie	CLIENT: U.S. Army Corps of Engineers
ADDRESS: Riverwoods Wet Prairie Deerfield IL 60015	CONTACT: Casey Pittman
LAT/LONG: 42.1615 / 87.9117	INQUIRY #: 3169667.1s
	DATE: September 20, 2011 11:56 am

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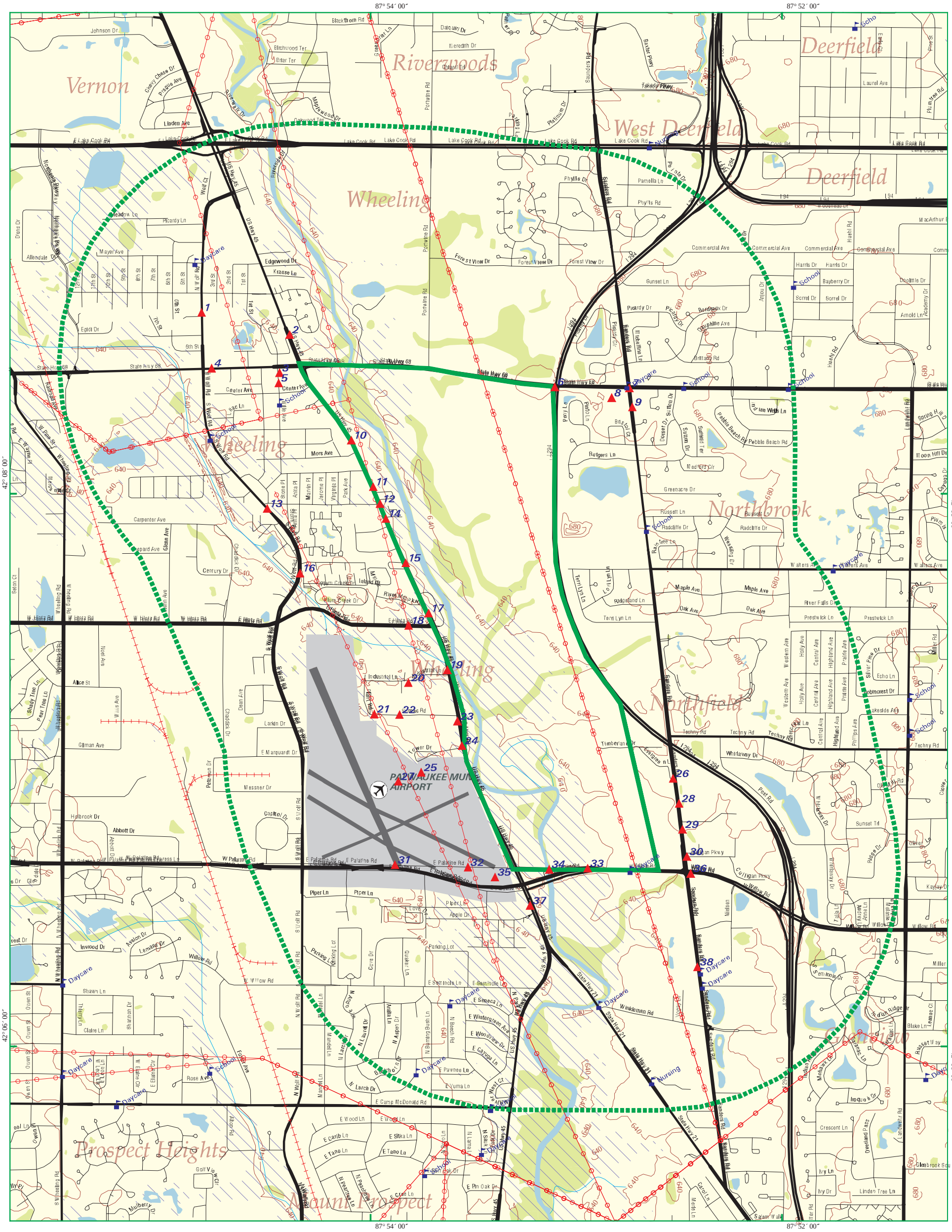

EDR DataMap® - Area Study

Figure 34

EDR® Environmental Data Resources Inc

Northbrook Marsh Includes Dam 1 & Wheeling Creek Brdg Mod.

Northbrook, IL

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- Federal DOD Sites
- Indian Reservations BIA
- 100-Yr Flood Zones
- National Wetland Inventory

N

0 1/4 1/2

Scale in Miles

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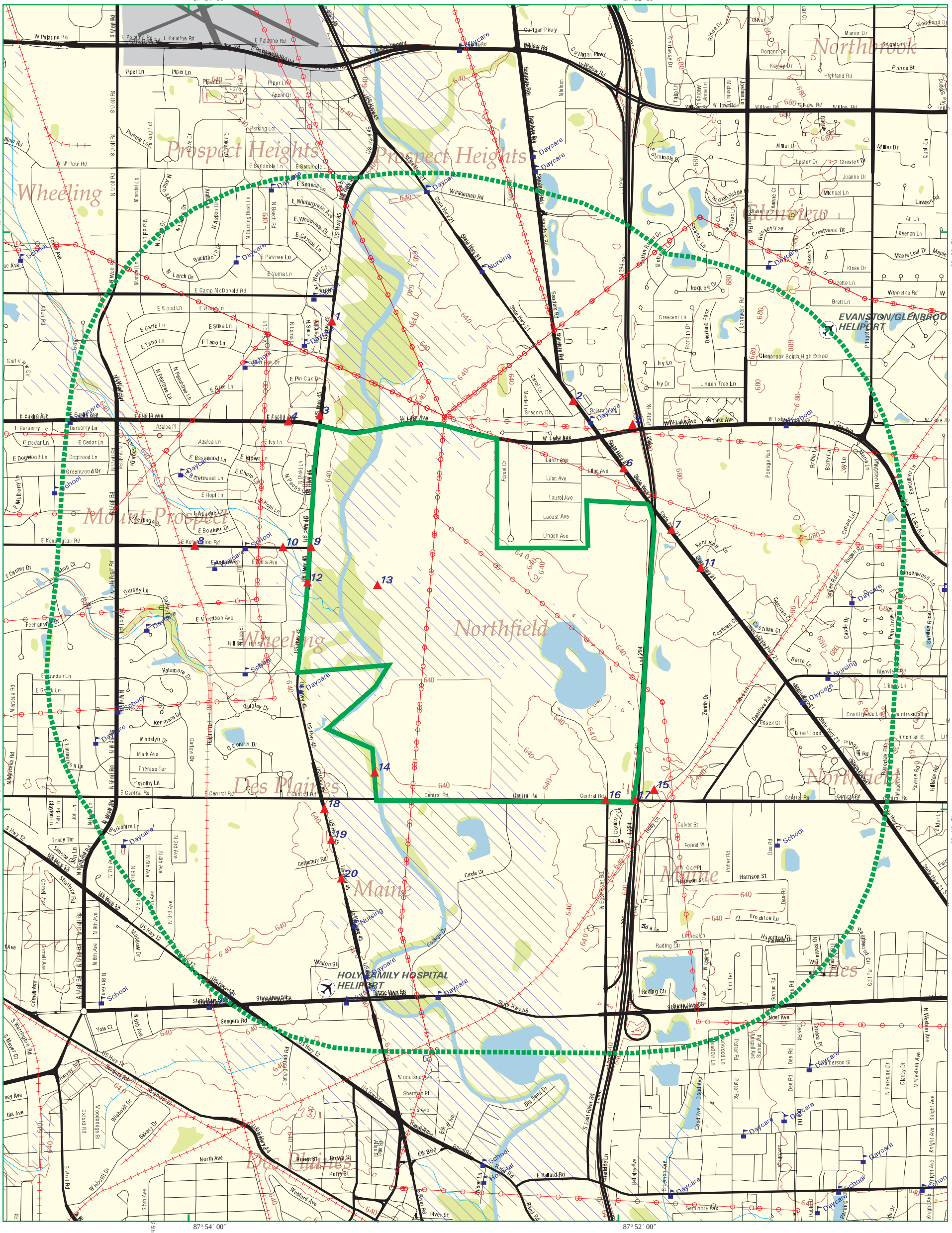
3145497.2s - 17 Aug 11

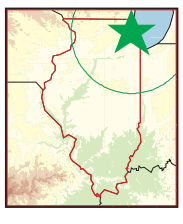


EDR DataMap® - Area Study

EDR® Environmental Data Resources Inc

Figure 35

Beck Lake Meadow Includes Dam 2, & Feehanville Ditch Brdg Mod.



Glenview, IL

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- Federal DOD Sites
- Indian Reservations BIA
- 100-Yr Flood Zones
- National Wetland Inventory

N

0 1/4 1/2

Scale in Miles

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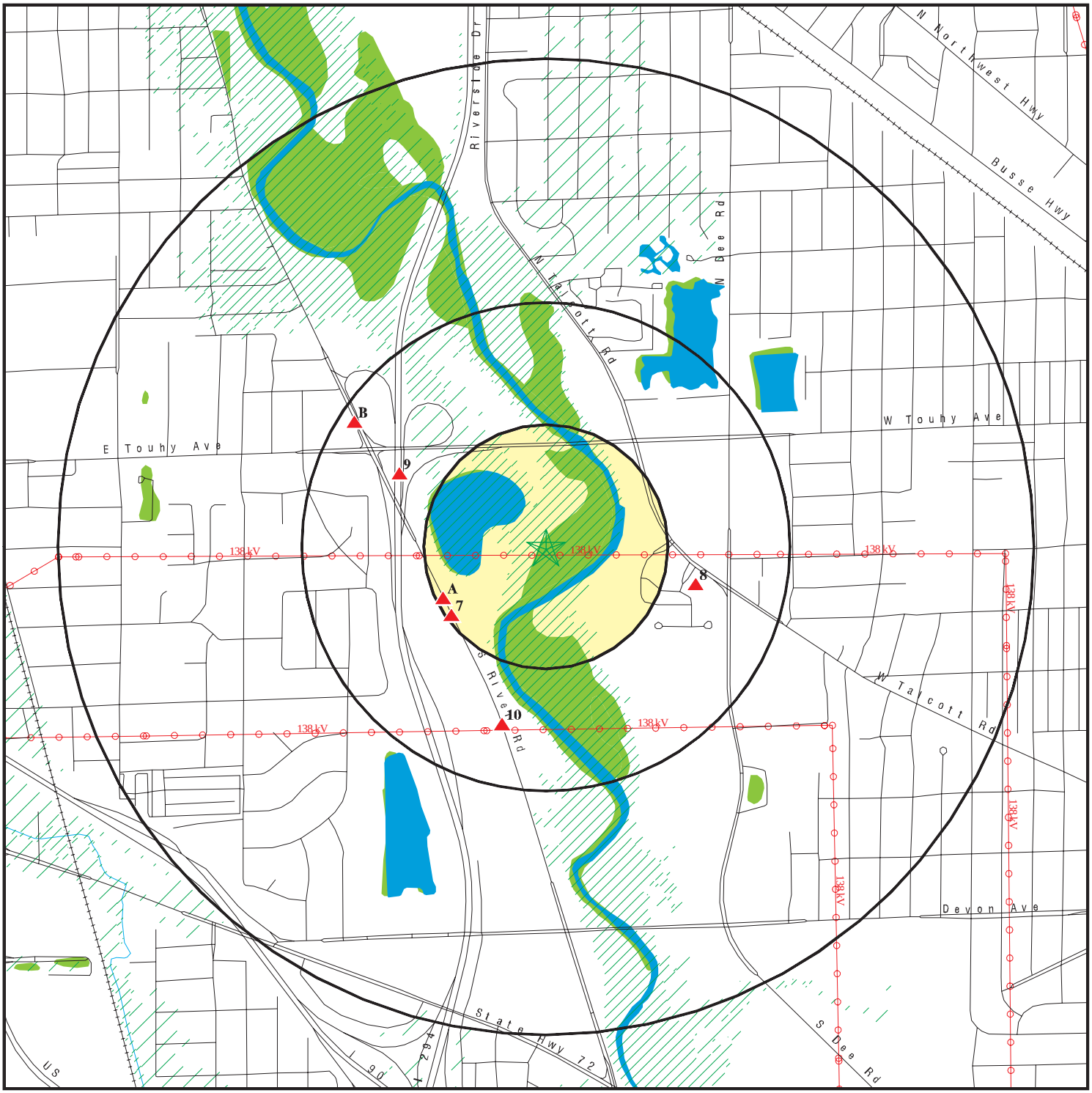
Figure 36 - Touhy Dam Radius Map



- 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
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

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: Touhy Ave Dam Removal	CLIENT: U.S. Army Corps of Engineers
ADDRESS: Touhy Ave Dam Park Ridge IL 60068	CONTACT: Casey Pittman
LAT/LONG: 42.0072 / 87.8626	INQUIRY #: 3145177.48s
	DATE: August 11, 2011 12:12 pm

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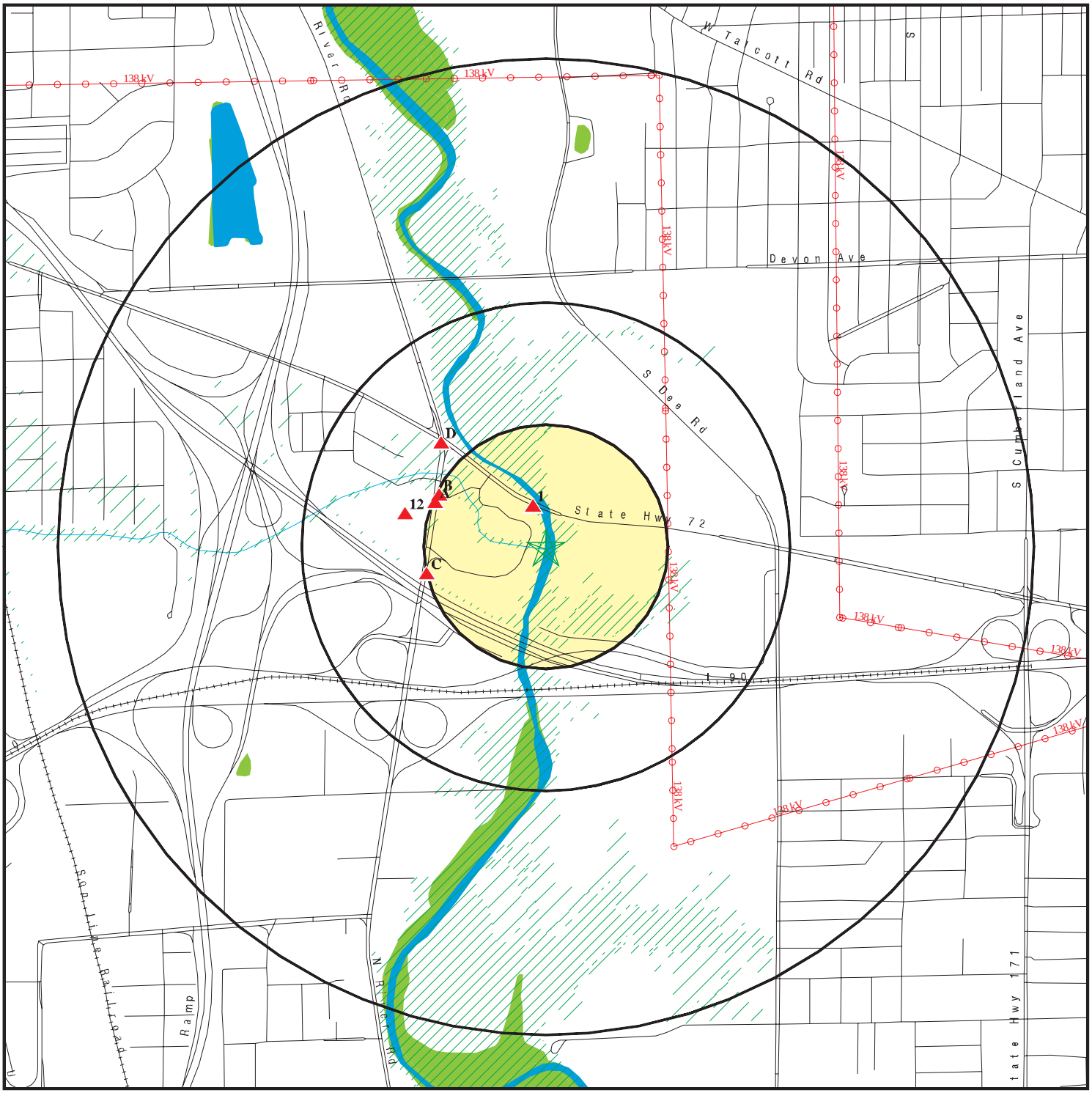
Figure 37 - Dam #4 Radius Map



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

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

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: Dam #4 Removal ADDRESS: Dam #4 Removal Des Plaines IL 60018 LAT/LONG: 41.9879 / 87.8557	CLIENT: U.S. Army Corps of Engineers CONTACT: Casey Pittman INQUIRY #: 3145177.57s DATE: August 11, 2011 12:12 pm

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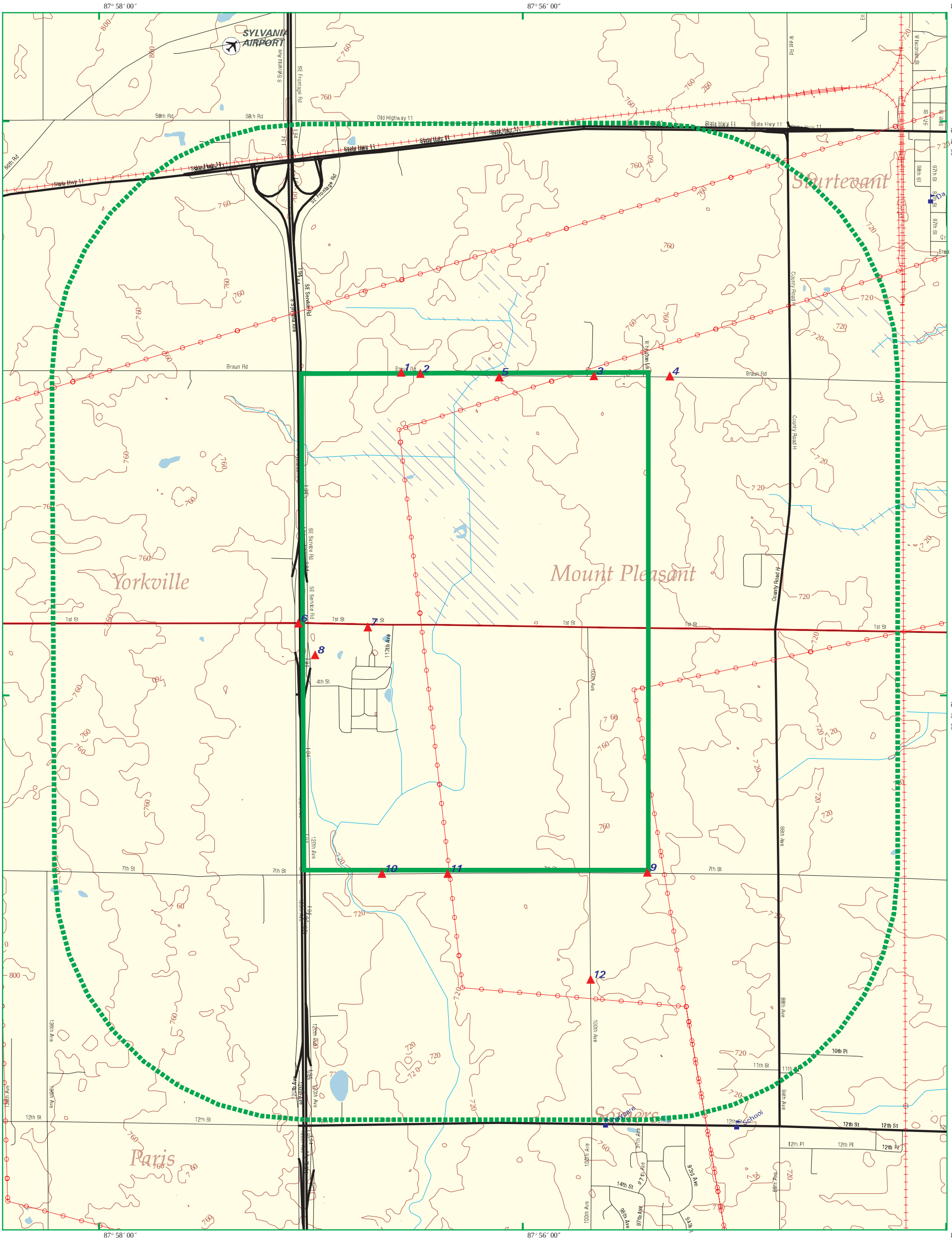
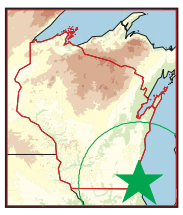


EDR DataMap® - Area Study

Figure 38

Sturtevant Wet Prairie
Somer's Marsh

EDR® Environmental Data Resources Inc



Sturtevant, WI

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- Federal DOD Sites
- Indian Reservations BIA
- 100-Yr Flood Zones

N

0 1/4 1/2

Scale in Miles

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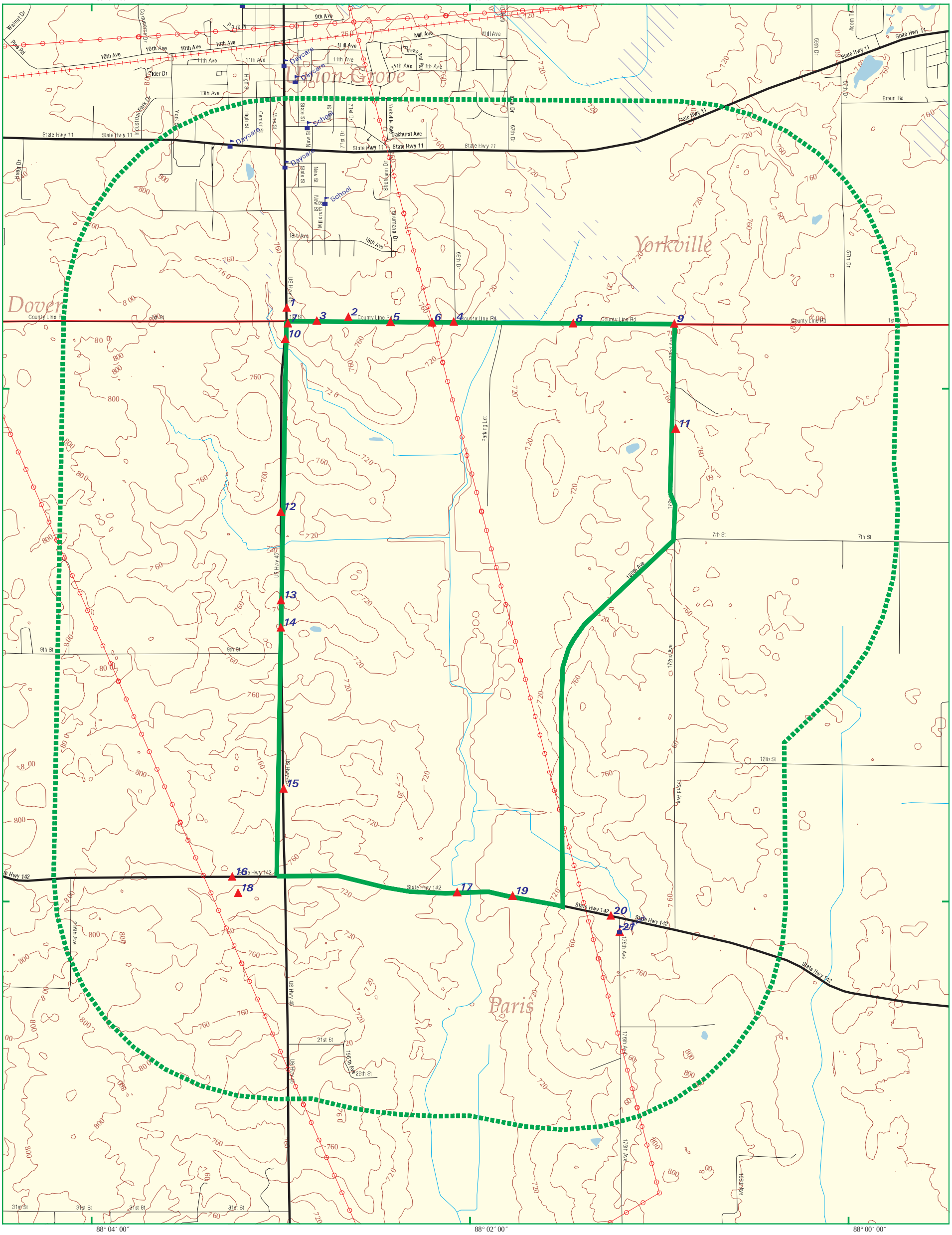
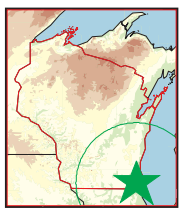
3145452.2s - 22 Aug 11



EDR DataMap® - Area Study

Union Grove Wet Prairie

Figure 39



Union Grove, WI

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- Federal DOD Sites
- Indian Reservations BIA
- 100-Yr Flood Zones

N

0 1/4 1/2

Scale in Miles

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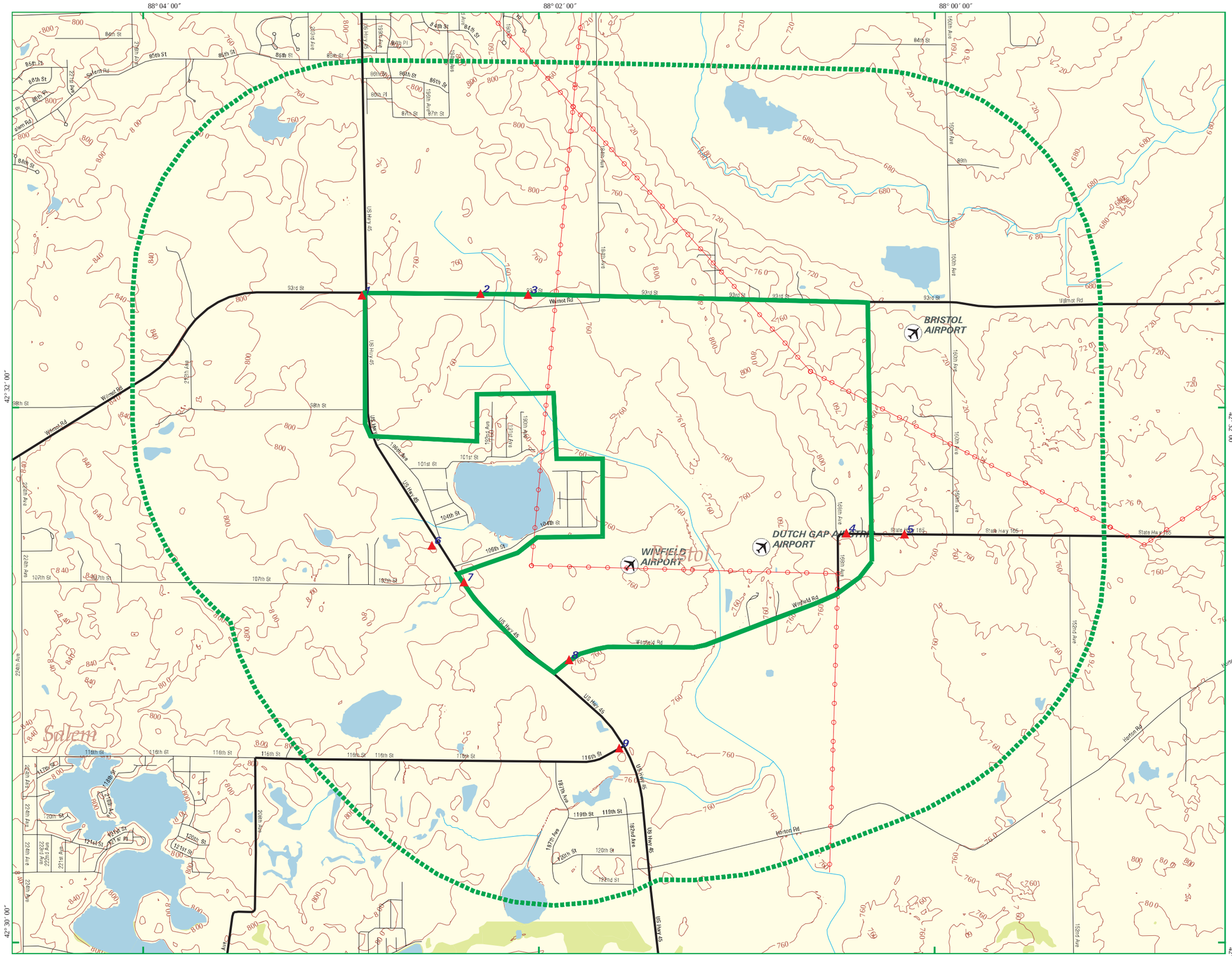
3145461.2s - 18 Aug 11

EDR DataMap® Area Study

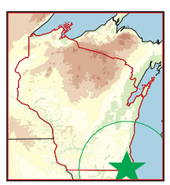
Figure 40

Bristol Marsh



Listed Sites
Earthquake Epicenters (Richter 5 or greater)
Search Boundary
Roads
Major Roads
Waterways
Railroads
Contour Lines
Pipelines
Powerlines
Fault Lines
Water
Superfund Sites
Federal DOD Sites
Indian Reservations BIA
National Wetland Inventory

N



Bristol, WI

0 1/4 1/2

Scale in Miles

EDR® Environmental Data Resources Inc

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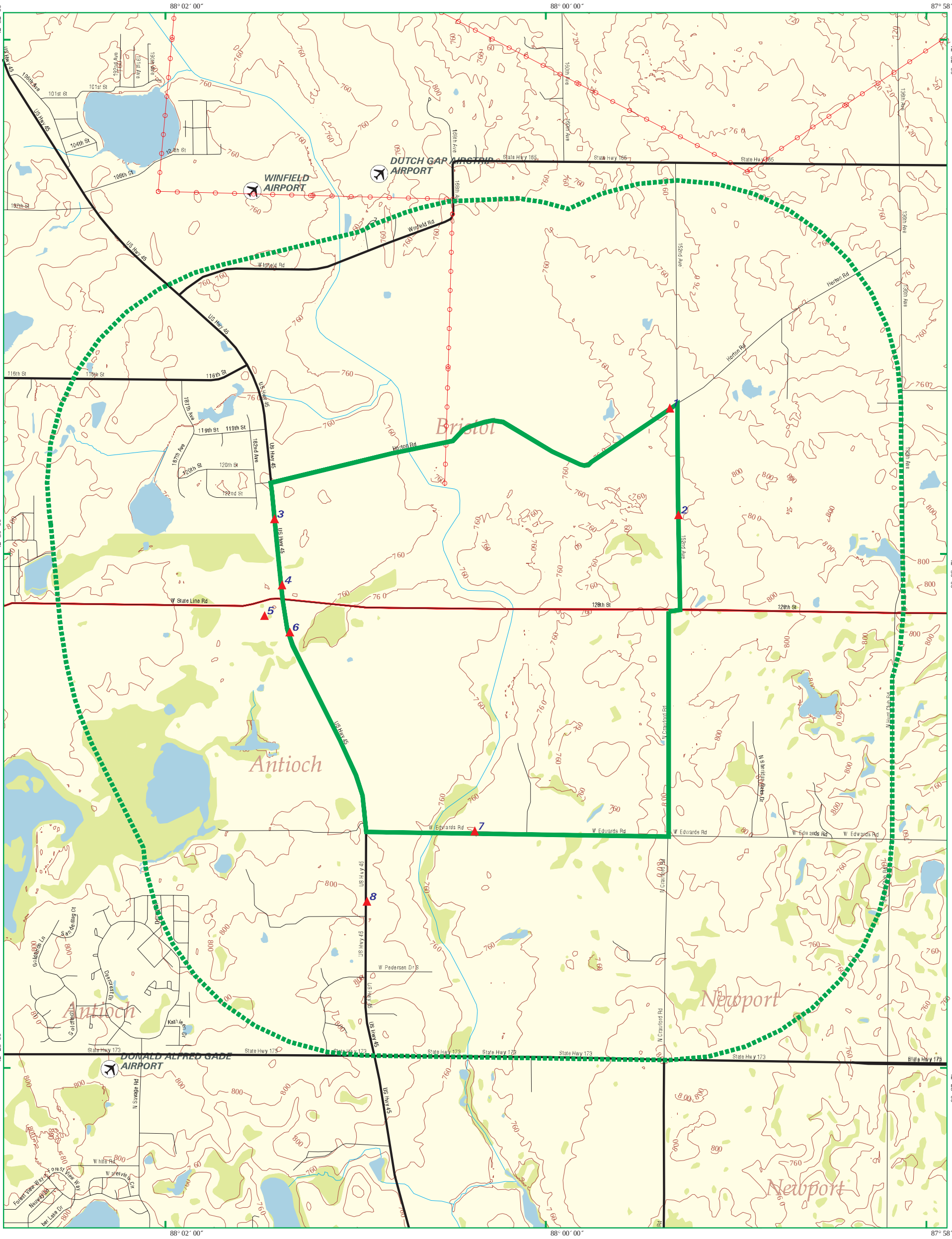
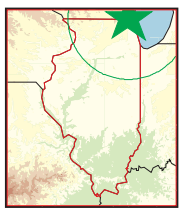


EDR Environmental Data Resources Inc

EDR DataMap® - Area Study

Antioch Aquatic Complex

Figure 41



Antioch, IL

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- Federal DOD Sites
- Indian Reservations BIA
- National Wetland Inventory

N

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Scale in Miles

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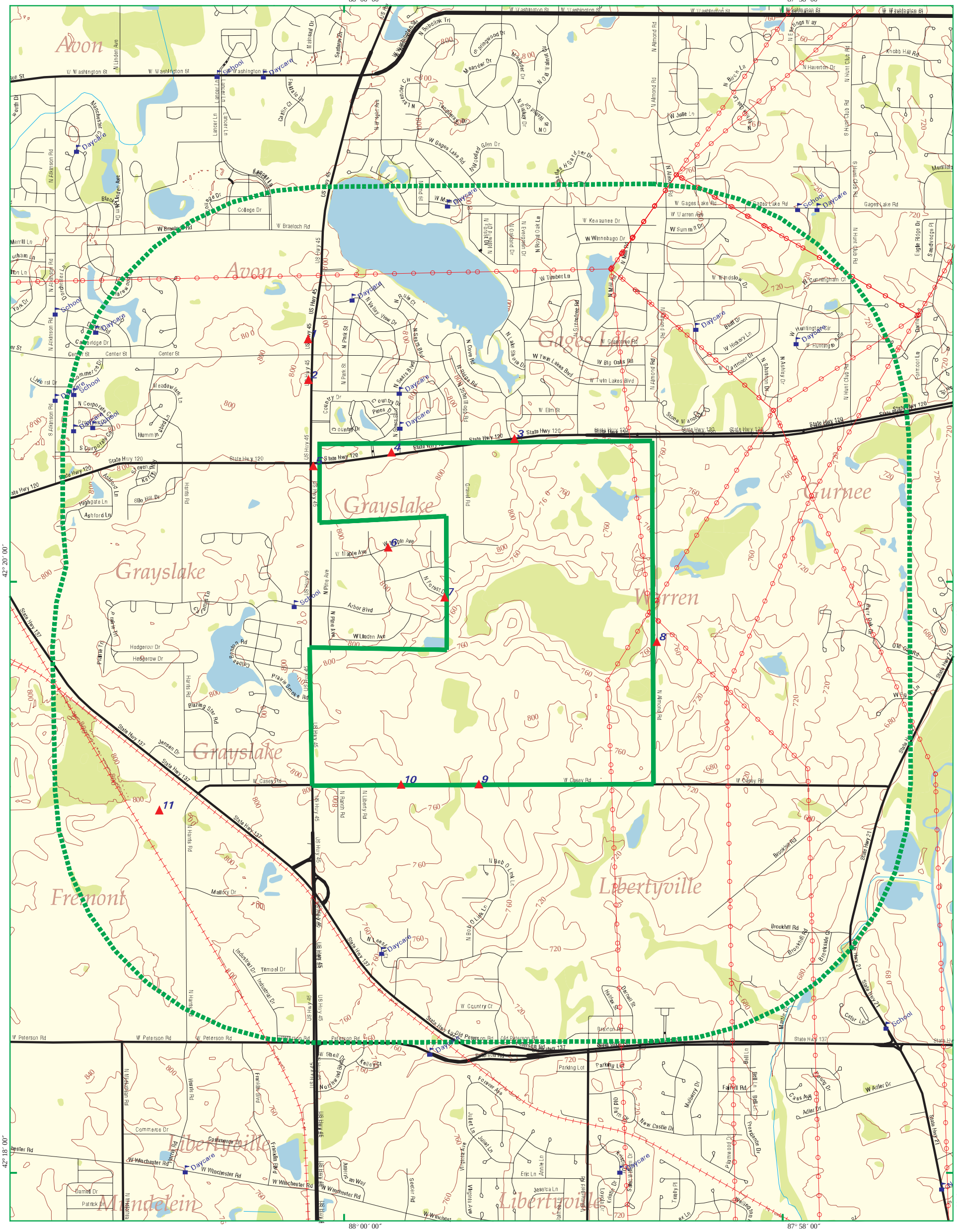

EDR DataMap® - Area Study

EDR Environmental Data Resources Inc

Figure 42

Bull Creek Reservoir Mitigation

Grayslake, IL

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- Federal DOD Sites
- Indian Reservations BIA
- National Wetland Inventory

N

0 1/4 1/2

Scale in Miles

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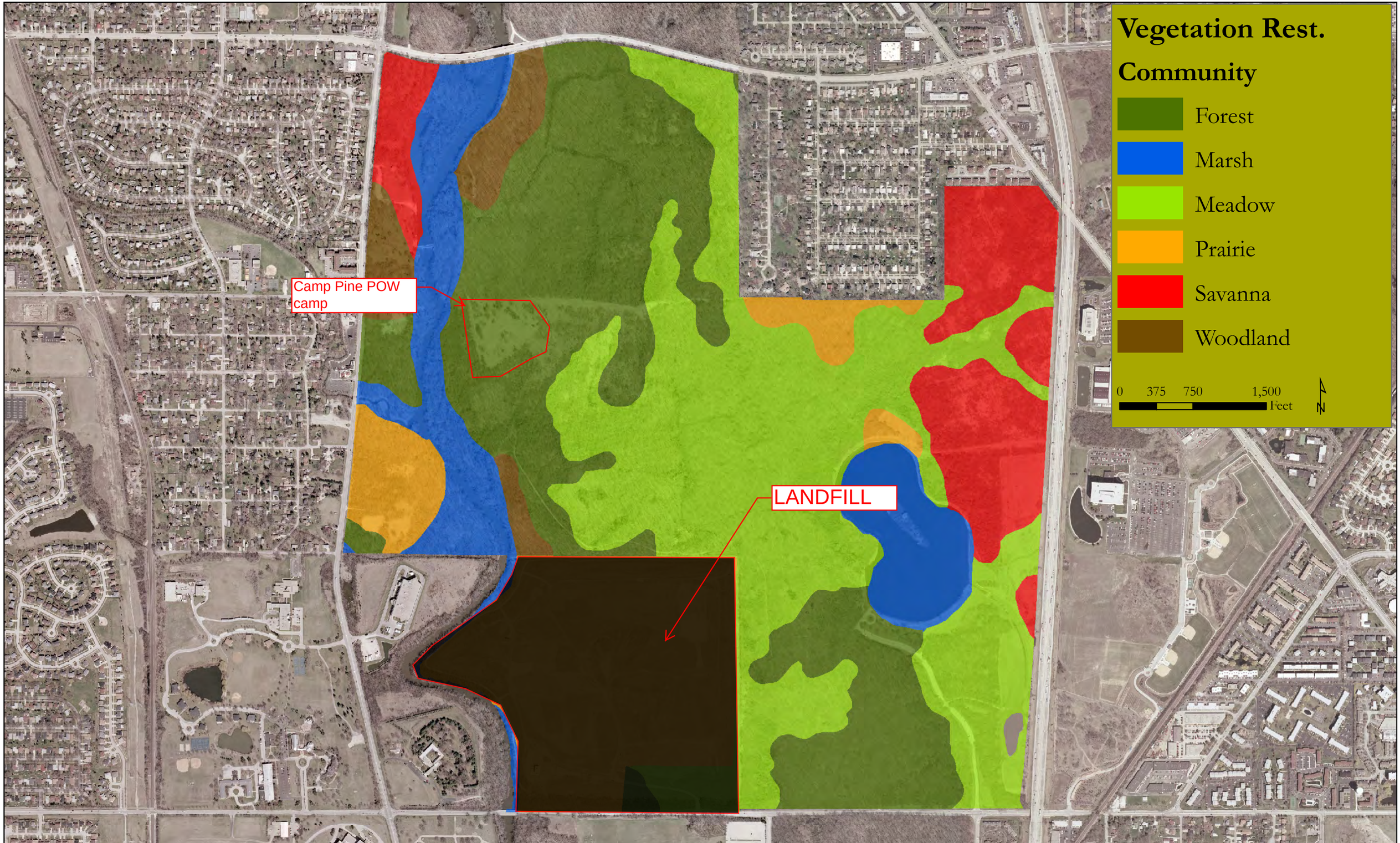
Figure 43 - Riverwoods Landfill Location

FMV 16MAR2010

Figure 44 - Beck Lake Meadow and Landfill and Camp Pine Woods POW Camp Location



FMV 16MAR2010

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW ADDENDUM UPPER DES PLAINES RIVER AND TRIBUTARIES PHASE II FEASIBILITY STUDY

Additional National Ecosystem Restoration (NER) and National Economic Development (NED) Sites

Hydraulic and Environmental Engineering Section (TS-DH)
U.S. Army Corps of Engineers, Chicago District

November 2012

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW ADDENDUM - DES PLAINES PHASE II LAKE COUNTY NER, LEVEE 9/COMPENSATORY STORAGE AND BELVIDERE ROAD SITES

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Attachment 1: EDR Database Search Results
Attachment 2: Historical Topographic Maps
Attachment 3: Historical Aerial Photographs
Attachment 4: Site Visit Photographs
Attachment 5: Supplemental IEPA Information

PROJECT DESCRIPTION

The combined plan developed for the Upper Des Plaines and Tributaries Feasibility Study (Phase II Study) has been formulated to build on and extend the benefits achieved by the Upper Des Plaines River Flood Damage Reduction Feasibility Study (Phase I Study). The authorized plan developed in the Phase I Study addresses flood risk within the Upper Des Plaines River watershed in Illinois. The Phase II Study recommends a plan that further manages flood risk on the main stem of the Des Plaines River in both Illinois and Wisconsin, manages tributary flood risk, and, additionally, restores and enhances degraded ecosystems within the study area. The watershed scope of the study has allowed for a systems approach, evaluating the basin wide flood risk management and ecosystem restoration potential of each site. Separate plans were formulated to meet the flood risk management and ecosystem restoration study purposes resulting in national economic development (NED) and national ecosystem restoration (NER) plans. These plans have been combined into a single multipurpose plan.

SCOPE OF REPORT

This report contains the results of the supplemental Phase I Environmental Site Assessment (ESA) for additional National Ecosystem Restoration (NER) and National Economic Development (NED) sites proposed in Cook and Lake Counties, Illinois. Previously prepared Phase I investigations document the existing conditions for Lake and Cook Counties in Illinois, and Racine and Kenosha Counties in Wisconsin. This report identifies Recognized Environmental Conditions (RECs) and presents appropriate measures to resolve the issues for additional NED and NER sites not previously investigated. The methods used in performing the investigation are described in detail. Conclusions and recommendations regarding potential impacts due to RECs associated with the project sites are provided.

NED Sites

The Phase II NED plan was formulated to manage flood risk on both the main stem Upper Des Plaines River and along its tributaries. The initial proposed NED plan recommended two floodwater storage reservoirs, three levee/floodwalls, six road raises, and three modifications to existing structures be implemented throughout the watershed. A Phase I Environmental Site Assessment (ESA) was completed for these more high-risk sites (reservoirs, structure modifications, and levee/floodwalls) under separate cover. This supplemental report contains the results of the Phase I ESA for the additional levee/floodwall (DPLV09), the compensatory storage site (DPLV09 CSS) required to mitigate increased river stages from construction of levee/floodwall, and the proposed Belvidere Road bridge modification.

DPLV09 Levee/Floodwall

DPLV09 levee floodwall is an extension of the previously identified Oakton-Everett levee/floodwall (DPLV07) located near the west bank of the Des Plaines River, between Ashland Avenue and just south of Fargo Avenue in Des Plaines, Cook County, Illinois (see Figures 1 through 3). DPLV09 is approximately 2.2 miles of combination levee and floodwall that will protect homes along River Road.

DPLV09 Compensatory Storage Site (CSS)

DPLV09 CSS is a compensatory storage site proposed for storage of floodwater due to increased stages in the Des Plaines River resulting from construction of DPLV09. The CSS is a reservoir site located in Cook County Forest Preserve between Oakton and Algonquin Roads, in Unincorporated Cook County, Illinois. The CSS will provide approximately 275 acre-feet of storage on the main stem Des Plaines River. The inline reservoir will be excavated to a depth of 10 feet providing capacity designed for 100 year flood events. Surplus material generated from reservoir excavation that is not used to construct the embankments creating the storage area will be placed at the east side of the project site (see Figure 4).

Belvidere Road Bridge Modification (DPBM13)

The Belvidere Road Bridge Modification site crosses the main stem Des Plaines River at State Highway 120 in Gurnee, Lake County, IL (see Figure 5). The NED plan recommends raising the Belvidere Road Bridge to 668.5 NAVD 88.

NER Sites

The Phase II NER plan was formulated to restore degraded ecosystem structure, function, and dynamic processes to a less degraded, more natural condition. The plan that reasonably maximizes net benefits and is consistent with the Federal objective is identified as the NER plan. The NER plan initially identified 15 sites for restoration; five NER sites located in Wisconsin (Union Grove Wet Prairie, Sturtevant Wet Prairie, Bristol Marsh, Somers Marsh, and Pikeville Forested Floodplain), five NER sites located in Illinois (Antioch Aquatic Complex, North Brook Marsh, Riverwoods Wet Prairie, Beck Lake Meadow, and Grayslake Wet Prairie), and 5 dam removals (Dam #1, Dam #2, Dam #4, Touhy Dam, and Dempster Dam) along the Des Plaines River in Cook County, Illinois. Phase I ESAs were prepared for these sites under separate cover.

This supplemental Phase I ESA identifies five alternate ecosystem restoration sites proposed in Lake County, Illinois (L05, L31, L33, L39, and L43). The locations are shown in Figure 6; site L41 noted on Figure 6 was investigated in a previous report. Individual site restoration plans are shown in Figures 7 through 11. The following restoration measures may be implemented on one or more sites:

- Agricultural drain tile disablement
- Drainage ditch filling and/or plugging
- Soil compaction, removal, or soil amendment
- Dam removal
- Cobble/riffle placement
- Stream remeandering
- Woody debris in-stream placement
- Herbaceous invasive species removal
- Tree/shrub (canopy) removal
- Installation of native plant species seed
- Installation of live native plants as plugs

- Installation of live native trees and shrubs

DATABASE SEARCH

A search of available environmental records was conducted utilizing the Environmental Database Resources, Inc. (EDR) online for each of the project sites. EDR searched federal and state databases using the minimum search distances issued in the ASTM E 1527-00 guidelines. Table 1 notes the recommended ASTM search distance for federal and state databases. Search distances were extended for sites that are unusually large in size. A description of information included in each database is included in previous reports. The EDR overview map displaying the project areas and the search results are given in Figures 12 through 18. The comprehensive EDR database reports are provided in Attachment 1. Analysis of information included in the EDR database, the status of the sites, and a summary of the potential project impacts are included in Tables 2 through 8.

Table 1 – Minimum Search Distance for Federal and State Database Searches

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

DPLV09 and DPLV09 Compensatory Storage Site

Table 2 – Levee 9 and Levee 9 Comp Storage Site EDR Search Results (DPLV09 and DPLV09 CSS)

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
ENG CONT INST CONT SRP	1	Berry Property	¼ to ½ mile northwest	SRP NFR letter recorded 1/7/2002. Site has industrial/commercial closure with asphalt barrier and groundwater use restriction on 0.28 acres (with worker caution).	Unlikely site status will impact project implementation.
LUST UST SPILLS	2	City of Des Plaines	¼ to ½ mile north	Site contains 1-UST, heating oil, exempt from registration. LUST NFR not reported.	Corrective action complete report received and acknowledged July 2005. Unlikely LUST activities have impacted project area.
LUST	3	Gallucci, Virginia	¼ to ½ mile northwest	NFR letter dated 11/6/1995	Unlikely LUST activities have impacted the project area
LUST UST	4	1st United Methodist Church	¼ to ½ mile northwest	2-heating oil tanks removed from site. LUST NFR letter dated 6/16/1993.	Unlikely LUST activities have impacted the project area
CERCLIS	5	Mill Street Mercury Spill Site	¼ to ½ mile north	Mercury spill in residence. No site assessment, removal action completed 07/16/2003.	Unlikely activities have impacted project area.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	6	Elmer's Union Service	¼ mile north	NFR letter dated 10/9/1996	Unlikely LUST activities have impacted the project area
LUST	7	Babe Bicycle Shop	¼ to ½ mile northwest	NFR letter dated 12/22/1993	Unlikely LUST activities have impacted project area
UST	8	Ferracane, Gary	¼ mile north	2-heating oil USTs possible on-site, exempt from registration	Unlikely facility activities will impact project implementation
LUST	8	Central Telephone	¼ mile north	NFR letter dated 12/18/1997	Unlikely LUST activities have impacted project area
LUST	8	Des Plaines Public Works	¼ mile north	NFR letter dated 10/16/1990	Unlikely LUST activities have impacted the project area
LUST	8	Alto Building Corporation	¼ mile north	NFR letter dated 6/20/2006	Unlikely LUST activities have impacted project area
BROWNFIELD	8	Des Plaines Rand and Pine Road Property	¼ mile north	Property listed as 1900 farmland, filling station with USTs	Property mismapped in EDR report. Located at Des Plaines Road/Rand Road (3/4 mile north – Envirofacts online). Property has been assessed (2.5 acres) but no clean-up implemented. Given the proximity of the property to the project area, it's unlikely to impact project implementation.
LUST	8	Mt. Prospect National Bank	¼ mile north	NFR letter dated 9/27/2006	Unlikely LUST activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
SRP	9	Evergreen Community Church	¼ to ½ mile northwest	NFR letter recorded 4/15/2010 – no restrictions	Unlikely facility activities have impacted project area
LUST	10	Science and Arts Academy	¼ to ½ mile northeast	LUST 57.5(g) letter issued 10/11/2007	According to IEPA online database, the site contains a heating oil storage tank for on-site use, and is not subject to remediation. Given the proximity and type of activity, it is unlikely to impact project implementation.
LUST UST	11	Ameritech	¼ to ½ mile northeast	1-heating oil tank onsite, exempt from registration. LUST 57.5(g) letter dated 11/13/1998.	According to IEPA online database, the site contains a heating oil storage tank for on-site use, and is not subject to remediation. Given the proximity and type of activity, it is unlikely to impact project implementation.
LUST	12	Park Plaines Chevy Geo	1/8 to ¼ mile northeast	NFR letter dated 9/28/1993	Unlikely LUST activities have impacted project area
RCRA-CESQG FINDS UST	12	River Chevrolet	1/8 to ¼ mile northeast	RCRA previous SQG with no violations. 6-USTs removed from site, one exempt from registration.	Unlikely facility activities will impact project implementation. Site is physically and hydrologically separated from floodwall by the Des Plaines River.
LUST UST ENG CONTRL INST CNTRL SRP	12	Advent Electronics	1/8 to ¼ mile northeast	LUST NFR letter dated 5/6/1993 UST – removed SRP NFR letter recorded 9/20/2010 with industrial/commercial	Unlikely facility activities will impact project implementation. Site is physically and hydrologically separated from floodwall by the Des Plaines River.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
				closure on 4 acres. Groundwater use restriction and concrete/foundation barrier onsite.	
LUST UST	13	St. Mary's Church Our Lady of Destiny	1/8 to ¼ mile northwest	LUST 57.5(g) letter "732" with 20 and 45 day reports 2-heating oil tanks exempt from registration	According to IEPA online database, the site contains a heating oil storage tank for on-site use, and is not subject to remediation. Given the proximity and type of activity, it is unlikely to impact project implementation.
UST RCRA-SQG FINDS LUST LUST-TRUST INST CNTRL SRP AIRS	14	Delta Technical Products	1/8 to ¼ mile east	UST – I heating oil tank removed RCRA – no violations LUST NFR letter dated 3/14/2011 SRP NFR letter recorded 4/1/9/2011 with industrial/commercial groundwater use restriction on 0.69 acres AIRS – operation ceased 1990	Unlikely facility activities will impact project implementation. Site is physically and hydrologically separated from floodwall by the Des Plaines River. More than ½ mile from CSS.
UST	15	5 Flat Apartment Building	<1/8 mile north	1-heating oil UST on-site exempt from registration	Site not adjacent to construction, unlikely to impact project implementation
SRP	16	J&R Properties Management	¼ to ½ mile west	NFR letter recorded 2/1/1999 with no	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
				controls	
RCRA-SQG FINDS ENG CNTRL SRP	17	Chandelite Display Fixtures	¼ to ½ mile west	RCRA – no violations SRP NFR recorded 12/23/1997 with asphalt barrier on 2 acres of site	Unlikely facility activities have impacted project area
LUST	18	Des Plaines Lumber & Coal Co.	¼ to ½ mile west	NFR letter dated 10/23/1996	Unlikely LUST activities have impacted project area
INST CNTRL SRP	18	Farm & Gardens	¼ to ½ mile west	NFR recorded 9/17/1999 with residential groundwater use restriction on 0.58 acres	Unlikely facility activities have impacted project area
LUST	19	Des Plaines Park District	¼ mile west	57.5(g) letter dated 3/27/1995	According to IEPA online database, the site contains a heating oil storage tank for on-site use, and is not subject to remediation. Given the proximity and type of activity, it is unlikely to impact project implementation.
FINDS LUST AIRS	19	Des Plaines Park District	¼ mile west	LUST NFR letter dated 8/7/2006 AIRS -	Facility permanently closed with no previous enforcement actions. Unlikely facility activities have impact project area.
RCRA-SQG FINDS LUST UST	19	Des Plaines Auto Clinic	¼ mile west	RCRA – no violations LUST NFR letter dated 7/28/2006 2-USTS removed from site	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	20	Mullens, Donald	¼ to ½ mile west	57.5(g) letter dated 9/8/1995	According to IEPA online database, the site contains a heating oil storage tank for on-site use, and is not subject to remediation. Given the proximity and type of activity, it is unlikely to impact project implementation.
LUST SRP	20	Diamond Screen Process Facility	¼ to ½ mile west	LUST & SRP NFR letter dated 9/20/1995	Unlikely facility activities have impacted project area
SWF/LF	21	Des Plaines Transfer Station (Active)	¼ mile east	Facility accepts leaves, wood chips, clean C&D debris (from municipal projects)	Unlikely facility activities have impacted project area
LUST LUST-TRUST	21	City of Des Plaines	¼ mile east	NFR letter dated 9/8/2010	Unlikely facility activities have impacted project area
LUST	22	Illinois Department of Transportation	½ to 1 mile west	NFR letter dated 12/9/2010	Unlikely facility activities have impacted project area
UST RCRA-SQG FINDS MAINFEST	23	Ridge Motors	1/8 mile west	4-USTs removed from site RCRA – no violations	Unlikely facility activities have impacted project area
RCRA-SQG FINDS	23	O'hare Auto Group	1/8 mile west	RCRA – no violations	Unlikely facility activities have impacted project area
LUST	24	Mobil Oil Corporation	<1/8 mile west	NFR letter dated 7/16/2009	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
UST	24	Bucky's Express	< 1/8 mile west	4- USTs on-site currently in use (gasoline)	Unlikely facility activities will impact project implementation
RCRA-SQG FINDS	24	Mobil Oil Corporation	< 1/8 mile west	RCRA – no violations	Unlikely facility activities have impacted project area
UST	24	Circle K #6771	< 1/8 mile west	Facility has several USTs on-site, most in use or exempt from registration	Facility and associated tanks are not within the project area. No indications that facility operations have impacted the project area
RCRA-SQG FINDS	24	Amoco 9631	< 1/8 mile west	RCRA generator- no violations	Unlikely facility activities have impacted project area
LUST UST	24	Philips 66	< 1/8 mile west	Facility lists several USTS, some removed and some exempt from registration. Facility is closed. LUST 20 and 45-day reports – no NFR.	Up gradient to project area. Given the activities conducted for construction of floodwall (excavation), and unknown scope and scale of LUSTS, the status of facility was requested through IEPA. Additional information not available at time of report.
RCRA-CESQG FINDS	24	Alpha Graphics	< 1/8 mile west	CESQG – no violations	Unlikely facility activities have impacted project area
LUST	25	William L. Kunkel & Co.	1/8 to 1/4 mile west	NFA/NFR letter dated 12/30/1997	Unlikely LUST activities have impacted the project area
RCRA-SQG FINDS	25	Walgreens #2212	1/8 to ¼ mile west	RCRA gen – no violations	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	26	Clark Oil & Refining	¼ to ½ mile west	Two LUST incidences with unknown status (reported 1992 and 2002)	Up gradient to project area. Given the activities conducted for construction of floodwall (excavation), and unknown scope and scale of LUSTS, the status of facility was requested through IEPA. Additional information not available at time of report.
SRP	26	Royal Cleaners	¼ to ½ mile west	SRP unknown status (enrolled 2007)	Up gradient to project area. Additional information provided by IEPA staff (Attachment 5) suggests that the RAP has been approved for the site. Contamination is limited to on-site surficial soils and groundwater, with no evidence the groundwater plume extends off-site. It is unlikely that the site activities have impacted the project area.
LUST	27	Gunn, Raymond	¼ to ½ mile west	Non-LUST status 9/11/1995	Confirmed site status through IEPA online database. After additional reporting by owner, it appears site is determined to be non-LUST. Unlikely activities have impacted project area.
RCRA-SQG FINDS MANIFEST	28	Auto Craft Auto Body	Along floodwall alignment	RCRA- no violations found	Unlikely facility activities have impacted project area
RCRA-SQG	29	Northwestern University	1/8 to ¼ mile west	RCRA, previous LQG, with no violations	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
FINDS LUST	30	Vanderra, Russell	Along floodwall alignment	NFA/NFR letter dated 1/28/1997	Unlikely LUST activities have impacted project area
UST	30	River Howard Service Station	Along floodwall alignment	USTs – all tanks removed	Unlikely facility activities have impacted project area
UST	30	Martin Oil Marketing	Along floodwall alignment	3-USTs possible on-site all exempt from registration	Confirm location of USTs during design phase
RCRA-SQG FINDS	30	Rivers Cleaners	Along floodwall alignment	RCRA – no violations	Unlikely facility activities have impacted project area
AIRS	31	Kenny Kiewit Shea Jr.	Along floodwall alignment	031264ABF	No status
AIRS	31	Baja Contractors, Inc.	Along floodwall alignment	Operations ceased 8/14/1998	Unlikely facility activities will impact project implementation
RCRA-SQG	32	Creative Printing Service, Inc.	1/8 to ¼ mile northwest	RCRA – no violations	Unlikely facility activities have impacted project area
UST RCRA-Nongen LUST ENG CNT INST CNT SRP AIRS	32	AM Properties Corporation	1/8 to ¼ mile northwest	3 of 4 tanks removed RCRA – non generator, but previous LQG, no violations LUST NFA/NFR letter dated 11/23/1992 SRP NFR letter dated 9/17/199 with groundwater use restriction and building	Unlikely facility activities will impact project implementation

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
				foundation soil barrier on 8 acres AIRS – facility ceased operation 4/16/1993	
SRP	33	Nu Way Industries	¼ to ½ mile west	NFR letter dated 11/21/1994	Unlikely facility activities have impacted project area
LUST	34	Calkins & Co.	¼ to ½ mile west	NFA/NFR letter dated 4/15/1991	Unlikely facility activities have impacted project area
UST	35	Des Plaines Park District	< 1/8 mile west	1 tank removed	Unlikely facility activities have impacted project area
RCRA-SQG FINDS	36	Bramples Equipment Services	1/8 to ¼ mile west	RCRA – no violations	Unlikely facility activities have impacted project area
RCRA-nongen FINDS	36	Nalco Chemical Company	1/8 to ¼ mile west	RCR – previous SQG, no violations	Unlikely facility activities have impacted project area
LUST	37	Mobil Oil Corporation	1/8 to ¼ mile south	NFA/NFR letters dated 6/12/1991, 10/30/2007, and 5/24/2012	Unlikely LUST activities have impacted project area
RCRA-CESQG FINDS	37	Creative Printing Service, Inc.	1/8 to ¼ mile south	RCRA – no violations	Unlikely facility activities have impacted project area
LUST	38	Brunswick Service Station	~ ¼ mile south	NFA/NFR letter dated 9/24/2001	Unlikely LUST activities have impacted project area
LUST	39	Illinois State Toll Highway Authority,	¼ to ½ mile south	Unknown status	Up gradient to project area. Given the activities conducted for construction of

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
		M-3, I-294, MP-62			floodwall (excavation), and unknown scope and scale of LUSTS, the status of facility was requested through IEPA. Additional information not available at time of report.
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

DPLV09 is an extension of the Oakton-Everett Levee (DPLV07) from previous HTRW study (high-risk).

The NER sites in Lake County contain a number of private water wells that are within the project area(s). The location of the water wells should be identified prior to restoration work to confirm that the site activities won't conflict with the work or the use of the well.

NER L05

Table 3 – NER L05 EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
UST	1	Getz, James R.	1/8 to ¼ mile southeast	1-UST on-site exempt from registration at private residence	Tank is not on or adjacent to project area. Unlikely that UST presence will impact project implementation.
UST LUST SPILLS	A2 A3	Stevenson House and Service Building, Lake County Forest Preserve	Adjacent to restoration activities	Site contained 1-UST exempt from registration – last used 1973. LUST/SPILLS NFR 10/4/2004.	Unlikely facility activities have impacted the project area
LUST	B4 B5	Illinois State Tollway Authorities and Mobil Oil	1/8 to ¼ mile northeast	Multiple LUST actions registered to site. NFR letters dated 9/1/2004 for all reported incidences	Unlikely LUST activities have impacted the project area
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

NER L31

Table 4 – NER L31 EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	1	S&S Enterprises, Inc.	1/8 mile west	Gasoline, 45-day report; no NFA/NFR letter.	IEPA online database: 45-day report submitted in 1994. Site given "high" classification indicating that corrective action is required, but may not have been conducted. Unlikely site activities will impact project implementation (given no significant upland excavation is expected for ecosystem restoration). Verify assumptions during design.
LUST	A2	National Petroleum	1/8 to ¼ mile west	NFA/NFR letter dated 1/25/2012	Unlikely LUST activities have impacted project area
LUST	A3	Gurnee Truck Stop	1/8 to ¼ mile west	NFA/NFR letter dated 1/25/2012	Unlikely LUST activities have impacted project area
UST	4	Gurnee Fuel Stop	1/8 to ¼ mile west	Four existing tanks, 4 tanks removed	UST not adjacent to project area, unlikely to impact project implementation
LUST UST	5	Fatman Inn	1/8 to ¼ mile west	NFA/NFR letter dated 12/9/1998	Unlikely facility activities will impact project implementation
LUST	6	HE Cashmore Estate	¼ to ½ mile east	NFA/NFR letter dated 5/14/1991	Unlikely LUST activities have impacted project area
RCRA-SQG FINDS MANIFEST	7	Laserage Technology Corporation	>1 mile east	Previous LQG, no RCRA violations	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
UST	8	Katris, Jim	Adjacent	3-tanks exempt from registration	Confirm locations of USTs during design phase
RCRA-SQG	9	Selected Chemical	½ to 1 mile east	No RCRA violations	Unlikely facility activities have impacted project area
RCRA-SQG FINDS	10	Norstan, Inc.	½ to 1 mile east	No RCRA violations	Unlikely facility activities have impacted project area
UST	11	Whitmore Service, Inc.	>1 mile east	3-tanks in use	Outside ASTM search distance, unlikely to impact project implementation
RCRA-CESQG FINDS	12	Exclusive Woodworking, Inc.	>1 mile east	No RCRA violations	Outside ASTM search distance, unlikely to impact project implementation
UST LUST	B13 B14	Eric Christenson Concrete Co, Inc.	Adjacent	2-tanks removed, LUST 45-day report in 2000, no NFA/NFR	IEPA online database: 45-day report submitted in 2000. Unlikely site activities will impact project implementation (given no significant upland excavation is expected for ecosystem restoration). Verify assumptions during design.
LUST	C15	Kale, Bob	Adjacent	NFA/NFR letter dated 10/7/1996	Unlikely LUST activities have impacted project area
RCRA-SQG FINDS NPDES LUST UST	D16 D17	Ferrite International Co.	Adjacent (across Wadsworth Road)	No RCRA violations LUST NFA/NFR letter dated 6/9/1993 2-tanks exempt from registration NPDES active, current permit, minor	Unlikely facility activities will impact project implementation

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
				discharger	
UST	C18	Soo Line Railroad	Adjacent	Facility closed, tank removed	Unlikely facility activities have impacted project area
UST	19	St. Patrick Catholic Church	1/8 to ¼ mile east	1-heating oil tank removed	Unlikely facility activities have impacted project area
UST	20	The Corner Gas Station	Adjacent	4-tanks in use	Confirm location of USTs during design phase
INST CONTROL SRP	21	Hot Road Shop	Adjacent	NFR letter recorded 9/25/2000 with 2 acres of groundwater use restriction	Unlikely facility activities will impact project implementation; confirm site activities during design.
RCRA-SQG MANIFEST	22	Six Flags Great America	1/8 to ¼ mile southwest	No RCRA violations	Unlikely facility activities will impact project implementation
UST	23	Tri Star Gas & Food mart, Inc.	Adjacent	3-tanks in use	Confirm location of USTs during design phase
UST	E24	Sheridan Wholesale Liq, Inc.	½ to 1 mile east	1-tank removed	Unlikely facility activities have impacted project area
UST	25	BP Convenience Store	Adjacent	3-tanks currently in use	Confirm location of USTs during design phase
LUST	E26	Continental Dist.	½ to 1 mile east	NFA/NFR letter dated 1/7/1993	Unlikely LUST activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
RCRA-SQG FINDS	27	Payson Casters, Inc.	½ to 1 mile east	Previous LQG, no RCRA violations	Unlikely facility activities will impact project implementation
RCRA-SQG FINDS	F28	Nosco, Inc	½ to 1 mile east	No RCRA violations	Unlikely facility activities will impact project implementation
CERC-NFRAP RCRA-SQG	F29	LPI, Inc.	½ to 1 mile east	No RCRA violations, site does not qualify for NPL, archived	Due to proximity of facility to project site, unlikely to impact implementation
UST	30	Royal Crown Warehouse	½ to 1 mile east	1-tank removed	Unlikely facilities activities have impacted project area
RCRA-nongen FINDS AIRS	31	Hoover Materials Handling Group, Inc.	½ to 1 mile east	Previous LQG, no RCRA violations AIRS – facility closed, no active permit	Unlikely facilities activities have impacted project area
RCRA-SQG FINDS	32	Triangle Packaging	½ to 1 mile east	No RCRA violations	Unlikely facilities activities have impacted project area
RCRA-nongen FINDS	G33	Tri State Distribution, LTD	½ to 1 mile east	Previous LQG, violation and enforcement action 09/1990, achieved compliance 12/1990	Unlikely facilities activities have impacted project area
UST	G34	Plant #16	½ to 1 mile east	2-USTs removed	Unlikely facilities activities have impacted project area
RCRA-CESQG FINDS	35	Istha Plaza 21 STP	½ to 1 mile west	No RCRA violations	Unlikely facilities activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
SRP	G36	Tri-State Distribution, LTD.	½ to 1 mile east	NFR recorded 3/26/2003, with no restrictions	Unlikely facilities activities have impacted project area or will impact project implementation
RCRA-SQG	37	Cornfields, Inc.	½ to 1 mile east	No RCRA violations	Unlikely facilities activities have impacted project area
RCRA-SQG FINDS	38	Elrich Machines, Inc.	½ to 1 mile east	No RCRA violations	Unlikely facilities activities have impacted project area
UST	39	Lakeside Transportation	> 1 mile	Outside standard search distance	
RCRA-Nongen FINDS	40	PQ Corp	½ to 1 mile east	Current non-gen but previous LQG. No violations.	Unlikely facilities activities have impacted project area
RCRA-SQG FINDS	41	ComEd Waukegan Dist HQTRS	> 1 mile east	Outside standard search distance	
CERC-NFRAP CORRACT RCRA-nongen FINDS	42	Travenol Laboratories, Inc.	> 1 mile east	Outside standard search distance	
RCRA-SQG	H43	General Loose Leaf Binder Co.	> 1 mile east	Outside standard search distance	
RCRA-CESQG FINDS	H44	Interpak Equipment Corp.	> 1 mile east	Outside standard search distance	

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
RCRA-nongen FINDS	H45	Piper Casepro	> 1 mile east	Outside standard search distance	
RCRA-CESQG FINDS	H46	Whiteway Sign Co.	> 1 mile east	Outside standard search distance	
RCRA-SQG FINDS	H47	Certified Packaging Corp.	> 1 mile east	Outside standard search distance	
RCRA-CESQG FINDS INST-CONTROL SRP	H48 H49	Chugai USA Inc.	> 1 mile east	Outside standard search distance	
RCRA-SQG	H50	Centerpoint Properties Trust	> 1 mile east	Outside standard search distance	
UST	51	ISTHA Toll Plaza 21	½ to 1 mile west	1-UST removed	Unlikely facility activities have impacted project area
RCRA-SQG FINDS	52	Polyfoam Packing	> 1 mile east	Outside standard search distance	
LUST	53	ISTHA	> 1 mile west	Outside standard search distance	
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

NER L33

Table 5 – NER L33 EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST FINDS	A1 A2	Galt, Anne R.	Adjacent to restoration area to east	Non-LUST determination letter dated 12-30-1993	Unlikely LUST activities have impacted the project area
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

NER L39

Table 6 – NER L39 EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST	1	Amoco Oil Co. #3761	1/8 to ¼ mile north	NFR letter dated 12/10/1996	Unlikely LUST activities have impacted the project area
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found.					

NER L43

Table 7 – NER L43 EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
No regulated sites within the ASTM recommended search distances. The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. No sites of concern were found. Verify site status and surrounding land use during site visit.					

Belvidere Road Bridge Modification (DPBM13)

Table 8 – Belvidere Road Bridge Modification (DPBM) EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
IL NIPC CERC-NFRAP RCRA-CESQG FINDS SWF/LF	1/2	Lake County Grading Company	¼ to ½ mile southwest	Site archived in 1993 does not qualify for NPL RCRA – no violations SWF – closed/permitted landfill with incinerator ash and demolition debris – 56 acres, groundwater monitoring required	Given the downstream proximity of the site to the bridge modification site, and the nature of the bridge modification work (fill for road raise), site is unlikely to impact project implementation.
SRP	3	Cobble Creek Development	¼ to ½ mile north	NFR recorded 10/14/1999 with no restrictions	Unlikely site will impact project implementation
The listing of orphan sites was briefly reviewed to determine if any sites appear to be located on or near the project area. Additional information for Lake County Grading was found and added to table above.					

HISTORICAL TOPOGRAPHIC MAP 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 dumping activities, and locating extensive areas that lack vegetation can determine indications of a potential REC. Historical topographic maps for each of the project sites are included in Attachment 2.

Levee 9 and Levee 9 Comp Storage Site (DPLV09 and DPLV09 CSS)

Historical topographic maps (Arlington Heights, Park Ridge, Chicago 1A and Chicago 1B, Illinois Quadrangles) were reviewed from the period between 1900 and 1995. Review of the 1900 topographic map suggests that municipalities such as Mt. Prospect, Des Plaines and Referee Park have begun to develop in the area but site-specific topography cannot be determined. The Des Plaines River, Central railroad, and the Northwestern railroad are noted. The scale of the 1927 topographic map includes enough detail to suggest that there are structures along River Road as well as commercial development along the entire floodwall project corridor. Because of the early development in the project and surrounding area, there does not appear to be significant changes in topography in the project area between 1927 and 1995. The floodwall project area footprint and compensatory storage site appears to be undeveloped along the Des Plaines River corridor between 1900 and 1995; the exception is where the floodwall alignment intersects properties in areas where development has occurred east of River Road and adjacent to the Des Plaines River between Algonquin and Oakton Streets. The nature of the development along this corridor should be confirmed during the site visit to determine if current site use will impact project implementation.

NER L05

Historical topographic maps (Wheeling, Illinois Quadrangle) were reviewed from the period between 1900 and 1993. The 1900 topographic map shows only the general area and does not indicate site-specific topography. The Des Plaines River and Indian Creek, along with two railroads and scattered structures are noted. The 1947 topographic map indicates that there are several small structures adjacent to the restoration project areas and a few undeveloped roadways adjacent and within the project area. Townline Road is present to the north. The project area contains several wetland/open water areas and the surrounding properties are mostly undeveloped. In 1948 St. Mary's and Everett roads are noted. The 1953 map indicates several trails or roadways entering the project area and adjacent areas from the north and west with the addition of several small structures (*presumably single family residences and driveways*). The Tristate tollway and Mettawa (town) are noted in the 1963 topographic map along with several larger structures adjacent. With the exception of continued growth in the surrounding area, there are no changes in topography at the project site between 1963 and 1993. While there is development in the adjacent properties (outside of the project area), there does not appear to be significant topographic changes in the restoration areas between 1900 and 1993.

NER L31

Historical topographic maps (Wadsworth and Waukegan, Illinois Quadrangles) were reviewed from the period between 1908 and 1993. The project site appears to be undeveloped in the 1908 topographic map. Structures align Wadsworth Road to the north and the Chicago-Milwaukee railroad forms the eastern border of the project area. A road is present on the western boundary of the site, but is not designated as Skokie Highway until 1960. There is little development along this roadway in 1908. The Des Plaines River bisects the project area from the north to the south, and an undeveloped road bisects the site (Section 35). Between 1908 and 1960 the site was used for mining gravel; multiple gravels pits are noted in the 1960 topographic map and are shown as open water areas. Several undeveloped roads are noted surrounding the gravel pits. Multiple structures and development appear along Skokie Highway in the southern portions of the project area; this development continues through 1972. In 1972, a golf course is located west of the Des Plaines River; this area is outside the USACE restoration project area. Between 1972 and 1993, the extent of the gravel mining expands and more open water areas are present, but it appears that the railroad bordering the site to the east is abandoned. It is presumed that the railroad right-of-way and other undeveloped roadways present during mining are currently being used as part of the Des Plaines River Trail. Restoration limits appear to be designed such that adjacent developed properties are not within the scope of restoration.

NER L33

Historical topographic maps (Wadsworth and Waukegan, Illinois Quadrangles) were reviewed from the period between 1908 and 1993. The 1908 topographic map indicates that the property and surrounding areas are mostly undeveloped. The Chicago Milwaukee Railroad is present to the far east, and Stearns School Road (southern border) is constructed. There are isolated structures along Stearns School Road, Mill Creek is to the north, and a small stream (presumed also Mill Creek) is noted in the project area. Other major surrounding roadways are present. Between 1908 and 1960 larger structures are constructed west of the project area along Stearns School Road, but are outside of the project limits. The Mill Creek limits have expanded to include large open waterbody and several wetlands areas are noted north of the project area. Between 1960 and 1993, there are no changes in topography within the project area. There are no other changes to the site topography between 1908 and 1993.

NER L39

Historical topographic maps (Grayslake and Antioch, Illinois Quadrangles) were reviewed from the period between 1923 and 1993. Resolution of the 1923 quad map prevents using the map for site-specific determinations; in general, the project area appears undeveloped. Huntley Lake is visible, as are the adjacent surrounding roadways (US-45, SR-173, Savage and Miller Roads). Wetlands (western portions of the project) and small streams (Mill Creek – eastern; Hastings Creek - southeastern portions of the project area) are present. Between 1947 and 1960 Huntley Lake Association Road is constructed with multiple residential structures adjacent; additional isolated structures are

present on adjacent roadways. An undeveloped road (perhaps for access to Huntley Lake) bisects the project area from US-45 to the east. Between 1960 and 1972, previous wetlands areas are designated as open water, and more undeveloped roadways are present within the project limits north of Huntley Lake. In 1993, this area is designated as a mobile home park. No other changes are present between 1972 and 1993.

NER L43

Historical topographic maps (Grayslake and Antioch, Illinois Quadrangle) were reviewed from the period between 1923 and 1993. Resolution of the 1923 quad map prevents using the map for site-specific determinations; in general, the project area appears undeveloped. Deer Lake is visible, as are the adjacent surrounding roadways (US-45, SR-173, County Highway 36 and Stateline Road). Adjacent roadways contain isolated structures; wetlands are present on western portions of the project area, and small stream outlets at Deer Lake to the northeast. With the exception of wetlands areas being designated as open water, there are few changes to the project area between 1923 and 1960. Between 1960 and 1972, adjacent areas outside of the USACE restoration area appear to contain several larger structures (northeast quadrant). Between 1972 and 1993, Redwing Slough is designated as open water, and development continues on adjacent properties to the east (industrial/commercial) and southeast (residential). There are not significant changes in topography within the USACE project area between 1923 and 1993.

Belvidere Road Bridge Modification (DPBM13)

Historical topographic maps (Waukegan and Libertyville, Illinois Quadrangle) were reviewed from the period between 1908 and 1998. The 1908 topographic map indicates that major thoroughfares, such as Belvidere Road (crossing the Des Plaines River), Milwaukee Avenue and US-41 are present. In 1960, Belvidere Road is noted as a two lane road with entrance and exit ramps to Milwaukee Avenue. An open water body is noted on the west bank of the Des Plaines River just southwest of the Des Plaines River bridge crossing. The area adjacent to the Des Plaines River is relatively flat, with more relief in the topography outside of the flood plain. There is minimal development in the adjacent surrounding areas. Six small structures are located north of Belvidere Road west of the bridge (single-family residences or commercial development). Tri-state tollway is present to the east. Between 1960 and 1972, a large “pit” (likely Lake County Grading) was developed south and west of the project area with an access from Milwaukee Avenue, reaching its final elevation of 700 in 1993. Between 1972 and 1980, residential areas developed along the Milwaukee Avenue corridor north of the project area, and between 1980 and 1993, Belvidere Road is designated SR-120. Surrounding areas continue development through 1998 with the addition of schools, golf courses, and residential areas to the west; the project area and areas adjacent to the east are County Forest Preserve. There are not significant changes in topography beyond expansion of the Belvidere Roadway within the USACE project area between 1908 and 1998.

HISTORICAL AERIAL PHOTOGRAPH REVIEW

Indications of a potential REC 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 dumping activities, and locating extensive areas that lack vegetation can determine indications of a potential REC. Historical aerial photographs are included in Attachment 3.

Levee 9 and Levee 9 Comp Storage Site (DPLV09 and DPLV09 CSS)

Historical aerial photographs were reviewed from the period between 1951 and 2007. Residential development and other structures are adjacent to the floodwall alignment in the 1951 photo along Des Plaines River Road. The compensatory storage project area is forested east of the Des Plaines River. There is evidence of controlled land disturbing activities west of the project area where mining activities may have created a large excavation/pond north of Oakton Street; the pond is visible in the 1967 photograph with residential development surrounding. The floodwall corridor continues to develop through 1974 when the tollway construction is visible to the east. There are no significant changes to the project area between 1951 and 2007, with the exception of continued development of adjacent structures along River Road. There are no indications from the review of the historical aerial photographs that the floodwall/compensatory storage project areas were used for industrial purposes.

NER L05

Historical aerial photographs were reviewed from the period between 1951 and 2007. In the 1951 aerial photograph the site is mostly undeveloped. The project area is vegetated with forest or agriculture. Between 1951 and 1953, several undeveloped roadways and associated structures (that appear to be residential in nature) are noted. There are visible signs of water in the southwest and eastern portions of the area. In 1962 there appears to be an area with land-disturbing activities north of Everett Road (USACE area marked for Savannah restoration) but appears vegetated in 1972. It is unclear what activities were conducted in this area. Re-review of the topographic maps indicates that there are no changes in site topography in this area, though a circular roadway was noted in 1947 and disappears by 1963. This portion of the project area should be investigated during the site visit to determine if the property was used for landfill. The area is currently vegetated. Areas adjacent to the restoration site appear to continue to develop with residential structures between 1972 and 2007, but those areas appear to be outside the limits of the restoration project. It appears that the restoration project areas have historically been undeveloped forest and agriculture.

NER L31

Historical aerial photographs were reviewed from the period between 1939 and 2007. In 1939 the USACE project area appears to be mostly undeveloped and a combination of agriculture, forest, a few structures (likely farmhouses), and mined areas. Railroad forms the eastern boundary, and Skokie Highway forms the western boundary. There are few

changes to the site between 1939 and 1972; open water areas are more abundant over time, but site use remains the same. Development is noted in areas adjacent to the project and the Des Plaines River to the south in 1972. The quality of the 1981 photograph prevents use for HTRW purposes. 1988 and 1993 photographs indicate dense vegetation in most area of the project with large open water area where mining activities may have been conducted. There are no significant changes in site use between 1993 and 2007. There are no indications that the project area has been impacted from industrial/commercial uses or dumping; however, the aerial photographs provided do not fully cover the USACE proposed project area. A more thorough review of aerial photographs should be conducted during design stage of the project.

NER L33

Review of historical aerial photographs obtained between 1953 and 2007 suggest the project area did not contain any development. The property proposed for ecosystem restoration was primarily forested or active agriculture. Roadways surrounding the site appear to have changed alignment over time. There are no indications that the project area has been impacted by the limited adjacent development in the area.

NER L39

Historical aerial photographs were reviewed from the period between 1941 and 2008. In 1941 the USACE project area appears to be mostly undeveloped and a combination of agriculture, forest, and a few structures (likely farmhouses). Adjacent developments appear to consist of single-family dwellings. 1953, structures are noted surrounding Huntley Lake. Between 1953 and 1980, the large mobile home park identified in the topographic map review on the north eastern portion of the USACE project area is constructed, with access to Huntley Lake on the north side. The forested area to the west of the mobile home park also appears to contain structures and is clear in the 1988 photograph. Adjacent areas continue to be used for agriculture. Between 1998 and 2005 the mobile home park is removed. Between 2005 and 2006, several roadways or paths are constructed within the project area, and parking facilities noted in current aerials are present (presumed to be part of the Raven Glen Forest Preserve). With the exception of continued vegetation growth, few changes are present in the project area between 2006 and 2008.

NER L43

Historical aerial photographs were reviewed from the period between 1941 and 2008. In 1941 the USACE project area appears to be mostly undeveloped and a combination of agriculture and forest. In 1950 and 1956, channelized ditches and small open water areas are noted in central portions of the USACE project area, likely created for agricultural purposes given the surrounding land use. Between 1956 and 1998, there are few changes in the aerial photographs. Redwing Slough becomes open water, and adjacent ditches and ponds are expanded to a more natural state in 1972, but then changes to a more dry state through 1998. There are no indications that the project area has been impacted from industrial/commercial uses or dumping; however, the aerial photographs provided do not

fully cover the USACE proposed project area. A more thorough review of aerial photographs should be conducted during design stage of the project.

Belvidere Road Bridge Modification (DPBM13)

Historical aerial photographs were reviewed from the period between 1939 and 2007. In 1939 the roadway proposed for modification is present; however it appears to be a small two lane roadway. The Des Plaines River is partially tree-lined, and the surrounding areas consist primarily of agriculture and single family residences. The open water area southwest of the project area appears sometimes between 1953 and 1972; this open water body appears to be either stormwater retention or borrow pit developed during expansion of the Belvidere roadway from a two lane road to a four lane road between 1953 and 1972. In 1972, Lake County Grading is clearly visible to the southwest; a large area of land disturbance with associated structures and access roads are noted. Between 1972 and 1981, residential development flourished to the northwest of the project area. There are no significant changes to the adjacent properties until 1998, when the Lake County Grading property appears partially vegetated. Residential/commercial properties (currently AAA tent) are located north of Belvidere Road (Riverside/Des Plaines Ct), and a large development, upstream of the project area (Manchester Road) is disturbed in 2005 through 2007. This area appears to be a strip mall; the remaining area is disturbed with some vegetation and a small debris pile off of Manchester Road (for sale). The Lake County Grading site also appears to be undergoing changes between 1998 and 2007, but the limits of the site do not increase. There are no indications that the project area has been impacted by the adjacent development in the area.

SITE VISIT

Environmental engineering section staff members visited the project sites on October 12 and October 19, 2012. The purpose of the trips was to overview the current site conditions and to examine the area for evidence of potential recognized environmental concerns (RECs). Site visit photographs are included at Attachment 4.

Levee 9 and Levee 9 Comp Storage Site (DPLV09 and DPLV09 CSS)

Members of the TS-DH team visited the Levee 9 and Levee 9 proposed compensatory storage project site on October 2nd and 9th, 2012. Half of the levee 9 project area (south of Oakton Street) is accessible from Des Plaines River Road. River Road is developed with a mixture of residential and commercial properties. Southern portions of the project area, where levee is identified as the primary flood risk management feature of the project, lie within forest preserve property. The forest preserve area appeared to be relatively free of trash and debris; however isolated debris and roadway debris is present. All facilities that are adjacent to the levee and floodwall alignment that were accessible appear to be well-kept and free of RECs. Northern portions of the Levee 9 project area were inaccessible. The project area north of Oakton Street is developed with residential private properties on the east side of Des Plaines River Road. This portion of the project consists of floodwall placement adjacent to the Des Plaines River and in the backyards of multiple single-

family homes. There was limited accessibility to the residential area and no accessibility to the floodwall alignment. Residences and retention pond associated with the development appear to be well-kept. The compensatory storage site was access from Campground Road Woods. The area of compensatory storage is heavily wooded. The Des Plaines River was accessed through the woods. Photos presented in Attachment 4 note the development along the Des Plaines River, west bank. No signs of trash or debris were visible in the project area; however, due to the limitations (size of site and access limitations), the entire compensatory storage site was not investigated during the site visit.

NER L05

Members of the TS-DH team visited the NER L05 project area on October 2, 2012. Project areas appear to primarily be undeveloped agricultural and/or woodland areas. Areas of the site were viewed from adjacent roadways. The southwest corner of the project area appears to consist of state dedicated nature preserve (Grainger Woods). Forested woodland and open water areas were visible from Everett and St. Mary's Road. Wright Woods is located southwest of the project area. There is limited development along St. Mary's Road; Grainger Woods Conservation Preserve is located on the corner of St. Mary's and Townline Road, with stables, horses, and horse working areas. The portion of the project area just south of Townline Road adjacent to Grainger, Inc. is marked as a habitat restoration area. The majority of the project area is not visible from the adjacent roadways. Tree lines, private residence and private drives prevent access in the inner portions of the project area from Riverwoods Road, the primary eastern project boundary. No signs of trash or debris were visible in the project area; however, due to the limitations (size of site and access limitations), the entire site was not investigated during the site visit.

1962 historical aerial photos suggest an area with land-disturbing activities north of Everett Road (USACE area marked for Savannah restoration) but appears vegetated in 1972 historical aerial photos. This portion of the project area was investigated during the site visit; the area appears to be used for recreational purposes (but is marked as private property – Photo 2). A circular drive is present and several cars were parked on the day of the site visit; people were present with model airplanes. The area was not walked during the site visit, but portions of the property visible from the roadway did not appear elevated, or excavated, and did not appear to be landfill. Surrounding areas appear to be well-kept and free of RECs. Grainger Inc. appears to be a substantial adjacent industrial/commercial facility on Townline Road, but no information was presented in the EDR database report on environmental compliance. Internet search suggests that Grainger, Inc. appears to be an industrial supple and applied industrial technologies company. There are entries in the USEPA enviromapper tool for this business:

- AIRS/AFS: operating facility with unknown compliance status
- RCRA-SQG no violations

The facility appears to be well-kept and free of RECs.

NER L31

Members of the TS-DH team visited the NER L31 project area on October 9, 2012. The project area was viewed from adjacent roadways and photographs were captured from Skokie Highway (western boundary) and the Des Plaines River Trail (accessed from Wadsworth Avenue to the north). The site appears to be undeveloped forest preserve. The site appears to be heavily vegetated forest and prairie with isolated open water/wetland areas. The Des Plaines River trail forms the eastern boundary of the project. There were no signs on trash or debris on the project site. Garbage receptacles are provided in the northern portions of the forest preserve where site access and parking facilities are provided for the Des Plaines River Trail as well as the trailer and traffic for restoration efforts/contractors. The site is posted as a wetland demonstration project by the lake County Forest Preserve. Limited businesses are situated along Skokie Highway and are primarily commercial in nature (restaurant, gas stations, etc.) The Des Plaines River Trail is well-kept and being used on the day of the site visit. Bird, geese, and ducks were visible in northern area ponds. Due to site limitations (size of site and timing of the investigation) the entire site was not investigated during the site visit.

NER L33

Members of the TS-DH team visited the NER L33 project area on October 9, 2012. Areas of the site were viewed from the adjacent roadway to the south (Stearns School Road). Southern portions of the project area are accessible from an access point provided to the Mill Creek Forest Preserve on the southeast corner of the property. The area is a pull-off from the road and there are no formal parking facilities. The project area appears to be a mix of prairie and agriculture. Northern portions of the project area were not accessible by road and were not visible from Stearns School Road due to heavy tree line. Signage near the project area indicated that Mill Creek Forest Preserve consists of 276 acres of acquired properly. Mill Creek, shown in photos, crosses under Stearns School Road. No signs of trash or debris were visible in the project area; however, due to site limitations (size of site and timing of the investigation) the entire site was not investigated during the site visit.

NER L39

Members of the TS-DH team visited the NER L39 project area on October 9, 2012. Areas of the site were viewed from adjacent roadways and trail networks on-site through the forest preserve. The project area consists primarily of undeveloped areas that are densely vegetated or actively farmed. Raven Glen Forest Preserve access is from US-45 and is the majority of the project area. Trails and other facilities, such as parking, toilets, and equestrian facilities are provided on-site (appear to be in areas previously used as trailer park as noted in historical topographic maps). A series of nature walks and trail networks noted in photo 6 lead to Timber Lake, woodland and wetland walk areas, as well as a lake overlook. No signs of trash or debris were visible in the project area; however, due to site limitations (size of site and timing of the investigation) the entire site was not investigated during the site visit.

NER L43

Members of the TS-DH team visited the NER L05 project area on October 9, 2012. Areas of the site were viewed from adjacent roadways. The project area is almost entirely inaccessible. Most of the USACE restoration activities appear to surround Redwing Slough and Deer Lake; though a variety of private drives appear to lead to these portions of the restoration area. The exception is the parking facility south of Route 173 for the Redwing Slough Forest Preserve. Though the USACE site appears accessible from this location (and according to maps contains a trail), signs are posted for no entry. In addition, restoration areas on the corner of Deep Lake and Stateline Roads appear to be agriculture. From the adjacent roadways the project area appears to consist primarily of undeveloped areas that area densely vegetated or actively farmed. No signs of trash or debris were visible in the project area; however, due to site limitations (size of site and inaccessibility) the entire site was not investigated during the site visit.

Belvidere Road Bridge Modification (DPBM13)

Members of the TS-DH team visited the Belvidere Road bridge modification project area on October 2, 2012. There appears to be little to no development along the Belvidere Road corridor where the bridge modification project is proposed. The river is accessible from a service trail to the Des Plaines River Trail on the south side of Belvidere Road east of the bridge. The Des Plaines River was shallow (1-2 feet) under the bridge on the day of the site visit and the water was clear. The sediment bed appears to consist of sand and vegetation was visible within the stream. The Des Plaines River Trail goes under the Belvidere Road Bridge, but the clearance is shallow and only accessible by walking or biking. The banks of the Des Plaines River are mostly vegetated, with the exception of the bank areas adjacent to the bridge piers. The substrate in this area is siltier in nature and vegetation is likely not present due to the flashy/flood-prone nature of the River. No signs of trash or debris, or other RECS, were visible in the project area.

FINDINGS AND CONCLUSIONS

This Phase I Environmental Site Assessment Addendum was completed to document HTRW investigation of five additional Lake County NER sites (L05, L31, L33, L39, and L43) and two additional NED sites (Levee 9 and compensatory storage site) identified for possible implementation during completion of the Upper Des Plaines and Tributaries Phase II Feasibility Study. This report supplements information documented in previous HTRW investigations and provides an assessment of whether project activities will have an impact on any RECs that may exist in the surrounding areas, and if RECs will have an impact on the implementation of the projects. 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. Recommendations for future actions and results of the investigation are summarized in Table 9.

Review of information provided in the EDR database suggests that there are three LUST incidents within the recommended search distance of the DPLV09 levee/floodwall

project area with unknown or unresolved status. The sites appear to be up gradient to the proposed work. It is unclear if any of these sites have the potential to impact project implementation. Additional information about the sites was requested through the IEPA but was not available at the time of this report. The scope and scale of the LUST incidents should be confirmed. A phase II investigation may be required at the project site to determine scope and scale of site impacts from adjacent regulated activities.

Review of information provided in the EDR database suggests that there is one LUST incident within the recommended search distance of the NER Site L31project area with unknown or unresolved status. The site appears to be up gradient to the proposed work. It is unclear if this site has the potential to impact project implementation; however, it seems unlikely given that the nature of ecosystem restoration work (limited excavation). The scope and scale of the LUST incident, and proposed USACE activities, should be confirmed during the design phase. A phase II investigation may be required at the project site to determine scope and scale of site impacts from adjacent regulated activities.

Review of information provided in the EDR database suggests that undeveloped project areas proposed for ecosystem restoration, such as NER Site L31, may contain multiple USTs on adjacent properties that have been excluded from the USACE project areas. While the nature of ecosystem restoration activities does not typically involve significant excavation, if excavation is proposed for soil or drain tile removal near the USTs associated with the adjacent properties, the USTs locations and status should be confirmed during the design phase of the project to avoid disturbance.

Review of historical aerial photographs and topographic maps indicate the project areas were undeveloped prior to 1900. The majority of the sites identified for ecosystem restoration are contained within forest preserves and/or open space (undeveloped/agricultural) and do not appear to have been used for industrial/manufacturing purposes. Several RECs were identified as part of this investigation:

- Historical topographic maps suggest that the DPLV09 levee/floodwall project area and compensatory storage site appears to be undeveloped along the Des Plaines River corridor between 1900 and 1995; an exception is where the floodwall alignment intersects properties in areas where development has occurred east of River Road and adjacent to the Des Plaines River between Algonquin and Oakton Streets. The nature of the development along this corridor was confirmed during the site visit to determine if current site use will impact project implementation. The adjacent properties appear to be residential in nature. Access was not provided to these sites during the site visit. Additional site visits should be conducted on the individual properties to determine if isolated RECs exist on these properties prior to project implementation.

- Historical aerial photographs reviewed for NER Site L05 suggests a large area with land-disturbing activities north of Everett Road (USACE area marked for

Savannah restoration) with unknown activities. While review of the topographic maps indicates that there are no changes in site topography in this area, a circular roadway was noted surrounding the site in 1947. This portion of the project area was investigated during the site visit; the area appears to be used for recreational purposes (but is marked as private property). A circular drive is present and several cars were parked on the day of the site visit; people were present with model airplanes. The area was not walked during the site visit, but portions of the property visible from the roadway did not appear elevated, or excavated, and did not appear to be landfill.

- Historical aerial photographs reviewed at NER Sites L31 and L43 indicate that these sites have likely not been impacted from industrial/commercial uses or dumping; however, the aerial photographs provided do not fully cover the USACE proposed project area. A more thorough review of aerial photographs should be conducted during design stage of the project to adequately assess if any RECs exist on these properties.

Environmental engineering section staff members visited the project sites on October 2 and 9, 2012. The purpose of the trips was to overview the current site conditions and to examine the area for evidence of potential RECs and other environmental issues. Results of the site visits suggest that the project areas investigated appear to be clean and generally free of trash and debris; however, due to the size and inaccessibility of the NER sites, and the DPLV09 compensatory storage site, these sites were not investigated in their entirety during the site visit. In addition, portions of the DPLV09 project area were not accessible due to private residential development along the floodwall alignment adjacent to the Des Plaines River. More site-intensive field visits should be conducted when the restoration designs are identified to determine if there are any isolated RECs onsite that may impact project implementation.

No investigation can wholly eliminate uncertainty regarding the potential for encountering a REC associated with a project area. Performance of this investigation is intended to reduce, but not eliminate, uncertainty regarding the potential for encountering a REC in connection with a project area.

Table 9 – Summary Phase I Results and Future Recommendations

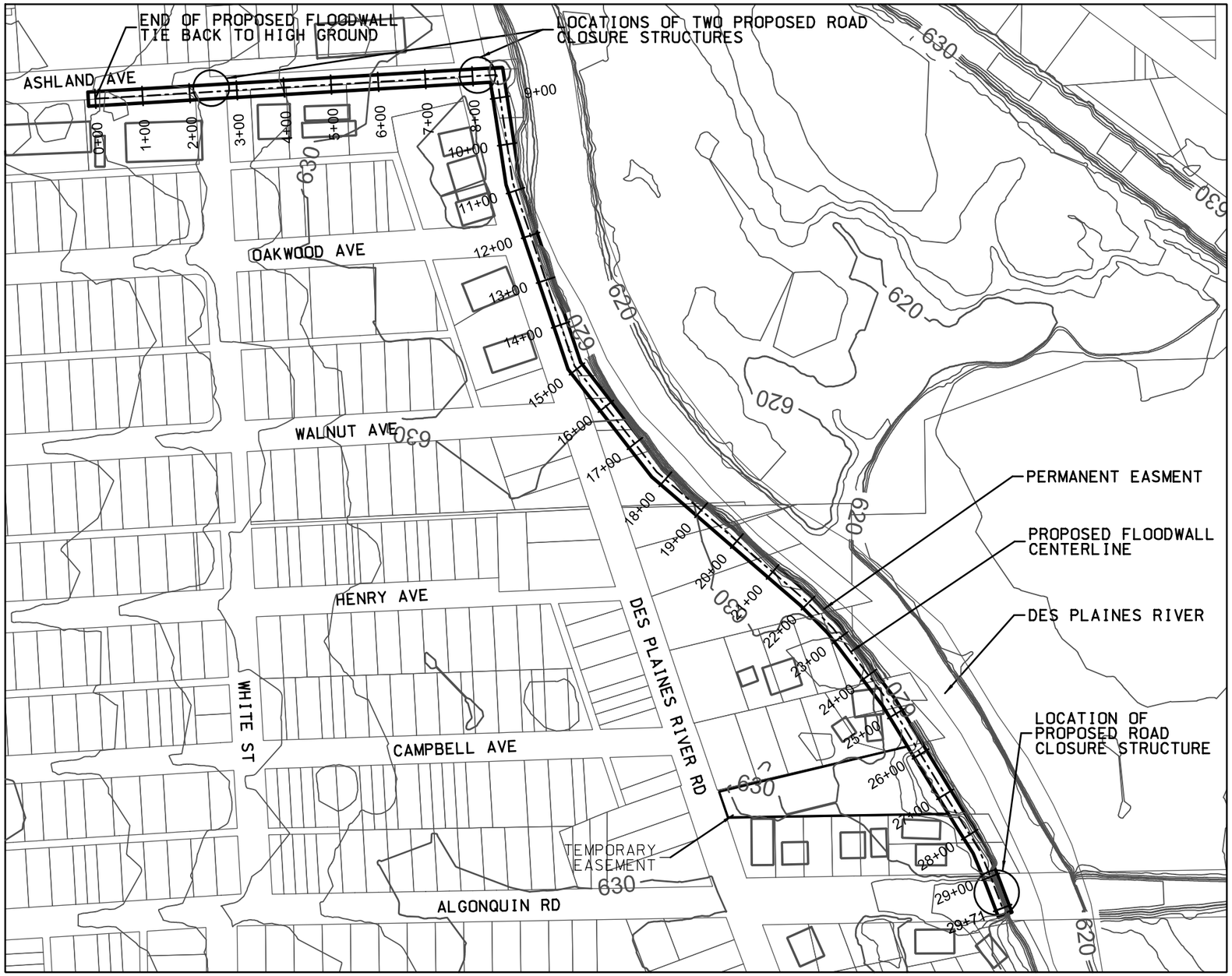
Site	Issue	Short-Term Data Needs	Potential Future Actions
DPLV09 Levee/Floodwall & DPLV09 CSS	Site debris *(debris generally consists of roadside garbage, construction, or landscape debris)*	None	Collect all debris during construction and dispose in accordance with Federal, State, and local laws and regulations
	LUSTs hydraulically up gradient to project within recommended search distance with unknown status	Confirm scope and scale of the LUST incidents with IEPA	Perform phase II investigation to determine scope and scale of site impacts from adjacent regulated LUST activities, if required.
All NER sites & DPLV09 CSS	Site visit	None	More intensive field visits must be must conducted during the design phase to determine if there are any isolated RECs onsite that may impact project implementation.
	USTs adjacent	None	Confirm the location of adjacent USTs during design phase to avoid disturbance of utilities during restoration
NER L31	Two LUSTs (EDR #1 and B13/14) within recommended search distance with unknown status	Confirm scope and scale of the LUST incidents with IEPA	1. Confirm design/excavation assumptions 2. Perform phase II investigation to determine scope and scale of site impacts from adjacent regulated LUST activities, if required.
	SRP Site (EDR #21) adjacent to the restoration site with 2-acres of groundwater use restriction.	None	1. Confirm design/excavation assumptions 2. Perform phase II investigation to determine scope and scale of site impacts from adjacent regulated LUST activities, if required.
NER Sites L31 and L43	Inadequate historical aerial photograph coverage	None	More comprehensive historical aerial photograph coverage must be obtained and reviewed to determine if there are any isolated RECs onsite that may impact project implementation.

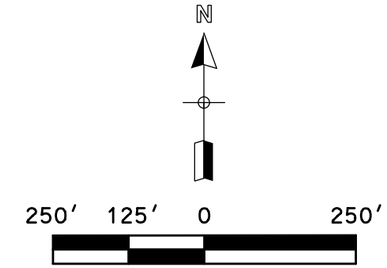
REFERENCES

American Society for Testing of Materials. Publication E 1527-00. 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.

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





SCALE: 1′′= 250′-0″

NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.
4. THE PROPOSED FLOODWALL IS 2,971 FT WITH AN ELEVATION OF 635.65 FT.
5. THE PERMANENT EASEMENT AREA TOTALS 2 ACRES.
6. THE TEMPORARY EASEMENT AREA TOTALS 1 ACRE.
7. THREE ROAD CLOSURE STRUCTURES WOULD BE NECSSARY TO COMPLETE THE LINE OF PROTECTION.

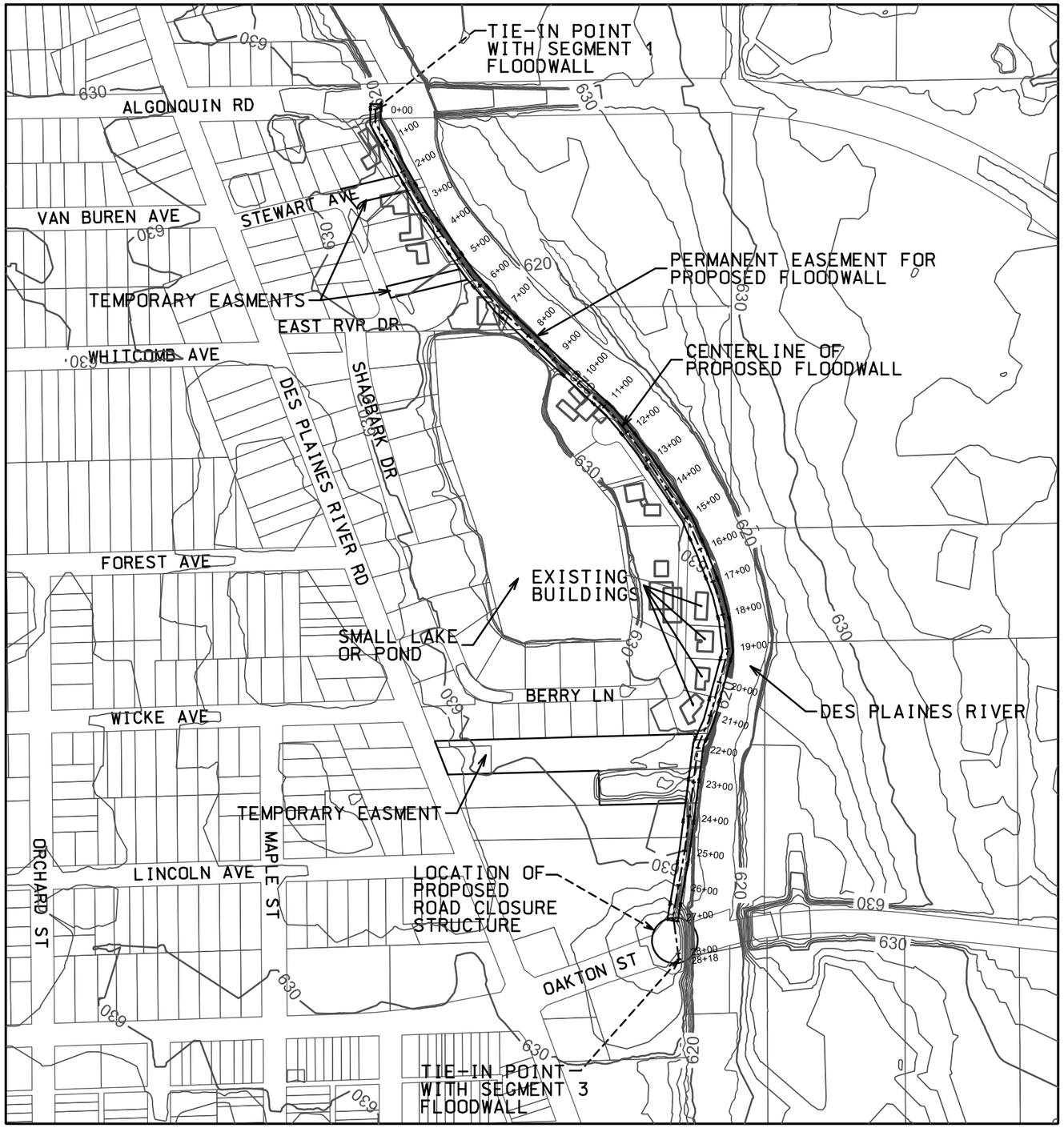
U.S. Army Corps of Engineers Chicago District

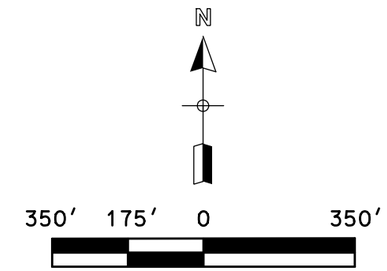
UPPER DES PLAINES RIVER AND TRIBUTARIES FEASIBILITY REPORT AND ENVIRONMENTAL ASSESSMENT

Figure 1 - DPLV09 - SEGMENT 1

FLOODWALL SITE PLAN
DES PLAINES, COOK COUNTY, IL

SCALE:	DATE:	DRAWING CODE:
1″ = 250′	JANUARY 2012	DPLV7A_S1_Siteplan.dgn





SCALE: 1''= 350'-0"

NOTES:

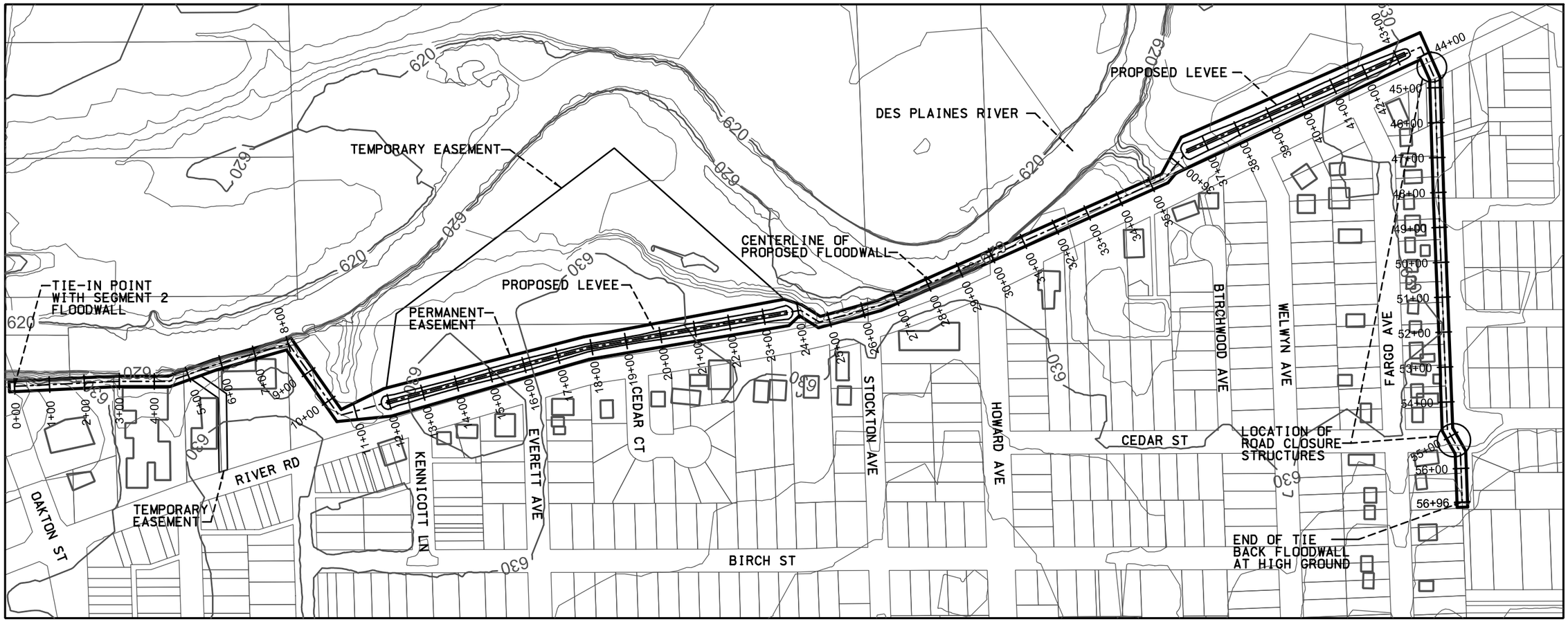
1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.
4. THE PROPOSED FLOODWALL IS 2,818 LF WITH AN ELEVATION OF 635.12 FT.
5. THE TEMPORARY EASMENT AREA TOTALS 2.6 ACRES.
6. THE PERMANENT EASMENT AREA TOTALS 1.9 ACRES.
7. ONE ROAD CLOSURE STRUCTURE WILL BE NECESSARY TO COMPLETE THE LINE OF PROTECTION.

U.S. Army Corps of Engineers Chicago District

UPPER DES PLAINES RIVER AND TRIBUTARIES FEASIBILITY REPORT AND ENVIRONMENTAL ASSESSMENT

Figure 2 - DPLV09 - SEGMENT 2
FLOODWALL SITE PLAN
DES PLAINES, COOK COUNTY, IL

SCALE:	DATE:	DRAWING CODE:
AS-SHOWN	JANUARY 2012	DPLV7A_S2_Siteplan.dgn



NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.
4. THE PROPOSED FLOODWALL IS 3,843 LF WITH AN ELEVATION OF 633.81 FT.
5. THE PROPOSED LEVEE TOTAL IS 1,853 LF WITH AN ELEVATION OF 633.81 FT.
6. TWO ROAD CLOSURE STRUCTURES WOULD BE REQUIRED TO COMPLETE THE LINE OF FLOOD PROTECTION.
7. THE PERMANENT EASMENT AREA TOTALS 6 ACRES.
8. THE TEMPORARY EASMENT AREA TOTALS 8 ACRES.

N

300′ 150′ 0 300′

SCALE: 1′′= 300′-0″

U.S. Army Corps of Engineers
Chicago District

UPPER DES PLAINES RIVER AND TRIBUTARIES
FEASIBILITY REPORT AND ENVIRONMENTAL ASSESSMENT

Figure 3 - DPLV09 - SEGMENT 3

FLOODWALL & LEVEE SITE PLAN
DES PLAINES, COOK COUNTY, IL

SCALE:	DATE:	DRAWING CODE:
1″ = 300′	JANUARY 2012	DPLV7A_S3_SitePlan.dgn

RESERVOIR STAGE STORAGE

ELEVATION	AREA (acres)	AVERAGE AREA (acres)	STAGE VOLUME (acre-feet)	CUMULATIVE VOLUME (acre-feet)	COMMENT
622.7	19.30			0.00	*Bottom of Reservoir*
		19.348	5.804		
623.0	19.40			5.80	
		19.554	19.554		
624.0	19.71			25.36	
		19.867	19.867		
625.0	20.02			45.23	
		20.181	20.181		
626.0	20.34			65.41	
		20.496	20.496		
627.0	20.65			85.90	
		20.812	20.812		
628.0	20.97			106.71	
		21.130	21.130		
629.0	21.29			127.84	
		21.449	21.449		
630.0	21.61			149.29	
		21.769	21.769		
631.0	21.93			171.06	
		22.091	22.091		
632.0	22.25			193.15	
		22.349	13.409		
632.6	22.45			**206.56**	*100-Yr HWL Elev.*
		22.511	9.004		
633.0	22.58			215.57	
		22.738	22.738		
634.0	22.90			238.30	
		23.063	23.063		
635.0	23.23			261.37	
		23.324	13.995		
635.6	23.42			275.36	*Top of Reservoir 3' Freeboard*

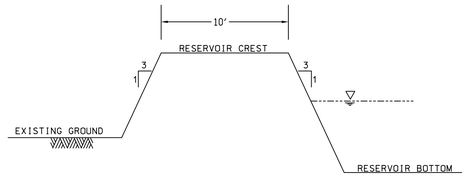
	AC-FT
Req'd Storage Volume =	205
Volume Provided at 100-yr HWL Elev. =	**206.56**
Volume Provided w/ 3' Freeboard =	275.36

NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME. SURVEY SHOWS 2' CONTOURS.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) U.S. FEET.
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. FEET.
4. DRAINAGE SWALE EAST OF RESERVOIR CREATED TO DIVERT OVERLAND RUNOFF FROM SITE HIGH POINT.

ST 1
4-3.5'x1.5' RCP
BOX CULVERTS @ 35 LF EACH
UPSTREAM IE = 630.7 (W)
DOWNSTREAM IE = 629.7 (E)
(PROVIDE CONCRETE DROP STRUCTURE AT DOWNSTREAM END)

ST 2
350 LF - 30" RCP
UPSTREAM IE = 622.7 (E)
DAYLIGHT PIPE AT RIVER
WITH HEADWALL AND FLAP GATE



TYPICAL RESERVOIR X-SECTION

N

500' 250' 0 500'

SCALE: 1'' = 500'-0"

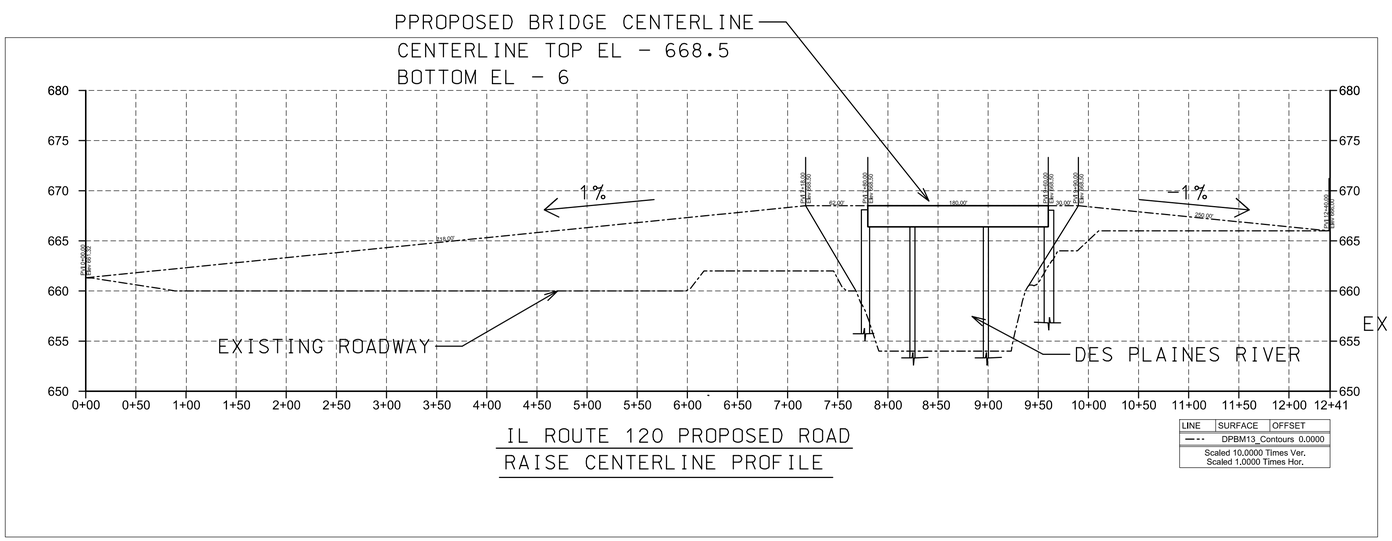
U.S. Army Corps of Engineers
Chicago District

UPPER DES PLAINES RIVER AND TRIBUTARIES
FEASIBILITY REPORT AND ENVIRONMENTAL ASSESSMENT

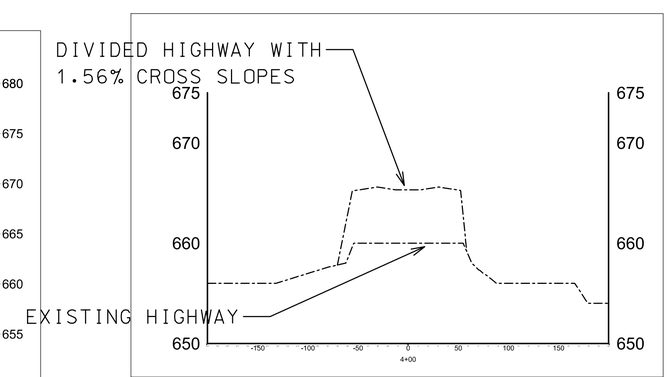
DPLV7A - COMP STORAGE SITE
FLOODWALL SITE PLAN
DES PLAINES, COOK COUNTY, IL

SCALE:	DATE:	DRAWING CODE:
1" = 500'	JANUARY 2012	DPLV7A_CSS_Siteplan.dgn

Figure 4



IL ROUTE 120 PROPOSED ROAD
RAISE CENTERLINE PROFILE



PROPOSED ROAD RAISE TYPICAL SECTION

NTS

NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM LOCAL GIS DATA AND REPRESENT CONDITIONS EXISTING AT THAT TIME. REFER TO THE CIVIL APPENDIX FOR THE SURVEY DATA SOURCES.
2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOI STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983(NAD83) US FEET.
3. ALL ELEVATIONS SHOWN ARE REFRENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)) U.S. FEET.

REAL ESTATE MEASUREMENTS:
TEMPORARY EASEMENT = 7.4 AC

U.S. Army Corps of Engineers Chicago District	UPPER DES PLAINES RIVER AND TRIBUTARIES FEASIBILITY REPORT AND ENVIRONMENTAL ASSESSMENT VOLUME 2 - NED PLAN
DPBM13 BRIDGE AND ROAD RAISE CONCEPTUAL SITE PLAN COOK COUNTY, IL	

SCALE:	DATE:	DRAWING CODE:
AS-SHOWN	APRIL 2012	DPBM13_Siteplan.DGN

Figure 5

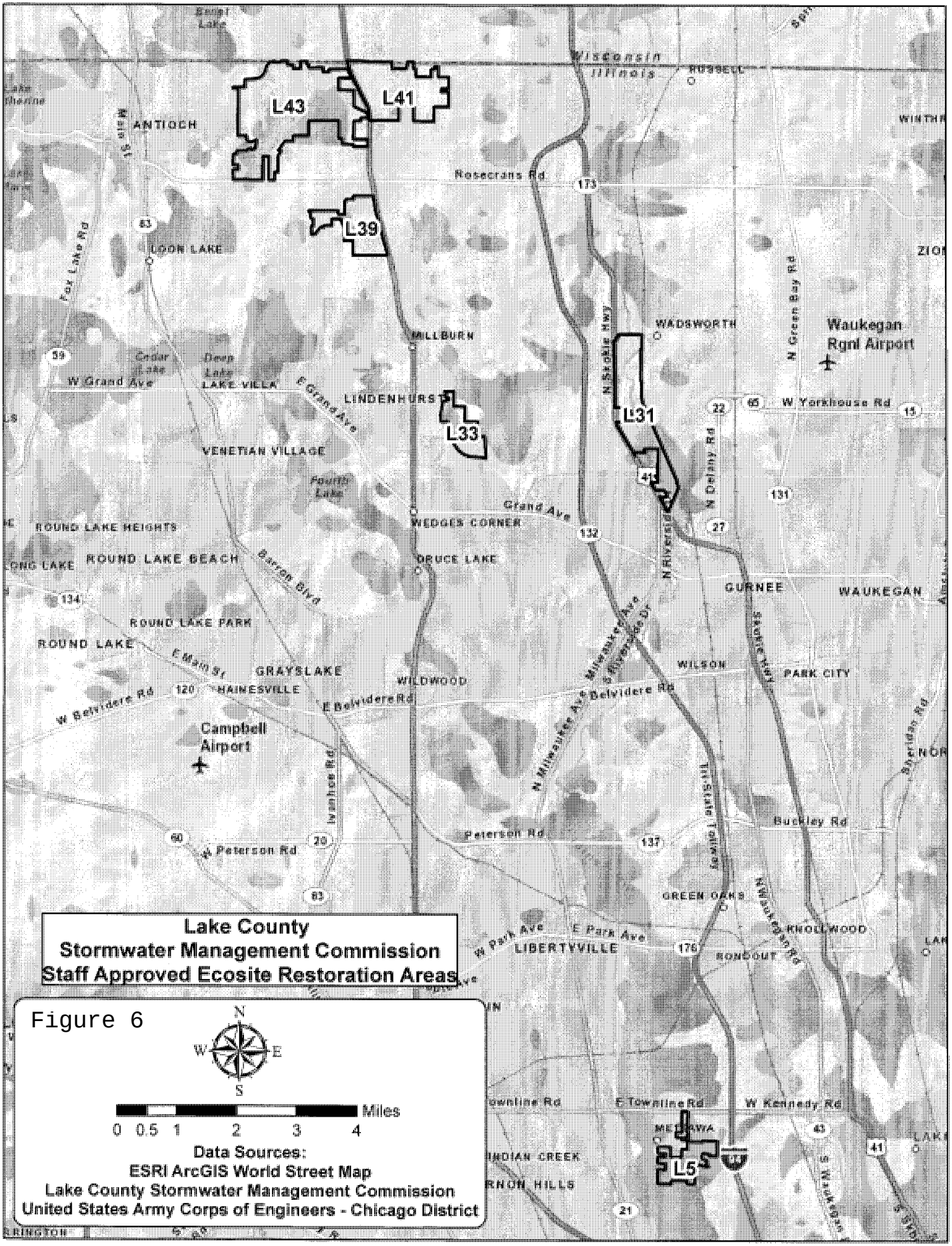
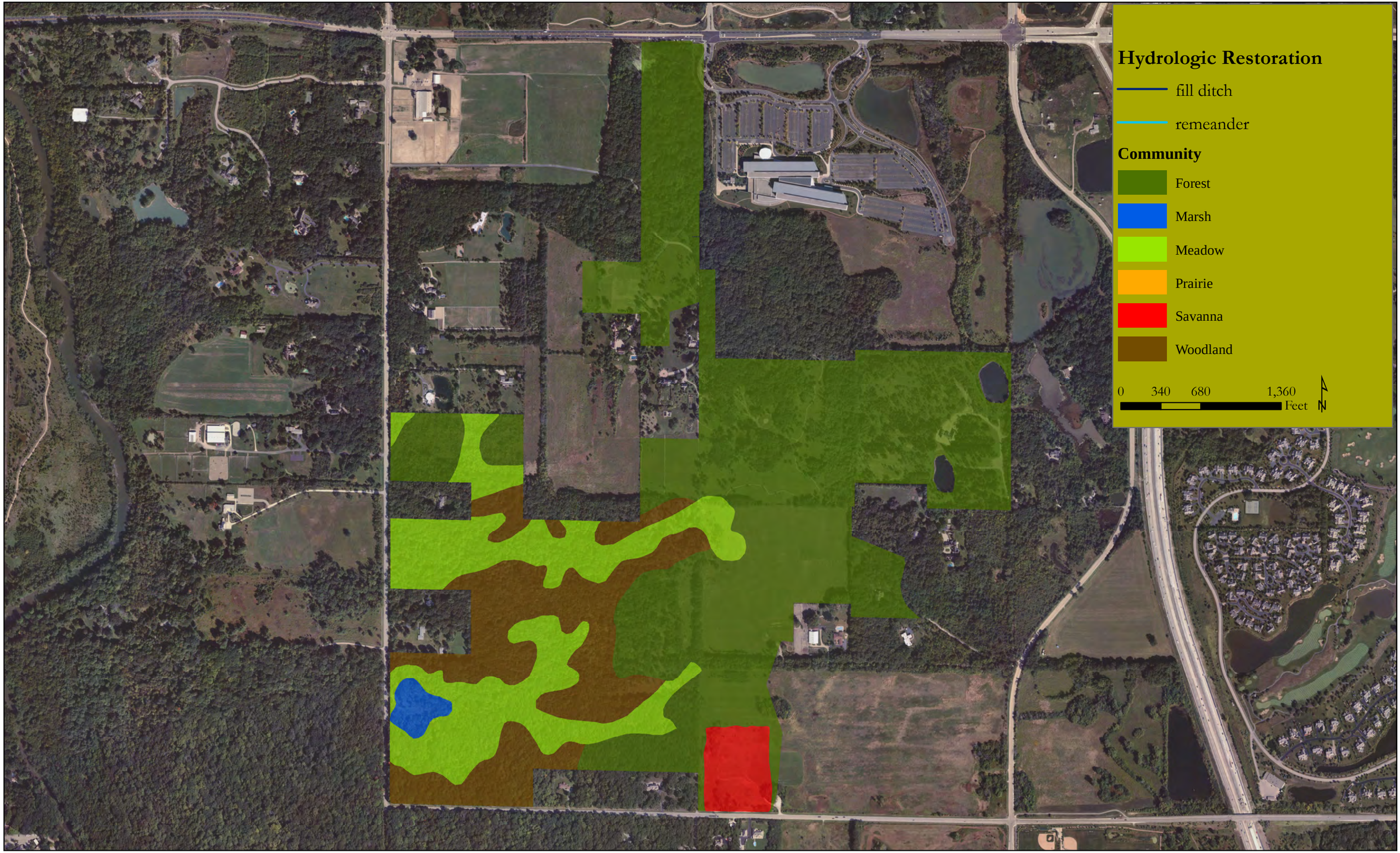

Lake County
Stormwater Management Commission
Staff Approved Ecosite Restoration Areas
Figure 6
N
W
E
S
Miles
0 0.5 1 2 3 4
Data Sources:
ESRI ArcGIS World Street Map
Lake County Stormwater Management Commission
United States Army Corps of Engineers - Chicago District
L43
L41
L39
L33
L31
L5
Wisconsin
Illinois
ANTIOCH
LOON LAKE
MILLBURN
WADSWORTH
Waukegan Rgnl Airport
LINDENHURST
VENETIAN VILLAGE
ROUND LAKE HEIGHTS
ROUND LAKE BEACH
WEDGES CORNER
DEUCE LAKE
GURNEE
WAUKEGAN
ROUND LAKE PARK
ROUND LAKE
GRAYSLAKE
WILDWOOD
WILSON
PARK CITY
HAINESVILLE
Campbell Airport
GREEN OAKS
KNOLLWOOD
LIBERTYVILLE
MUNDELEIN
INDIAN CREEK
Nesecrans Rd
W Grand Ave
E Grand Ave
Grand Ave
W Yorkhouse Rd
N Green Bay Rd
N Delany Rd
N Skokie Hwy
N Milwaukee Ave
S Milwaukee Ave
E Belvidere Rd
W Belvidere Rd
Peterson Rd
Buckley Rd
W Park Ave
E Park Ave
E Townline Rd
W Kennedy Rd
Fox Lake Rd
Barron Blvd
E Main St
Ivanhoe Rd
Rockefeller Dr
Tri State Tollway
Bonnie Brae Rd

Figure 7

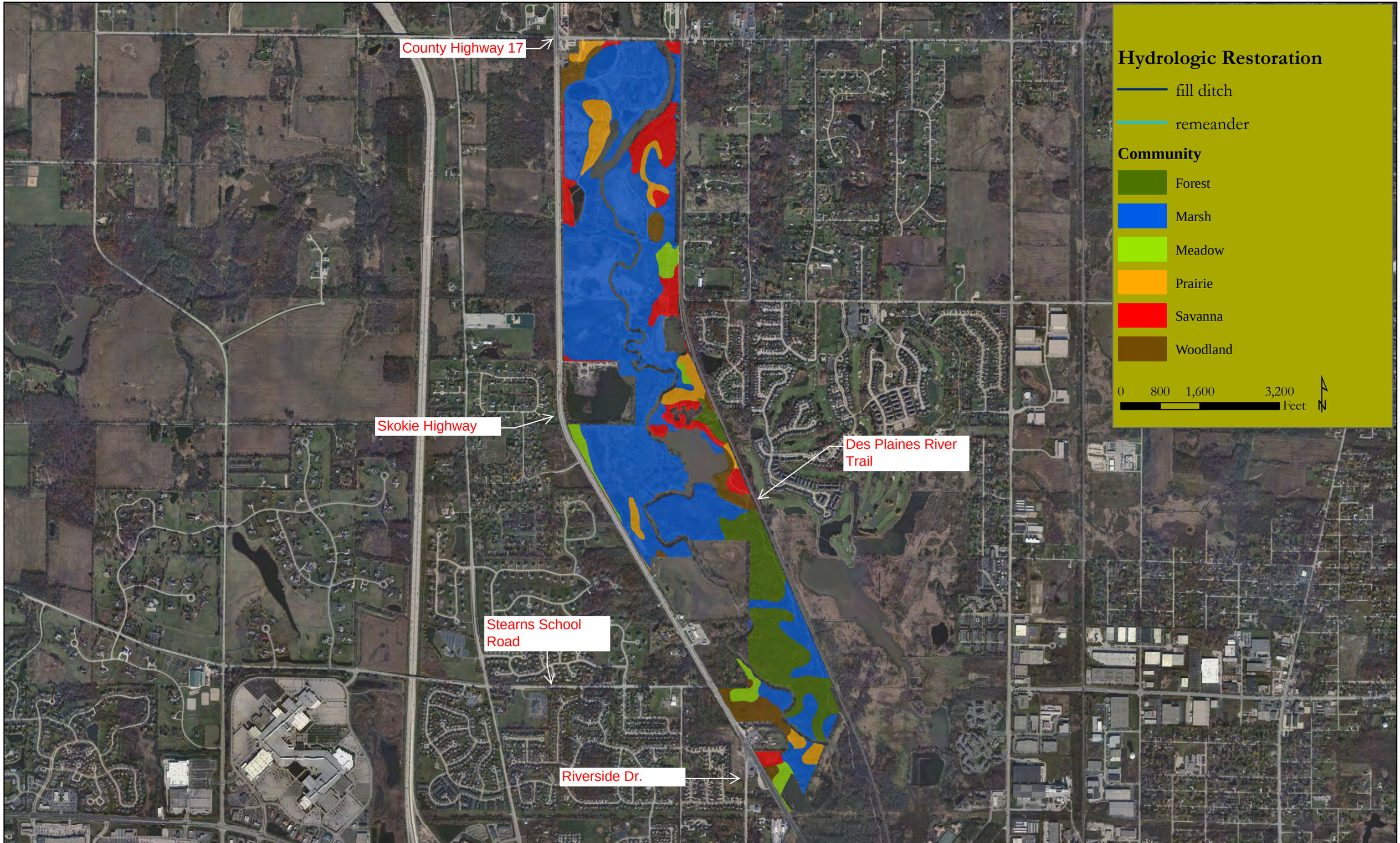
NER Site L05 Restoration Layout



FMV 16MAR2010

Figure 8

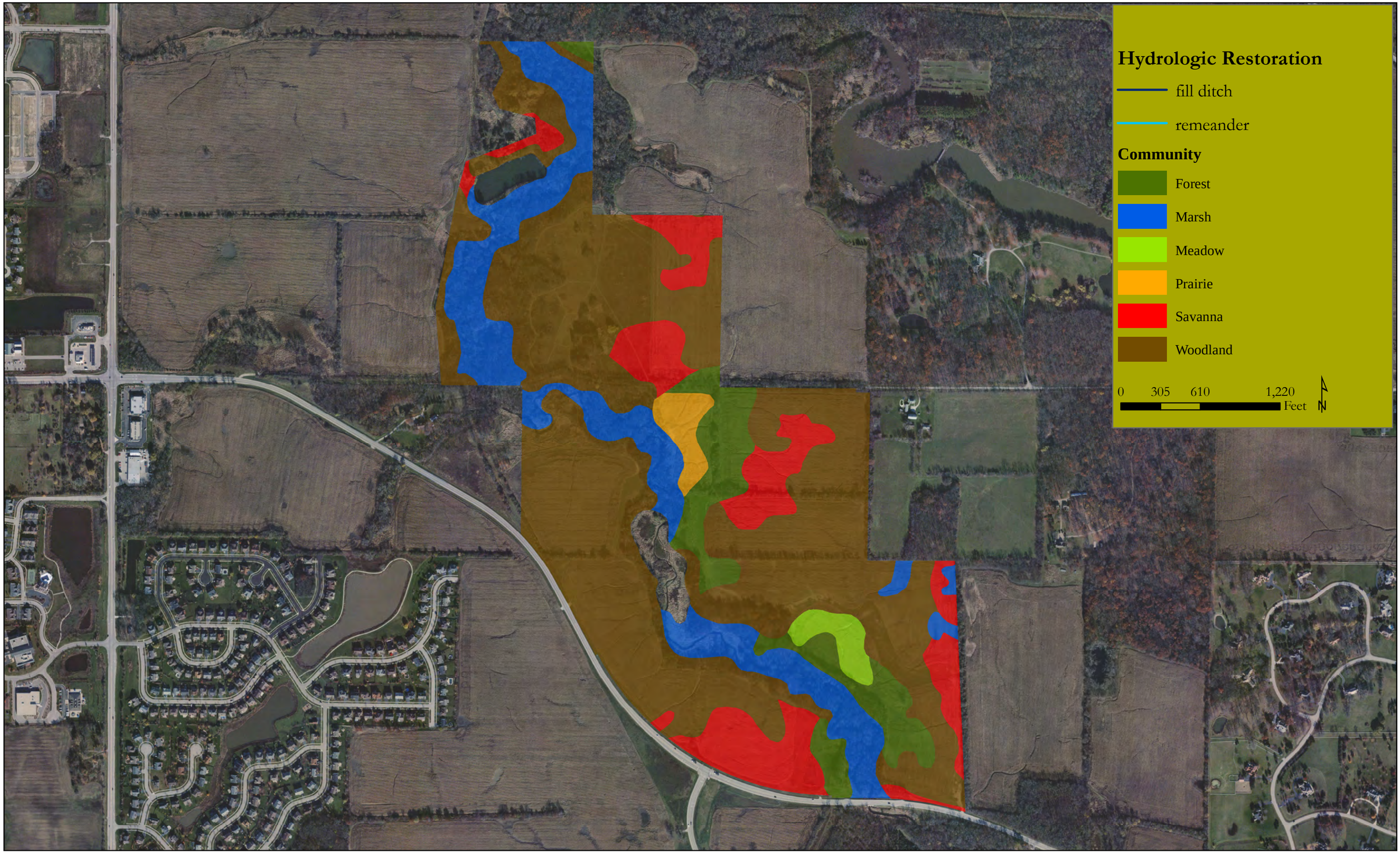
NER Site L31 Restoration Layout



FMV 16MAR2010

Figure 9

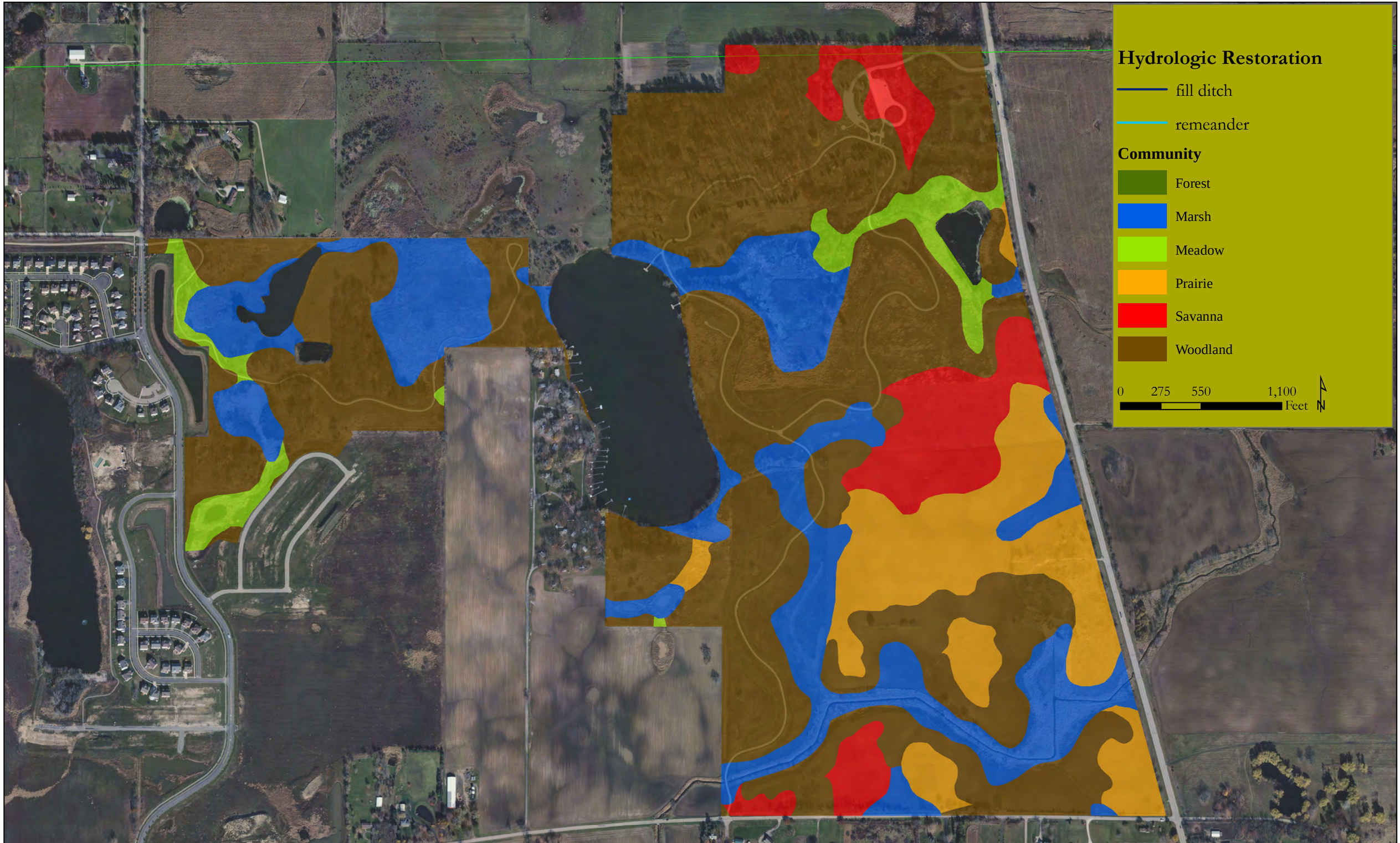
NER Site L33 Restoration Layout



FMV 16MAR2010

Figure 10

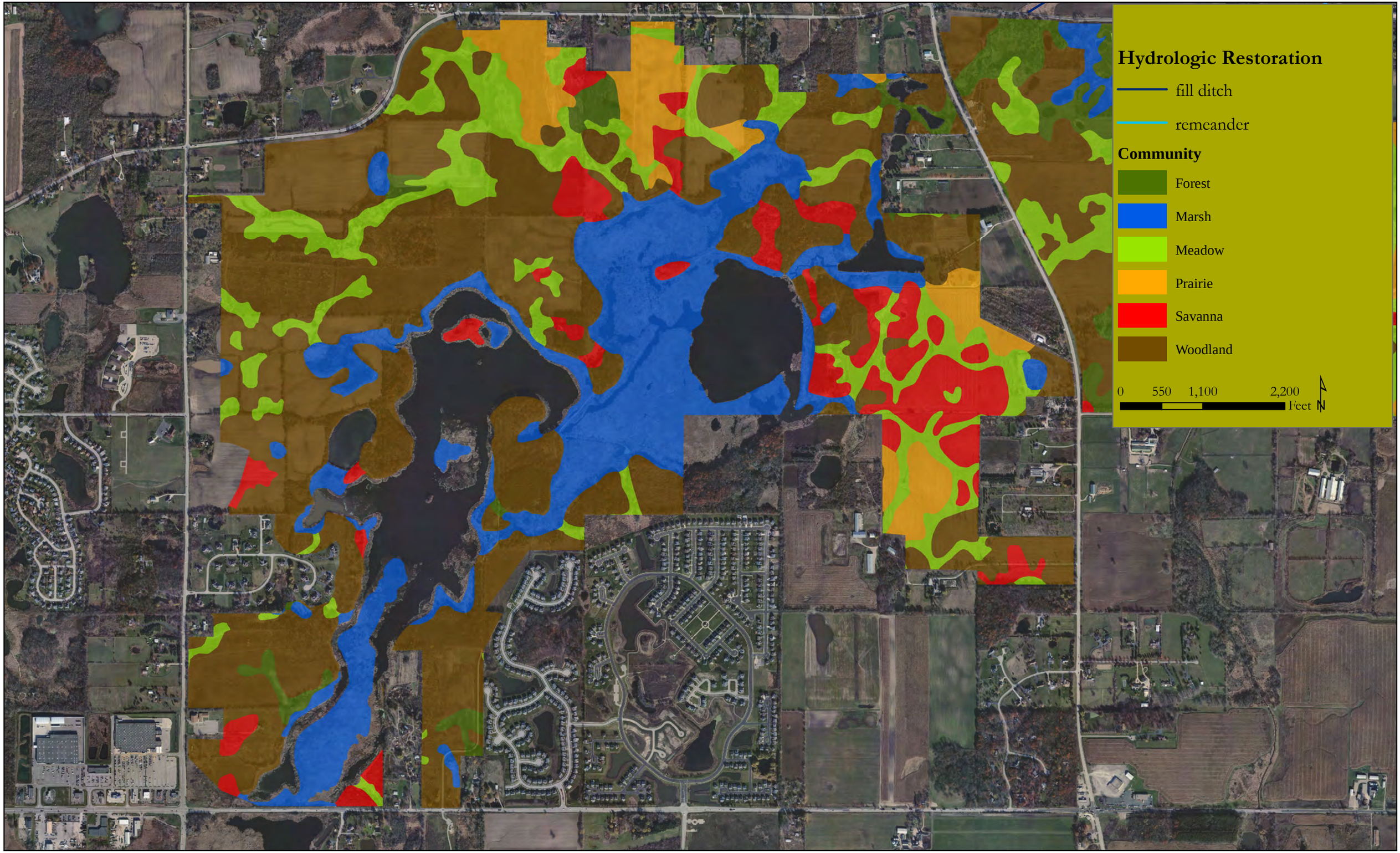
NER Site L39 Restoration Layout



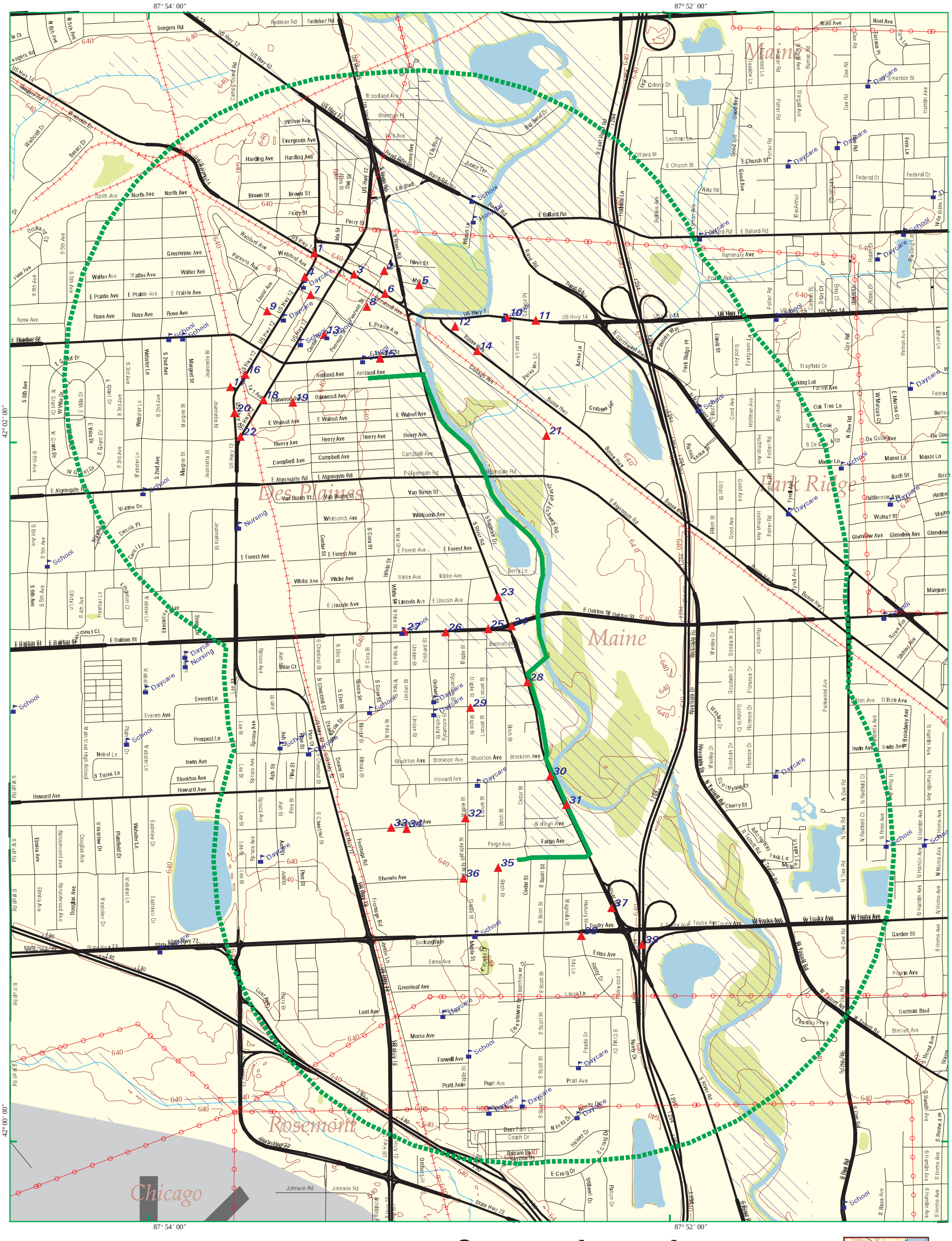
FMV 16MAR2010

Figure 11

NER Site L43Restoration Layout



FMV 16MAR2010

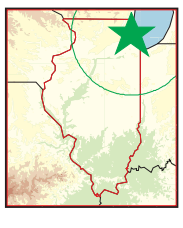


EDR DataMap® - Corridor Study

Des Plaines II levee 9

Figure 12

EDR® Environmental Data Resources Inc



Des Plaines, IL

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- Federal DOD Sites
- Indian Reservations BIA
- 100-Yr Flood Zones
- National Wetland Inventory

N

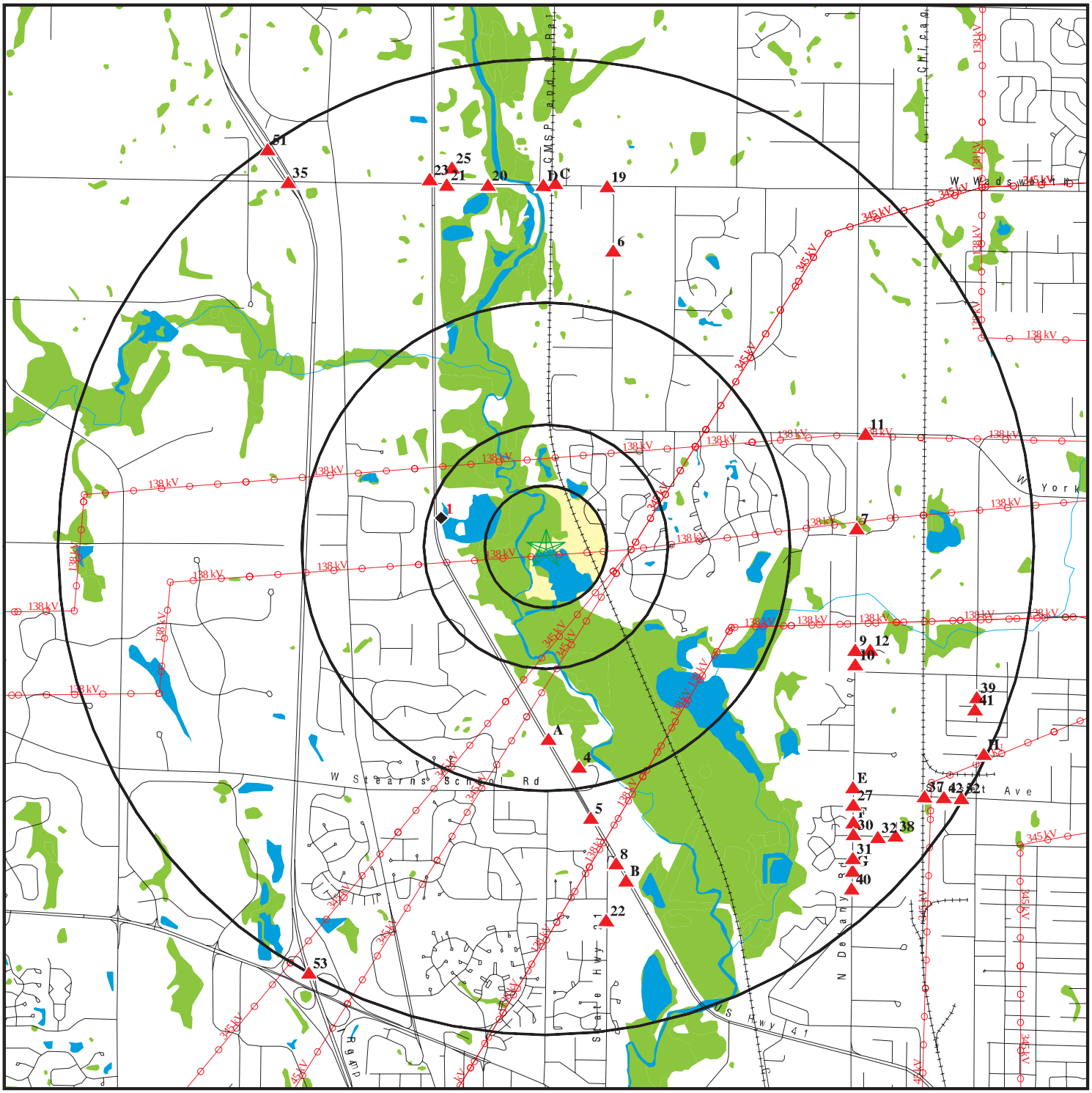
0 1/4 1/2

Scale in Miles

Copyright © 2012 EDR, Inc. © 2010 Tele Atlas Rel. 07/2009.

3274828.2s - 12 Mar 12

OVERVIEW MAP - 3405208.2s



0 1/2 1 2 Miles

- 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
- Oil & Gas pipelines from USGS
- National Wetland Inventory

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

Figure 13

SITE NAME: NER L31	CLIENT: U.S. Army Corps of Engineers
ADDRESS: Stearns School/Skokie Highway Waukegan IL 60087	CONTACT: Casey Pittman
LAT/LONG: 42.4074 / 87.929	INQUIRY #: 3405208.2s
	DATE: September 06, 2012 1:17 pm

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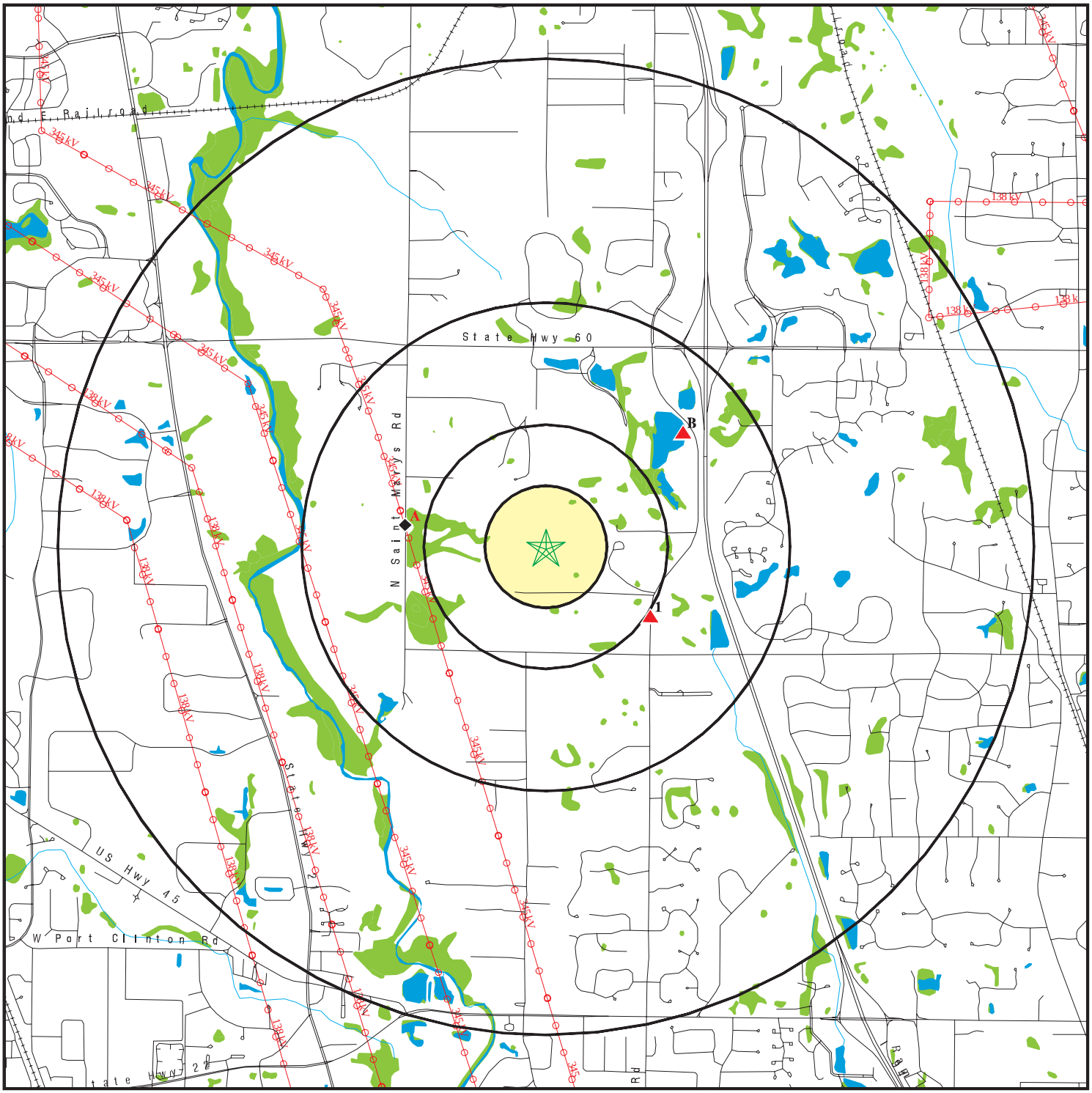
OVERVIEW MAP - 3353249.2s



0 1/2 1 2 Miles

- 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
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

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

Figure 14

SITE NAME: Lake County NER L05	CLIENT: U.S. Army Corps of Engineers
ADDRESS: N St. Marys Road/W Everett Raod NE Corner Lake Forest IL 60045	CONTACT: Casey Pittman
LAT/LONG: 42.2283 / 87.9142	INQUIRY #: 3353249.2s
	DATE: June 26, 2012 3:47 pm

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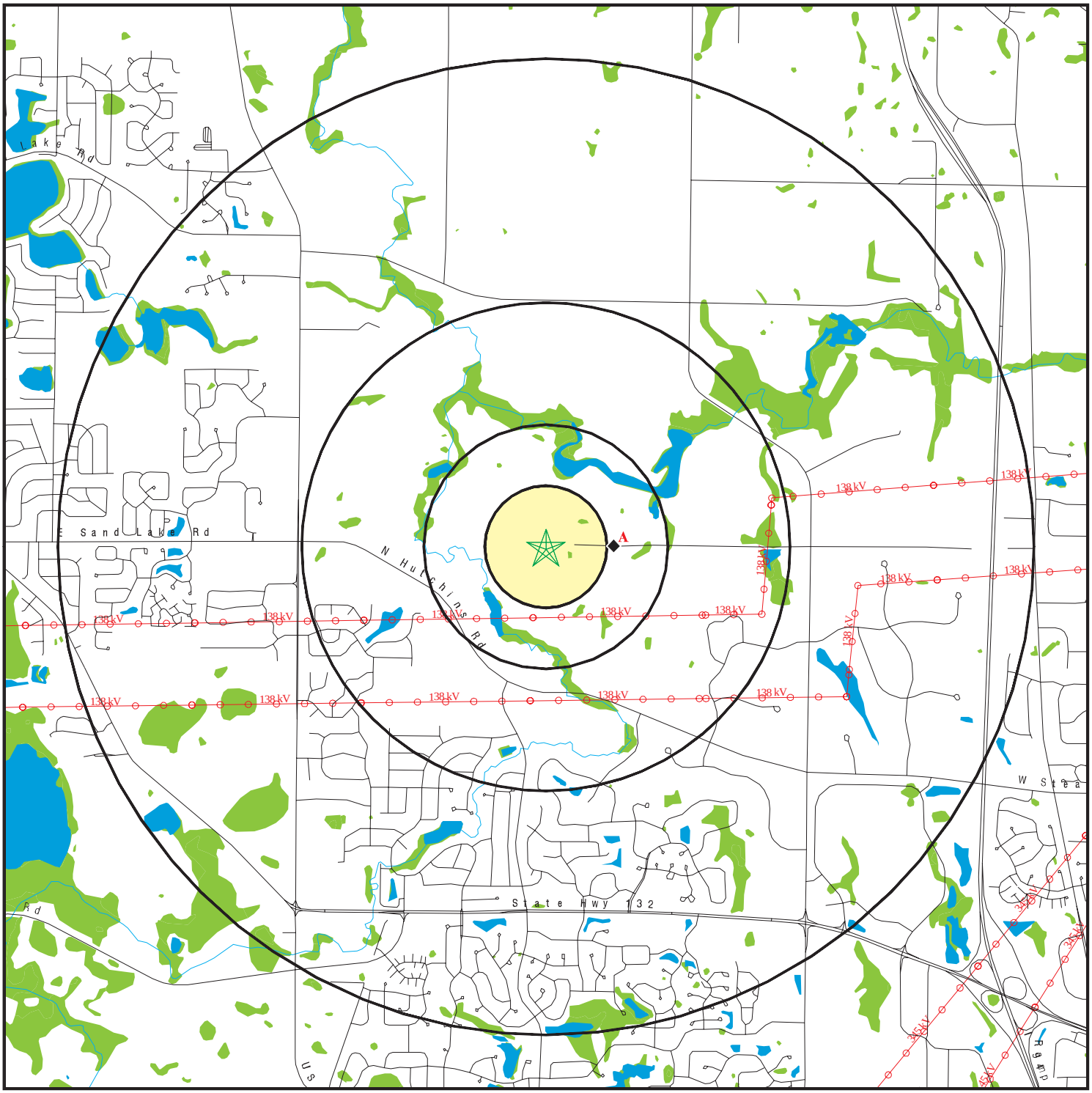
OVERVIEW MAP - 3348918.2s



0 1/2 1 2 Miles

- 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
- Oil & Gas pipelines from USGS
- National Wetland Inventory

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

Figure 15

SITE NAME: Lake County NER L33 ADDRESS: W Sand Lake Road Wadsworth IL 60083 LAT/LONG: 42.4076 / 87.9841	CLIENT: U.S. Army Corps of Engineers CONTACT: Casey Pittman INQUIRY #: 3348918.2s DATE: June 20, 2012 1:57 pm

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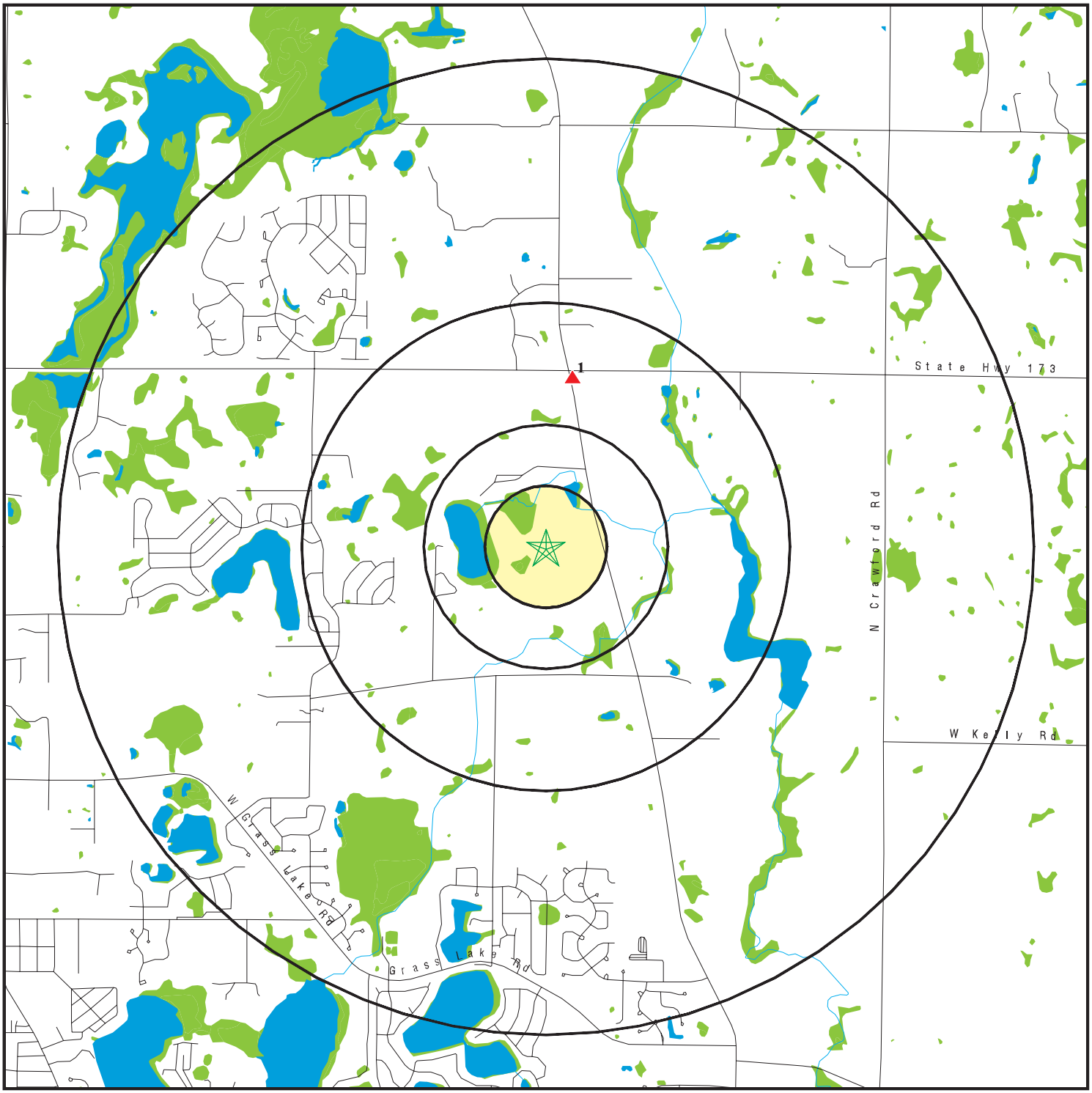
OVERVIEW MAP - 3348941.2s



0 1/2 1 2 Miles

- 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
- Oil & Gas pipelines from USGS
- National Wetland Inventory

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

Figure 16

SITE NAME: Lake County L39 ADDRESS: Miller Road/U.S.45 Northwest Corner Antioch IL 60002 LAT/LONG: 42.4557 / 88.019	CLIENT: U.S. Army Corps of Engineers CONTACT: Casey Pittman INQUIRY #: 3348941.2s DATE: June 20, 2012 1:57 pm

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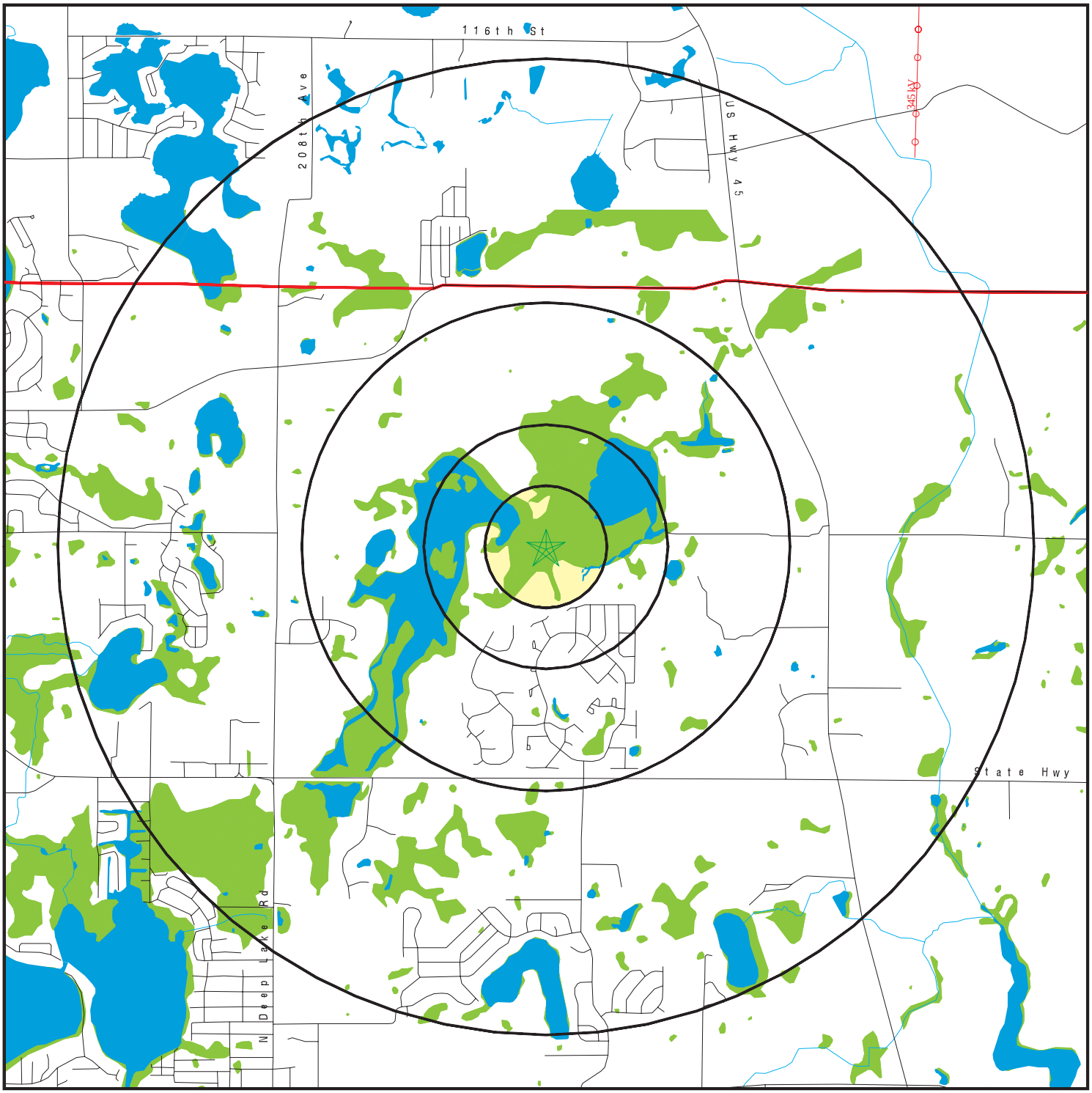
OVERVIEW MAP - 3353270.2s



- 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

0 1/2 1 2 Miles

- Indian Reservations BIA
- County Boundary
- Power transmission lines
- Oil & Gas pipelines from USGS
- National Wetland Inventory

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

Figure 17

SITE NAME: Lake County NER L43 ADDRESS: Route 173/County Road 36 Antioch IL 60002 LAT/LONG: 42.48 / 88.0406	CLIENT: U.S. Army Corps of Engineers CONTACT: Casey Pittman INQUIRY #: 3353270.2s DATE: June 26, 2012 1:16 pm

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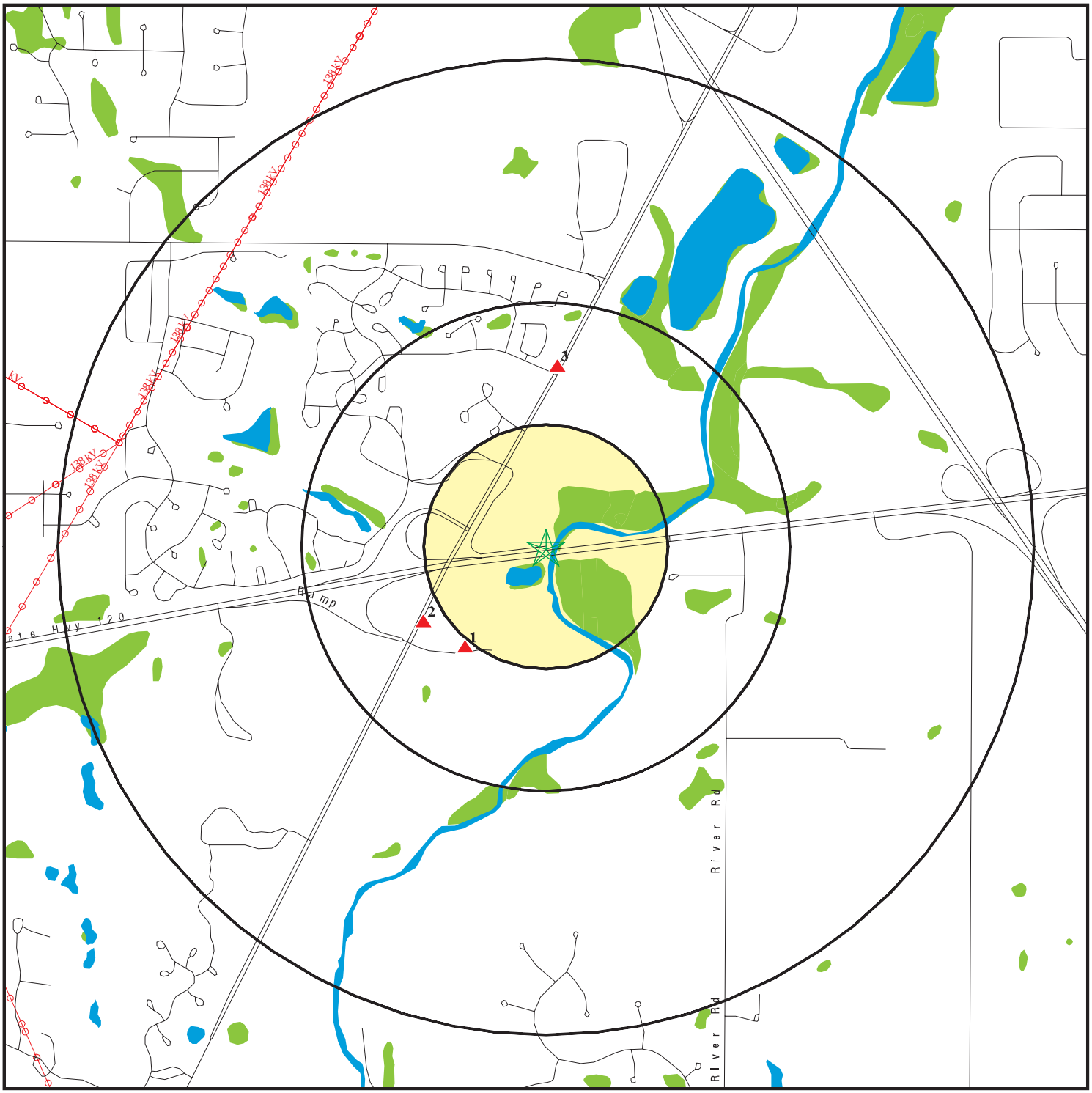
OVERVIEW MAP - 3432071.2s



- 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
- Oil & Gas pipelines from USGS
- National Wetland Inventory

0 1/4 1/2 1 Miles

N

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

Figure 18

SITE NAME: Belvidere Road Bridge Modification ADDRESS: Belvidere Road/Milwaukee Ave Gurnee IL 60031 LAT/LONG: 42.344 / 87.9414	CLIENT: U.S. Army Corps of Engineers CONTACT: Casey L. Pittman INQUIRY #: 3432071.2s DATE: October 15, 2012 3:07 pm

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HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW ADDENDUM - DES PLAINES PHASE II LAKE COUNTY NER, LEVEE 9/COMPENSATORY STORAGE AND BELVIDERE ROAD SITES

Attachment 1
EDR Database Search

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW ADDENDUM - DES PLAINES PHASE II LAKE COUNTY NER, LEVEE 9/COMPENSATORY STORAGE AND BELVIDERE ROAD SITES

Attachment 2
Historical Topographic Maps

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW ADDENDUM - DES PLAINES PHASE II LAKE COUNTY NER, LEVEE 9/COMPENSATORY STORAGE AND BELVIDERE ROAD SITES

Attachment 3
Historical Aerial Photograph

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW ADDENDUM - DES PLAINES PHASE II LAKE COUNTY NER, LEVEE 9/COMPENSATORY STORAGE AND BELVIDERE ROAD SITES

Attachment 4
Site Visit Photographs

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW ADDENDUM - DES PLAINES PHASE II LAKE COUNTY NER, LEVEE 9/COMPENSATORY STORAGE AND BELVIDERE ROAD SITES

Attachment 5
Supplemental IEPA Information

CELRC-TS-DH

MEMORANDUM FOR CELRC-PM-PM (Zuercher) and CELRC-PM-PL (Brodzinsky)

SUBJECT: Limited HTRW Review, Des Plaines Phase II Study, C16 Environmental Mitigation Site

1. This memorandum documents the results of a limited HTRW review conducted for the Upper Des Plaines and Tributaries Phase II Feasibility Study (Phase II study) for mitigation site C16 (Lake Avenue Woods). C16 is an ecosystem restoration site proposed to mitigate environmental impacts resulting from construction of NED site levee 9 and compensatory storage site at Camp Ground Woods, sites included in the tentatively selected plan for the Phase II study. Mitigation site C16 includes approximately 110 acres of Cook County Forest Preserve property located at the corner of Euclid (Lake) Avenue and River Road in Mount Prospect, Illinois (see attached Figure 1). The site is located adjacent to the tentatively selected NER site C15 (Beck Lake Meadow). Information obtained during completion of the Beck Lake Meadow HTRW review, including the state and federal database search, historical aerial photographs, and historical topographic maps provide adequate coverage of site C16 project area and were used to complete this review.

2. Review of information provided in the EDR database search (Attachment 1) and shown in Figure 2 suggests that EDR sites 1 through 13 are within the recommended ASTM search distance to site C16. A summary of the potential impacts to implementation are summarized in Table 1 attached. Results of database search suggest that are no recognized environmental conditions (RECs) that exist on the property or in the surrounding areas that will impact use of the site.

3. Review of historical aerial photographs (Attachment 2) and topographic maps (Attachment 3) suggest that the Des Plaines River, and the adjacent restoration site, have remained undeveloped from 1900 to date. It does not appear that the site was used for industrial/manufacturing purposes. The site has undergone hydrologic changes over time; the extent of drainage and backwater areas change in historical maps and photographs. 1927 topographic maps indicate that a small structure is within the project limits adjacent to Des Plaines River Road, but the structure is removed in the 1953 map. An access road between Euclid and Des Plaines River Road bisect the site in 1963 and remains until 1993 when a turnaround access to Des Plaines River road is added and the access road bisecting the site from river Road to Euclid is removed. A picnic shelter is located within the project area in 1963 and remains to date. No other topographic changes are noted. Historical aerials suggest that the site was vegetated with dense forest or open prairie in 1951 and remains vegetated to date.

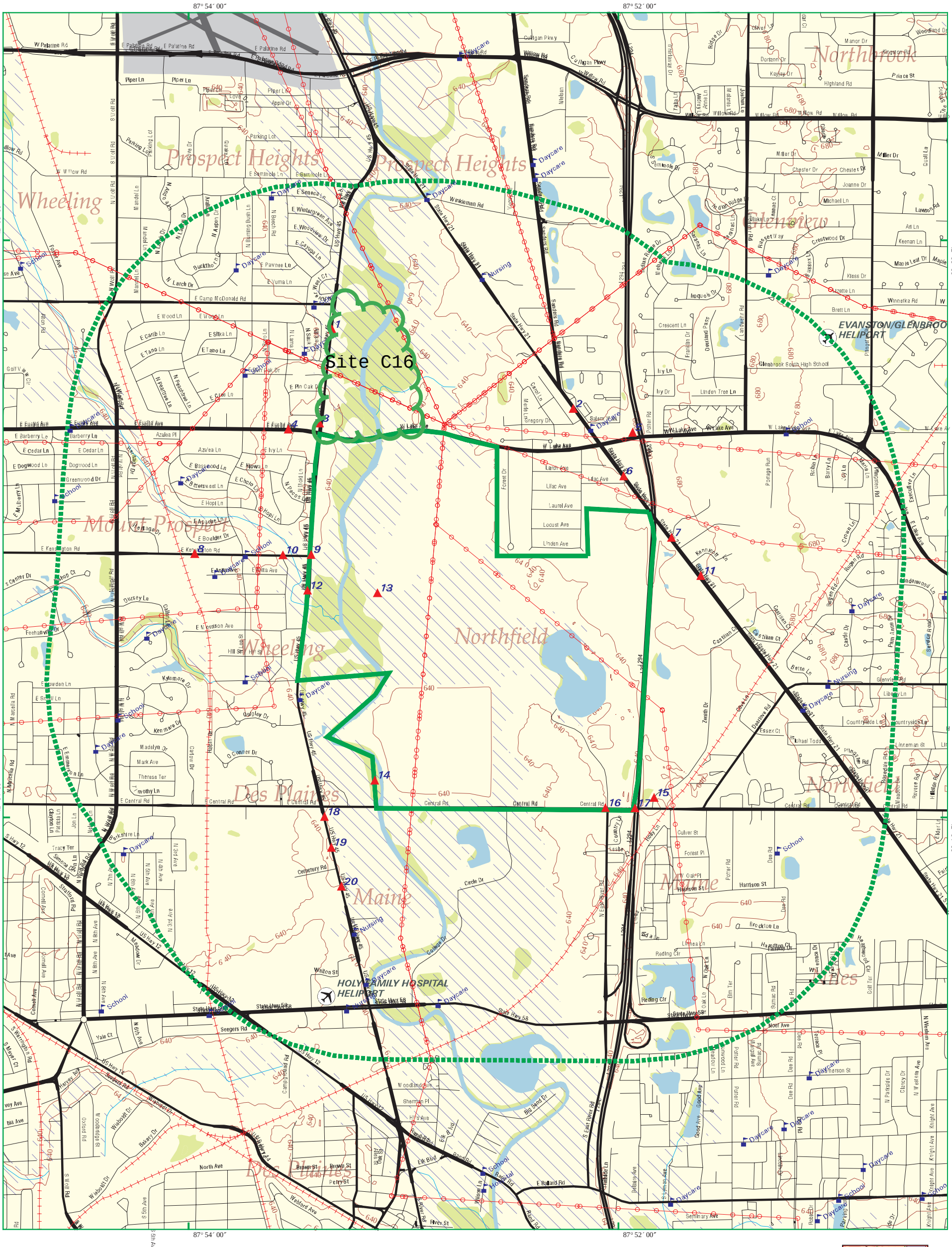
4. TS-DH did not conduct a site visit to the C16 project area, but Google Earth was used to "walk" the surrounding area and confirm site use. It appears that floodwall was being constructed, or was recently constructed, along Des Plaines River Road in 2012 adjacent to the project area. The access from Des Plaines River Road to the Lake Avenue Woods and picnic shelter was under construction at the time of the photographs. One access point with a turnaround remains on site; it does not appear that the dual access road noted in the 1980 historical topographic map is current. Current aerial photographs suggest that the site is densely vegetated. Review of existing current aerial photographs does not indicate the presence of any RECs.

5. No HTRW investigation can wholly eliminate uncertainty regarding the potential for encountering a REC associated with a project area. Performance of this investigation is intended to reduce, but not eliminate, uncertainty regarding the potential for encountering a REC in connection with a project area. TS-DH recommends additional investigation of the C16 project area, including a site visit, during the design stage of the project when details of proposed mitigation measures are defined. Questions regarding this investigation can be directed to Casey Pittman at (312) 846-5506.

//original signed 12/6/12//

JAY A. SEMMLER, P.E.
Chief, Hydraulics & Environmental
Engineering Section

Attachments (6)



EDR DataMap® - Area Study

EDR® Environmental Data Resources Inc

Figure 35

Beck Lake Meadow Includes Dam 2, & Feehanville Ditch Brdg Mod.

Glenview, IL

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- Federal DOD Sites
- Indian Reservations BIA
- 100-Yr Flood Zones
- National Wetland Inventory

N

0 1/4 1/2

Scale in Miles

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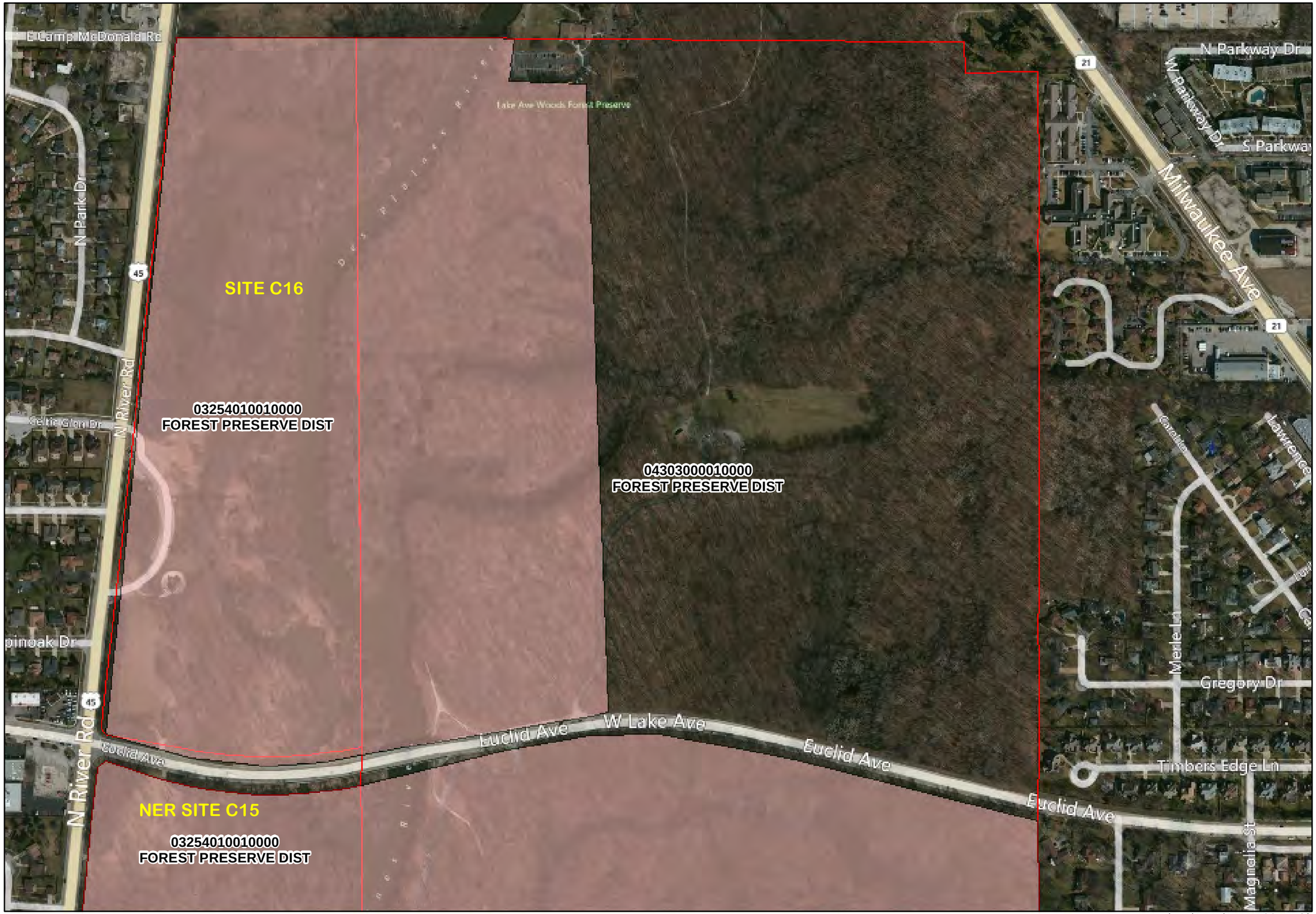
REAL ESTATE - Des Plaines River (SITE C16)

U.S. Army Corps of Engineers
Chicago District



Legend

FEE

ACREAGE

FEE = 109.02

Location Map

Date: 11/28/2012

N
W E
S

1 in = 350 ft

Path: J:\MXD\PRJ-506 Ft. Sheridan\Real Estate\RE-C16.mxd

Table 1 – Applicable EDR Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
LUST MANIFEST	1	Dinucci Builders	*Adjacent to west*	NFA/NFR letter dated 8/6/1997	Unlikely facility activities have impacted project area
LUST	2	Amoco Oil Co.	*½ to 1 mile east*	NFA/NFR letter dated 12/17/1998	Unlikely facility activities have impacted project area
LUST LUST TRUST UST	3	Shell #137111	*Adjacent to west*	Closed service station, 4-USTs removed. LUST NFA/NFR letters dated 11/5/2009, 4/6/2006	Unlikely facility activities have impacted project area
RCRA-SQG FINDS MANIFEST	3	Equilon Enterprises, LLC	*Adjacent to west*	RCRA – no violations	Unlikely facility activities have impacted project area
MANIFEST	4	Studianos Hair Design	*1/8 to ¼ mile west*	Not a past or current RCRA generator	Unlikely facility activities have impacted project area
RCRA-nongen FINDS ENG CONTROLS INST CONTROLS SRP DRYCLEANERS MANIFEST	4	Bliss Cleaners	*1/8 to ¼ mile west*	RCRA – previous LQG, no violations. SRP NFR letter dated 7/17/2007 with groundwater use and soil barrier restrictions (industrial/ commercial)	Unlikely facility activities will impact project implementation

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
MANIFEST	4	Evanston Northwestern Healthcare	*1/8 to ¼ mile west*	Not a past or current RCRA generator	Unlikely facility activities have impacted project area
UST MANIFEST	4	Mount Prospect Auto Sales & Service	*1/8 to ¼ mile west*	5-USTs removed, facility listed as closed.	Unlikely facility activities have impacted project area
LUST	4	Union 76	*1/8 to ¼ mile west*	Unknown LUST status (0311985100)	Unlikely facility activities have impacted project area
LUST	5	Marriott Corp.	*½ to 1 mile east*	NFA/NFR letter dated 10/1/2001	Unlikely facility activities have impacted project area
MANIFEST ENG CONTROLS INST CONTROLS SRP	6	Lovely Cleaners	*½ to 1 mile southeast*	SRP NFR letter dated 7/13/2006 with soil barrier and groundwater use restriction (industrial/commercial)	Unlikely facility activities have impacted project area
UST	6	Shell Service Station	*½ to 1 mile southeast*	4-USTs removed, facility listed as closed.	Unlikely facility activities have impacted project area
LUST MANIFEST	6	Equiva Services, LLC	*½ to 1 mile southeast*	NFA/NFR letter dated 3/27/2001	Unlikely facility activities have impacted project area
MANIFEST	7	Glenview Park District	*½ to 1 mile southeast*	Not a past or current RCRA generator	Unlikely facility activities have impacted project area

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
INST CONTROL SRP	8	Image Cleaners	*½ to 1 mile southwest*	SRP NFR letter dated 8/16/2007 with groundwater us restriction.	Unlikely facility activities have impacted project area
RCRA-CESQG FINDS LUST UST MANIFST	9	FPDCC Des Plaines Division	*¼ to ½ mile southwest*	RCRA – no violations. LUST NFA/NFR letter dated 7/31/2001. 3-USTs removed.	Unlikely facility activities have impacted project area
UST MANIFEST	10	River Trails School District #26	*¼ to ½ mile southwest*	1-UST removed	Unlikely facility activities have impacted project area
RCRA-SQG FINDS LUST UST MANIFEST	11	Life Source (Blood Center of NIL)	*½ to 1 mile southeast*	RCRA – no violations. LUST NFA/NFR letter dated 3/31/1993. 1-UST removed.	Unlikely facility activities have impacted project area
FINDS	12	Ala Carte Entertainment	*½ to 1 mile south*	No additional information.	Improperly mapped.
FUDS	13	Camp Pine POW Camp – Mount Prospect	*½ to 1 mile south*	1937-1942 Camp, 1943-1945 POW and training camp. Returned to CCFPD 1945.	Camp Pine is located outside of C16 boundaries and not likely to impact implementation.

CELRC-TS-DH

MEMORANDUM FOR PM-PL (Brodzinsky)

SUBJECT: HTRW Review for Additional Levee Sites DPLV04 and DPLV05, Des Plaines Phase II Study

1. This memorandum discusses results of additional HTRW review conducted for the Des Plaines Phase II Study, DPLV04 (Levee 4) and DPLV05 (Levee 5) project sites, and supplements the previous HTRW and non-HTRW assessment conducted for the project. The DPLV04 and DPLV05 project areas were developed in the late stages of the planning phase and include combination levee/floodwall features developed for flood damage reduction along the Des Plaines River investigated as a result of recent flooding. This review uses results of the database search and historical topographic maps and historical aerial photographs to determine if any recognized environmental conditions (REC) may impact project implementation. A site visit was not conducted as part of this investigation.

2. Levee 4 is a 6,548 foot combination levee/floodwall primarily along Des Plaines River Road between Kennedy Avenue and Palmer Street in River Grove, Illinois (see Figure 1). The project area appears to be within Forest Preserve property and is adjacent to the Des Plaines River north of Fullerton, and adjacent to 5th Avenue south of Fullerton, with a southern tie-back along Palmer Street. The project also includes road closures at Grand Avenue and Des Plaines River Road, and a road raise at 5th Avenue (see Figure 2). View of current aerials provided through Google suggests that the developed areas adjacent to the project area are high density residential and commercial properties.

3. Levee 5 is a 6,387 foot combination levee/floodwall primarily along Des Plaines River Road with tie-backs at Irving Park Road and King Street in Schiller Park, Illinois (see Figure 3). The project area appears to be primarily within Forest Preserve property and is adjacent to the Des Plaines River to the west, with the exception of the tie-backs which are adjacent to Stalica Park to the north and an industrial/commercial complex along King Street to the south. The project also includes road raises and/or closures at Des Plaines River Road and Irving Park Road (see Figure 4). View of current aerials provided through Google suggests that the adjacent developed areas are a combination of commercial, industrial, and high density residential housing.

4. Review of environmental database information provided in the EDR database searches (Attachments 1 and 2) suggest that there are multiple sites within the recommended ASTM search distance to the project areas. The limits of each of the environmental database searches were extended ½ mile to accommodate the size of the sites. As a result, EDR reports contain in excess of 330 and 430 environmental database entries for Levees 4 and 5, respectively (see Figures 5 and 6). Due to the time constraints for completing the HTRW review, only those sites that are directly adjacent to the levee/floodwall alignments, determined by Figures 5 and 6, were reviewed and summarized in this memo. Additional

database review and a site investigation will be necessary during the design stage of the project. The summary of the limited database review are included in Tables 1 and 2 attached; RECs are summarized below:

a. DPLV04: Three historical and/or existing service stations (EDR #A6, A9, and B14) are located hydraulically up gradient to project. The service stations have multiple SPILL and LUST actions with known and/or unknown status. One SRP site (EDR #V111) with a residential groundwater use restriction is located hydraulically up gradient to project. The excavation assumptions and groundwater handling requirements should be confirmed during the design stage of the project, and the status of all LUST and SPILL incidences confirmed, to determine if a phase II investigation will be necessary to determine scope and scale of site impacts and the associated impacts on project implementation, if required. In addition, a historic landfill (EDR #E31) is located adjacent to the proposed staging area to the south at 2314 North River Road within forest preserve property. The limits of the staging area and the limits of the landfill should be determined during the design stage to determine if areas overlap. Contractual restrictions may be necessary to prevent disturbance of the landfill cover.

b. DPLV05: Four SRP sites (EDR #B14, D26, X144, and U136) with industrial/commercial groundwater use restrictions are located hydraulically up gradient to the project area. The excavation assumptions and groundwater handling requirements should be confirmed during the design stage of the project to determine if a phase II investigation will be necessary to determine scope and scale of site impacts and the associated impacts on project implementation, if required.

5. Historical topographic maps (Riverside, River Forest, and Chicago Vicinity 1B Illinois Quadrangles) for DPLV04 were reviewed from the period between 1901 and 1997 (Attachment 3). Review of the 1901 topographic map suggests that municipalities such as Franklin Park, River Grove, Melrose, and River Forest have begun to develop. The Des Plaines River, Milwaukee and St. Paul railroad, Wisconsin Central railroad, and the Indiana Harbor railroad are noted. In addition, several structures are noted along the project alignment/Des Plaines River Road as well as along Grand Avenue. The 1928 topographic map indicates industrial development along the Indiana Harbor Belt railway with the addition of the Norpaul Yards. Between 1928 and 1948 Des Plaines River road was expanded to a four-lane road. The scale of the 1953 topographic map indicates larger development complexes with multiple large buildings in the area, as well as the classification of property east of the Des Plaines River as Forest Preserve. Smaller roadways and additional structures are noted along the project alignment in 1953. Between 1963 and 1972 there is additional development in the area, which tapers off between 1972 and 1978. The landfill is not identified in the 1997 topographic map.

6. Historical aerial photographs were reviewed (Attachment 4) from the period between 1938 and 2012 for DPLV04, but the coverage is limited to the areas surrounding the intersection of Grand Avenue and Des Plaines River Road in most photos. Residential development and other structures, perhaps commercial, are west of the floodwall alignment in the 1938 photo

along Des Plaines River Road. The number of small residential and commercial structures noted in the 1951 and 1962 photos increases at a high rate west of the Des Plaines River, with larger more industrial buildings present to the southeast in 1962, increasing through 1972. A large disturbance is noted in the 1999 aerial photograph along Des Plaines River Road south of the staging area (presumed landfill) and limited disturbances are noted along other isolated areas along the floodwall at Des Plaines River Road and Grand Avenue, and Des Plaines River Road and Herrick Avenue. Vegetation is present in the landfill area in 2007. The project area appears to be entirely within the Forest Preserve property east of the Des Plaines River Road, with the exception of the portion that is adjacent to Palmer Street. There are no indications from the review of the historical aerial photographs and topographic maps that the levee/floodwall areas east of the Des Plaines River were used for industrial purposes within the Forest Preserve. The site use along Palmer Street (EDR #N75 and N76) suggests that the property was used as a trailer park sometime around and between 1953 and 1963, and was converted to industrial use with parking facilities sometime between 1963 and 1972.

7. Historical topographic maps (Riverside, River Forest, and Chicago Vicinity 1B Illinois Quadrangles) for DPLV05 were reviewed from the period between 1901 and 1997 (Attachment 5). The project area appears to be undeveloped in the 1901 topographic map. The Des Plaines River is noted near its current alignment and several major roadways (Des Plaines River Road and Irving Park Road) and railways (Wisconsin Central, Chicago Milwaukee St. Paul, and Indiana Harbor Belt) are noted in the map. There are a few small structures along Irving Park and Des Plaines River Road. Surrounding communities, such as Franklin Park and Norwood Park are developing. In 1928, Irving Park Road and Des Plaines River Road are noted as highways and there are multiple structures adjacent to the roadways. Adjacent communities such as Schiller Park, Franklin Park, and Fairview are establishing to the west. The area adjacent to the east is mostly undeveloped. Between 1928 and 1953 there is continued development to the west of River Road; in 1953 the area east of River Road is noted as Forest Preserve. The area to the east appears to be developing with a combination of high density residential housing and industry between 1953 and 1972. There are modifications to the River Road /Irving Park Road intersection between 1978 and 1993 and continued development in the surrounding area until 1997 when the adjacent property is fully developed. Development north of Irving Park Road appears to consist primarily of residential and commercial facilities; development to the south appears to consist primarily of residential, commercial and industrial facilities.

8. Historical aerial photographs were reviewed (Attachment 6) from the period between 1939 and 2012 for DPLV05. Residential development, farmland, and other similar development is present west of the levee/floodwall alignment in the 1939 photo along Des Plaines River Road on the north side of the project. Between 1939 and 1951, several industrial buildings and complexes were constructed southeast of the project area, but the same structures are not present to date. Between 1951 and 1962, much of the surrounding area land use changed and there is a high rate of development in the project area west of and along Des Plaines River Road until 1972, when the property appears to be fully developed. Undeveloped areas lie mostly east of Des Plaines River Road, along the majority of the levee/floodwall alignment; review of historical maps and aerial photographs suggest that this area was not used for

industrial development between 1901 and 2012. The levee floodwall tie-back area along Irving Park Road was also not developed between 1901 and 2012; the properties adjacent to the levee/floodwall along King Street are located in a developed industrial area.

9. No HTRW investigation can wholly eliminate uncertainty regarding the potential for encountering a REC associated with a project area. Performance of this investigation is intended to reduce, but not eliminate, uncertainty regarding the potential for encountering a REC in connection with a project area. TS-DH recommends additional investigation of the DPLV04 and DPLV05 project areas, as outlined in Table 3, during the design stage of the project to determine if any RECs identified in this investigation will impact project implementation. Questions regarding this investigation can be directed to Casey Pittman at (312) 846-5506

//original signed 8/1/13//

JAY A. SEMMLER, P.E.
Chief, Hydraulics & Environmental Engineering Section

Attachments (6)

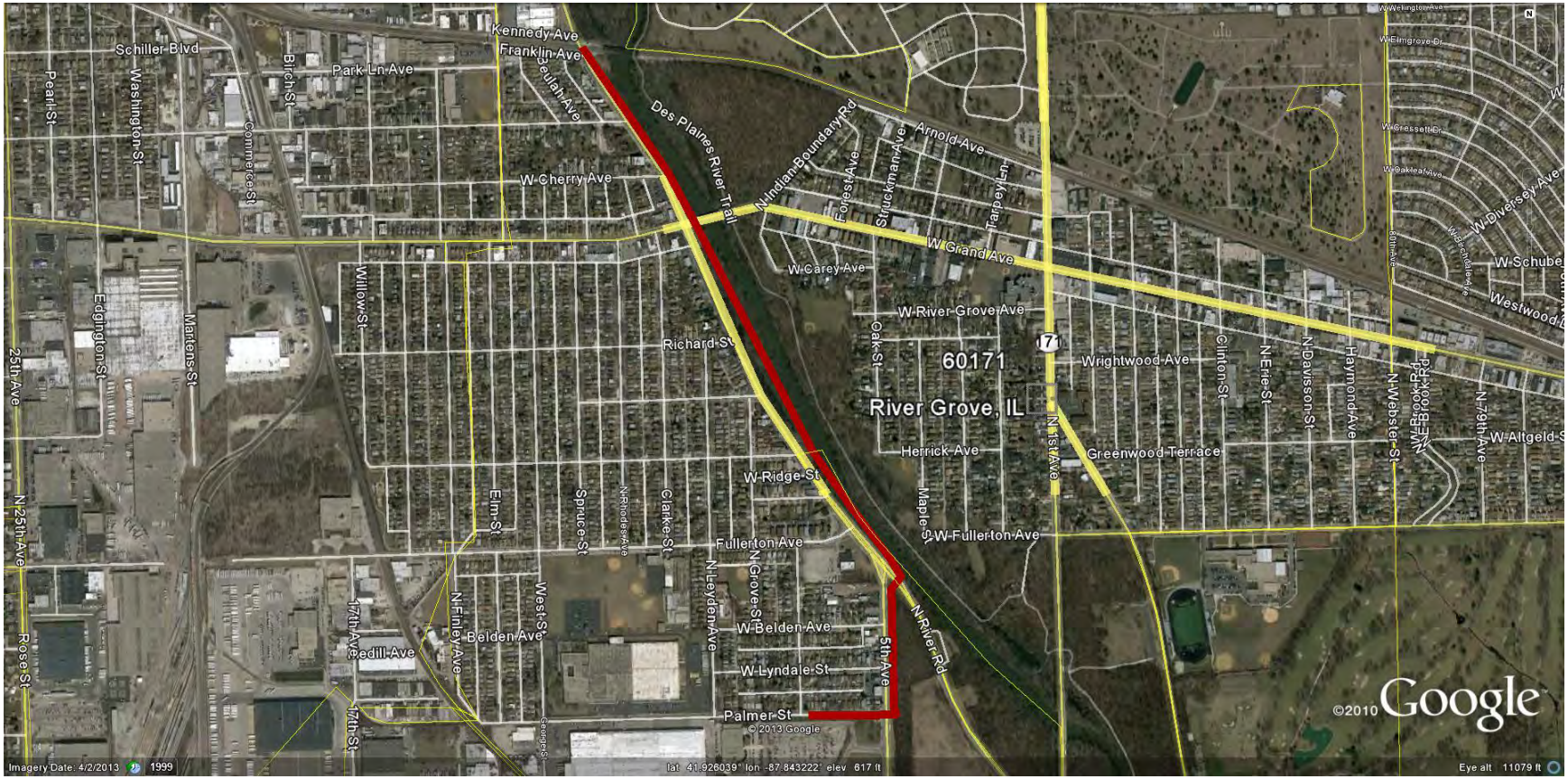


Figure 1: DPLV04 Project Area

PLAN VIEW

N

NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME.

2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83) U.S. FEET.

3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) U.S. FEET.

4. THE PROPOSED FLOOD WALL LENGTH IS 2190 FEET AND LEVEE LENGTH IS 4240 FEET.

5. THE PERMANENT EASEMENT AREA IS 6.2 ACRES. THE TEMPORARY EASEMENT AREA IS 4.4 ACRES.

6. THREE ROAD CLOSURE STRUCTURES WILL BE NECESSARY TO COMPLETE THE LINE OF PROTECTION, INCLUDING ONE ROAD RAISE AT 5TH AVE.

0 600' 1200'

U.S. Army Corps of Engineers
Chicago District

UPPER DES PLAINES RIVER AND TRIBUTARIES
FEASIBILITY REPORT
AND EVIRONMENT ASSESSMENT
VOLUME 2 – NED PLAN

DPLV04 LEVEE
CONCEPTUAL SITE PLAN
RIVER GROOVE, COOK COUNTY, IL

SCALE:	DATE:	DRAWING CODE:
AS SHOWN	21 MAY 2013	DPLV04-CS101.DGN

Figure 2

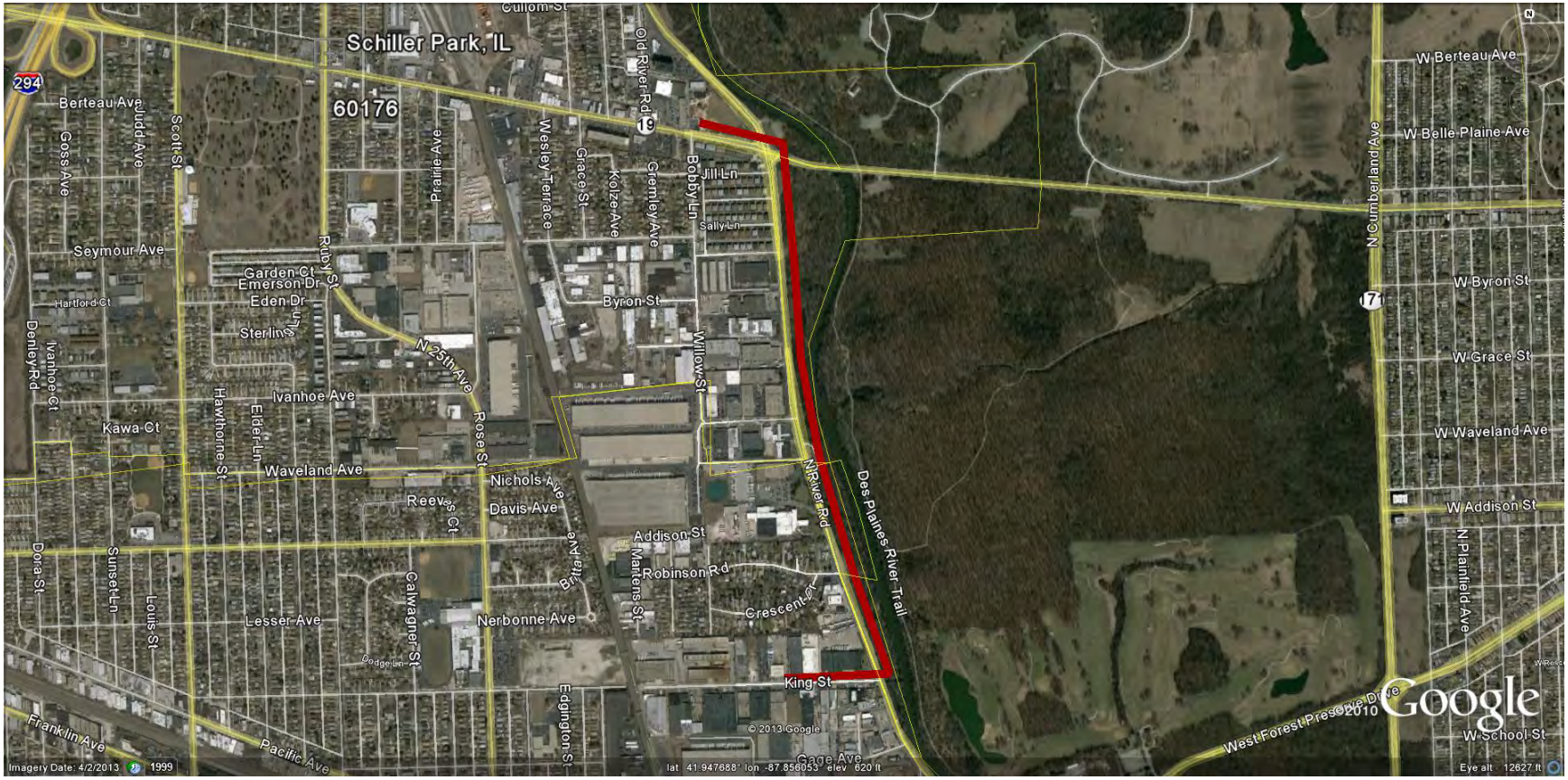


Figure 3: DPLV05 Project Area

PLAN VIEW

N

NOTES:

1. THE SURVEY CONDITIONS SHOWN ON THESE DRAWINGS ARE FROM A LOCAL GIS DATA AND REPRESENTS CONDITIONS EXISTING AT THAT TIME.

2. ALL COORDINATES SHOWN ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83) U.S. FEET.

3. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) U.S. FEET.

4. THE PROPOSED FLOOD WALL LENGTH IS 807 FEET AND LEVEE LENGTH IS 5240 FEET.

5. THE PERMANENT EASEMENT AREA IS 7.1 ACRES. THE TEMPORARY EASEMENT AREA IS 5.6 ACRES.

6. THREE ROAD CLOSURE STRUCTURES WILL BE NECESSARY TO COMPLETE THE LINE OF PROTECTION.

0 600' 1200'

U.S. Army Corps of Engineers Chicago District

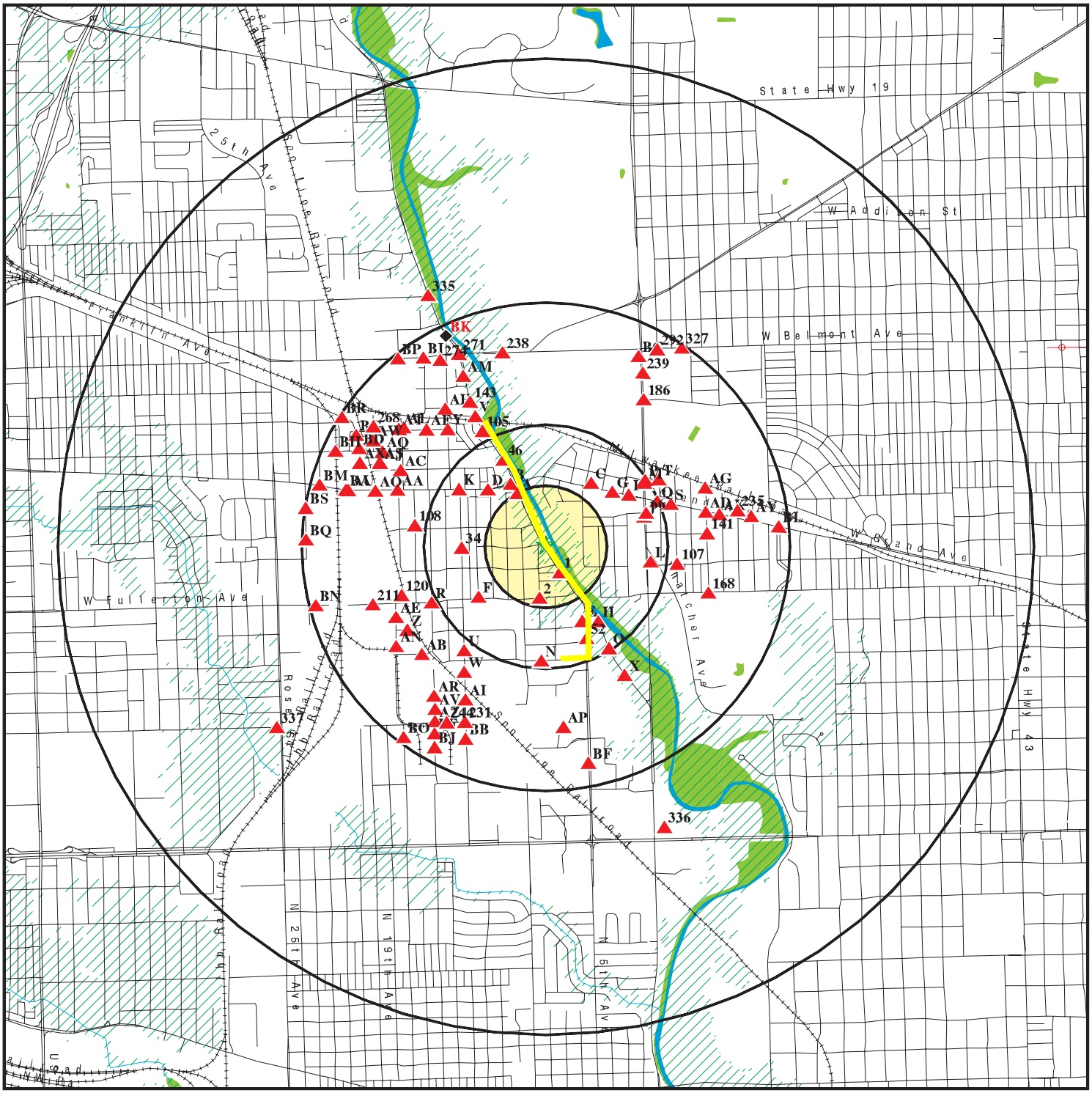
UPPER DES PLAINES RIVER AND TRIBUTARIES
FEASIBILITY REPORT
AND EVIRONMENT ASSESSMENT
VOLUME 2 - NED PLAN

DPLV05 LEVEE
CONCEPTUAL SITE PLAN
SHILLER PARK, COOK COUNTY, IL

SCALE: AS SHOWN DPLV05-C.DGN	DATE: 21 MAY 2013	DRAWING CODE:

Figure 4

OVERVIEW MAP - 3674230.10s



- 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
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

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: DPLV04 - Des Plaines II	CLIENT: U.S. Army Corps of Engineers
ADDRESS: Ferrick Ave/ Des Plaines River Road River Grove IL 60171	CONTACT: Casey Pittman
LAT/LONG: 41.9258 / 87.8436	INQUIRY #: 3674230.10s
	DATE: July 23, 2013 6:07 pm

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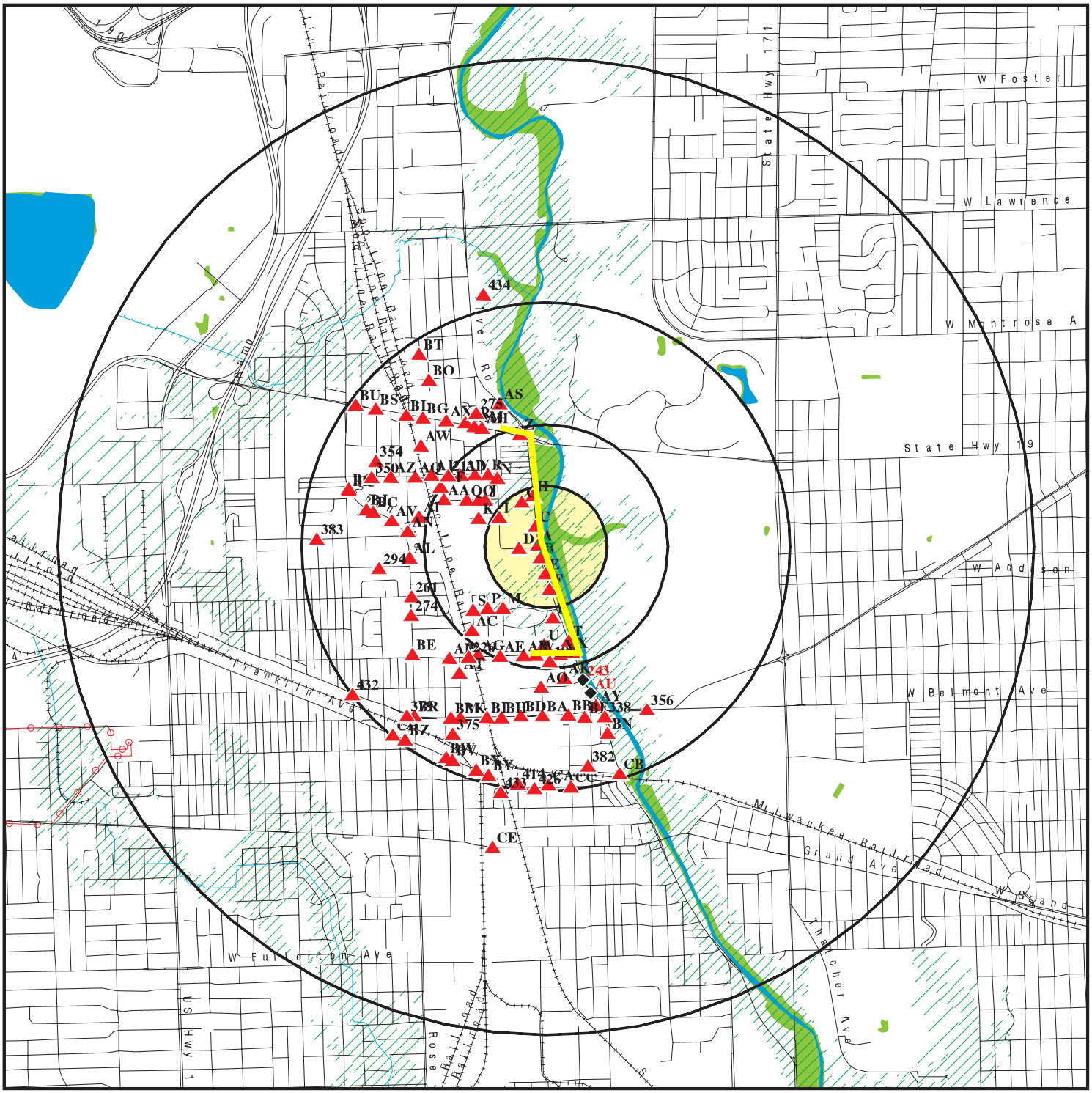
Figure 5

OVERVIEW MAP - 3674230.2s



0 1/2 1 2 Miles

- 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
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

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: DPLV05 - Des Plaines Phase II	CLIENT: U.S. Army Corps of Engineers
ADDRESS: Des Plaines River Road/Ivanhoe Ave Schiller Park IL 60176	CONTACT: Casey Pittman INQUIRY #: 3674230.2s
LAT/LONG: 41.947 / 87.8551	DATE: July 23, 2013 6:03 pm

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Figure 6

Table 1 – DPLV04 Levee/Floodwall EDR Search Results

Database	Map ID	Site Name	Status	Potential Impact
EDR US Hist Auto Stat	1	2444 River Road	Historical Auto Station/Repair listed L&C Auto, or Northwest Automotive (2003, 2008, 2011, 2012)	No known issues, a site visit should be conducted to confirm the current status of the site.
IL SPILLS ERNS	A3 A4 A5	2670 River Road	Incident 20081380 Supplemental ERNS report suggests that during flood in 09/2008 the Jiffy lube flooded, causing a sheen on the Des Plaines River.	Unlikely incident impacted project area.
FINDS LUST IL BOL SPILLS	A6 A7 A8	Oil Express (2672 River Road)	LUST identified 2007 with no NFR/NFA (0312645003) SPILLS incident 20071227	Facility is adjacent (across River Road) and upgradient to the levee/floodwall alignment. LUST status should be confirmed during the design phase to determine if facility activities will impact project implementation.
RCRA-SQG EDR US-Hist Auto-Stat FINDS SPILLS IL BOL	A9 A10 A11 A12	Tri C Shell (2680 River Road)	RCRA – no violations Auto Station Shell 1999 – 2003 SPILLS 20061293 BOL 0312645027 linked to LUST incidents at 8801 Grand. NFA/NFRs dated 12/17/2009, 3/20/1998 and 3/12/2003.	Facility is adjacent (across River Road) and upgradient to the levee/floodwall alignment. Given the site history (multiple LUSTs and spills) the site status should be confirmed during the design phase to determine if facility activities will impact project implementation.
RCRA-SQG FINDS	B13	Shell Service Station (8801 N Grand Ave)	RCRA - no violations	Unlikely facility activities have impacted the project area.
EDR US-Hist-Auto-Stat RCRA nongen/NLR IL UST IL BOL	B14 B15 B16 B17	Amoco (8800 W Grand)	Historical Auto Amoco/Parent 2010-2012 RCRA – no violations 3-USTs onsite in use BOL 0312645049	See entries A9 – A12 above for previous history. Existing USTs not likely to be impacted by project, they are adjacent but across River Road.

Database	Map ID	Site Name	Status	Potential Impact
EDR US-Hist-Auto-Stat	B18	8820 Grand Ave	Historical Auto station Amoco/BP 1999-2009	No known issues, site visit should be conducted to determine the current status of the site.
FINDS IL SWF/LF IL SPILLS IL BOL IL SPILLS	E31 E32 H44 H45	Trumbull Exc Co, Inc. (2314 River Road)	LF facility is unpermitted/unauthorized with closed final cover IEPA ID 1118010008 SPILL incident 20081410 BOL 0312645040	Landfill appears to be located adjacent to the staging area identified in preliminary drawings along River Road at 5th Avenue. If staging area will be extended into the landfill, land-disturbance restrictions may be necessary.
ERNS	46	2834 North River Road	ERNS supplemental information: white foamy substance discharging from water in the storm sewer 2004	Unlikely ERNS incident will impact project implementation given the scope and scale of the incident.
EDR Hist Auto Stat	52	2242 5th Ave	Historical Auto Repair – River Auto Body 2012	No known issues, site visit should be conducted to confirm the current status of the site.
FINDS IL BOL	N75 N76	TRW Inc. (8747 W Palmer)	BOL 0312645002 – it is unclear, based on further searching, why facility is listed in BOL sites. Site appears to be a parking lot associated with adjacent industry.	Review of historical topographic maps suggest that the property was used as a trailer park sometime around and between 1953 and 1963, and was converted to industrial with parking facilities sometime between 1963 and 1972. Its unlikely that these historic activities will impact project implementation.
RCRA-SQG FINDS	O87 O88	Shea Kenny Kiewit JV Baja Contractors Inc. (2100 N. River Road)	RCRA – no violations	Unlikely facility activities have impacted the project area.
EDR US Hist Aut Stat	105	2946 River Road	Dave's Auto Repair from 1999 to 2002	No known issues, site visit should be conducted to confirm the current status of the site.
IL LUST IL INST CONTROL IL SRP	V111	Compx (3000 N River Road)	LUST NFA/NFR letter dated 6/30/2009 with residential groundwater use restriction. SRP NFR/NFA letter dated 6/29/2009 with same restriction.	The facility has closure for previous LUST and SRP actions; however, there is a groundwater use restriction onsite. Site is adjacent/upgradient to the project area; impacts to project implementation will need to be determined in the design phase. In addition, the status of

Database	Map ID	Site Name	Status	Potential Impact
IL LUST IL UST	V112 V113	TTT (3000 N River Road)	LUST incident reported 3/26/2013 with no known status (0312645007) 2- USTs reported onsite Further research identified site as entry V111 above and V114 below. However, an additional LUST action (with recent 45-day report) is moving through the program.	the 2013 LUST action will need to be confirmed during design.
FINDS IL SPILLS IL AIRS IL BOL	V114	River Grove River Road LLC (3000 N River Road)	SPILLS 20090021 AIRS no incidents BOL 0312645007 (as above V111-V113)	
RCRA-SQG	V115	Metra (3000 N River Road)	RCRA – facility has violations related to records/reporting and achieve compliance 12/22/2005	Unlikely facility activities have impacted project area.

Table 2 – DPLV05 Levee/Floodwall EDR Search Results

Database	Map ID	Site Name	Status	Potential Impact
IL UST	AH220	Water Pump House (9248 W Irving Park Road)	1-UST removed from site	Unlikely facility activities have impacted the project area.
RCRA-SQG FINDS EDR Hist Clean	AH230 AH231	Dres Well CLNRS (9314 W Irving Park Road)	RCRA - no violations, historical cleaner since 2001	Unlikely facility activities have impacted the project area.
RCRA-SQG EDR Hist Auto IL LUST	Z152 Z158 Z165 Z172 Z173	Amoco 15670 Standard Oil (9201 W Irving Park Road)	RCRA – no violations EDR – historical auto station since 1981 LUST NFA/NFR letter dated 11/13/1998 5-USTs removed, 3-USTs out of service BOL 0312855069	Facility and associated tanks are not within the project area. No indications that facility operations have impacted the project area.
IL SPILLS	Z193	9200 Irving Park Road	19921011	Given the timing of the spill (1992), it is unlikely facilities activities will impact project implementation.
FINDS	G46	Singer Co. (3838 N River Road)	Further research into IEPA databases does not reveal why facility is listed in BOL database.	Unlikely facility activities have impacted the project area.
RCRA-SQG FINDS IL AIRS IL BOL	G47	Gulton Industries (3860 River Road)	RCRA – no violations AIRS – cease operations 1901; current permit dated 12/2013. BOL 0312855023 (facility listed for RCRA tracking and AIRS compliance by IEPA)	Unlikely facility activities have impacted the project area.
IL BOL RCRA nogen FINDS	H48 H49 H50	Beckman Instruments Rent Com (3900 River Road)	BOL 0312855018 (IEPA RCRA tracking) RCRA – no violations 1-UST removed	Unlikely facility activities have impacted the project area.
RCRA-SQG FINDS IL BOL	C20 C21 C22	Atols Mold (3828 River Road)	RCRA – no violations LUST NFA/NFR letter dated 7/16/2009 BOL 0312855021 (IEPA RCRA tracking)	Unlikely facility activities have impacted the project area.

Database	Map ID	Site Name	Status	Potential Impact
RCRA-SQG FINDS IL UST	C24 C25	Craftsman Custom Metal Fab (3838 River Road)	RCRA – no violations 1-UST abandoned UST	Unlikely facilities activities have impacted project area.
RCRA-SQG FINDS IL UST IL BOL	A1 A2	K-P Publications (3800 River Road)	RCRA – no violations 3 – USTs removed, 1 exempt BOL 0312850008 (IEPA RCRA tracking)	Unlikely facilities activities have impacted project area.
RCRA-SQG FINDS IL AIRS IL BOL	A3 A4	Manor Tool & Mfg (9200 Ivanhoe Ave)	RCRA – no violations AIRS – cease operation 7/2003 BOL 0312855084 (IEPA RCRA tracking)	Unlikely facilities activities have impacted project area.
IL BOL RCRA-SQG FINDS	A11 A12	Anderson Snow Corp (9225 Ivanhoe St.)	BOL 0312855036 (IEPA RCRA tracking) RCRA – no violations	Unlikely facilities activities have impacted project area.
RCRA-SQG FINDS IL AIRS US AIRS IL BOL IL UST	A19 D23	Western Printing Machinery (9229 Ivanhoe St)	RCRA – no violations AIRS – minor discharger in compliance with requirements BOL 0312850005 (facility listed for tracking in IEPA AIRS and RCRA system) 2-HW USTs removed	Unlikely facilities activities have impacted project area.
IL UST SPILLS	B5 B6	Commercial Tool Works (3738 River Road)	Facility closed 5-USTs removed SPILLS 19981851	Facility is physically disconnected from project area across Des Plaines River Road. Unlikely facilities activities have impacted project area.
RCRA-CESQG FINDS IL LUST IL BOL	B7	AZ Woodworking (3738 River Road)	RCRA previous generator – no violations LUST NFA/NFR letter dated 02/16/1999 BOL 0312855047 (IEPA RCRA tracking)	Unlikely facilities activities have impacted project area.
IL SPILLS IL BOL	B8 B9	Property Solutions (3710 River Road)	SPILLS 20061588 BOL 0312855176 (IEPA LUST action) LUST NFA/NFR letter dated 7/24/2008	Facility is physically disconnected from project area across Des Plaines River Road. Unlikely facilities or spill activities have impacted project area.

Database	Map ID	Site Name	Status	Potential Impact
RCRA nongen FINDS	B10	Dulin Metals (3710 River Road)	RCRA previous generator – no violations	Unlikely facilities activities have impacted project area.
IL AIRS	B13	Environmental Group Services (3702 River Road)	AIRS cease operation date 8/2000	Unlikely facilities activities have impacted project area.
RCRA-TSDF CORRACTS RCRA-nongen FINDS IL LUST IL UST IL SPILLS IL ENG CONTROL IL INST CONTROL IL SRP IL AIRS IL BOL IL FIN ASS.	B14 B18	Duo Fast Corp (3702 River Road)	RCRA – previous generator with TSDF CORRACTS, medium CA assigned (1998); RFA 2009, no need for RFI LUST NFA/NFR letters dated 6/18/1997, 9/23/1996 SRP NFA/NFR letter dated 6/19/1998 with controls (industrial/commercial groundwater use restriction and 26 acre asphalt barrier) 3-USTs (one haz) removed, 3-exempt SPILLS NL850793 AIRS cease operation 1998 BOL 0310965026 Financial assurance requirements withdrawn (not required)	Facility is adjacent (across River Road) and upgradient to the levee/floodwall alignment. Given the site history (multiple LUSTs, SRP, and CORRACTS) and the groundwater use restriction in the area of the project, the site status should be confirmed during the design phase to determine if existing environmental conditions will impact project implementation.
FINDS IL AIRS	B15 E39	Ohare Partners Environmental Group (3702 River Road)	Facility in ACES – AIRS cease operation 12/1998	Unlikely facility activities have impacted project area.
IL BOL	B16	Centerpoint Properties (3708 River Road)	BOL 0310965469 – unclear BOL interest in site	Unlikely facility activities have impacted project area.
RCRA-nongen FINDS IL SRP	D26 D27	Eclipse Lighting (9245 Ivanhoe)	RCRA previous generator – no violations SRP NFA/NFR letter dated 5/2/2003 with industrial/commercial groundwater use restriction (<1 acre)	Facility is adjacent (across River Road) and upgradient to the levee/floodwall alignment. Given the site history and the groundwater use restriction in the area of the project, the site status should be

Database	Map ID	Site Name	Status	Potential Impact
IL INST CONTRL				confirmed during the design phase to determine if existing environmental conditions will impact project implementation.
FINDS IL BOL RCRA-SQG	D29 D30 D31	Precise Rotary (9250 Ivanhoe St.)	RCRA –violations related to permit general information, compliance achieved 2008 BOL 0312855180 (IEPA RCRA tracking)	Unlikely facility activities have impacted project area.
RCRA-SQG FINDS	D35	MAACO Auto Painting (9259 Ivanhoe)	RCRA – no violations	Unlikely facility activities have impacted project area.
RCRA nongen FINDS IL UST IL AIRS	D40 D41	Har Machine Products (9228 Ivanhoe)	RCRA – no violations 4-USTs abandoned in place AIRS cease operation date 9/1990	Unlikely facility activities have impacted project area.
RCRA-SQG/CESQG FINDS IL SPILLS IL UST IL BOL	E28 E32 E33 E34 E38 B17	Arcor (Anchor) Construction site Autocam (3710-3720 River Road)	RCRA – no violations SPILLS 20080532/20061627 2-USTs exempt from registration BOL 0310965354 (IEPA RCRA tracking)	Facility is physically disconnected from project area across Des Plaines River Road. Unlikely facilities activities or site spills have impacted project area.
FINDS IL SPILLS IL AIRS US AIRS	E36 E37	JS Paluch (3708 River Road)	SPILLS 20041687 AIRS – commercial printing with major discharge in compliance	Facility is physically disconnected from project area across Des Plaines River Road. Unlikely facilities activities or site spills have impacted project area.
IL LUST IL Tier 2 FINDS IL UST IL BOL	F42 F43 F44 F45	Dean Foods (3600 River Road)	LUST NFA/NFR letters dated 11/14/1997 & 6/14/1994 Tier 2 – facility stores ammonia and sulfuric acid on-site 2-USTs removed, 1-exempt BOL 0310965299 (IEPA LUST tracking)	Facility is physically disconnected from project area across Des Plaines River Road. Unlikely facilities activities or site spills have impacted project area.

Database	Map ID	Site Name	Status	Potential Impact
SPILLS	L67 L76	Franklin Park P-876 Natural gas Pipeline	SPILLS 20081185 Natural Gas pipeline Utility present	Facility is physically disconnected from project area across Des Plaines River Road. Unlikely facilities activities or site spills have impacted project area.
RCRA-CESQG IL SPILLS IL BOL	L77 L78	Alpha Tool (3506 River Road)	RCRA – no violations SPILLS 20081185 BOL 0310965344 (IEPA RCRA tracking)	Facility is physically disconnected from project area across Des Plaines River Road. Unlikely facilities activities or site spills have impacted project area.
RCRA-SQG FINDS IL BOL	L83 L84	Vanart Engineering (3504 River Road)	RCRA – no violations BOL 0310965055 (IEPA RCRA tracking)	Unlikely facility activities have impacted project area.
IL SPILLS IL BOL IL UST IL LUST RCRA-SQG FINDS	T117 T118 T119 T120	3450 Corp Vacant (UST) Pope Salvage (LUST/RCRA) (3450 River Road)	SPILLS 19910329 BOL 0310965234 (IEPA LUST and RCRA tracking) 1-UST removed, 2 – DNE LUST NFA/NFR letter dated 10/20/2004 RCRA – no violations	Facility is physically disconnected from project area across Des Plaines River Road. Unlikely facilities activities or site spills have impacted project area.
IL AIRS IL BOL CORRACTS RCRA-SQG FINDS IL SRP IL INST CONTROL IL UST	X144 X145 X147 X146	David Brown Hydraulics (3412 River Road) 7013246	BOL 0310960017 (AIRS and SRP IEPA tracking) AIRS cease operation date 8/2000 RCRA – violations CORRACT – RFA complete 2010, RFI not necessary SRP NFA/NFR letter dated 7/11/2002 with groundwater use restriction (3.5 acres) 2 heating oil USTs exempt	Facility is adjacent (across River Road) and upgradient to the levee/floodwall alignment. Given the site history and the groundwater use restriction in the area of the project, the site status should be confirmed during the design phase to determine if existing environmental conditions will impact project implementation.
IL BOL FINDS IL UST	X153 X155 X154	ARI Industries (9000 King St) Brewer Russell	BOL 0310965068 (asbestos removal contractor and IEPA SW tracking) 1 heating oil tank exempt from registration	Unlikely facilities activities or site spills have impacted project area.

Database	Map ID	Site Name	Status	Potential Impact
IL SPILLS	X157	King St. & River Road	SPILLS 20030124	Given the date of spill activity (2003) it is unlikely that any site spills will impact project implementation.
RCRA-LQG TRIS FINDS US AIRS IL HWAR IL BOL ERNS IL SPILLS TIER 2	X166 X167 X168 X169 X170 X171 X188	Belmont Plating Works (3410 River Road)	RCRA – facility has TSD violations, pre-transport, manifesting, general. Compliance achieved on all violations. HWAR/TIER 2 - Facility uses/produces/stores a variety of chemicals with controlled (AIRS) and fugitive releases (in compliance). ERNS – fire inside facility caused HCl release to Des Plaines River 2006. Spill contained with booms.	Facility is physically disconnected from project area across Des Plaines River Road. Unlikely facility activities have impacted project area.
IL AIRS	X178	Victor Fluid Power (3412 River Road)	AIRS – facility ceased operation	Unlikely facility activities have impacted project area.
FINDS IL BOL	Y148 Y149	Schaef Corp (9045 King St)	BOL 0310965111 (unclear IEPA interest)	Unlikely facility activities have impacted project area.
IL SPILLS RCRA nongen IL HWAR IL BOL IL LUST IL ENG/INST CONTROL IL SRP IL UST	189 U136 U137 U138 U139 U140	Estate of Nick Anthony Guarino and/or G&M Metal Fabricators (9105 King St)	SPILLS 20080586 RCRA previous generator – no violations SRP NFA/NFR letter dated 12/2/2010 with industrial/commercial groundwater use restriction and asphalt/foundation barrier on 3 acres LUST 2008 reported, no status (likely moved to SRP) 3-USTs removed	Facility is adjacent (across King Street) and upgradient to the levee/floodwall alignment. Given the site history and the groundwater use restriction in the area of the project, the site status should be confirmed during the design phase to determine if existing environmental conditions will impact project implementation.
EDR HIST AUTO	U141	9101 King St	Historical auto body from 2005 to present (All Star Auto Body)	No known issues, a site visit should be conducted to determine the site status.

Database	Map ID	Site Name	Status	Potential Impact
IL SPILLS	U121	Franklin Park	20030148 (unclear location)	Given the date of the spill (2003), its unlikely spill activity will impact project implementation.
FINDS IL BOL RCRA-SQG IL NPDES	AB121 AB161 AB162 AB164	Food Liner (9200 King St)	BOL 0310965051 (IEPA RCRA tracking) RCRA – no violations NPDES discharger to MWDRGC expires 2014	Unlikely facility activities have impacted project area.
IL UST	AB163	Hanchor Cement (9200 King St)	5-USTs removed	Unlikely facility activities have impacted project area.
IL BOL FINDS	AB184 AB185	Just Mfg Co. (9233 Kind St)	BOL 0310965127 (unclear IEPA interest)	Unlikely facility activities have impacted project area.

Table 3 – Summary Results and Future Recommendations

Site	Issue	Short-Term Data Needs	Potential Future Actions
DPLV04	Several historical gas stations, and one SRP site with groundwater use restrictions, located hydraulically up gradient to project with multiple SPILL and LUST actions	None	1. Confirm design/excavation assumptions and groundwater handling requirements 2. Confirm status of all LUST and SPILL actions 3. Perform phase II investigation to determine scope and scale of site impacts from adjacent regulated activities, if required.
	Landfill located adjacent to staging area	None	Confirm the limits of the staging area and the limits of the landfill to determine if areas overlap. Insert any contractual restrictions required to prevent disturbance of the landfill area.
	Site Visit	None	Site visits must be conducted to determine if there are any isolated RECs onsite that may impact project implementation.
	Database Search review	None	Intensive review of database results of all sites within the ASTM search limits (beyond the limits of the levee/floodwall alignment documented herein) should be conducted to identify a comprehensive list of RECs that may impact project implementation.
DPLV05	Four SRP site with groundwater use restrictions, located hydraulically up gradient to project	None	1. Confirm design/excavation assumptions and groundwater handling requirements 2. Perform phase II investigation to determine scope and scale of site impacts from adjacent regulated activities, if required
	Site Visit	None	Site visits must be conducted to determine if there are any isolated RECs onsite that may impact project implementation.

Site	Issue	Short-Term Data Needs	Potential Future Actions
	Database Search review	None	Intensive review of database results of all sites within the ASTM search limits (beyond the limits of the levee/floodwall alignment documented herein) should be conducted to identify a comprehensive list of RECs that may impact project implementation.