

Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62467-94-D-0888

N00210.AR.000379
NSTC GREAT LAKES
5090.3a



Community Involvement Plan

**Naval Station Great Lakes
Great Lakes, Illinois**

Contract Task Order 0384

January 2010



201 Decatur Avenue, Building 1A
Great Lakes, Illinois 60088

COMMUNITY INVOLVEMENT PLAN

**NAVAL STATION GREAT LAKES
GREAT LAKES, ILLINOIS**

**COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:
Naval Facilities Engineering Command Midwest
201 Decatur Avenue, Building 1A
Great Lakes, Illinois 60088**

**Submitted by:
Tetra Tech NUS, Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh, Pennsylvania 15220**

**CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0384**

JANUARY 2010

PREPARED UNDER THE SUPERVISION OF:



**ROBERT F. DAVIS, JR., P.E.
TASK ORDER MANAGER
TETRA TECH NUS, INC.**

APPROVED FOR SUBMITTAL BY:



**DEBRA M. HUMBERT
PROGRAM MANAGER
TETRA TECH NUS, INC.**

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE NO.</u>
ACRONYMS AND ABBREVIATIONS	3
1.0 OVERVIEW OF COMMUNITY INVOLVEMENT PLAN	1-1
1.1 OVERVIEW	1-1
1.2 NAVY INSTALLATION RESTORATION PROGRAM AND THE SUPERFUND PROCESS.....	1-2
2.0 SITE DESCRIPTION AND REMEDIATION PROGRESS.....	2-1
2.1 LOCATION, HISTORY, AND DESCRIPTION	2-1
2.1.1 Location.....	2-1
2.1.2 History	2-1
2.1.3 Description	2-1
2.2 WASTE ACTIVITIES.....	2-4
2.2.1 Waste Generation	2-4
2.2.2 Waste Storage	2-4
2.2.3 Waste Transportation.....	2-5
2.3 SUMMARY OF SITE INVESTIGATIONS AND SELECTED REMEDIES.....	2-5
2.3.1 Summary of Site Investigations and Selected Remedy for Site 1 and 4	2-6
2.3.2 Summary of Site Investigations and Current Status for Site 2.....	2-7
2.3.3 Summary of Site Investigations and Current Status for Site 3.....	2-8
2.3.4 Summary of Site Investigations and Current Status for Site 7.....	2-10
2.3.5 Summary of Site Investigations and Selected Remedy for Site 9	2-10
2.3.6 Summary of Site Investigations and Current Status for Site 17.....	2-11
2.3.7 Summary of Site Investigations and Current Status for Site 17.....	2-12
2.3.8 Summary of Site Investigations and Current Status for Site 21.....	2-13
2.3.9 Summary of Site Investigations and Current Status for Site 22.....	2-13
2.4 FIVE-YEAR REVIEWS.....	2-15
3.0 COMMUNITY BACKGROUND	3-1
3.1 COMMUNITY PROFILE.....	3-1
3.2 CHRONOLOGY OF COMMUNITY INVOLVEMENT	3-3
3.3 KEY COMMUNITY CONCERNS	3-4
4.0 ELEMENTS OF COMMUNITY INVOLVEMENT PLAN	4-1
4.1 RESTORATION ADVISORY BOARD.....	4-1
4.2 OBJECTIVES AND HIGHLIGHTS.....	4-1
4.3 COMMUNITY INVOLVEMENT ACTIVITIES	4-3
4.4 TIME FRAME SUMMARY FOR COMMUNITY INVOLVEMENT ACTIVITIES.....	4-6
REFERENCES.....	R-1

TABLE OF CONTENTS (Continued)

APPENDICES

A	NAVAL STATION GREAT LAKES MEDIA CONTACTS
B	POINTS OF CONTACT FOR PUBLIC INPUT
C	REPOSITORY LOCATIONS
D	ELECTED OFFICIALS
E	REGULATORY OFFICIALS

TABLES

NUMBER

2-1	Summary of Potentially Contaminated Sites and Their Current Status
-----	--

FIGURES

NUMBER

2-1	General Location Map
2-2	Site Locations
2-3	Site Map, Site 1 – Golf Course Landfill and Site 4 – Fire Fighting Training Unit
2-4	Site Map, Site 2 – Forrestal Landfill
2-5	Site Map, Site 3 – Supplyside Landfill
2-6	Site Map, Site 7 – RTC Silk Screening Shop
2-7	Site Map, Site 9 – Camp Moffett Ravine Area
2-8	Site Map, Site 17 – Pettibone Creek and Boat Basin
2-9	Site Map, Site 19 – Former Building 910
2-10	Site Map, Site 21 – Building 1517
2-11	Site Map, Site 22 – Building 105 Old Dry Cleaning Facility

ACRONYMS AND ABBREVIATIONS

CAG	Community Advisory Group
CIP	Community Involvement Plan
COC	Chemical of concern
DRMO	Defense Reutilization and Marketing Office
FS	Feasibility Study
HDPE	High Density Polyethylene
IAS	Initial Assessment Study
Illinois EPA	Illinois Environmental Protection Agency
IR	Installation Restoration
LUC	Land Use Control
MOA	Memorandum of Agreement
NCRS	North Chicago Refiners and Smelters
NFA	No Further Action
PAH	Polynuclear aromatic hydrocarbon
PCBs	Polychlorinated biphenyl
PCE	Tetrachloroethene
PWC	Public Works Center
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
RI/RA	Remedial Investigation/Risk Assessment
ROD	Record of Decision
SVOC	Semivolatile organic compound
TCE	Trichloroethene
TtNUS	Tetra Tech NUS, Inc.
USEPA	United States Environmental Protection Agency
VOC	Volatile organic compound

1.0 OVERVIEW OF COMMUNITY INVOLVEMENT PLAN

1.1 OVERVIEW

This Community Involvement Plan (CIP) was developed to identify community concerns and information needs that may arise during remedial activities at Naval Station Great Lakes in Lake County, Illinois. The Navy developed this CIP to facilitate two-way communication between the community surrounding Naval Station Great Lakes and the Navy and to encourage community involvement in site activities. The Navy will utilize the community involvement activities outlined in this plan to make sure that residents are continuously informed and provided opportunities to be involved. The Naval Facilities Engineering Command Midwest is managing the remedial activities at the Naval Station Great Lakes on a voluntary basis, with regulatory oversight by the Illinois Environmental Protection Agency (Illinois EPA).

The purpose of the CIP is to outline activities designed to inform the public of planned or ongoing field investigations undertaken and remedial actions occurring at the Naval Station Great Lakes facility. The CIP also provides opportunities for the public to offer input. The primary objectives of this plan are to keep the residents of the Naval Station Great Lakes area informed of the planned activities at the facility, to provide a means for citizens and agencies to interact with the Navy, and to assist in resolving issues of public interest and concern. The CIP encourages involvement of citizens from the Naval Station Great Lakes area as well as representatives from federal, State, and local agencies and interest groups that are active in policy and decision making processes.

The CIP objectives are to:

- Provide for the exchange of information.
- Solicit input, comments, and active involvement from the public, elected and civic leaders, and concerned agencies.
- Provide a centralized point of contact to address public concerns and to distribute information regarding Naval Station Great Lakes activities.

This plan describes the site's conditions and historical background, identifies key parties and issues of concern to the affected community, and recommends activities and a schedule to provide information and

to encourage public involvement in the remedial process at Naval Station Great Lakes. The CIP is presented in the following sections:

- Section 1 - Overview of Community Involvement Plan
- Section 2 - Site Description and Remediation Progress
- Section 3 - Community Background
- Section 4 - Elements of the Community Involvement Plan
- Appendices - Key contacts and repository locations

This plan was developed in accordance with the requirements for community involvement activities at this site contained in: (1) Department of the Navy Environmental Restoration Program Manual (Navy, 2006) and (2) Superfund Community Involvement Toolkit [United States Environmental Protection Agency (USEPA), 2002]. The Navy drew upon several information sources to develop this plan, including site files. The steps outlined in the CIP are designed to achieve effective communication and a timely exchange of information with the public. The Naval Station Great Lakes Team will oversee the implementation of the community involvement activities outlined in this plan and will monitor community responses to environmental activities in order to update this document. This plan will be updated and revised as needed to make sure that the community is aware of site activities.

1.2 NAVY INSTALLATION RESTORATION PROGRAM AND THE SUPERFUND PROCESS

In 1980, Congress passed the Comprehensive Environmental Response, Compensation and Liability Act, commonly referred to as the Superfund law, to address hazardous waste sites which posed a threat to the public's health and/or the environment. To date, numerous sites nationwide have been cleaned up by USEPA, in cooperation with state and tribal partners, local governments, community organizations, and liable parties, also known as Potentially Responsible Parties.

One of the overall goals of the Superfund process is to involve the public in the decision-making process. Since community residents are or may be affected by the final clean-up decision, public input is critical throughout the process. In fact, 40 Code of Federal Regulations §300.430(c)(2) of the National Contingency Plan (regulations supporting Superfund law) requires the development of a CIP to specify what community relations activities the lead agencies (the state or federal agencies responsible for investigating and cleaning up a site) expects to undertake during the cleanup process.

The Superfund law provides for a lead agency, typically federal agency or a state environmental agency, to conduct the cleanup or to oversee cleanup. At the Naval Station Great Lakes, the Navy is the lead

agency responsible for investigating the sites, involving the community in the decision-making process, and overseeing site cleanup. Illinois EPA oversees and provides guidance to the Navy's implementation of the Installation Restoration (IR) Program/Superfund Process. The Navy and Illinois EPA also signed an agreement on the process to implement Land Use Control (Naval Station Great Lakes, 2002).

The IR Program for the Department of Defense is designed to meet the requirements for regulatory closure of sites in accordance with the Superfund law. The IR Program addresses environmental impacts caused by historical disposal and operation practices. The IR Program is carried out in compliance with federal, State, and local laws and regulations. The Naval Facilities Engineering Command Midwest and Naval Station Great Lakes Environmental Department are responsible for and are voluntarily implementing the IR Program. The Illinois EPA is the primary regulatory agency that oversees the Naval Facilities Engineering Command Midwest and Naval Station Great Lakes environmental programs. The USEPA Region 5 office receives copies of the reports that are prepared for the IR Program.

Naval Station Great Lakes is not listed on the USEPA National Priorities List as a facility that has hazardous waste sites which posed a threat to the public's health and/or the environment that need to be addressed. However, the Navy is using the IR Program to conduct voluntary investigations to obtain regulatory closure of sites at Naval Station Great Lakes that have environmental impacts caused by historical disposal and operation practices.

2.0 SITE DESCRIPTION AND REMEDIATION PROGRESS

2.1 LOCATION, HISTORY, AND DESCRIPTION

2.1.1 Location

Naval Station Great Lakes (see Figure 2-1) covers 1,632 acres of Lake County, Illinois. It is bounded on the north by the city of North Chicago, on the south by the Veterans Administration Hospital, Shore Acres Golf Course & Country Club, and the Village of Lake Bluff, on the east by Lake Michigan, and on the west by U.S. Route 41 (Skokie Highway) and Shields Township. Lake County is located in northeastern Illinois, north of the City of Chicago, and comprises 24 miles of Lake Michigan shoreline. Lake County extends from the Wisconsin border south to Cook County and from Lake Michigan west to McHenry County.

Naval Station Great Lakes lies within both the North Branch Chicago River Drainage Basin and the Lake Michigan North Drainage Basin. The divide between the basins lies along Green Bay Road. Precipitation runoff that does not infiltrate into the ground flows into the Skokie River or Pettibone Creek. The areas east of Green Bay Road, which include Naval Station Great Lakes, drain into Lake Michigan through Pettibone Creek, and areas west of Green Bay Road drain into the Skokie River.

2.1.2 History

Naval Station Great Lakes was established in 1902 after Congress appropriated \$5,000 for the investigation of areas in which to establish a naval training station. The present location was selected based on its close proximity to Chicago and access to rail transportation via the Chicago and Northwestern Railroads and the now defunct Chicago North Shore and Milwaukee Railroad. The original activity consisted of 39 buildings on 167 acres and was bounded on the west by Sheridan Road, on the north by Bronson Avenue, on the east by Lake Michigan, and on the south by an irregular line through what is now Hospital Side. Expansion of the activity to its current size was accomplished through land acquisitions from 1917 to 1942. Naval Station Great Lakes now consists of approximately 1,060 buildings on approximately 1,632 acres (Rogers, Golden, & Halpern and BCM Eastern Inc., 1986).

2.1.3 Description

Naval Station Great Lakes is involved with basic military training and basic and advanced surface warfare training in weapons, propulsion, communications, information technology, and other services for United

States Navy and international military personnel. Naval Station Great Lakes is used to support naval training and consists of the Recruit Training Command, the Training Support Center, and Naval Facilities Engineering Command Midwest. Naval Station Great Lakes is one of the Navy's largest training commands, conducting over 100 training courses (Naval Station Great Lakes, 2003b).

2.1.3.1 Physiography and Topography

The terrain of Naval Station Great Lakes consists of relatively flat glacial drift deposits bordered by steep lake-facing bluffs cut with vertical sloping ravines. The unconsolidated glacial material that comprises the bluff faces and ravine walls is under continual erosion. Most of Naval Station Great Lakes is situated on a plateau elevated 640 to 660 feet above mean sea level. Pettibone Creek lies approximately 600 feet above sea level, and the eastern portion of Naval Station Great Lakes, along the Lake Michigan shoreline, is 600 feet above sea level.

Intensive development has replaced most of the forests that originally covered the area. Native woodlands occur primarily on the vertical-sloped ravine of Pettibone Creek, across the Mainside, and on the bluffs facing Lake Michigan. The principal mammals in the Naval Station Great Lakes area include groundhogs, raccoons, squirrels, opossums, rabbits, chipmunks, and deer. Pettibone Creek supports aquatic life including minnows, aquatic insects, frogs, and salamanders [Tetra Tech NUS, Inc. (TtNUS), 2003b].

2.1.3.2 Soil and Geology

The Morley-Beecher-Hennepin soil consists primarily of loams and silt loams and is located on level to very steep ravines along Pettibone Creek within the eastern portion of Naval Station Great Lakes. This soil is characterized as well to poorly drained and has slow to moderate permeability. Made Land soil is located in the areas of Naval Station Great Lakes that consist of manmade cuts and fills covered by roads and buildings. This fill material includes a variety of soil and non-soil materials that have not been characterized.

The geologic units encountered at Naval Station Great Lakes include Aeolian and Lacustrine deposits, glacial till, and bedrock. The interface between the bedrock surface and overlying till consists of 1 to 15 feet of broken bedrock (dolomite), gravel, sand, and coarser material. This material appears to be debris ground from the bedrock by the advancing glaciers of the Wisconsin Stage of glaciation during the Late Pleistocene.

Unconsolidated glacial till overlies the bedrock. This till is an unsorted mixture of sand, silt, and clay imbedded with pebbles, cobbles, and boulders. Interstices between the coarser-grained sediments are typically filled with fine, clay-sized particles resulting in low permeability. Generally, the till is clayey, with thin and irregular lenses of sand or silty sand occurring over limited areas. The till has been further subdivided into clayey and sandy phases according to the size of the dominant particles. Because clay comprises up to 70 percent of the till at Naval Station Great Lakes, the clayey phase dominates in the local area.

The coastal geomorphology of Naval Station Great Lakes is characterized as a bluff coast. The bluffs consist of gray to brown glacial till interbedded with glacial-like sediments of clay, silt, sand, and sandy outwash (Chrzatowski and Trask, 1995). Silt and clay are the dominant bluff materials (Clark and Radcliff, 1990). Average grain-size distribution for the till is 10 percent sand, 42 percent silt, and 48 percent clay (Linbeck, 1974). In general, only 10 to 15 percent of eroded bluff materials are coarse enough to provide beach sediments.

Bluff heights relative to mean lake level are variable but are generally in the range of 70 to 90 feet, and bluff slopes range from 25 degrees to nearly vertical (Chrzatowski and Trask, 1995). These bluffs are incised by a series of V-shaped ravines occupied by streams such as Pettibone Creek that drain the upland areas located west of the bluffs.

Along the bluff coast, the beach and nearshore deposits occupy a narrow zone extending from the toe of the bluff to several hundred to thousands of feet offshore where the sand pinches out (Chrzatowski and Trask, 1995). Maximum sand thicknesses of beach and nearshore deposits along the bluff coast are generally no more than 5 to 7 feet (Chrzatowski and Trask, 1995).

2.1.3.3 Regional Hydrology

Pettibone Creek is a small creek that flows through Naval Station Great Lakes and into Lake Michigan. The Pettibone Creek watershed is one of five Lake Michigan watersheds in Lake County, Illinois. The watershed drains an area of 4.2 square miles and consists of the North and South Branches, each with a minor tributary branch. The hydrology of the watershed is well established. It flows through well-defined ravines within Naval Station Great Lakes. The creek is characterized by moderately steep stream bed gradients and banks with 30 to 60 percent slopes.

There are few floodplain areas along Pettibone Creek because of the steeply sloped creek banks. The North Branch of the Creek has a short time of concentration, or time it takes for a unit of water to run the

watercourse. The time of concentration is short because the water source is primarily from an urban area that has low infiltration rates and fast run-off rates during storms. As a result, Pettibone Creek is susceptible to flash floods characterized by high channel velocities and great erosive potential. The Illinois State Water Survey calculated the average flow of Pettibone Creek as less than 10 cubic feet per second or 4,488 gallons a minute. This can greatly increase during periods of precipitation (TtNUS, 2003b).

2.2 WASTE ACTIVITIES

2.2.1 Waste Generation

Naval Station Great Lakes is involved primarily with the administration of base operations and provides facilities and related support to training of personnel as well as a variety of other military commands located on base since 1911. Although Naval Station Great Lakes does not conduct industrial-type activities, the generation of hazardous waste has occurred in the past through some commercial activities such as gas stations, underground storage tanks, drum storage, dry cleaning, and printing shops. The generation of hazardous waste has been confined primarily to the Public Works Center (PWC), the Hospital Command, and the Service School Command, although waste has been generated in lesser quantities at other buildings on the base (Rogers, Golden, & Halpern and BCM Eastern Inc., 1986).

2.2.2 Waste Storage

A variety of waste materials are stored at Naval Station Great Lakes. Naval Station Great Lakes has operated with a Resource Conservation and Recovery Act (RCRA) interim status permit (USEPA # IL7170024577) since November 19, 1980 as a large quantity generator. This interim status permit is for the hazardous waste management and storage (accumulation sites) at locations throughout the Naval Station Great Lakes property.

The Defense Reutilization and Marketing Office (DRMO), located in Building 3212A, is the building where surplus properties are stored before disposal. Scrap metal generated by Naval Station Great Lakes is stored at the DRMO. Typical wastes that the DRMO is responsible for removal of include paints, polychlorinated biphenyls (PCBs), pesticides, batteries, empty barrels, vehicles, and tires. Waste materials are physically stored at the shops and facilities' generating the waste until off-base removal is arranged by the DRMO. The DRMO includes two large warehouse buildings and a storage yard. Special care is taken in the storage of hazardous and flammable materials, which are stored in a separate room on pallets in one of the warehouses.

The Supply Department orders chemicals for most shops and facilities at Naval Station Great Lakes. The orders are placed and delivered to the individual shops where they are stored. Flammable and hazardous materials are stored in secure locks at the shops. Pesticides are also ordered through the Supply Department and stored in the Pest Control Shop (Building 68-H). The Pest Control Shop stores approximately 30 to 40 gallons of pesticides at any given time, comparable to a 1 month usage supply.

Underground tanks store petroleum, oils, and lubricants at Naval Station Great Lakes. Several accidental releases have been associated with the refilling of these tanks; however, the spills were contained and cleaned up.

Spent transformers, capacitors, and other PCB-containing machinery and devices have been historically stored in several locations at Naval Station Great Lakes. The PWC "boneyard" (Site 5) is not covered by a roof, and the ground is saturated with oily residue in some spots. At Site 6, the basement of the old steam plant was used for storage of PCB transformers between 1979 and 1981. The transformers were drained by vandals releasing approximately 132 gallons of PCB fluid to the dirt floor. A fully enclosed PCB storage building was constructed in 1984. These sites are summarized on Table 2-1 and the table indicates the status of the sites as of March 2009.

2.2.3 Waste Transportation

Since the late 1970s, the DRMO has arranged for the transportation and disposal of hazardous wastes generated at Naval Station Great Lakes. A private contractor is periodically hired for the offsite removal of hazardous wastes. Before the late 1970s, the PWC handled disposal of hazardous wastes that was often mixed with general activity refuse and disposed in the Naval Station Great Lakes landfills (Sites 1, 2, and 3).

Before 1980, solid waste transportation and disposal were handled by the PWC. The majority of the generated solid waste before 1980 was disposed in facility landfills. A private contractor handles disposal of solid waste generated at Naval Station Great Lakes today.

2.3 SUMMARY OF SITE INVESTIGATIONS AND SELECTED REMEDIES

In 1986, an Initial Assessment Study (IAS) conducted at Naval Station Great Lakes identified potentially contaminated sites on the base. The IAS identified waste management areas, disposal sites, and contaminated areas caused by past hazardous substance storage, handling, or disposal practices from Naval activities. Each site was evaluated with respect to contamination characteristics, migration

pathways, pollutant receptors, and potential threats to human health or to the environment (Rogers, Golden, & Halpern and BCM Eastern Inc., 1986). There is potential that additional unknown environmental sites will be established in the future. As these sites are located they will be identified and investigated.

The IAS identified 14 potential areas where hazardous materials may have been released to the environment. These sites consisted of landfills and disposal areas, transformer storage areas, training areas, service stations, shooting ranges, and storage areas. Other potential Navy sources included surface run-off or fallout from engine exhaust from nearby roadways, historical pesticides usage applied when it was legal to do so, and volatile organic compounds (VOCs) stored in tanks and drums. Of these 14 sites, seven sites were recommended for further investigation, and one site was recommended for a cleanup action (Rogers, Golden, & Halpern and BCM Eastern Inc., 1986).

Using the information from the IAS, the Navy's IR Program has identified 23 potential sites where hazardous materials may have been released to the environment. These sites are summarized on Table 2-1 and the table indicates the status of the sites as of March 2009. Sites that are currently being investigated are shown on Figure 2-2.

2.3.1 Summary of Site Investigations and Selected Remedy for Sites 1 and 4

Site 1 - Golf Course Landfill was a landfill that operated between 1942 and 1967 on approximately 50 acres that is now covered by the golf course (see Figure 2-3). The landfill was operated as a trenching/burning operation and received an estimated 1.5 million tons of material during its years of operation. Types of waste reportedly disposed at the landfill included domestic refuse; sewage sludge; petroleum, oil and lubricants; solvents; coal ash; and materials contaminated by PCBs (C.H. Guernsey, 2002). When the landfill was closed in 1969, a layer of ash from coal-fired power plants at Naval Station Great Lakes was placed over the landfill and topsoil was placed over the ash. In 1986, an IAS conducted at the Naval Station Great Lakes identified 14 potentially contaminated sites (Rogers, Golden & Halpern and BCM Eastern Inc., 1986). The study concluded that Site 1 warranted further investigation to assess potential long-term impacts.

A Remedial Investigation/Risk Assessment (RI/RA) investigation at Site 1 that involved collecting and analyzing subsurface soil, sediment, surface water, and groundwater samples was conducted in December 2006 and March 2007. The results from this investigation were reported in a RI/RA report (TtNUS, 2008a) that was reviewed by the Illinois EPA. A Focused Feasibility Study (FS, TtNUS, 2009) was prepared that included the USEPA's presumptive remedy for landfills as the selected remedial action

for this site. The presumptive remedy includes engineering controls and groundwater monitoring. The Proposed Plan was prepared and the public comment period occurred from mid-August to mid-September 2009. The Record of Decision (ROD) is being prepared and will be completed in early 2010.

Site 4 – Fire Fighting Training Area was built in 1942 and operated until it was taken out of service in 1989. The fire fighting training unit was located on 10 acres that are now at the center of the golf course. Consequently, the fire fighting training unit was active during the operation of the landfill and during the operation of the golf course. Environmental investigations were conducted to determine the nature and extent of contamination at the fire fighting training unit. Environmental remediation of the old fire fighting training unit site was conducted to remove underground and above-ground storage tanks.

A RI report was prepared and recommended institutional controls for the fire fighting training unit site closure in 1998 (TtNUS, 2008a). However, no additional actions have been conducted at the site since the RI. During the preparation of the Site 1 RI/RA, the Navy and Illinois EPA agreed to incorporate Site 4 with Site 1 in the FS, Proposed Plan, and ROD since its boundaries lie within Site 1 and the potential remedy for both sites will be the same.

2.3.2 Summary of Site Investigations and Current Status for Site 2

Site 2 – Forrestal Landfill – was the first controlled disposal area used by Naval Station Great Lakes (see Figure 2-4). Operations at the landfill began in 1967 and ceased in 1969, at which time the landfill did not fall under any state or local permitting programs or regulatory closure requirements. The site was operated as a trench-type landfill with no burning. It is estimated that approximately 276,000 cubic yards of refuse were disposed at the landfill. The total volume of material disposed at the landfill was limited by the size of the parcel (approximately 4 acres) and the fact that disposed refuse was not burned. In addition, during the time the site operated, housing waste collection was transferred from the Navy to a private contractor, with disposal on Navy property. The waste disposed in the Forrestal Landfill was primarily mixed office waste from the Administrative Command and the various training schools. Shop waste was also disposed at the Forrestal Landfill. There is no record of hazardous waste disposal at Site 2.

Site investigations were performed at Site 2 in 2000 and 2001 to determine the aerial extent of the buried waste and to investigate the presence of methane and VOCs in the landfill gas. In late 2002 and early 2003, an investigation was conducted to determine the thickness and properties of the existing soil cap and to collect samples of groundwater. Based on these investigations, risks to human health and the environment were assumed to be low. However, because the existing cap was placed without

documentation with respect to both quality and thickness, it was determined that the potential for exposure of waste and leachate generation from infiltration was unknown

In 2004, a cover system and gas management system were installed at the Supplside Landfill. Prior to installation of the cover system, the landfill sub grade was regraded to promote drainage.

Site 2 is included in the Land Use Control (LUC) Memorandum of Agreement (MOA) between the Navy and Illinois EPA (Naval Station Great Lakes, 2002). The LUC MOA restricts property use to light recreational use, restricts groundwater use or soil disturbance, and requires maintenance of the landfill cover. LUCs will be inspected on an annual basis to ensure that the controls are properly enforced. The inspections will include observations of the erosion control measures, the passive landfill gas collection system, and the landfill cover for signs of damage, and the site fence will also be inspected for damage and for signs of unauthorized access to the site.

Groundwater monitoring and reporting is being conducted as part of on-going post-closure activities at Forrestal Landfill. The groundwater monitoring program is designed to determine the effectiveness of the landfill cap in preventing leaching of constituents to groundwater. Groundwater samples were collected quarterly from six monitoring wells located on the perimeter of the landfill and are analyzed for Illinois EPA provided L1 and L2 parameters for 2 years. Groundwater monitoring began in August 2006; the ninth quarter of monitoring was conducted in November 2008. Exceedances of regulatory monitoring criteria in quarterly groundwater samples have included mainly inorganics such as aluminum, arsenic, iron, manganese, lead, vanadium, ammonia, chloride, sulfate, and total dissolved solids. Illinois EPA has agreed to semi-annual sampling starting with the November 2008 event.

2.3.3 Summary of Site Investigations and Current Status for Site 3

Site 3 – Supplside Landfill – was a 7-acre landfill that operated from 1969 to 1983 (see Figure 2-5). It is estimated that approximately 1 million cubic yards of refuse were disposed at the landfill; the total volume of material disposed at the landfill was limited by the size of the parcel. The main component of disposed material was general office waste. No liquids, metals, or sanitary wastes were accepted for disposal. The waste was deposited in two cells – one north of the former rail road spur and one south/southeast of the former spur. Portions of these cells were located on top of lagoons and filter beds that were presumably used for wastewater treatment. No intentional burning of refuse occurred at this site. A railroad spur formerly crossed the southeastern third of the landfill and serviced the warehouses north of the site.

A soil cover was placed on the landfill in 1985. The cover grading and seeding were performed by the Navy Construction Battalion 401, a tenant command at Naval Station Great Lakes during that time period. Between 1999 and 2001, the Navy removed the railroad tracks, filled the area between the two cells, and placed additional cover on top of the landfill cells. Site investigations were performed at Site 3 between 2001 and 2003. The 2001 investigation at the Site 3 was to determine the presence of methane and VOCs in landfill gas. In 2002 and 2003, investigations were conducted to determine the thickness and properties of the existing soil cap and to collect samples of groundwater. Field testing indicated that the cap was generally over 2 feet thick and had a conductivity of less than 1×10^{-7} centimeters per second.

A streamlined risk assessment was conducted in 2004 based on the results of the site investigations. The streamlined risk assessment identified that two parameters (iron and chloride) exceeded Class II groundwater standards in two wells and determined that the landfill was not graded to minimize runoff velocity and that portions of the cap were subject to erosion in the future, which could increase the potential for infiltration to groundwater. It was determined the landfill did not have a significant impact on surface water quality, but erosion of the cap that lead to a situation in which storm water would become exposed to landfill waste, causing an increase in surface water contaminant concentrations. The potential for direct contact was determined to be limited as there was no indication that hazardous waste had been placed in the landfill and the landfill is capped. The landfill cap appeared to be adequate to prevent airborne exposure to waste debris.

In 2004, a new cover system and gas management system were installed at the Supplside Landfill. The landfill subgrade was regraded to create a flat surface with a gradual slope from west to east across the top of the landfill. Geotextile fabric and additional soil cover were installed over approximately 330 feet by 550 feet of the northern end of the landfill in 2005 to cover approximately 12,000 cubic yards of soil with asbestos-containing material (non-friable transite).

Site 3 is included in the LUC MOA between the Navy and Illinois EPA (Naval Station Great Lakes, 2002). The LUC MOA restricts property use to light recreational use, restricts groundwater use or soil disturbance, and requires maintenance of the landfill cover. LUCs will be inspected on an annual basis to ensure that the controls are properly enforced. The inspections will include observations of the erosion control measures, the passive landfill gas collection system, and the landfill cover for signs of damage, and the site fence will also be inspected for damage and for signs of unauthorized access to the site.

Groundwater monitoring and reporting is being conducted as part of on-going post-closure activities at Supplside Landfill. The groundwater monitoring program is designed to determine the effectiveness of the landfill cap in preventing leaching of constituents to groundwater. Groundwater samples are collected

quarterly from six monitoring wells located on the perimeter of the landfill and are analyzed for Illinois EPA provided L1 and L2 parameters for 2 years. Groundwater monitoring began in August 2006; the ninth quarter of monitoring was conducted in November 2008. Exceedances of regulatory monitoring criteria in quarterly groundwater samples have included mainly inorganics such as aluminum, arsenic, iron, manganese, lead, chloride, sulfate, and total dissolved solids. Illinois EPA has agreed to semi-annual sampling starting with the November 2008 event.

2.3.4 Summary of Site Investigations and Current Status for Site 7

A RI/RA was conducted at Site 7 (see Figure 2-6) in 2001 and determined that no exposure pathways existed that would present unacceptable risks to human health or the environment. An interim remedial action, i.e., a hot spot removal (excavation and offsite disposal) of polynuclear aromatic hydrocarbons (PAH)-contaminated soil at Site 7 was conducted in July 2002. The hot spot removal involved excavation of PAH-contaminated soil that was identified during the investigation from a tank spill. After the PAH-contaminated soil was excavated, confirmation samples were collected and analyzed. It was determined that no further action (NFA) was required for Site 7 (TtNUS, 2003d).

The remedial activities at Site 7 consisted of a removal action triggered by the PAH-contaminated soil from a petroleum and petroleum-related products spill. A Proposed Plan for NFA was prepared and released for public comment on March 1, 2003. The public was invited to comment during the 30-day period from March 1 to 31, 2003. No public comments were received. The Navy prepared a NFA ROD for this site, and Illinois EPA approved the ROD on August 11, 2003 (TtNUS, 2003c).

Site 7 is currently a parking lot covered with asphalt.

2.3.5 Summary of Site Investigations and Current Status for Site 9

The IAS conducted in 1986 reviewed the Camp Moffett disposal area (see Figure 2-7). According to the IAS, waste materials were encountered in 1980 during repair of Missouri Street, which had collapsed. During the repair activities the excavation was extended to a depth of 8 feet below the ground surface and the bottom of the waste materials was not reached. The report indicated that the material was galley-type wastes. In addition, during the excavation activities for construction of one of the new buildings, waste materials were also encountered. No further investigations were conducted. Waste materials were also encountered during construction of new buildings in the Camp Moffett area.

A geophysical survey using ground penetrating radar and EM31 and EM61 equipment was conducted to determine the edges of the potential landfill and to use this information to guide the subsequent sampling

efforts. Based on the results from the Site 9 geophysical survey, sampling locations are currently being evaluated for contaminated soil and groundwater. A sampling program for the RI/RA is planned to be conducted in the fall of 2009. The results from this sampling event will be reviewed by the Illinois EPA.

2.3.6 Summary of Site Investigations and Current Status for Site 17

Early investigations of Site 17, Pettibone Creek and Boat Basin (see Figure 2-8), in the 1970s resulted from studies by USEPA and Illinois EPA of the abandoned industrial facilities in the City of North Chicago located upstream of Naval Station Great Lakes (see Figure 2-2). Several of the facilities [Fansteel, North Chicago Refiners and Smelters (NCRS), and the Vacant Lot] were turn-of-the-century manufacturing facilities that produced tantalum mill products, non-ferrous metals, and zinc oxide. USEPA Region 5 and Illinois EPA investigated these facilities for VOC, semivolatile organic compound (SVOC), pesticide, PCB, and metals contamination. The Navy has also conducted several investigations of Site 17.

A RI/RA was conducted in September of 2001. The activities consisted of surface water and sediment sampling. PAHs, pesticides, PCBs, and metals were detected in the sediment samples. A human health risk assessment performed as part of the investigation indicated unacceptable risks would exist from the ingestion of fish assuming they were contaminated from the ingestion of contaminated sediment in the Boat Basin. A number of uncertainties were associated with those stated risks; however, the results of the risk assessment were generally consistent with fish advisories currently in effect for Lake Michigan.

Additional samples were collected in December 2008 to determine if contamination reached the native soil below the sediment. Sample results are pending but expected to be reported on in late spring of 2009.

A screening-level ecological risk assessment was also performed as part of the 2001 investigation at Site 17. PAHs, pesticides, and metals in sediment samples were retained as chemicals of concern (COCs) for risks to aquatic receptors in the North Branch of Pettibone Creek because they were detected in several samples at concentrations that exceeded alternate benchmarks. PAHs, pesticides and PCBs, and metals in sediment samples were retained as COCs for risks to aquatic receptors in the Boat Basin because they were detected in several samples at concentrations that exceeded the alternate benchmarks. These conclusions are based on literature toxicity values not site-specific biological studies; therefore, there is uncertainty in the conclusions. In addition, because of the large amount of soil erosion in the creek, there are physical stressors as well as chemical stressors that may be adding to the risks to aquatic organisms.

Pesticides were also retained as COCs in the North Branch of Pettibone Creek and the Boat Basin because they may cause risks to piscivorous birds that consume fish from the area. The risks are based on predicted fish tissue concentrations estimated from sediment concentrations however, the potential risks to piscivorous birds and mammals were likely overestimated in the screening-level ecological risk assessment (TtNUS, 2003a).

Based on the results from the Site 17 RI/RA, remedial action alternatives were evaluated for the sediment in Pettibone Creek and the Boat Basin. The Site 17 Feasibility Study (FS) was finalized in August 2005 (TtNUS, 2005b). The Proposed Plan was issued and the 30 day public comment period occurred from mid-February to mid-March 2009. NAVFAC Midwest is in discussions with USEPA Region 5 concerning historical upstream sources of contamination and the potential risk of recontamination. The ROD, remedial design, and remedial action for the contaminated sediment will be conducted in the future but the timeline is unknown. Remedial actions to remove the contaminated sediment may occur during the 10-year maintenance dredging program for the Naval Station Great Lakes harbor system.

2.3.7 Summary of Site Investigations and Current Status for Site 19

Site 19 is the location of a former Recruit Training Center Rifle Range housed within Building 910 (see Figure 2-9). The shooting range was in operation for 55 years until the demolition of Building 910 in 2000. VOC, PAH, and metal (primarily lead) contamination is suspected in the soil and groundwater at the site due to the spent ammunition and the use of solvents for gun cleaning operations. An active offsite dry cleaning operation is in close proximity to Site 19, and contaminants from this facility may have migrated into the groundwater and soil of Site 19.

A remedial investigation has been performed to help determine the nature and extent of the contamination. The investigation includes collection and field screening of soil samples, laboratory analysis of 35 soil samples, and installation and sampling of 2 new monitoring wells. Soil and groundwater samples have been analyzed for VOCs, PAHs, and metals. A remedial investigation report will be finalized in the spring of 2009.

Data generated from the investigation will be used in a human health risk assessment to determine if a feasibility study comparing various remedial actions is necessary for the site.

2.3.8 Summary of Site Investigations and Current Status for Site 21

Little is known about subsurface conditions and the presence of contamination at Building 1517 and the area surrounding it which is known as Site 21 (see Figure 2-10). Although there are several potential sources of contamination, no contamination is confirmed. Based on written reports and aerial photographs, the primary use of Site 21 was a coal stockpile area from the 1940's until the late 1960's or early 1970's. Two rail spurs can be seen at Site 21 as early as 1939 from aerial photographs. There is a potential for soil to be impacted by coal residue or leaching. Building 1517 was also used as a "Salvage Store House" as noted in a 1950 drawing of the site. Although it is not confirmed in any documentation other than on a 1935 artist's rendering, the areas adjacent to the rail spurs may have also stored wastes or scrap material. An incinerator was located to the northwest of Site 21 from approximately the 1950's to 1970's, which may be another potential source of contamination.

There have been no prior environmental investigations performed at Site 21. A geophysical survey using ground penetrating radar and EM31 and EM61 equipment was conducted and this information will be used to guide the subsequent sampling efforts. A Site Investigation will be conducted to determine the presence of contaminants and, if so, at what concentrations. A sampling program is planned to be conducted in the fall of 2009. Contaminant concentrations will be compared against those which are acceptable for human exposure in soil and groundwater. If contamination is found above acceptable levels at the site, a RI/RA will be performed to determine the nature and extent of contamination. However, if contaminants do not exceed levels which are acceptable for human exposure, then NFA is warranted. The results from this sampling event will be reviewed by the Illinois EPA.

2.3.9 Summary of Site Investigations and Current Status for Site 22

Site 22 - Building 105 Old Dry Cleaner Facility was constructed in 1939, was utilized as a dry cleaning facility until 1993 or 1994, and the building was demolished in March 2003 (see Figure 2-11). Hazardous waste consisting of spent tetrachloroethene (PCE) from the laundry facilities was stored in this area from 1980 until 1987. Drains from the gutter under the washing machines associated with previous laundry operations were connected to a grease catch basin located outside the building.

A RI/RA investigation at Site 22 that involved collecting and analyzing surface and subsurface soil samples and groundwater samples was conducted in the fall of 2003. Based on the results of this RI/RA, PCE, trichloroethene (TCE), and cis-1,2-dichloroethene were identified as COCs in soil, and PCE and TCE were identified as COCs in groundwater. The greatest soil and groundwater concentrations were adjacent to and below the grease catch basin area and its associated former drains and pipes. A broader

area of impacted soil and groundwater encompassed the floor drains, cracks in the concrete floor, and the RCRA storage area. The migration of the contamination appears to be limited due to the geology (glacial till consisting of clay resulting in low permeability), the high density polyethylene (HDPE) liner/asphalt parking lot diversion of surface run-off and minimizing infiltration and percolation, and the confined nature of the deeper aquifer. Carcinogenic and noncarcinogenic risk estimates for construction workers and hypothetical future occupational workers and residents at Site 22 exceeded USEPA and Illinois EPA benchmarks, indicating the potential for adverse health effects from exposure to chemicals of potential concern in soil and groundwater. However, because the site is paved and most of the footprint of former Building 105 is covered with a HDPE liner, there is no current exposure pathway or risk (TtNUS, 2004).

Based on the results from the Site 22 RI/RA, remedial actions were evaluated for contaminated soil and groundwater. The Site 22 FS was finalized in January 2006 (TtNUS, 2006). Based on the FS, the Navy conducted an Electrical Resistance Heating Treatability Study in the area with the greatest soil and groundwater contamination from May through October 2006. The treatability study reduced contaminant concentrations, with approximately 1,200 pounds of chlorinated volatile organic compounds removed from the soil and pore water within the treatment area. As a result of the ERH Treatability Study, the concentrations of chlorinated volatile organic compounds were reduced such that they no longer pose unacceptable risks to human health and the environment.

A Proposed Plan with LUCs was prepared and released for public comment in March 2008. The public was invited to comment during the 30-day period. No public comments were received. The Navy prepared a LUC ROD for this site, and Illinois EPA approved the ROD in September 2008 (TtNUS, 2008b). No additional active CERCLA remedial action is necessary for Site 22 soil and pore water for protection of human health and the environment.

Additionally, capping of the site is not required due to the presence of a high-density polyethylene liner and asphalt parking lot covering the site. LUCs including property, soil, and groundwater use restrictions, will be implemented at the site to prevent future residential development and restrict groundwater use and disturbance of soil in 2009. The LUCs will require review of future construction activities and intrusive work at the site to protect workers and to confirm proper management of contaminated materials. Site inspections will be conducted to verify the integrity of the current asphalt cover and that site use remains unchanged. Annual site inspections will be conducted to verify continued implementation of these LUCs (TtNUS, 2008b).

2.4 FIVE-YEAR REVIEWS

Remedial actions that result in hazardous substances remaining on site are required by federal and State regulations to be reviewed no less often than every 5 years. The reviews should make sure that human health and the environment are being protected by the remedial action specified. Five-Year Reviews are not required for Site 7 because the ROD indicated no hazardous substances remain at the site and that NFA was required. The first Five-Year Review will occur in 2013 for Site 22. The next Five-Year Review will occur in 2018 which will include any other sites that have been established at that time. Five-year reviews will eventually be combined to occur at the same time every five years and be reported in one all-inclusive report subject to funding availability.

Illinois EPA and the Navy have signed a LUC MOA (Naval Station Great Lakes, 2002) that includes a Naval Station Policy Letter restricting use of groundwater on the Naval Station Great Lakes property. This LUC MOA also identifies restrictions that apply to sites on the facility where hazardous substances remain. This LUC MOA will be enforceable regardless of changes in Navy policy regarding the use of groundwater at the base.

TABLE 2-1

**SUMMARY OF POTENTIALLY CONTAMINATED SITES AND THEIR CURRENT STATUS
NAVAL STATION GREAT LAKES
GREAT LAKES, ILLINOIS
PAGE 1 OF 3**

Site Number	Site Name	Description	Previous Investigations	Current Status
1	Golf Course Landfill	The Golf Course Landfill is a 49-acre site located under the fairways, greens, and tees of at least 12 holes of the current golf course. The trench-burn style landfill was the active disposal area for Naval Station Great Lakes from 1942 through 1967, at which time it was closed and covered with ash and a thin layer of topsoil. It is estimated that as much as 1.5 million tons of material have been burned and/or disposed of at this site. Items disposed of at this site include general refuse and trash, free liquid oil (such as waste engine oil), coal ash, solvents (such as carbon tetrachloride, Solvent 144, and motor crankcase oil), and chemicals such as PCE and transformer oils containing PCBs.	IAS (1986); RI/RA and FS	ROD in process
2	Forrestal Landfill	The Forrestal Landfill was the first controlled disposal area used by Naval Station Great Lakes. The 4-acre landfill was operated as a trench-type landfill with no burning from 1967 to 1969. Approximately 76,000 cubic yards of refuse were disposed of in this landfill and no hazardous wastes were disposed of in the landfill; however, degradation products such as alcohols and methane gas from organic wastes are a concern.	IAS (1986)	Semiannual Groundwater Monitoring
3	Supplieside Landfill	The Supplieside Landfill covers an area of approximately 400 feet by 1,000 feet and is located in the southwest corner of Naval Station Great Lakes. The landfill was operated as a trench-type landfill with no burning from 1969 to 1983. The landfill was used as a disposal for mixed office waste and galley waste. No liquids, metals, or sanitary wastes were disposed of at the Supplieside landfill. Chemical wastes include rags soiled with chemical cleaners, solvents, and oils, Solvent 144, trichloroethane, contact cement, and cement grout. Office waste disposed of at the Supplieside Landfill include paper, typewriter ribbons, and ink.	IAS (1986)	Semiannual Groundwater Monitoring
4	Fire Fighting Training Area	The Fire Fighting Training Area is a 10-acre training area used in training recruits in fire fighting techniques since 1942. The recruits fight practice fires that are set in open steel tanks and in smoke practice buildings. In 1979, a centrifugal oil/water separator was installed between the training area and the lagoons collecting wastes generated by the exercises. #2 fuel oil (used in setting the fires) was skimmed from the surface and drummed. From 1942 to 1979, waste petroleum, oils, lubricants, and waste solvents were accepted for separation at the oil/water separator and subsequently drummed and stored along the western fence line of this site. All drums were emptied by 1985; however, the soil pad where drums were once stored was soaked and is stained from residual oil spillage. A RI was done in 1997-1999. This Site, due to its location is now included in Site 1. See above for further information.	IAS (1986); RI and FS	ROD in process
5	Transformer Storage "Boneyard"	The Transformer Storage "Boneyard" is located in the northern end of Camp Moffett. This location was the primary storage area for out of service transformers, including PCB-containing transformers from 1945 to 1985. In 1985 PCB-containing transformers were moved from the "Boneyard" to a separate storage area; however, approximately 40 non-PCB-containing transformers are still stored in the "Boneyard". Waste materials in the "Boneyard" include lead insulation from high voltage cables in addition to PCB transformer oils.	IAS (1986)	Recommended for Additional Study
6	Mainside Transformer Storage Area	The Mainside Transformer Storage Area is the former storage area of six PCB-containing transformers (1979 to 1981). The storage area was the dirt covered basement floor of Building 226. During storage, vandals removed the tops of the transformers and dumped the liquid contents of the transformers before stripping the copper from the transformers. It is estimated that approximately 132 gallons of PCB oil was spilled to the ground. No cleanup was made. The building was subsequently demolished to the foundation level.	IAS (1986); Sampling in 1987 and 1988 detected no PCBs in soil. Consequently an easement was granted for road construction over the former Building 226.	NFA

TABLE 2-1

**SUMMARY OF POTENTIALLY CONTAMINATED SITES AND THEIR CURRENT STATUS
NAVAL STATION GREAT LAKES
GREAT LAKES, ILLINOIS
PAGE 2 OF 3**

Site Number	Site Name	Description	Previous Investigations	Current Status
7	RTC Silk-Screening Shop	The RTC Silk-Screening Shop is located in the Recruit Training Center (RTC) Training Aids Branch in Building 1212. Since 1965, banners and flags used by recruits during celebrations have been prepared in this shop. Chemicals and materials that are or have been used at the silk-screening shop include water and oil-based lacquers and enamels, mineral spirits, acetone, thinner, photographic emulsions, and ink products. From 1965 to 1985, wastes generated by the silk-screening shop were allowed to pass through a drain that penetrated the building wall, discharging directly to the unpaved soil outside the building.	IAS (1986); RI/RA; Proposed Plan; ROD (2003)	NFA
8	Exchange Service Station	3,000 gallons of leaded gasoline was discharged to the surrounding subsurface when a line leading to the Exchange Service Station's underground storage tanks ruptured. Although the area was remediated, it is suspected that residual contamination remains in the soil due to gasoline odors in the nearby Post Office.	IAS (1986)	Recommended for Additional Study
9	Camp Moffett Disposal Area	In 1980, an excavation to repair collapsed roadway in Camp Moffett uncovered galley-type wastes which included stainless steel serving trays and food waste. It is uncertain what depth the fill extends to; however, it is known that the fill extends greater than 8 feet bgs (which was the limit of the backhoe reach). Aerial and topographic maps indicate the area was once a narrow, V-shaped ravine and a former tributary to Pettibone Creek. It is not believed, however, that hazardous waste was ever disposed of at the Camp Moffett Disposal Area. In 1998, a Combat Training Pool was constructed on part of the site. Considerable quantities of asbestos, medical waste, organics, and inorganic compounds were found.	IAS (1986)	NFA
10	NTC Rifle Range	The Rifle Range is a 14.2 acre area located in the northeastern corner of Naval Station Great Lakes. This area has historically been used as the primary firearms training and practice facility since purchase in 1918. A preliminary environmental investigation was conducted in 1984 where unfired ammunition was found from ground surface to approximately 8 feet bgs. The investigation concluded that the ammunition was buried over the years and became exposed through soil erosion. The site is no longer Navy property, rather it is FBI property.	IAS (1986)	Recommended for Remedial Measures
11	BE/E School Gyro Compass Room	Rooms 329, 330, 330A, and 330B are located on the third floor of Building 2B and comprise Site 11. These rooms housed 15 gyro compasses from 1942 until 1976. Each compass contained 10 to 15 pounds of elemental mercury. Reserve mercury was also stored in a locker in Room 330C. In 1979 a large puddle of mercury under the storage locker in room 330C was found during conversion of the rooms from laboratories to classrooms. Additional mercury was found between floor tiles and the baseboard edging. All of the mercury was cleaned up and disposed.	IAS (1986)	NFA
12	Harbor Dredge Spoil Area	The Harbor Dredge Spoil Area is the location where previously dredged sediments (in 1952 and 1970) were disposed of. Analysis of in place harbor sediment indicates a sludge worm population of 10,000 worms per square foot. Populations greater than 100 worms per square foot is indicative of contaminated sediments. However, such a high sludge worm population may also be indicative of sediments rich in organic matter which may be a result of poor water circulation within the harbor area.	IAS (1986)	Recommended for Additional Study
13	Demolition Debris Disposal Areas	Site 13 comprises seven areas formerly used for coal storage (13A-F). Sites 13A, 13B, and 13C are located along the shoreline of Lake Michigan. The Sites are areas where fill material (i.e., bricks, concrete, and other building materials) was placed behind and in front of bulkheads and piers constructed to protect bluffs from coastal erosion. Fill was placed at Site 13C (Rifle Range shoreline) to combat severe erosion along the bluff between 1981 and 1984. Site 13D is located along the western and southern sides of Zeigemeier Street (rising from the shoreline) onto the Mainside campus. Disposal at Site 13D ended in 1969 with the development of Building 621. No seepage has been observed from the bluff at Site 13D. Site 13E is a former swimming pool facility that was filled from 1984 to 1985 because the concrete walls were leaking. Site 13F is located along the banks of Pettibone Creek, which has moved approximately 100 feet towards the stream bed over time believed to be related to coal ash disposal. Site 13G is located in the area of the present Auto Hobby Shop. It is believed that only demolition debris was encountered in these areas. No leachates are expected from the Site 13 disposal area.	IAS (1986)	NFA

TABLE 2-1

**SUMMARY OF POTENTIALLY CONTAMINATED SITES AND THEIR CURRENT STATUS
NAVAL STATION GREAT LAKES
GREAT LAKES, ILLINOIS
PAGE 3 OF 3**

Site Number	Site Name	Description	Previous Investigations	Current Status
14	Former Coal Storage Areas	The former coal storage areas consist of seven locations across Naval Station Great Lakes, where coal was stored during its use as the primary source of fuel for heating and power. Oil has since replaced coal for these purposes. However, the coal piles that once posed environmental threat through the development of leachates has been removed.	IAS (1986)	NFA
15	Western Burn Area #1	Reported to be the location of past debris/trash burning area. SI sampling identified minor contamination. Follow-up sampling and historical review of maps and aerial photographs lead the survey and sampling that identified an old dump used between the 1950s and 1960s. Trenching determined the contents to be Special Waste as determined by Illinois EPA.		
16	Indoor Pistol Range	Indoor firing range used since 1953 and had unfiltered exhaust until recently. Visual evidence of lead contamination on wall exists. Soil contamination is suspected.		
17	Pettibone Creek and Boat Basin	Pettibone Creek has two main branches that flow through the ravine dividing the plateau upon which Naval Station Great Lakes sits. The North Branch originates in North Chicago and drains a number of industrial facilities. The South Branch originates in a residential area and flows through the Shore Acres Golf Course Country Club before reaching Naval Station Great Lakes. Both branches meet at Naval Station Great Lakes before discharging to Lake Michigan via the Boat Basin. Historical efforts have been conducted to control erosion and sediments have been characterized as contaminated with various compounds.	RI/RA; FS; and Proposed Plan	ROD, Remedial Design, and Remedial Action are planned in the future
17	Inner Harbor and Outer Harbor	The Inner Harbor and Outer Harbor are sheltered waters that are part of the Naval Station Great Lakes Harbor system. These areas are not Navy property; the waters are under the jurisdiction of the State of Illinois. The harbor area is constructed with breakwaters to decrease wave energy. The harbor area receives the runoff from Pettibone Creek and Boat Basin.	Site Investigation	
18	Monazite Sand Storage Area	Elevated readings of radium found in the soils. Buried metal scraps with painted radium dials were also found in the soils.	Investigation and Remedial Action	Completed
19	Small Arms Range	Began operation in 1942 and utilized approximately 19 million pounds of ammunition and 37,500 gallons of CLP brand solvents for gun cleaning. Solvent contaminated rages were managed in an outside dumpster for approximately 55 years. The site is expected to be contaminated with lead from the ventilation system and solvents and heavy metals from gun cleaning operations. Demolition of Building 910 was completed in August 2000. Several previous soil samples around the building failed TCLP; however, soils were not removed during the demolition. Twelve inches of topsoil was placed in the location of the building foundation and the site hydroseeded.	Site Investigation	RI in process
20	Radium Contaminated Soil	During the 1950s through the 1980s DRMO maintained a yard for recycled metals. The operation consisted of crushing scrap metal and sending it to a recycler. The recycled metals included radium-containing equipment. The site is near a family housing complex.		
21	Building 1517 Landfill	Identified as a Coal Storage Yard Site. In 1996, during excavation for utilities, at the site uncovered a substantial amount of buried debris and incinerator ash. The utilities were relocated to avoid further impact on the discovered contamination. Soil samples from the foundation excavations confirmed elevated levels of RCRA metal and PAHs and asbestos containing materials.		RI in process
22	Former Building 105 Old Dry Cleaning Facility	Building 105 was constructed in 1939 and was utilized as a dry cleaning facility until 1993 or 1994 when it was converted to a vending machine supply and repair station. Soil and groundwater surrounding the building has been contaminated through the dry cleaner operations. The building was demolished in March 2003.	RI/RA; FS; ERH Treatability Study; Proposed Plan and ROD (2008)	LUCs in process

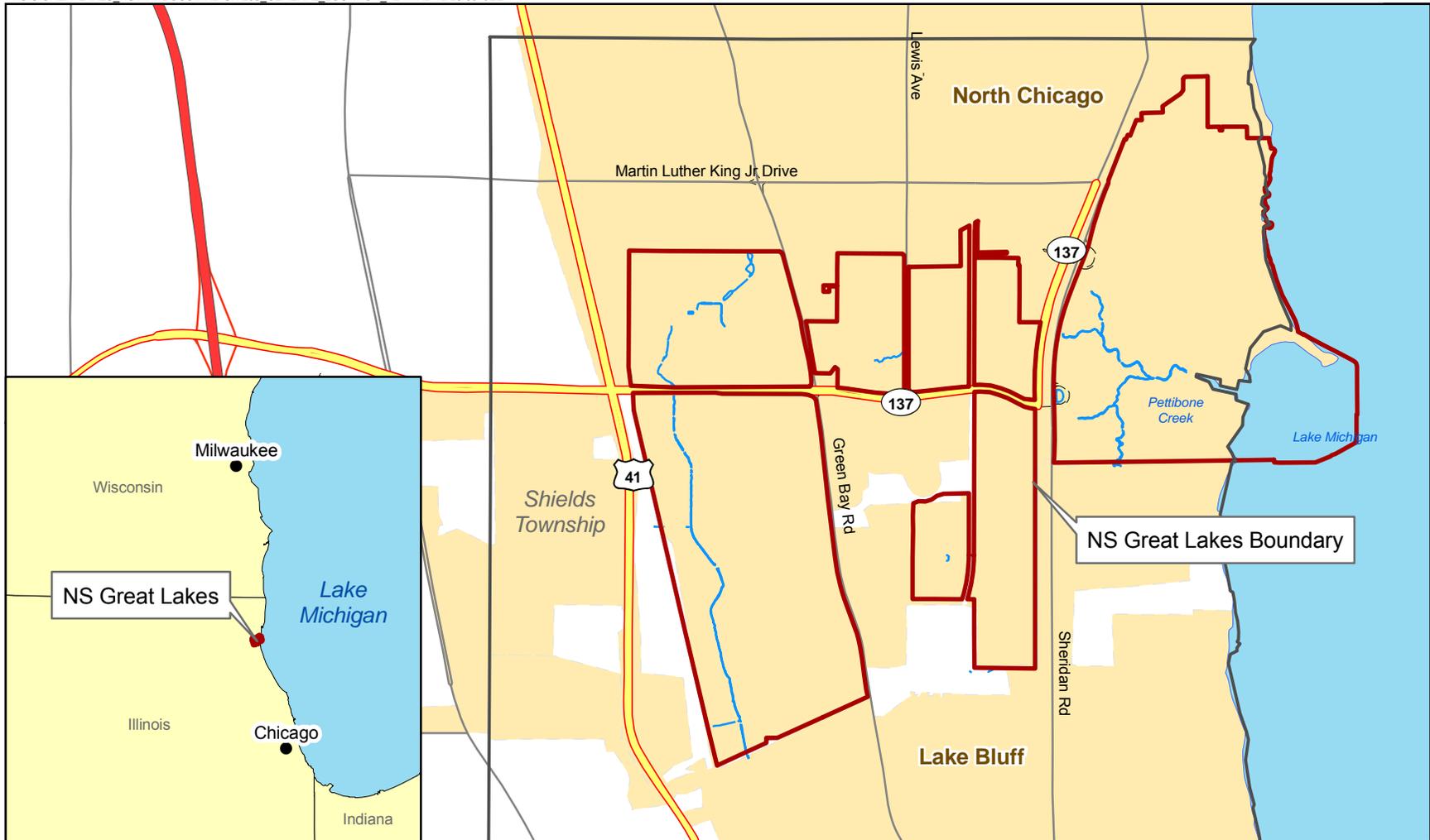
IAS (1986) - Initial Assessment Study (Rogers, Golden, & Halpern and BCM Eastern Inc., March 1996. Initial Assessment Study, Naval Complex Great Lakes, Illinois).

NFA - No Further Action

RI/RA - Remedial Investigation and Risk Assessment

FS - Feasibility Study

ROD - Record of Decision

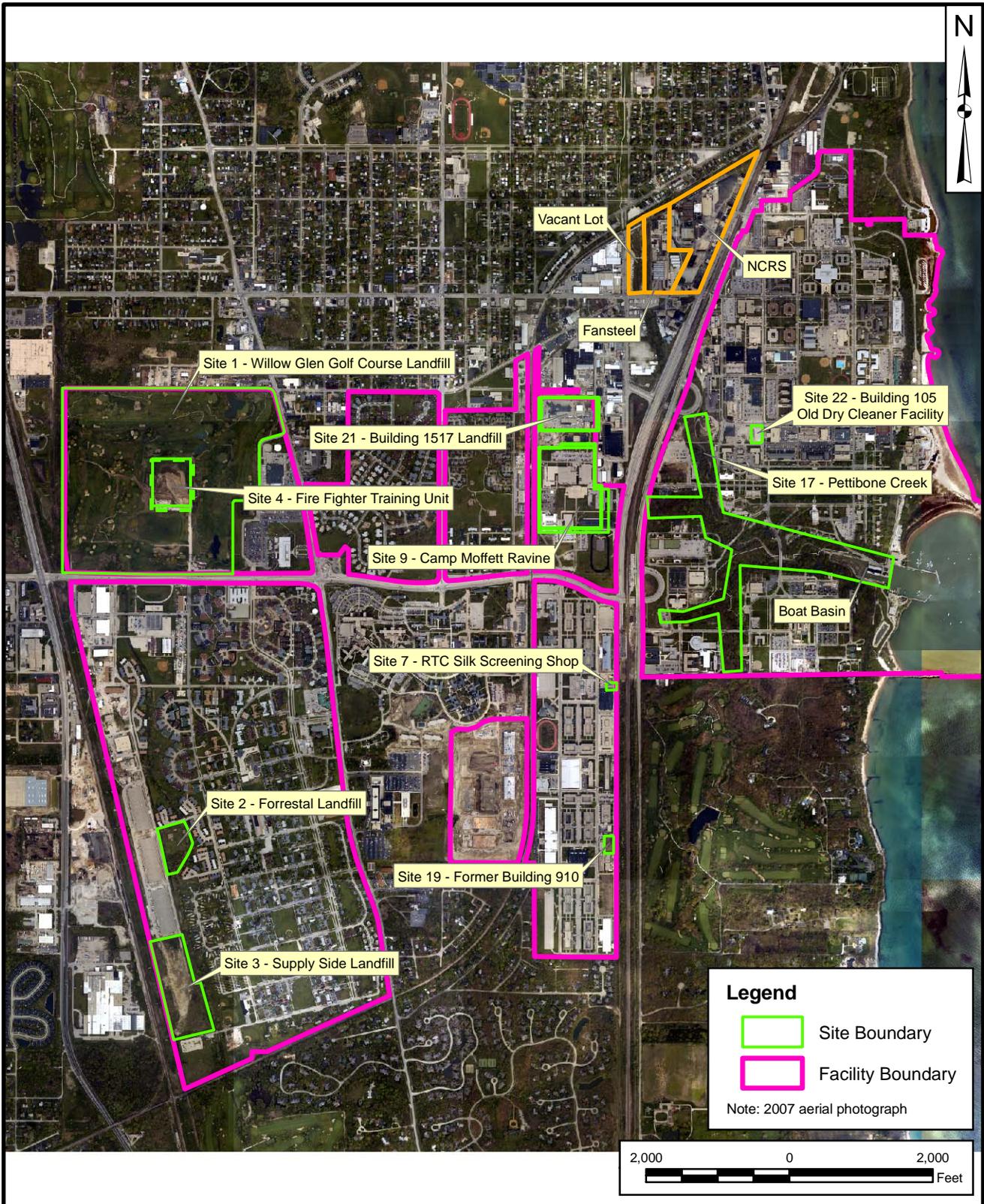


DRAWN BY	DATE
J. ENGLISH	12/28/09
CHECKED BY	DATE
S. HILL	12/29/09
COST/SCHEDULE AREA	
SCALE AS NOTED	



GENERAL LOCATION MAP
 NAVAL STATION GREAT LAKES
 GREAT LAKES, ILLINOIS

CONTRACT NUMBER 00078	
APPROVED BY RFD	DATE 12/29/09
APPROVED BY	DATE
FIGURE NO. FIGURE 2-1	REV 0



Legend

- Site Boundary
- Facility Boundary

Note: 2007 aerial photograph

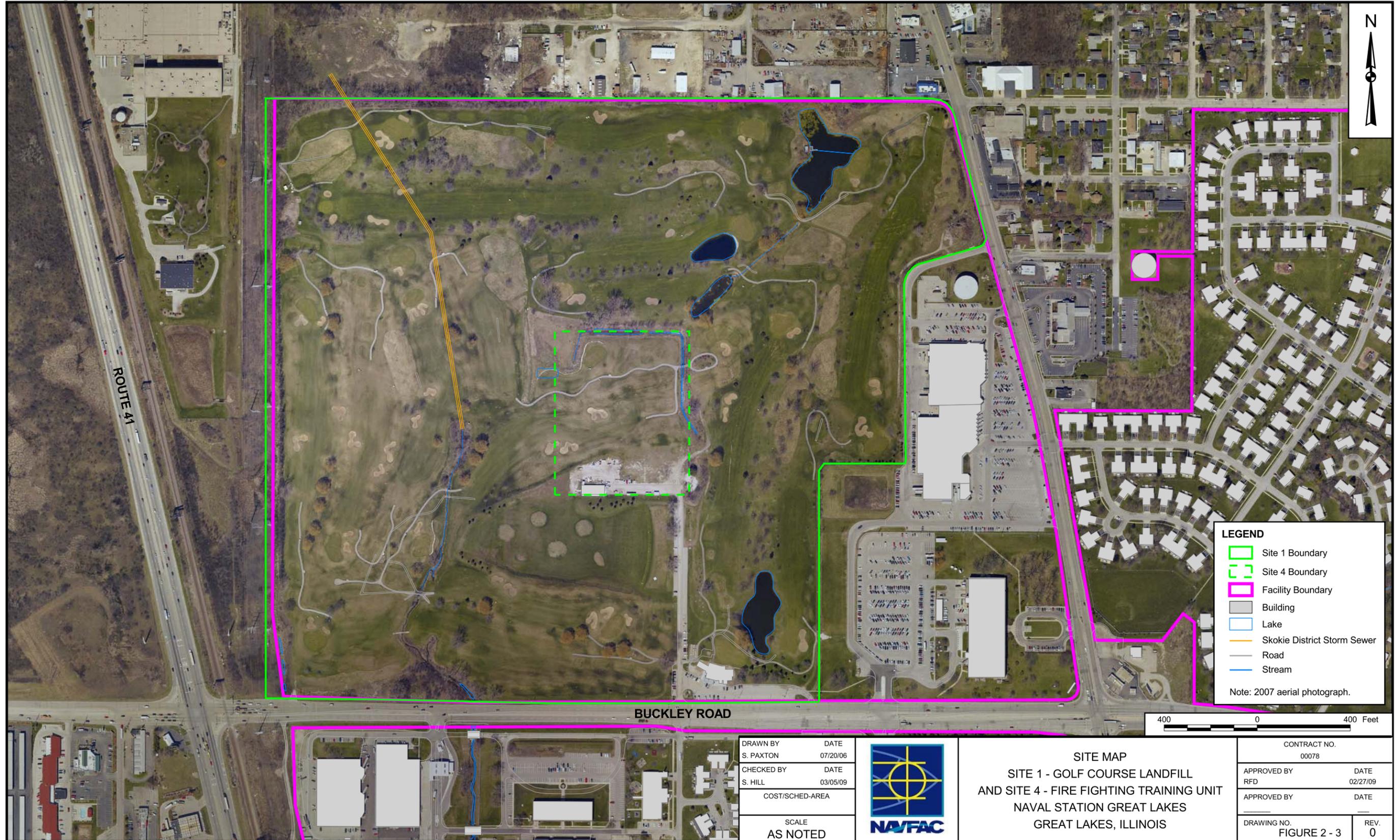


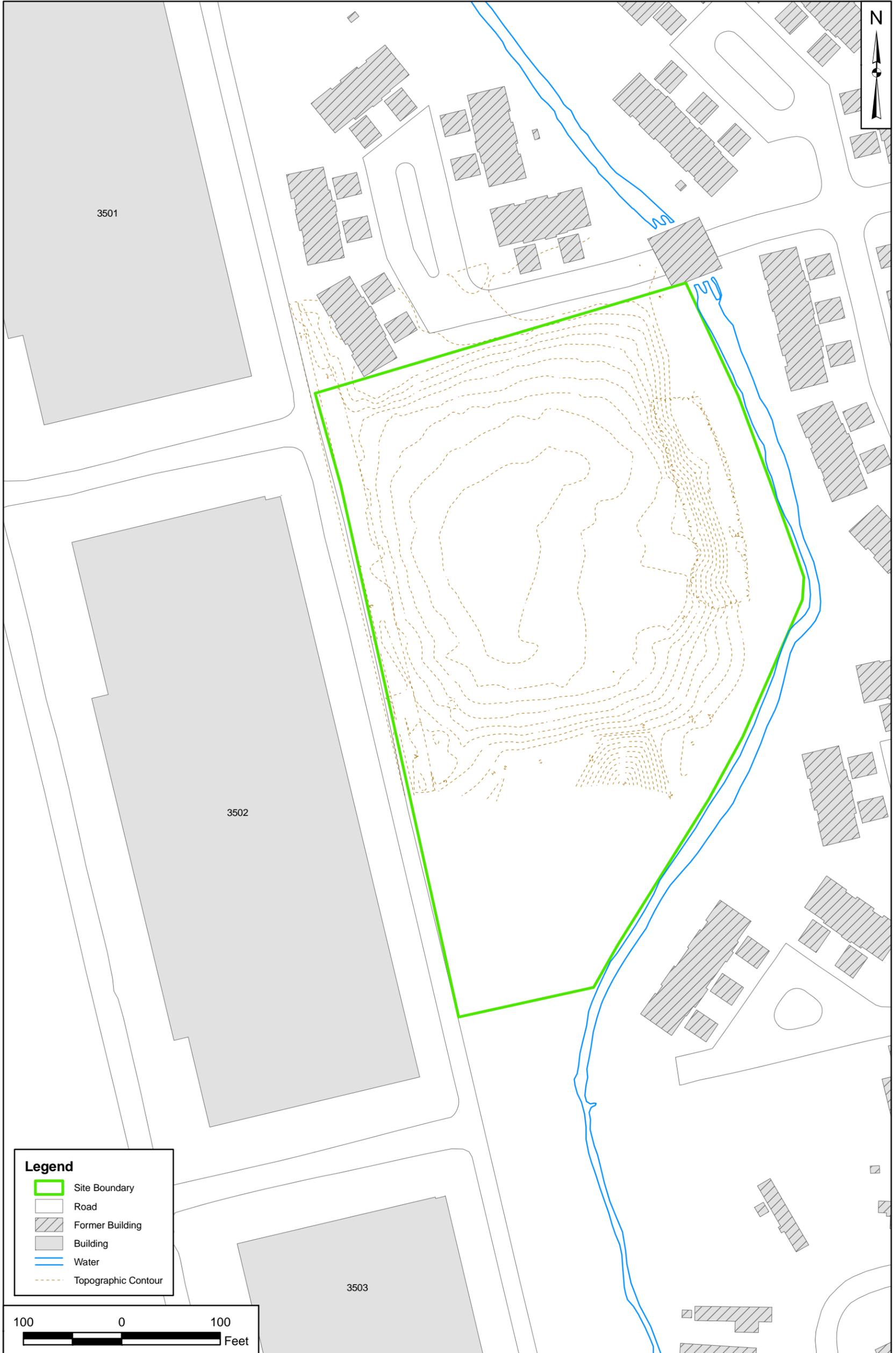
DRAWN BY J. ENGLISH	DATE 02/11/09
CHECKED BY S. HILL	DATE 03/05/09
REVISED BY	DATE
SCALE AS NOTED	



SITE LOCATIONS
 SITES 1, 2, 3, 4, 7, 9, 17, 19, 21 AND 22
 NAVAL STATION GREAT LAKES
 GREAT LAKES, ILLINOIS

CONTRACT NUMBER 00078	
APPROVED BY RFD	DATE 02/27/09
APPROVED BY	DATE
FIGURE NO. FIGURE 2-2	REV 0





Legend

- Site Boundary
- Road
- Former Building
- Building
- Water
- Topographic Contour



DRAWN BY	DATE
S. STROZ	01/27/09
CHECKED BY	DATE
S. HILL	03/05/09
COST/SCHEDULE AREA	
SCALE AS NOTED	



SITE MAP
SITE 2 - FORRESTAL LANDFILL
NAVAL STATION GREAT LAKES
GREAT LAKES, ILLINOIS

CONTRACT NUMBER	
00078	
APPROVED BY	DATE
RFD	02/27/09
APPROVED BY	DATE
FIGURE NO.	REV
FIGURE 2-4	0



Legend

- Facility Boundary
- Site Boundary
- Road
- Former Building
- Building
- Water
- Topographic Contour



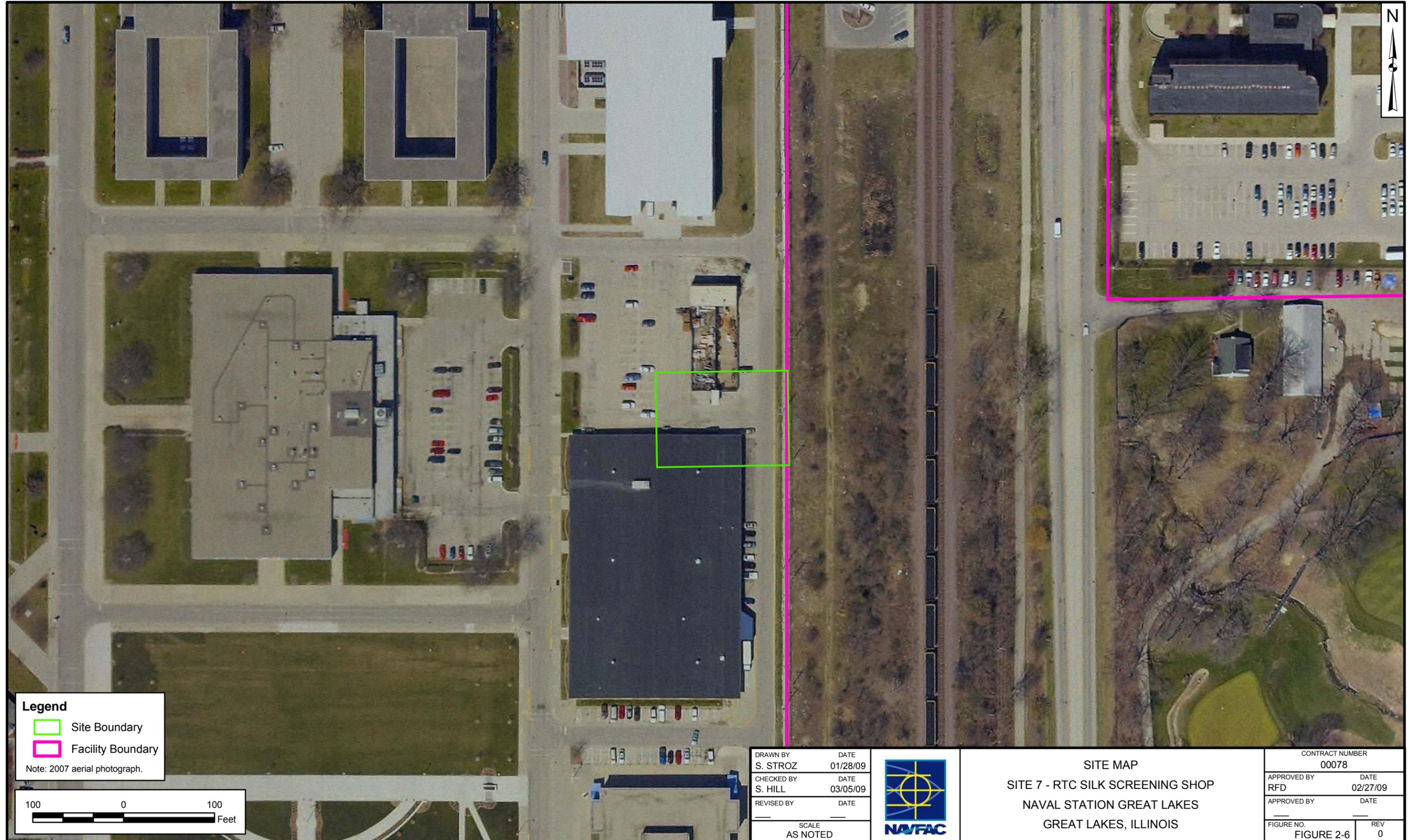
DRAWN BY	DATE
S. STROZ	01/27/09
CHECKED BY	DATE
S. HILL	03/02/09
COST/SCHEDULE AREA	



SITE MAP
SITE 3 - SUPPLYSIDE LANDFILL
NAVAL STATION GREAT LAKES
GREAT LAKES, ILLINOIS

CONTRACT NUMBER	
00078	
APPROVED BY	DATE
RFD	03/02/09
APPROVED BY	DATE
—	—
FIGURE NO.	REV
FIGURE 2-5	0

SCALE
AS NOTED



Legend
 Site Boundary
 Facility Boundary
 Note: 2007 aerial photograph.

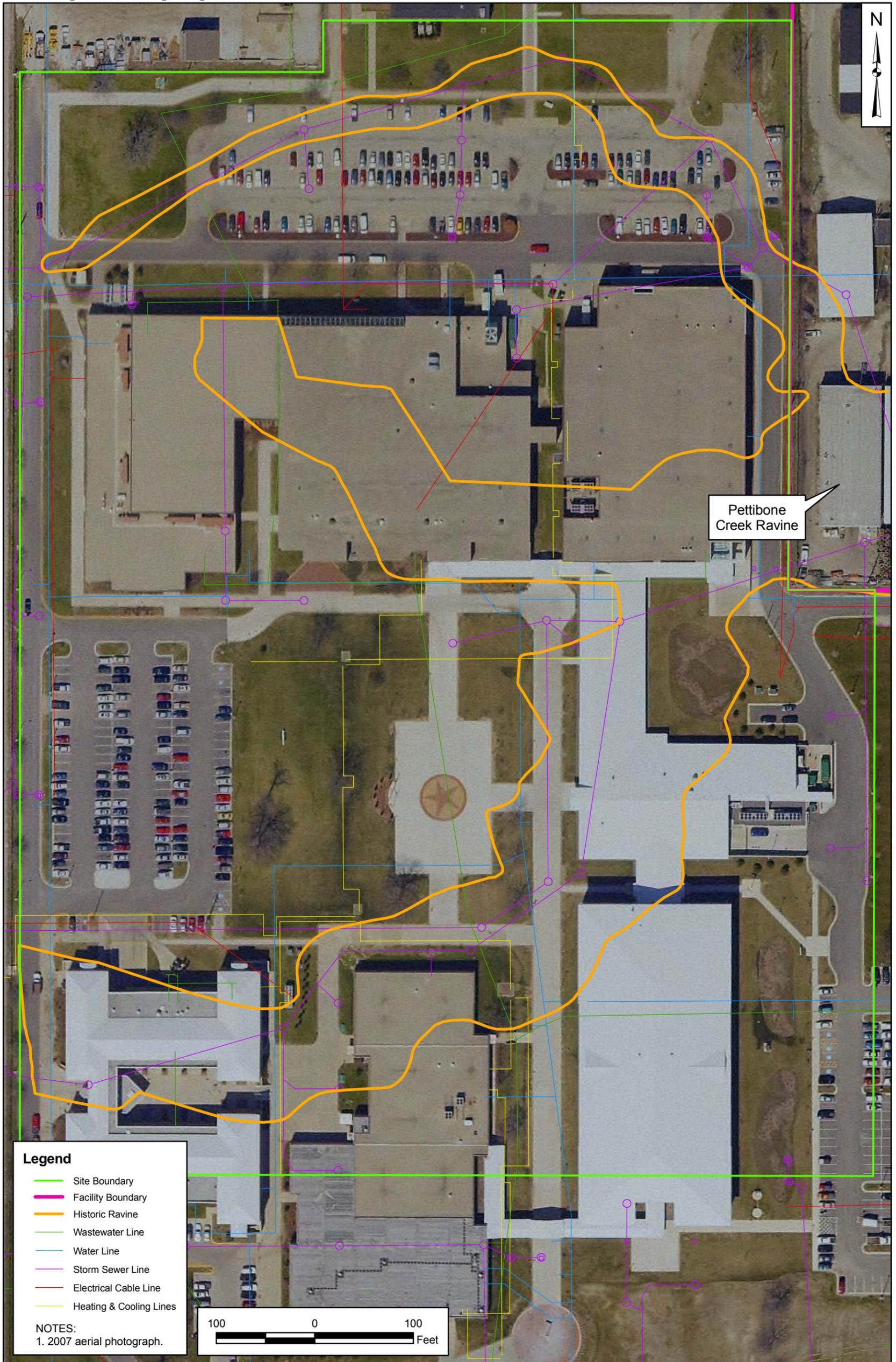


DRAWN BY	DATE
S. STROZ	01/28/09
CHECKED BY	DATE
S. HILL	03/05/09
REVISED BY	DATE
SCALE AS NOTED	



SITE MAP
 SITE 7 - RTC SILK SCREENING SHOP
 NAVAL STATION GREAT LAKES
 GREAT LAKES, ILLINOIS

CONTRACT NUMBER 00078	
APPROVED BY	DATE
RFD	02/27/09
APPROVED BY	DATE
FIGURE NO.	REV
FIGURE 2-6	0



Legend

- Site Boundary
- Facility Boundary
- Historic Ravine
- Wastewater Line
- Water Line
- Storm Sewer Line
- Electrical Cable Line
- Heating & Cooling Lines

NOTES:
1. 2007 aerial photograph.

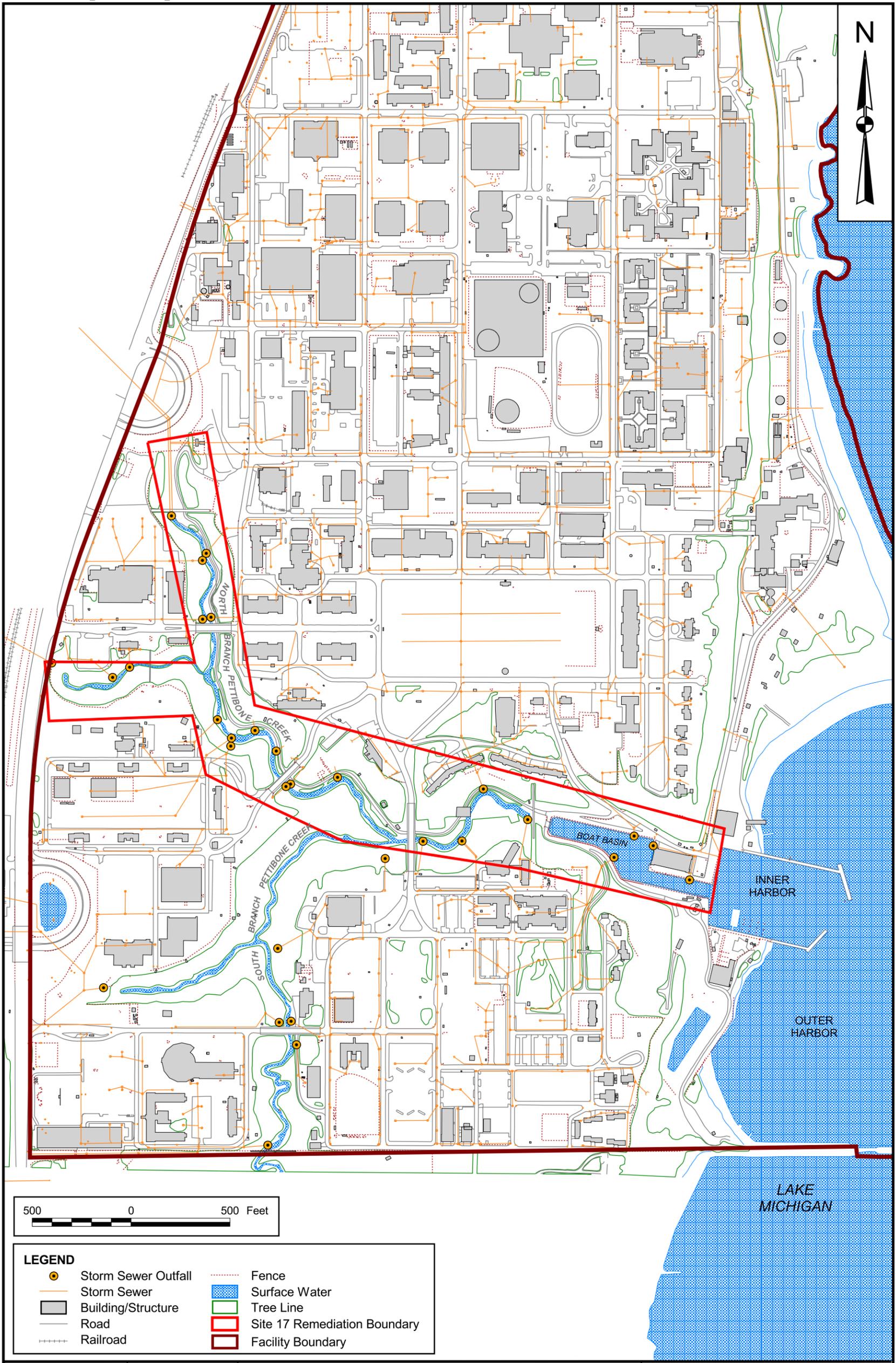


DRAWN BY	DATE
J. ENGLISH	02/11/09
CHECKED BY	DATE
S. HILL	03/06/09
REVISED BY	DATE
SCALE AS NOTED	



SITE MAP
SITE 9 - CAMP MOFFETT RAVINE AREAS
NAVAL STATION GREAT LAKES
GREAT LAKES, ILLINOIS

CONTRACT NUMBER 00078	
APPROVED BY	DATE
RFD	02/27/09
APPROVED BY	DATE
FIGURE NO.	REV
FIGURE 2-7	0



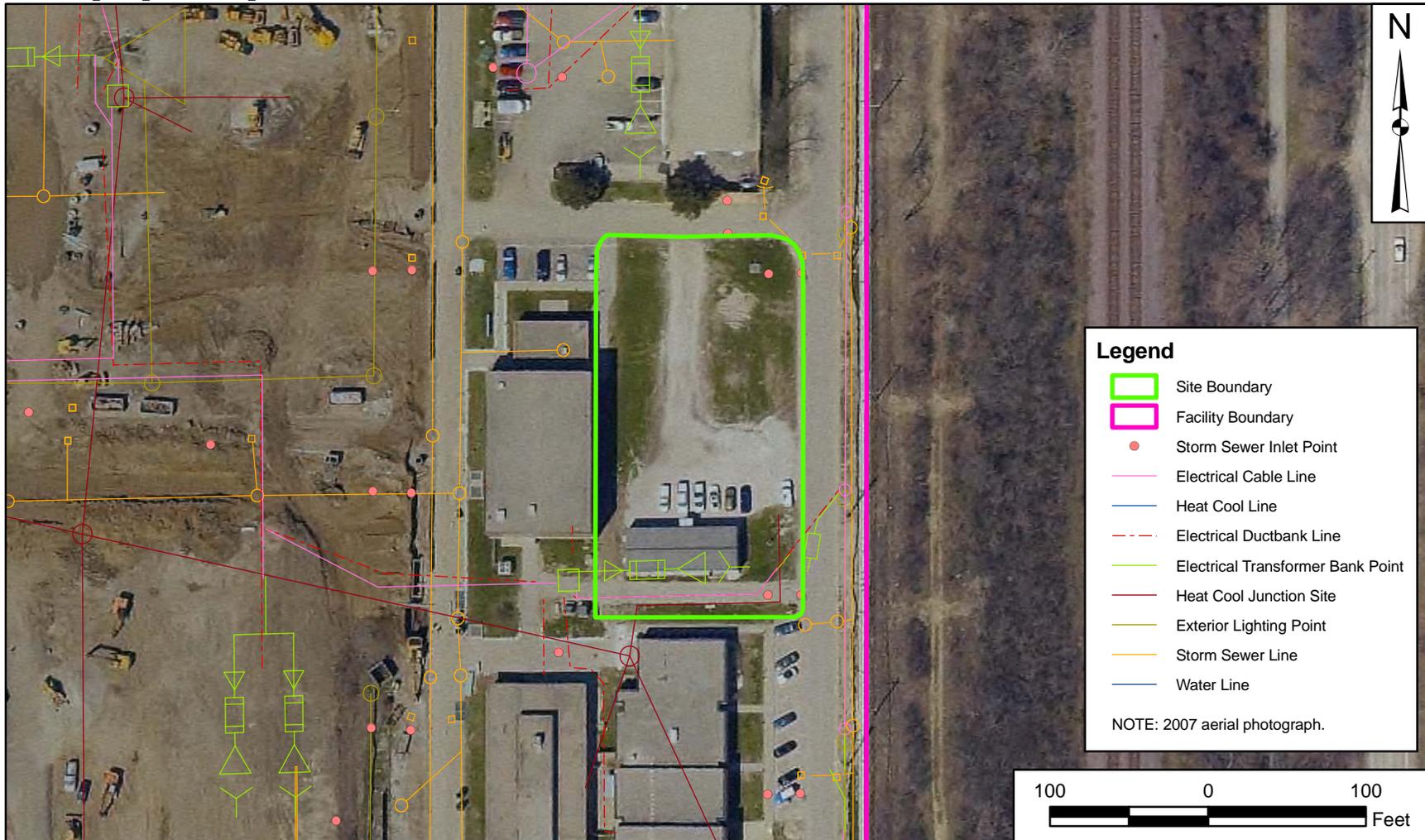
LEGEND	
	Storm Sewer Outfall
	Storm Sewer
	Building/Structure
	Road
	Railroad
	Fence
	Surface Water
	Tree Line
	Site 17 Remediation Boundary
	Facility Boundary

DRAWN BY	DATE
K. PEILA	08/17/05
CHECKED BY	DATE
T. SMITH	05/19/09
COST/SCHEDULE-AREA	
SCALE AS NOTED	



PETTIBONE CREEK AND STORM SEWER OUTFALL LOCATIONS
 SITE 17 - PETTIBONE CREEK RAP
 NAVAL STATION GREAT LAKES
 GREAT LAKES, ILLINOIS

CONTRACT NUMBER 01021	
APPROVED BY	DATE
RFD	03/20/09
APPROVED BY	DATE
DRAWING NO.	REV
FIGURE 2-8	0



Legend

- Site Boundary
- Facility Boundary
- Storm Sewer Inlet Point
- Electrical Cable Line
- Heat Cool Line
- Electrical Ductbank Line
- Electrical Transformer Bank Point
- ⊗ Heat Cool Junction Site
- Exterior Lighting Point
- Storm Sewer Line
- Water Line

NOTE: 2007 aerial photograph.

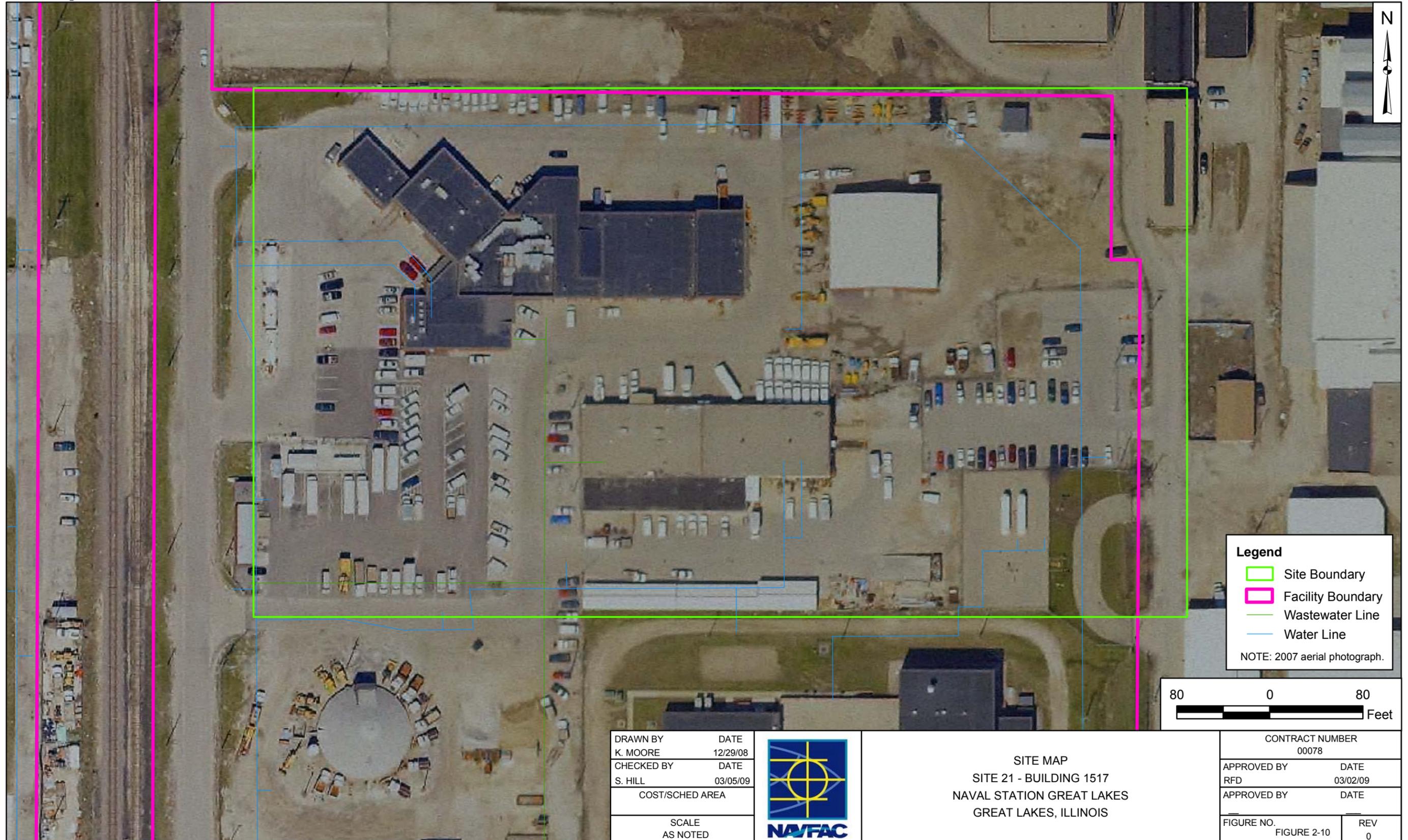


DRAWN BY	DATE
K. MOORE	10/19/07
CHECKED BY	DATE
S. HILL	03/05/09
COST/SCHEDULE AREA	
SCALE	
AS NOTED	



SITE MAP
SITE 19 - FORMER BUILDING 910
NAVAL STATION GREAT LAKES
GREAT LAKES, ILLINOIS

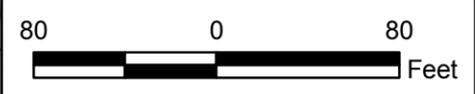
CONTRACT NUMBER	
00078	
APPROVED BY	DATE
RFD	02/27/09
APPROVED BY	DATE
FIGURE NO.	REV
FIGURE 2-9	0



Legend

- Site Boundary
- Facility Boundary
- Wastewater Line
- Water Line

NOTE: 2007 aerial photograph.

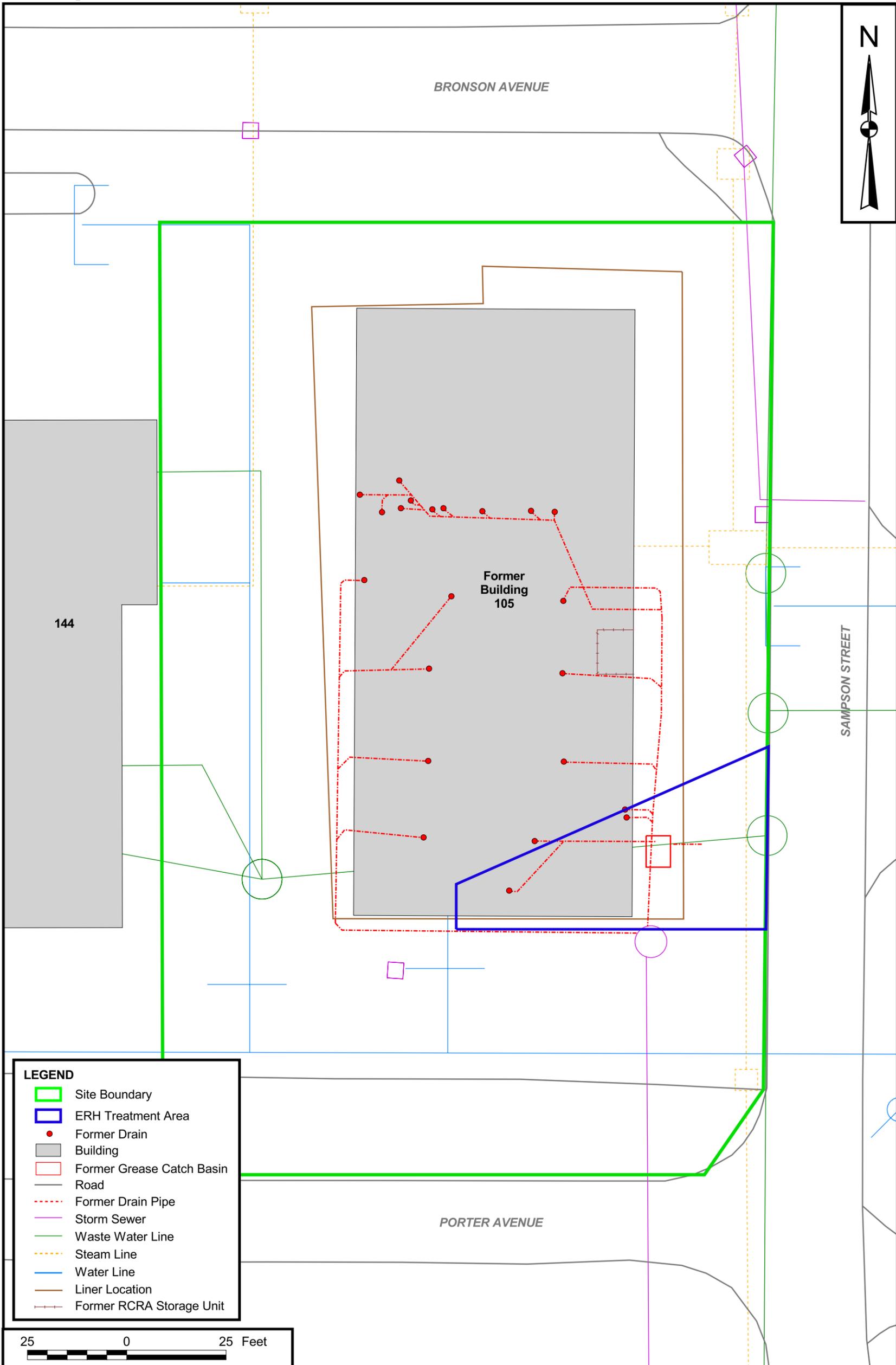


DRAWN BY K. MOORE	DATE 12/29/08
CHECKED BY S. HILL	DATE 03/05/09
COST/SCHED AREA	
SCALE AS NOTED	



SITE MAP
SITE 21 - BUILDING 1517
NAVAL STATION GREAT LAKES
GREAT LAKES, ILLINOIS

CONTRACT NUMBER 00078	
APPROVED BY RFD	DATE 03/02/09
APPROVED BY	DATE
FIGURE NO. FIGURE 2-10	REV 0



LEGEND

- █ Site Boundary
- █ ERH Treatment Area
- Former Drain
- Building
- Former Grease Catch Basin
- Road
- Former Drain Pipe
- Storm Sewer
- Waste Water Line
- Steam Line
- Water Line
- Liner Location
- Former RCRA Storage Unit



DRAWN BY K. PEILA	DATE 8/17/05
CHECKED BY S. HILL	DATE 03/05/09
COST/SCHEDULE-AREA	
SCALE AS NOTED	



SITE MAP
 SITE 22 - BUILDING 105 OLD DRY CLEANING FACILITY
 NAVAL STATION GREAT LAKES
 GREAT LAKES, ILLINOIS

CONTRACT NUMBER 00078	
APPROVED BY RFD	DATE 02/27/09
APPROVED BY	DATE
DRAWING NO. FIGURE 2-11	
REV 0	

3.0 COMMUNITY BACKGROUND

3.1 COMMUNITY PROFILE

There are numerous lakeside communities in Lake County. The most recent (2000) United States Census Bureau data estimates the county's population at 644,356. During the 1950s and 1960s, population growth occurred primarily in the lakefront communities but, by the 1980s and 1990s, population growth moved north and west. Currently, most of Lake County's population lives in the 52 incorporated cities and villages.

The average number of persons per household in the area of influence (i.e., Lake County, Illinois) is 2.88. The estimated average median household income in the region of influence is \$66,973, with an estimated average per capita income of \$32,102. An estimated 5.7 percent of people living within the region are at or below poverty level (United States Census Bureau, 2005). The United States Census Bureau conducts new surveys every 10 years with the next survey scheduled for the year 2010.

Current land uses in Lake County include agricultural, industrial, and residential. Farmland and lake resorts characterize the western portions of the county, while industrial, urban, and suburban areas follow the 24 miles of Lake Michigan shoreline on the east. There are also three state parks in Lake County. Naval Station Great Lakes administers base operations and provides facilities and related support to training activities (including the Navy's only boot camp) as well as a variety of other military commands located on base. There are a variety of land uses that currently surround Naval Station Great Lakes. Along the northern boundary of the base are the most highly urbanized and industrial areas. Much of the land beyond the northwestern site boundary comprises unincorporated lands of Lake County and lies vacant except for scattered retail and residential properties. Adjacent to the western boundary are primarily industrial properties; along the southern boundary is a mixture of public open space and residential land (TtNUS, 2003b).

The towns located near Naval Station Great Lakes include the City of North Chicago to the north, the Village of Lake Bluff to the south, and Shields Township to the west. The most recent (2000) United States Census Bureau estimates the City of North Chicago population at 35,918. The average number of persons per household in the City of North Chicago is 3.09. Their estimated average median household income is \$38,180, with an estimated average per capita income of \$14,564. An estimated 15.1 percent of people living within the City of North Chicago are at or below poverty level (United States Census Bureau, 2005).

The City of North Chicago has a mayor-city council form of government, with a mayor and seven council members elected by city voters. The council sets city policy, which is implemented by the mayor through the city's departmental structure. Day-to-day administration is the responsibility of an appointed city administrator. The city provides municipal services such as public works, police and fire protection, and water supply and distribution. Wastewater service is provided by the North Shore Sanitary District, electric power is supplied by Commonwealth Edison, natural gas is supplied by People's Energy, and solid waste service is provided through a garbage and recycling contract with Onyx.

The most recent United States Census Bureau data estimate the Lake Bluff population at 6,056. The average number of persons per household in Lake Bluff is 2.86. Their estimated average median household income is \$114,521, with an estimated average per capita income of \$54,824. An estimated 1.1 percent of people living in Lake Bluff are at or below poverty level (United States Census Bureau, 2005).

Lake Bluff has a form of government that consists of a president and six board of trustee members elected by village voters. The president and board of trustees establish policies, approve ordinances, and appoint residents to advisory boards and commissions. The policies are implemented by the village administrator (appointed the village board) through the village's departmental structure. The village provides municipal services such as public works; solid waste service, police and fire protection, parks and recreation, and water supply and distribution. Wastewater service is provided by the North Shore Sanitary District, electric power is supplied by Commonwealth Edison, and natural gas is supplied by People's Energy.

Shields Township has a form of government that consists of a supervisor and four trustee members elected by voters. The supervisor and board of trustees establish policies, approve ordinances, and appoint residents to advisory boards and commissions. The policies are implemented by the office of the clerk. The township provides limited municipal services such as emergency assistance, road maintenance, voter registration, and property assessment.

Personnel at Naval Station Great Lakes have a limited stay on the installation. More than 25,000 military and civilian personnel work, train and live at the installation. Each year approximately 37,000 men and women complete the requirements of boot camp to become Navy Sailors. Naval Station Great Lakes is home to initial and advanced technical training schools for more than 25,000 students yearly. Naval Station Great Lakes is much like a city with an average population of over 25,000.

3.2 CHRONOLOGY OF COMMUNITY INVOLVEMENT

Due to Naval Station Great Lakes extended history, it has been a regional source of employment and a vital local resource for Lake County and the surrounding counties. Community involvement related to Navy's IR Program and physical remedial actions has been minimal. Requests for public comment on proposed remedial actions for five sites (Sites 1 and 4, 7, 17, and 22) have been published to date. Physical remedial actions have been conducted at Sites 7 and 22 only.

The Navy published on February 28, 2003 a notice of availability of the Proposed Plan for Site 7 in the *Great Lakes Bulletin* to announce the public comment period for the proposed Naval Station Great Lakes Site 7 NFA. The Navy also published this notice in the *Pioneer Press* on March 27, 2003.

Site 22 is located in the middle of the base and the Navy published a notice of availability of the Proposed Plan for Site 22 on March 7, 2008 in the *Great Lakes Bulletin* to encourage the review and comment on the proposed remedial action during the public comment period. The Navy also announced that the remedial action at Site 22 was completed and the establishment of LUCs in the February 20, 2009 edition of the *Great Lakes Bulletin*.

The Navy published on February 20, 2009 a notice of availability of the Proposed Plan for Site 17 in the *Great Lakes Bulletin* to announce the public comment period for the proposed remedial actions in Pettibone Creek and the Boat Basin. The Navy also published this notice in the *Pioneer Press* on February 19, 2009.

The Navy published a notice of availability of the Proposed Plan for Sites 1 and 4 in the *Pioneer Press* on August 13, 2009. The notice encouraged the review and comment on the proposed remedial action during the public comment period at the former Golf Course Landfill and Fire Fighting Training Area.

No written or verbal comments were submitted during these public comment periods. These documents are available at the Naval Station Great Lakes Environmental Department in Building 1A and at the Illinois EPA and EPA Region 5 offices.

Local newspapers and other media have reported on investigations conducted by USEPA and Illinois EPA that have occurred along Pettibone Creek related to the industrial facilities upstream of Naval Station Great Lakes. Newspaper articles from 1990 indicated that NCRS had agreed to clean up the creek after 2 years of discussions and negotiations.

Meetings have been held on an as-needed basis since September 2000. These meetings have involved federal and State regulatory representatives with the Navy to facilitate remedial planning.

3.3 KEY COMMUNITY CONCERNS

Community concerns identified by the Naval Station Great Lakes Midwest personnel in discussions with the Waukegan Citizens Advisory Group are

- Chemical contamination in Pettibone Creek, along with potential unresolved upgradient (off base) sources and
- Improve coordination and communication with local environmental groups such as the Waukegan Community Advisory Group.

4.0 ELEMENTS OF COMMUNITY INVOLVEMENT PLAN

The overall goal of the Navy's community involvement program is to promote two-way communication between citizens and the Navy and to provide opportunities for meaningful and active involvement by the community in the cleanup process. Naval Station Great Lakes and the Navy will implement the community involvement activities described below based on issues that are identified as being important to the community.

4.1 RESTORATION ADVISORY BOARD

A Restoration Advisory Board (RAB) for Naval Station Great Lakes does not currently exist. The purpose of a RAB is to establish and maintain a forum for the open exchange of information between federal and State agencies and the community concerning restoration activities at Naval Station Great Lakes and to receive advice and comments on such activities. If a RAB is formed for Naval Station Great Lakes in the future, it would provide an opportunity for direct input by members of the community into the environmental restoration plans for the Naval Station Great Lakes facility, through the Community co-chair or community RAB member representing the affected stakeholder. Currently, community members are able to provide input into the planned environmental restorations at the site by way of the public comment periods advertised in the local papers. During the public comment periods community members can make a request that a public meeting be held.

4.2 OBJECTIVES AND HIGHLIGHTS

In order to make sure that there are opportunities for community participation, the Navy has developed the Naval Station Great Lakes CIP. Informational activities will be conducted during the remedy selection phase and may be conducted during the remedial action phase. The level of public involvement will depend on the type of the site, the potential for impacts (human health and/or ecological) beyond the fence line of the site and Naval Station Great Lakes, and the potential for public interest.

This CIP will give citizens the opportunity to comment throughout the investigative and decision-making processes. Citizens are encouraged to participate in the process to help determine how local concerns may impact long-term decisions. The following methods will be used throughout the CIP process to accomplish the established objective:

Citizen Involvement

- Develop two-way communication between the community and decision makers. Where warranted, the Navy will utilize local-access cable television networks or print media to communicate with the community. A listing of the print and broadcast media the Navy utilizes to inform the public of site activities is included in Appendix A.
- Provide opportunities for formal and informal comments on documents and plans. Hold meetings with individual citizens, area clubs, and groups when needed or requested. Include the name and telephone number of the program contact person in correspondence concerning the project.
- Hold both formal and informal public meeting(s) and public availability sessions to discuss RI/FS results and suggested cleanup alternatives. Provide information through updates to the CIP (every 3 years or as required), periodic fact sheets, and press releases to the local media.

Inform the Public

The Navy will inform the public of the nature of the environmental problems, threats it may pose, environmental and health risks involved, the responses under consideration, and the progress of the RI/FS and remedial action work. The following methods will be used throughout the CIP process:

- Provide information, including studies and reports, in a public repository for public access and use.
- Create a mailing list of concerned citizens.
- Establish a point of contact and address to receive input from the public (Appendix B).

The article in the Great Lakes Bulletin and notice of public comment in the legal notices of the Pioneer Press on the Site 7 Proposed Plan in March 2003 requested the community provide comments on the proposed Naval Station Great Lakes remedial activities. The onset of the activities associated with remedial actions sometimes generates heightened public awareness or concern. However, no inquiries or concerns were expressed by persons from the community during the Site 7 public comment period and hot spot removal action.

The article in the Great Lakes Bulletin on the Site 22 Proposed Plan in March 2008 requested the community provide comments on the proposed Naval Station Great Lakes remedial activities. However, no inquiries or concerns were expressed by persons from the community during the Site 22 public comment period.

The article in the Great Lakes Bulletin and notice of public comment in the legal notices of the Pioneer Press on the Site 17 Proposed Plan in February 2009 requested the community provide comments on the proposed Naval Station Great Lakes remedial activities. However, no inquiries or concerns were expressed by persons from the community during the Site 17 public comment period.

The notice of public comment in the legal notices of the Pioneer Press on the Sites 1 and 4 Proposed Plan in March August 2009 requested the community provide comments on the proposed Naval Station Great Lakes remedial activities. Requests for a copy of the Proposed Plan were received from a couple of citizens. However, no inquiries or concerns were expressed by persons from the community during the Sites 1 and 4 public comment period.

Conflict Resolution

Another objective is to focus and resolve conflicts that may arise. The following methods will be used throughout the CIP process:

- Identify conflict and develop a forum for resolution, if doing so appears to serve a useful purpose for both the Navy and the community.
- Provide experts to address questions about RI/FS results and alternatives.

4.3 COMMUNITY INVOLVEMENT ACTIVITIES

The Navy plans to use the activities described below as part of the community involvement process. The level of public involvement will depend on the type of the site, the potential for impacts (human health and/or ecological) beyond the fence line of the site and Naval Station Great Lakes, and the potential for public interest.

1. Maintenance of Administrative Record

The Navy has established the Administrative Record at the Environmental Department of Naval Station Great Lakes in Building 1 and at the Illinois EPA and EPA Region 5 offices (see Appendix C for locations and telephone numbers). Documents and reports of interest to the public, such as the RI/RAs, FSs, Proposed Plans, RODs, this CIP, and fact sheets prepared during the course of the investigation and remedial processes, will be placed in the Administrative Record. Availability of the Administrative Record will be announced in the public notices and news releases issued by

the Navy. The Administrative Record for Naval Station Great Lakes also contains data and documentation supporting site decisions.

2. Restoration Advisory Board

A RAB does not currently exist for Naval Station Great Lakes; however, if in the future it is necessary to form a RAB, the Navy will hold meetings of the RAB as warranted to discuss key environmental activities or as general update meetings. Representation on the RAB would include local (see Appendix D), State, and federal officials, and other groups representing the public's interests (see Appendix E for the list of federal and State regulatory officials). In accordance with the Navy Environmental Restoration Program (NERP) a RAB would be established if any of the following criteria was met:

- Closure of the installation involves transfer of property to the community.
- 50 citizens petition for a RAB.
- Federal, state, or local government requests formation of a RAB.
- The installation Commanding Officer/Commanding General determines that a RAB is needed. To assist the Commanding Officer/Commanding General in making this determination, the following approaches are used to determine the level of interest in the community for establishing a RAB:
 - Reviewing correspondence;
 - Reviewing media coverage;
 - Consulting community members;
 - Consulting relevant government officials; and
 - Evaluating responses to communication efforts such as notices in local newspapers.

3. Direct Contact with Key Local Officials and RAB Members

In the event that a RAB is formed, the Navy will contact local representatives on the RAB prior to releasing information to the media concerning site decisions, major findings, or technical milestones. Follow-up briefings or meetings would be held if necessary.

4. Community Advisory Group

A Community Advisory Group (CAG) is a community driven advisory group that would enhance community involvement during any future cleanup processes by providing a public forum where

representatives from different community interests can discuss their concerns with each other, agency representatives, and responsible parties. The Navy may elect to establish a CAG if a significant hazardous waste cleanup is anticipated. A CAG does not exist yet but in the event that a site cleanup or other work that might affect the community would occur, one could be established. If the community decided to form a CAG, the local and State agencies could support the CAG by attending meetings as needed, and providing administrative support as requested by the CAG. Agency representatives would not serve as members of the CAG.

5. Fact Sheets and News Releases

In addition to the required notices, the Navy will prepare fact sheets and news releases periodically to keep the public informed of site activities and progress. These will be keyed to technical milestones. Fact sheets and/or copies of the news releases will be sent to the parties on the Naval Station Great Lakes mailing list and placed in the public repositories for public availability.

6. Additional Informal Public Meetings

The Navy does not expect to hold any informal public meetings. However, if a RAB is formed or if local interest appears to be sufficient, the Navy may revisit this issue. The timing would depend on the level of interest, and the meeting would be planned to present current topics and any other items of public interest.

7. Local Information Contact

The Navy has designated a local contact person (Mr. Howard Hickey, 847-688-2600 x243, Program Manager) to respond to public inquiries about site activities. Mr. Hickey will be informed about the general background and technical aspects of the work but may refer highly technical questions to a technical expert on the project or to the designated Project Manager for the site.

8. Review and Update Community Involvement Plan

The Navy will review/modify this CIP whenever necessary to make sure it is effective in keeping both local officials and the general public informed about the Naval Station Great Lakes sites. The Navy will revise the CIP every 3 years or as community concerns warrant until the sites are closed out. The CIP will be used and treated as a living, working document.

4.4 TIME FRAME SUMMARY FOR COMMUNITY INVOLVEMENT ACTIVITIES

ACTIVITY	TIME FRAME
Prepare and distribute site fact sheets technical summaries, and news releases	As needed
Maintain a mailing list for Naval Station Great Lakes	Ongoing
Establish and maintain Public Repositories	To be established, update as needed
Establish and maintain the Administrative Record	Established, update as needed
Hold public meetings	As needed
Encourage formation of a CAG	As needed
Solicit comments during a Public Comment Period	As needed and required
Prepare and issue a Responsiveness Summary	Following public comment periods
Revise the CIP	Every 3 years or as needed

REFERENCES

The following documents are part of the Administrative Record and together provide the record of site remedial activity. A few of these documents were referenced in this CIP.

Chrzastowski, M. J., and Trask, C. B., 1995. Nearshore Geology and Geologic Processes Along the Illinois Shore of Lake Michigan from Waukegan Harbor to Wilmette Harbor.

Clark, P. U. and Radcliff, G. A., 1990. Sedimentology and stratigraphy of late Wisconsin deposits, Lake Michigan bluffs, northern Illinois: pp. 29-41 in Schneider, A. F. and Fraser, G. S. (eds.), Late Quaternary History of the Lake Michigan Basin, Geological Society of America Special Paper 251, Boulder, Colorado.

C.H. Guernsey & Company, 2002. Final Environmental Assessment, Willow Glen Golf Course, Reconstruction of the Back-nine Holes. November.

Linback, J. A., 1974. Erosion of Till Bluffs, Wilmette to Waukegan: pp. 37-45 in Collison (ed.), Coastal Geology Sedimentology and Management, Chicago and Northshore, Illinois State Geological Survey Guidebook Series, Champaign, Illinois, 55 p.

Naval Station Great Lakes, 2002. Memorandum of Agreement between the Illinois Environmental Protection Agency, the U.S. Environmental Protection Agency, Region 5, and the U.S. Department of Navy. September 1.

Naval Station Great Lakes, 2003. Regional Shore Infrastructure Plan, Final Submittal, August.

Navy, 2006. Department of the Navy Environmental Restoration Program Manual, August.

Rogers, Golden, & Halpern and BCM Eastern Inc., 1986. Initial Assessment Study, Naval Complex Great Lakes, Illinois, March.

TtNUS (Tetra Tech NUS, Inc.), 2003a. Remedial Investigation and Risk Assessment Report - Site 17 – Pettibone Creek and Boat Basin, Naval Training Center Great Lakes, Great Lakes, Illinois, September.

TtNUS, 2003b. Quality Assurance Project Plan, Site 7 - RTC Silk Screening Shop, Site 17 - Pettibone Creek & Boat Basin, Remedial Investigation & Risk Assessment, Naval Training Center Great Lakes, Great Lakes, Illinois, June.

TtNUS, 2003c. Record of Decision, Site 7 - RTC Silk Screening Shop, Naval Training Center Great Lakes, Great Lakes, Illinois, May.

TtNUS, 2003d. Remedial Investigation and Risk Assessment, Site 7 - RTC Silk Screening Shop, Naval Training Center Great Lakes, Great Lakes, Illinois, February.

TtNUS, 2004. Remedial Investigation and Risk Assessment Report – Site 22 – Old Dry Cleaning Facility, Naval Training Center Great Lakes, Great Lakes, Illinois, July.

TtNUS, 2005a. Electronic Administrative Record and Index for Sites 7, 17, and 22, Naval Station Great Lakes, Great Lakes, Illinois, January.

TtNUS, 2005b. Feasibility Study Report for Site 17 – Pettibone Creek and Boat Basin, Naval Station Great Lakes, Great Lakes, Illinois, August.

TtNUS, 2006. Feasibility Study Report for Site 22 - Old Dry Cleaning Facility, Naval Station Great Lakes, Great Lakes, Illinois, January.

TtNUS, 2007. Quality Assurance Project Plan, Site 1 – Willow Glen Golf Course Landfill, Remedial Investigation & Risk Assessment, Naval Training Center Great Lakes, Great Lakes, Illinois, February.

TtNUS, 2008a. Remedial Investigation and Risk Assessment Report, Site 1 - Golf Course Landfill, Naval Station Great Lakes, Great Lakes, Illinois, March.

TtNUS, 2008b. Record of Decision, Site 22 – Former Building 105 Old Dry Cleaning Facility, Naval Station Great Lakes, Great Lakes, Illinois, May.

TtNUS, 2009. Feasibility Study Report for Site 1 – Golf Course Landfill and Site 4 – Fire Fighting Training Unit, Naval Station Great Lakes, Great Lakes, Illinois, January.

United States Census Bureau, 2005. Data Access Tools, <http://www.census.gov/>. June.

United States Environmental Protection Agency (USEPA), 2002. Superfund Community Involvement Toolkit, (EPA 540-K-01-004), <http://www.epa.gov/superfund/tools/> and <http://www.epa.gov/superfund/tools/pdfs/7clplans.pdf>, September.

APPENDIX A

NAVAL STATION GREAT LAKES MEDIA CONTACTS

APPENDIX A

NAVAL STATION GREAT LAKES MEDIA CONTACTS

PRINT MEDIA

1. Chicago Tribune
777 W. Chicago Avenue, FC 300
Chicago, IL 60610
800-874-2863

2. News Sun
2383 N. Delany Road
Waukegan, IL 60087
847-336-7000

3. Daily Herald
P.O. Box 280
Arlington Heights, IL 60006-0280
847-427-4300

4. Chicago Sun Times
350 N. Orleans
Chicago, IL 60654
312-321-3000

5. Pioneer Press Newspapers for the Lakeshore Zone
(Antioch Review, Deerfield Review, Grayslake Review, Gurnee Review,
Highland Park News, Lake Forester, Libertyville Review, Lincolnshire Review,
Mundelein Review, Review of Lindenhurst/Lake Villa, and Vernon Hills Review)
Lake Group
2383 N. Delany Road
Waukegan, IL 60087
Office Number: (847) 599-6900
Fax: (847) 599-6902

6. Great Lakes Bulletin
2601 A Paul Jones Street
Great Lakes, IL 60088
847-688-4800

APPENDIX A

NAVAL STATION GREAT LAKES MEDIA CONTACTS (continued)

BROADCAST MEDIA

7. WLS TV Channel 7 (ABC)
190 N State St Ste 1100
Chicago, IL 60601-3399
312-750-7777
http://abclocal.go.com/wls/news/wls_contactform.html

8. WFLD TV Channel 32 (Fox)
205 N. Michigan Avenue
Chicago, IL 60601
312-565-5532

9. WMAQ TV Channel 5 (NBC)
454 N Columbus Dr
Chicago, IL 60611-5807
312-836-5555
<http://www.nbc5.com/contact/index.html>

10. WGN TV Channel 9 (WB)
2501 W. Bradley Pl.
Chicago, IL 60618-4718
773-528-2311

11. WBBM TV Channel 2 (CBS)
630 N. McClurg Court
Chicago, IL 60611
312-202-2222

APPENDIX B

POINTS OF CONTACT FOR PUBLIC INPUT

APPENDIX B

POINTS OF CONTACT FOR PUBLIC INPUT

Local Contact

Mr. Howard Hickey

Dept. of Navy

Naval Facilities Engineering Command Midwest

Environmental Department

Building 1A, Code N457

201 Decatur Avenue

Great Lakes, IL 60088

847-688-2600 x243

howard.hickey@navy.mil

APPENDIX C

REPOSITORY LOCATIONS

APPENDIX C

REPOSITORY LOCATIONS

Local Repository

Mr. Howard Hickey
Dept. of Navy
Naval Facilities Engineering Command Midwest
Environmental Department
Building 1A, Code N457
201 Decatur Avenue
Great Lakes, IL 60088
847-688-2600 x243
howard.hickey@navy.mil

State Repository

Mr. Brian Conrath
Illinois Environmental Protection Agency
Bureau of Land
1021 N. Grand Avenue East
Springfield, IL 62702
217-557-8155
Brian.Conrath@illinois.gov

EPA Repository

Mr. Owen Thompson
U.S. EPA Region 5
SRF-5J
77 W. Jackson Blvd
Chicago, IL 60604-3507
312-886-4843
thompson.owen@epa.gov

APPENDIX D

ELECTED OFFICIALS

APPENDIX D

ELECTED OFFICIALS

LOCAL

City of North Chicago

Mayor

City of North Chicago
1850 Lewis Avenue
North Chicago, IL 60064
847-596-8610 (office)
847-596-8619 (fax)

Third Ward Alderman

City of North Chicago
1850 Lewis Avenue
North Chicago, IL 60064
847.596.8889 x 3

Village of Lake Bluff

President/Board of Trustees

40 E. Center Avenue
Lake Bluff, IL 60044
847-234-0774 (office)
847-234-7254 (fax)
vlb@lakebluff.org

Shields Township

Supervisor

906 Muir Ave
Lake Bluff 60044
(847) 234-0802 (office)
(847) 234-0721 (fax)
info@shieldstownship.com

STATE AND FEDERAL

Information will be distributed to State and Federal officials, as appropriate.

APPENDIX E

REGULATORY OFFICIALS

APPENDIX E

REGULATORY OFFICIALS

State

Mr. Brian Conrath
Illinois Environmental Protection Agency
Bureau of Land
1021 N. Grand Avenue East
Springfield, IL 62702
217-557-8155
brian.conrath@illinois.gov

Federal

Mr. Owen Thompson
U.S. EPA Region 5
SRF-5J
77 W. Jackson Blvd
Chicago, IL 60604-3507
312-886-4843
thompson.owen@epa.gov