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FINAL COMMUNITY INVOLVEMENT PLAN NWS YORKTOWN VA

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CH2M HILL

Final

Community Involvement Plan

Naval Weapons Station Yorktown
Yorktown, Virginia
and
Naval Weapons Station Yorktown Cheatham Annex
Williamsburg, Virginia

Contract Task Order WE88

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Acronyms and Abbreviations

AOC	Area of Concern
AR	Administrative Record
CAX	Cheatham Annex
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CIP	Community Involvement Plan
CRP	Community Relations Plan
CS	Confirmation Study
DoD	Department of Defense
EE/CA	Engineering Evaluation/Cost Analysis
ERP	Environmental Restoration Program
ESI	Expanded Site Investigation
FFA	Federal Facility Agreement
FS	Feasibility Study
HRS	Hazard Ranking System
IAS	Initial Assessment Study
IR	Installation Restoration
MIDLANT	Mid-Atlantic
MSA	Metropolitan Statistical Area
NAVFAC	Naval Facilities Engineering Command
NFRAP	No Further Response Action Planned
NPL	National Priorities List
O&M	operation and maintenance
PA	Preliminary Assessment
PA/SI	Preliminary Assessment/Site Inspection
PAO	Public Affairs Officer
PP	Proposed Plan
RA	remedial action
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI	Remedial Investigation
RI/FS	Remedial Investigation and Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SI	Site Investigation
SMP	Site Management Plan
SSA	Site Screening Area
SSI	Screening Site Investigation
SSP	Site Screening Process

TAG	Technical Assistance Grant
TAPP	Technical Assistance for Public Participation
TRC	Technical Review Committee
USEPA	U.S. Environmental Protection Agency
VDEQ	Virginia Department of Environmental Quality
WPNSTA	Naval Weapons Station

SECTION 1

Overview of Community Involvement Plan

1.1 Introduction

Naval Weapons Station (WPNSTA) Yorktown is located on the Virginia Peninsula in York and James City counties and the city of Newport News. The 10,624-acre installation was established in 1918 to support mine-laying in the North Sea during World War I. Currently, the primary mission of WPNSTA Yorktown is to provide ordnance, technical support, and related services to sustain the war-fighting capability of the U.S. armed forces in support of national military strategy.

Cheatham Annex (CAX) is located northwest of WPNSTA Yorktown in York County. CAX currently encompasses 2,300 acres, divided into two parcels, with the larger parcel situated along the banks of the York River. Almost all of the activities at CAX (administration, training, maintenance, support, and housing) take place in this portion of the installation. The smaller parcel is located south of the Colonial National Historic Parkway. It includes Jones Pond and its immediate surrounding area. In July 1987, CAX was designated as the Hampton Roads Navy Recreational Complex. Today, the mission of CAX includes supplying Atlantic Fleet ships and providing recreational opportunities to military personnel. In October 1998, CAX control was transferred from the Fleet and Industrial Supply Center to WPNSTA Yorktown.

WPNSTA Yorktown was included on the U.S. Environmental Protection Agency (USEPA)'s National Priorities List (NPL) on October 15, 1992, primarily due to the facility's proximity to wetlands and the potential impact on the surrounding environment. On January 2, 2001, CAX was included on the NPL. Prior to this, all Environmental Restoration Program (ERP) actions initiated at CAX were voluntary and consistent with other Navy installations.

The Navy has investigated soil, groundwater, surface water, sediment, and in some cases, biota (e.g., fish tissue) and indoor air at WPNSTA Yorktown and CAX under the provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Specific guidance for conducting these investigations is provided by the Federal Facility Agreement (FFA), which was signed by the Navy, the USEPA, and the Virginia Department of Environmental Quality (VDEQ) in September 1994 for WPNSTA Yorktown and in March 2005 for CAX.

The purpose of this Community Involvement Plan (CIP) is to assist the Navy in meeting the needs of the local community for information about, and participation in, the ongoing investigation and remedial processes. This document is the fourth update to CIPs or Community Relationship Plans (CRPs)[1] completed for WPNSTA Yorktown and CAX since 1991.

1.2 Goals of the Community Involvement Program

As part of the Navy's ERP at WPNSTA Yorktown and CAX, the Navy has implemented a community involvement program to address issues of community concern regarding the environmental investigation and restoration activities at these bases.

The main goal of the WPNSTA Yorktown/CAX CIP is to achieve effective, open communication between WPNSTA Yorktown and CAX, and the communities of York and James City counties; the cities of Newport News and Williamsburg; the VDEQ, which is located in Richmond, Virginia; and USEPA Region III, which is located in Philadelphia, Pennsylvania and provides oversight to environmental investigations/cleanup in the mid-Atlantic region, including Virginia.

Specific objectives of the community involvement program for WPNSTA Yorktown and CAX are identified in Section 4.

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[1] The term "Community Relations Plan" was replaced with "Community Involvement Plan" after the publication of USEPA's 2002 *Superfund Community Involvement Handbook.*

1.3 Contents of the Community Involvement Plan

This CIP identifies community concerns about the investigation and restoration of potentially contaminated sites at WPNSTA Yorktown and CAX and outlines community involvement activities to be conducted during the ongoing and anticipated future restoration activities.

This plan has been prepared in accordance with regulations and guidance for conducting community involvement activities related to environmental restoration, including:

- *Superfund Community Involvement Handbook* (USEPA 540-K-01-003, April 2002)
- USEPA's Community Involvement Toolkit (http://www.epa.gov/superfund/community/toolkit.htm)
- *Department of the Navy Environmental Restoration Program Manual* (2006)
- *Department of Defense (DoD) Management Guidance for the Defense Environmental Restoration Program* (September 2001)
- 32 Code of Federal Regulations (CFR) Part 203, Final Rule [for] Technical Assistance for Public Participation (TAPP) in Defense Environmental Restoration Activities (Federal Register/Vol. 63, No. 21)
- 30 CFR Part 202, Final Rule [for] Department of Defense Restoration Advisory Boards (Federal Register/ Vol. 71, No. 92)

Recommendations for future community involvement activities are based on information about community concerns and the effectiveness of community involvement activities to date. Information about the community's concerns were obtained from responses to written surveys from local residents during the spring 2014 and during telephone and personal interviews with leaders of the local community in April and May 2014. Community concerns were also identified through transcripts of recent meetings, and public comments submitted during public comment periods.

This plan is divided into the following major sections and appendices:

- Section 1 – Overview of Community Involvement Plan
- Section 2 – Facility Description and Site History
- Section 3 – Community Overview
- Section 4 – The Community Involvement Program
- Section 5 – Timing of Community Involvement Activities
- Section 6 – References
- Appendix A – Site Descriptions – WPNSTA Yorktown
- Appendix B – Site Descriptions – CAX
- Appendix C – Written Survey
- Appendix D – Interview Questions
- Appendix E – Written Survey Results
- Appendix F – Key Contacts
- Appendix G – Response to Comments on the Draft CIP

The Navy maintains a mailing list of interested individuals and agency representatives. However, to protect privacy, the names and addresses of private individuals (other than public officials) are not published in this CIP.

1.4 Implementation of the Plan

The Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic (MIDLANT) administers the ERP at WPNSTA Yorktown and CAX. As the owner of WPNSTA Yorktown and CAX, the Navy is ultimately responsible for implementing the ERP and the associated community involvement program as outlined by this CIP. The WPNSTA Yorktown/CAX Commanding Officer has the overall responsibility for administering this CIP, but typically has shared the tasks associated with implementing this CIP with the Public Affairs Officer (PAO) for WPNSTA Yorktown

and CAX, WPNSTA Yorktown and CAX military and civilian personnel, state and federal regulatory agencies, and technical personnel contracted by the Navy to assist in the ERP process. The main responsibilities of these entities are outlined below:

1. WPNSTA Yorktown and CAX:
    a. Implement the CIP; and
    b. Hold/participate in any public meetings regarding site activities.
2. WPNSTA Yorktown and CAX PAO:
    a. Plans, schedules, and coordinates all activities and necessary requirements for implementing the CIP. Activities may include specific communication techniques for regulatory agencies, the local community, media, military personnel, and resident and civilian work force as listed in the following sections;
    b. Informs and coordinates with NAVFAC MIDLANT, as appropriate, the development and distribution of news releases and fact sheets relating to the site investigation;
    c. Provides an on-the-scene spokesperson for the WPNSTA Yorktown and CAX site investigation programs and responds to media queries using statements or plans prepared in conjunction with NAVFAC MIDLANT;
    d. Informs the state and all appropriate federal agencies of activities and findings relative to the sites, in a timely manner;
    e. Ensures that Freedom of Information Act requests are properly coordinated;
    f. Remains sensitive to the needs and concerns of the local community regarding the sites, and implements activities of the CIP as appropriate; and
3. NAVFAC MIDLANT:
    a. Updates the CIP as new developments and/or changes occur at the sites;
    b. Provides general public affairs guidance and support for the implementation of this CIP;
    c. Provides timely and accurate information to WPNSTA Yorktown and CAX regarding the site activities and technical data/results; and
    d. Refers to appropriate technical and legal personnel for clearance and/or coordination of all material intended for public release that has not been previously cleared or specifically authorized for release in the WPNSTA Yorktown and CAX CIP.
4. USEPA
    a. Acts as a spokesperson on policy or queries concerning programs within USEPA's area of responsibility;
    b. Provides a spokesperson to respond to appropriate queries from briefings for local officials, interested community groups, citizens and the media; and
    c. Responds to press queries, as required, and notifies other involved agencies of responses and potential concerns.
5. VDEQ
    a. Acts as a spokesperson on policy or queries concerning programs within VDEQ's area of responsibility;
    b. Provides a spokesperson to respond to appropriate queries from briefings for local officials, interested community groups, citizens, and media; and
    c. Responds to press queries, as required, and notifies other involved agencies of responses and potential concerns.

The PAO for WPNSTA Yorktown and CAX, Mr. Mark Piggott, is the Navy's designated contact person for responding to public inquiries or providing relevant information to the public. His contact information is provided in Appendix F.

SECTION 2

Facility Description and Site History

2.1 Facility Location and History

2.1.1 WPNSTA Yorktown

WPNSTA Yorktown is a 10,624-acre installation on the Virginia Peninsula in York and James City counties and the City of Newport News, Virginia (Figure 2-1). WPNSTA Yorktown is bounded on the northwest by CAX and the King's Creek Commerce Center; on the northeast by the York River and the Colonial National Historic Parkway; on the southwest by Route 143 and Interstate 64; and on the southeast by Route 238 and the town of Lackey.

Originally named the U.S. Mine Depot, WPNSTA Yorktown was established in 1918 to support the laying of mines in the North Sea during World War I. For 20 years after World War I, the depot continued to receive, reclaim, store, and issue mines, depth charges, and related materials. During World War II, the facility was expanded to include three trinitrotoluene loading plants and new torpedo overhaul facilities. A research and development laboratory for experimentation with high explosives was established in 1944. In 1947, a quality evaluation laboratory was developed to monitor special tasks assigned to the facility, which included the design and development of depth charges and advanced underwater weapons. On August 7, 1959, the depot was renamed the U.S. Naval Weapons Station. Today, the primary mission of WPNSTA Yorktown is to provide ordnance, technical support, and related services to sustain the war-fighting capability of the U.S. armed forces in support of national military strategy.

2.1.2 Cheatham Annex

CAX is located on the site of the former Penniman Shell Loading Plant, which was a large powder- and shell-loading facility operated during World War I (Figure 2-1). The Penniman facility closed in 1918 and between 1918 and 1923 was dismantled. Between 1923 and 1943, the property was used for farming or was left idle until CAX was commissioned in 1943 as a satellite unit of the Naval Supply Depot to provide bulk storage facilities and serve as an assembly and overseas shipping point throughout World War II.

At inception, CAX occupied approximately 3,349 acres. Several portions of the original base were declared surplus and transferred to other government jurisdictions, including the Department of the Interior the Commonwealth of Virginia, and York County. CAX currently encompasses 2,300 acres and is divided into two parcels, with the larger parcel situated along the banks of the York River. Included in these 2,300 acres is the 786-acre former Department of Interior property, which was reacquired by the Navy in July 2004.

CAX is bordered to the east by the York River, to the north by Queen Creek and the Armed Forces Experimental Training Activity Camp Peary, to the west by York County's New Quarter Park and to the south by King Creek and WPNSTA Yorktown. Almost all of the activities at CAX (administration, training, maintenance, support, and housing) take place in the larger portion of the Installation. The smaller parcel is located south of the Colonial National Historic Parkway. This area contains Jones Mill Pond and is used mainly as a watershed protection area. In July 1987, CAX was designated the Hampton Roads Navy Recreational Complex. Today, the mission of CAX includes supplying Atlantic Fleet ships and providing recreational opportunities to military and civilian personnel.

2.2 Facility Descriptions

WPNSTA Yorktown and CAX are situated within the Virginia Coastal Plain Physiographic Province, which is characterized by unconsolidated sediments several thousand feet in thickness, according to *Hydrogeologic Framework of the Virginia Coastal Plain* (Meng and Harsh, 1988). The uppermost geologic formations consist of alluvial, colluvial, and marsh deposits which are composed of silt, sand, and pebbles with some clay. The aquifers and confining/semi-confining units relevant to CERCLA investigations at WPNSTA Yorktown and CAX are, from youngest to oldest: the Columbia aquifer, the Cornwallis Cave aquifer, and the Yorktown-Eastover aquifer.

Groundwater flow directions for all three aquifers are controlled by topography and surface water bodies with the primary discharge direction being north toward the York River.

Groundwater is not used as a beneficial resource at WPNSTA Yorktown and CAX. There are no drinking water wells at either base or downgradient of the bases, as the downgradient base boundaries are the Colonial National Historic Parkway and the York River. Public water is supplied to WPNSTA Yorktown and CAX and the surrounding area by the City of Newport News Waterworks.

The mission of WPNSTA Yorktown is to provide ordnance, technical support, and related services to sustain the war-fighting capability of the Armed Forces in support of national military strategy. The WPNSTA supports industrial activities and ordnance management and storage associated with the mission, but also supports some residential and recreational land uses. Current land use throughout much of the base is restricted within explosive safety quantity distance arcs of munitions storage areas. Much of the WPNSTA is wooded and dissected by ravines and tributaries that drain to the York River. Several unnamed ponds are used for catch-and-release fishing. The main surface water drainage receptors for WPNSTA Yorktown are Felgates Creek and Indian Field Creek, which are not used for recreation within the base. These creeks discharge to the York River, which is used for both commercial and recreational purposes. Anticipated land and resource use at WPNSTA Yorktown is not expected to change into the foreseeable future.

The mission of CAX includes supplying Atlantic Fleet ships and providing recreational opportunities to military and civilian personnel. Unlike WPNSTA Yorktown, there are no restricted areas at CAX except a fenced warehouse storage area. Several surface water bodies are used for fishing (Jones Pond, Cheatham Pond, Penniman Lake, and Youth Pond.) The topography of CAX is similar to that of WPNSTA Yorktown, with surface water discharge to Queen Creek and King Creek, which both discharge to the York River. Land and resource use at CAX is not expected to change in the foreseeable future.

2.3 National Priorities List

On October 15, 1992, USEPA placed WPNSTA Yorktown on the NPL, primarily due to the facility's proximity to wetlands and the potential impact on the surrounding environment. On January 2, 2001, CAX was included on the NPL.

The NPL, which was established by CERCLA, is USEPA’s list of the highest-priority hazardous waste sites in the nation. The decision to list a particular site is made on the basis of potential risks to human health and the environment. As of May 2014, there were 1,326 nation-wide sites listed on the NPL, of which 157 were federal facilities such as WPNSTA Yorktown and CAX.

CERCLA is often referred to as “Superfund,” because it established a fund for cleaning up abandoned or uncontrolled hazardous waste sites. However, all activities at federal facilities listed on the NPL are funded by the responsible federal agency. In the case of WPNSTA Yorktown and CAX, the Navy funds all investigation and remedial activities. To fund these activities at military installations, the DoD set up the Defense Environmental Restoration Account. The Navy’s portion of that funding mechanism is known as the Environmental Restoration, Navy account. Each year, available funding is directed to multiple facilities (often referred to as “activities”) on a “worst first” basis.

In other words, those activities deemed to be the most contaminated and/or presenting the greatest risks to human health or the environment are given preferential funding. Being listed on the NPL typically gives funding priority to a base. Although the responsibility for funding and carrying out ER at WPNSTA Yorktown and CAX rests with the Navy, the NPL listings give USEPA a specific role in the oversight of these actions.

2.4 Federal Facility Agreement

In September 1994, the Navy, USEPA, and VDEQ signed an FFA to ensure that environmental impacts associated with past and present activities at WPNSTA Yorktown were thoroughly investigated and the appropriate remedial action is taken to protect public health and the environment. The FFA for CAX was signed in March 2005.

These FFAs outline the scope of efforts for remedial activities at WPNSTA Yorktown and CAX, and make the USEPA and VDEQ part of the planning for the future use of resources and in prioritizing restoration efforts within the Navy's budget controls.

The WPNSTA Yorktown FFA identified 16 sites, 19 Site Screening Areas (SSAs) and 21 Areas of Concern (AOCs) that required investigation. Currently, there are 18 sites being investigated (all previously identified SSAs or AOCs have either been investigated or renamed as a site). Figure 2-2 shows the locations of all the ERP sites at WPNSTA Yorktown. In addition, two Munitions Response Program (MRP) sites at WPNSTA Yorktown are currently being investigated (Figure 2-2). The CAX FFA identified 12 sites and 5 AOCs. Currently, there are 3 sites and 6 AOCs (2 AOCs added and 1 AOC removed after the FFA was written) being investigated (investigations at all other sites have been completed). All CAX sites and AOCs are shown in Figure 2-3.

2.5 Site Management Plan

Under the FFAs for WPNSTA Yorktown and CAX, annual Site Management Plan (SMP) updates are required. The purpose of the SMP is to present the planned activities for upcoming fiscal years, and to provide projections for long-term progress at the facility. Appendices A and B provide site-specific capsule descriptions and describe the actions to be taken at each of the ERP sites at WPNSTA Yorktown and CAX (respectively). This information represents the most recently updated SMPs (CH2M HILL, 2013a; CH2M HILL, 2013b). The SMPs are updated annually; therefore, newly-updated SMPs are expected to be released in November 2014.

2.6 Environmental Restoration Partnership

WPNSTA Yorktown formed a CERCLA Tier I Partnering Team in January 1997. CAX became part of the WPNSTA Yorktown Partnering in 2000, following its listing on the NPL and the inclusion of CAX under Yorktown control. NAVFAC MIDLANT decided to split WPNSTA Yorktown and CAX into two separate partnering teams in September 2008 in order to accelerate the environmental investigation and cleanup at each base. The WPNSTA Yorktown and CAX Partnering Teams are made up of representatives of the organizations that are directly involved in ER at the facility:

- **Navy:** NAVFAC MIDLANT, which is responsible for managing and implementing the ERP, and WPNSTA Yorktown and CAX representatives responsible for onsite activities related to the ERP
- **Regulatory agencies:** USEPA Region III and VDEQ

The Navy's environmental contractor supports the partnering team meetings, and performs investigative studies and engineering design for remedial actions and remedy implementation.

By bringing these key parties together in regular, structured meetings to discuss and resolve issues, the WPNSTA Yorktown and CAX Partnering Teams promote trust and cooperation that permits the remediation process to move forward at a quicker pace than was possible under traditional procedures.

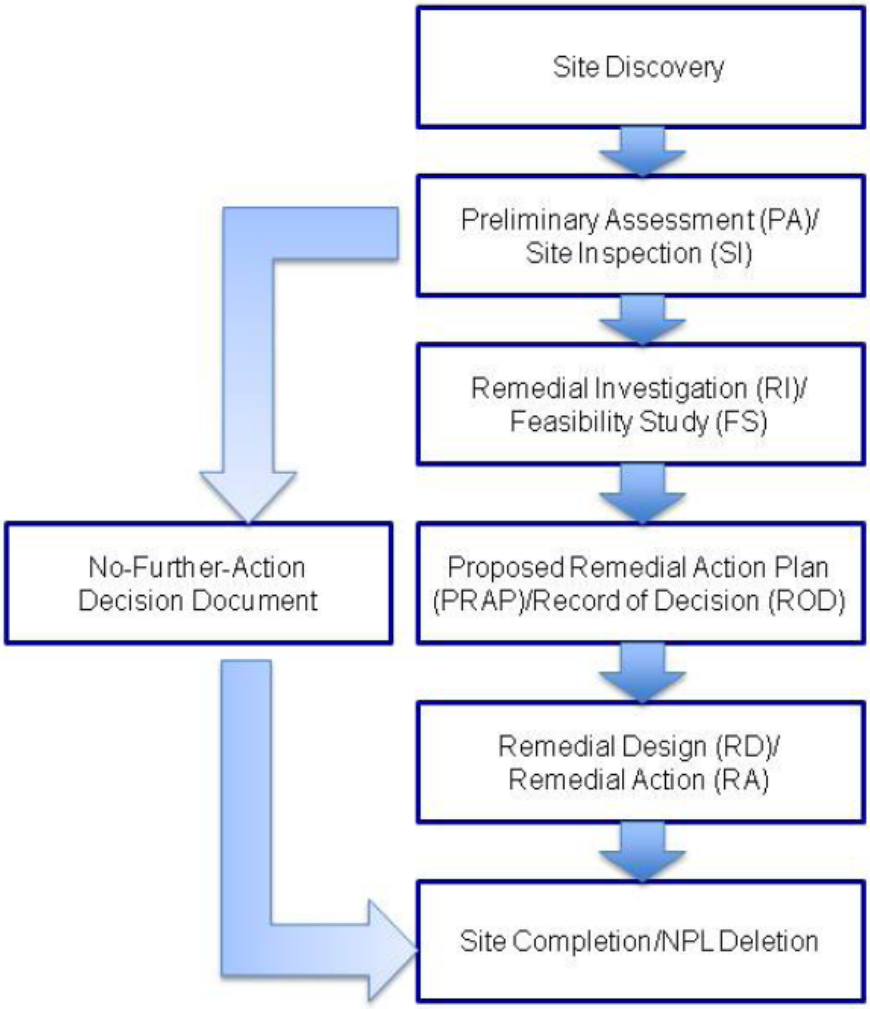
2.7 CERCLA Process

Since 1986, the Navy's ERP has followed the process prescribed by CERCLA regulations and guidance for investigating and addressing environmental contamination. This multi-step process is followed regardless of whether or not a facility is listed on the NPL, unless directed otherwise by a Resource Conservation and Recovery Act (RCRA) consent order or other legal instrument.

The investigations and remedial activities to be completed at WPNSTA Yorktown and CAX follow the guidelines established by the USEPA and the Navy as part of the CERCLA process. Once an area has been identified as potentially containing contaminated media (e.g., soil, groundwater, sediment, or surface water) and the site screening investigation and risk screening process (both limited in scope) have concluded that a potential risk to human health and/or the environment exists, the site will be subjected to the Remedial Investigation/ Feasibility Study (RI/FS) process. However, a removal action and/or an interim remedial action may also be appropriate. The

decision to implement one or a combination of these actions at established RI/FS sites depends on the nature and extent of contamination at the site; how well the site is characterized; the degree of associated human health and/or environmental risks; and the complexity of the potential remedial actions (i.e., the feasibility of the optimal remedy). The CERCLA process is depicted in Figure 2-4 and is described below.

FIGURE 2-4
CERCLA Process



2.7.1 Preliminary Assessment/Site Inspection

Once a site has been identified, a site assessment is performed, beginning with a Preliminary Assessment (PA) to determine if the site poses a potential hazard and whether further action is necessary. During the PA, any available documentation pertaining to the site is reviewed. In addition, there may be a site visit, but sampling generally does not occur at this time.

If information generated during the PA reveals that potential environmental contamination exists but does not pose an immediate threat, a more extensive study, called a Site Inspection (SI), is performed. Typically, the SI involves a site visit and sample collection to define and further characterize the nature of the contamination at a site. If results of the SI indicate the site presents an imminent and substantial threat, a removal action may be implemented (USEPA, 1992).

At WPNSTA Yorktown, the PA was implemented in the form of an Initial Assessment Study (IAS). The purpose of the IAS was to identify and assess sites posing a potential threat to human health and/or the environment due to contamination from past operations. A total of 19 potentially-contaminated sites were identified based on

information from historical records, aerial photographs, field inspections, and personnel interviews. Each site was evaluated for the type of contamination, migration pathways, and pollutant receptors. The IAS concluded that 15 of the 19 sites posed a sufficient threat to human health or the environment to warrant Confirmation Studies (C.C. Johnson & Associates, Inc. and CH2M HILL, 1984a). Following the completion of the IAS, ten additional potentially-contaminated sites were identified for further investigation.

An IAS for CAX also was conducted in 1984. A total of 12 potentially contaminated sites were identified based on information from historical records, aerial photographs, field inspections, and personnel interviews. Each site was evaluated for the type of contamination, migration pathways, and pollutant receptors. The IAS concluded that 4 of the 12 sites were a sufficient threat to human health or the environment to warrant Confirmation Studies (C.C. Johnson & Associates, Inc. and CH2M HILL, 1984b). Following the completion of the IAS, nine additional potentially-contaminated AOCs were identified for further investigation.

2.7.2 Expanded Site Inspection

The objective of the Expanded Site Inspection (ESI) is to collect data necessary to prepare a Hazard Ranking System (HRS) scoring package to evaluate the site for potential inclusion on the NPL. The HRS is a numerically-based scoring system that uses information from the PA and SI to assign sites scores based on releases or potential releases of contaminants, characteristics of substances, and people and sensitive environment's that would be impacted by a release. To fully evaluate the site and to fulfill HRS documentation requirements, the ESI will:

- Investigate and document critical hypotheses or assumptions not completely tested during the SI.
- Collect samples to determine whether hazardous substances or contaminants are attributable to past/current site operations.
- Collect samples to establish representative background levels.
- Collect any other missing HRS data for pathways of concern.

When environmental samples do not provide the information needed for HRS documentation requirements, investigations also may need to include special field activities. The purpose of these procedures, which are beyond the screening scope of the SI, is to supply data to refine and document the site score. Special ESI field activities may include monitoring well installation, air sampling, geophysical studies, drum or tank sampling, borings, immunoassay screening to define the extent of contamination, and complex background sampling studies.

Sampling during the ESI should be designed to support and document HRS requirements, including: 1) observed releases of hazardous substances relative to background; 2) observed contamination; and 3) levels of contamination. The ESI should facilitate collection of a complete set of quality assurance/quality control and background samples to fully and confidently document and attribute releases to the site.

The scope of an ESI is not necessarily larger than a SI, but depends on the data gaps remaining after all previous investigation information has been evaluated. The ESI also differs from the SI by emphasizing collection of all missing non-sampling information for pathways of concern. These data may be used to support previous documentation or references, fulfill remaining data requirements, and/or identify other sources of contamination in the vicinity of the site.

At the conclusion of the field activities, an ESI report summarizing findings and analytical results is prepared. Per USEPA regional and state instructions, the ESI should evaluate all site data according to the HRS. The HRS package consists of the HRS documentation record, reference materials, HRS score sheets, and site narrative summaries along with other administrative requirements as specified in *Regional Quality Control Guidance for NPL Candidate Sites (*USEPA, 1991). Preparing the HRS package is not considered part of SI or ESI activities. However, all data necessary to document an HRS score should be collected during the ESI.

When applied to investigating individual sites, the ESI also functions as another decision node and data evaluation process by which the most appropriate option in the CERCLA process (e.g., no action, removal action, or remedial action) may be selected. If sufficient data are collected, the ESI may be functionally equivalent to an RI.

While not used to prepare the HRS scoring package to evaluate the site for potential inclusion on the NPL, four ESIs at CAX are currently in progress. To date, no ESIs have been performed at WPNSTA Yorktown.

2.7.3 Remedial Investigation/Feasibility Study Process

The RI/FS phase is generally the most involved step in the CERCLA process. For the RI/FS phase, an RI, baseline risk assessment, and FS are completed, along with a Proposed Plan (PP) prior to a formal public comment period. After public comments have been addressed as part of the Responsiveness Summary in the Record of Decision (ROD), the ROD is placed in the Administrative Record. Subsequent to completion and agency approval of the ROD, remedial design activities are initiated, followed by the implementation of the remedial action. Following are general descriptions of the key components of the RI/FS process:

- RI: An assessment of the nature and extent of contamination and the associated health and environmental risks.
- FS: Development and analysis of the range of cleanup alternatives for the site.
- PP: Identifies a preferred remedial alternative and explains why the alternative was selected. Allows for public comment.
- ROD: The official report documenting the background information on the site and describing the chosen remedy and why it was selected.

If unacceptable human health or ecological risks do not exist, sites are recommended for no further action. If risks do exist, removal actions, interim actions, or additional RI/FS activities are proposed in order to mitigate the risks or further delineate the extent of contamination.

Bypassing the SI or ESI phase and commencing immediately with the RI/FS may be cost-effective and beneficial if known contamination or specific detail regarding previous practices is present and it is reasonably certain that in-depth study of the site is required.

2.7.3.1 WPNSTA Yorktown Confirmation Study and Remedial Investigation Interim Report

Two rounds of data were obtained during the Confirmation Study (CS) for WPNSTA Yorktown. During the first round of sampling, conducted in the winter of 1986, environmental samples were collected from the 15 sites identified in the IAS. This effort was documented in the *Confirmation Study Step IA (Verification), Round One* (Dames & Moore, 1986a). The initial sampling effort included:

- Installation and sampling of 26 monitoring wells.
- Collection and analysis of 21 surface water and sediment samples.
- Collection and analysis of 26 surface soil samples.

The second round of sampling was conducted during November and December 1987. The Round Two effort included:

- Collection and analysis of 26 groundwater samples from the previously-installed wells.
- Collection and analysis of 26 surface water and 32 sediment samples.
- Collection and analysis of 12 surface soil samples.

The results of the analyses and comparisons with appropriate regulatory standards were presented in the *Confirmation Study Step IA (Verification), Round Two* report (Dames & Moore, 1988a). The Draft RI interim report contained the combined and summarized results of these field efforts (Dames & Moore, 1989). This report was subsequently revised by Versar in 1991 to incorporate comments from the Technical Review Committee (TRC); this revised report is the RI interim report (Versar, 1991). The RI interim report recommended that further RI activities be completed at 14 of the 15 sites for which data were available.

2.7.3.2 CAX Confirmation Studies

The Confirmation Studies at CAX were conducted by Dames & Moore in two rounds. During the first round of sampling, conducted in the winter of 1986, environmental samples were collected from the four sites (Sites 1, 9, 10, and 11) identified in the IAS. This effort was documented in the CS Step IA (Verification), Round One (Dames & Moore, 1986b). The initial sampling effort included:

- Installation and sampling of five monitoring wells.
- Collection and analysis of four groundwater samples from previously installed wells at Site 1.
- Collection and analysis of three surface water and three sediment samples.
- Collection and analysis of 22 surface soil samples.

The Transformer Storage Area (Site 9) was taken off the list based on the results of the sampling completed during Round One of the CS. Additional investigations were recommended for the three remaining sites (Sites 1, 10, and 11) under the CSs.

The second round of sampling for the CS was conducted during November and December 1987. The Round Two effort for the three sites included:

- Collection and analysis of nine groundwater samples (Sites 1 and 11).
- Collection and analysis of three surface water and three sediment samples (Site 11).

The results of the analyses performed on these samples and comparisons with applicable regulatory standards were presented in the CS Step IA (Round Two). No recommendations were presented (Dames & Moore, 1988b).

2.7.3.3 CAX RI Interim Report

The purpose of the RI interim report was to summarize available data for Sites 1, 9, 10, and 11 and, based on these data, provide recommendations for additional efforts to be conducted to complete the RI. The recommendations included aerial photographic interpretation, an off-Base well inventory, limited biota sampling, and background sampling of soil, surface water, and sediment. Site-specific recommendations included collection of groundwater samples from Site 1, historic aerial photographic interpretation to gather information regarding disposal activities at Site 10, and collection of groundwater, surface water, sediment, and soil samples from Site 11. The RI interim report recommended additional investigation of Sites 1, 10, and 11 and recommended no further investigation of Site 9 (Dames & Moore, 1991).

2.7.3.4 Summary of RI/FS Documents

The following RIs have been completed for WPNSTA Yorktown and CAX:

TABLE 2-1
Summary of RI/FS Documents

Activity	Title	Year
Yorktown	Final Round One RI for Sites 1-9, 11, 12, 16-19, and 21	1993
	Final Round Two RI for Site 16 and SSA 16	1995
	Final Round Two RI for Site 12	1996
	Final Round Two RI for Sites 9 and 19	1997
	Final Round Two RI for Sites 11 and 17	1997
	Final Round Two RI for Sites 1 and 3	1998
	Final Round Two RI for Sites 6 and 7	1998
	Final Round Two RI for Sites 4, 21, and 22	2001
	Final Round Two RI for Sites 2, 8, 18, and SSA 14	2004
	Final Round One RI for Sites 27, 28, 29, and 30	2005
	Final Round One RI for Sites 1-9, 11, 12, 16-19, and 21	1993
	Final Phase I RI Report for Groundwater at Sites 1, 3, 6, 7, 11, 17, 24, and 25	2007

TABLE 2-1
Summary of RI/FS Documents

Activity	Title	Year
Yorktown (cont')	Final RI Report for Groundwater at Sites 4, 21, and 22	2009
	Final Phase II RI Report, Site 6	2011
	Final RI Report for Groundwater at Sites 8 and 34	2011
	Final Phase II RI Report Sites 1 and 3	2012
	Final RI, Site 24	2014
CAX	Final RI for Site 1	2004
	Final Screening-Level Ecological Risk Assessment for Sites 4 and 9	2005
	Final Screening-Level Ecological Risk Assessment and Step 3a Refinement for Site 1	2005
	Final RI for Site 11	2007

The following Site Screening Process (SSP) reports have been completed for WPNSTA Yorktown and CAX:

TABLE 2-2
Summary of SSP Reports

Activity	Title	Date
Yorktown	Final SSP Report for SSAs 1, 6, 7, and 15	1996
	Final SSP Report for SSAs 2, 17, 18, and 19	1996
	Final SSP Report for SSAs 8, 11, 12, and 13	1997
	Final SSP Report for SSAs 3, 4, 5, 9, 10, 20, 21, 22, 23, and 2	2004
	Final Site Inspection Report, MRP Site UXO 2	2011
CAX	Final Site Investigation Report for Sites 1, 10, and 11	1994
	Final SSP Report for Sites 1, 10, and 11	1997
	Final Field Investigation Report for Site 7 and AOC 2	2001
	Final Site Investigation Report for Site 4 and AOC 1	2001
	Final Site 4, 9, and AOC 3 Site Inspection Report	2011
	Final AOCs 1, 2, 6, 7 and 8 Site Inspection	2012
	Final Site 7 Site Inspection Report	2012

The following FS reports have been completed for WPNSTA Yorktown and CAX:

TABLE 2-3
Summary of FS Reports

Activity	Title	Year
Yorktown	Final FS for Site 12	1996
	Final FS for Sites 9 and 19	1997
	Final FS for Sites 1 and 3	1997
	Draft FS for Sites 2, 8, 18, and SSA 14	1998
	Final FS for Sites 6 and 7	1998
	Final FS for Sites 11 and 17	1999
	Final FS for Sites 4, 21, and 22	2001
	Final FS Report for Groundwater at Site 3	2014
	Final FS for Groundwater at Site 22	2011
CAX	Final FS for CAX Site 1	2000

The following PPs have been completed for WPNSTA Yorktown:

TABLE 2-4
Summary of PPs

Activity	Title	Year
Yorktown	Final PP for Site 5	1994
	Final PP for Site 16 and SSA 16	1995
	Final PP for Site 12	1996
	Final PP for Sites 9 and 19	1997
	Final PP for Sites 1 and 3	1998
	Final PP for Sites 6 and 7	1998
	Final PP for Sites 11 and 17	1999
	Final PP for Sites 4 and 22	2001
	Final PP for Site 21	2001
	Final PP for Site 18	2005
	Final PP for Sites 11 and 17 Groundwater	2009
	Final PP for Site 29	2009
	Final PP for Site 30	2009
	Final PP for Sites 4, 21, and 22	2010
	Final PP for Site 28	2011
	Final PP for Site 32 Surface Water and Sediment	2011
	Final PP for Site 22 Groundwater	2012
	Final PP for Site 3 Groundwater	2014
CAX	Final PP for Site 1	2009
	Final PP for Site 11	2010

The following RODs have been completed for WPNSTA Yorktown and CAX:

TABLE 2-5
Summary of RODs

Activity	Title	Year
Yorktown	Final ROD for Site 5	1994
	Final ROD for Site 16 and SSA 16	1995
	Final ROD for Site 12	1997
	Final ROD for Sites 6 and 7	1998
	Final ROD for Sites 9 and 19	1998
	Final ROD for Sites 1 and 3	1999
	Final ROD for Sites 11 and 17	2000
	Final ROD for Site 21	2003
	Final ROD for Site 22	2003
	Final ROD for Site 4	2005
	Final ROD for Site 18	2005
	Final ROD for Site 27	2006
	Final ROD for Site 29	2009
	Final ROD for Site 11 and 17	2010

TABLE 2-5
Summary of RODs

Activity	Title	Year
Yorktown (cont')	Final ROD for Site 30	2011
	Final ROD for Site 32 Surface Water and Sediment	2011
	Final ROD at Sites 4, 21, and 22	2011
	Final ROD for Site 28	2011
	Final ROD for Site 22 Groundwater	2012
CAX	Final ROD for Site 1	2009
	Final ROD for Site 11	2010

2.7.4 Removal Actions

Removal actions are those actions taken to clean up or remove released hazardous substances from the environment. In addition, a removal action may also be implemented to mitigate, minimize, or prevent damage to human health and the environment from a release or threat of a release by limiting exposure to the hazardous substances (i.e., security fencing or access limitation). Removal actions are classified as either time-critical or non-time-critical. Time-critical removal actions are conducted when there is an imminent and substantial threat to human health and the environment, such as corroded drums of wastes that are leaking into groundwater. Non-time-critical removal actions are defined as actions, based on the degree of potential risk to human health and/or the environment, that may be delayed for 6 months or more before onsite cleanup is initiated.

A removal action may be completed any time during the evaluation or remedial processes. However, it will often begin prior to the completion of the RI/FS to mitigate the spread of contamination.

Rather than preparing an FS, an Engineering Evaluation/Cost Analysis (EE/CA), which focuses only on the individual contaminated medium to be addressed, is completed. Other potentially contaminated media will be addressed as part of the RI/FS process and are not addressed in the EE/CA. Because the scope of a removal action is typically smaller than a final, full-scale remedial action, the time frames for completion of the EE/CA, related design efforts, and implementation of the removal action are much shorter than for a full-scale FS. The opportunity for public involvement is similar to the FS, with a public comment period and an Action Memorandum Decision Document (similar to a ROD in the RI/FS process) completed to document the evaluation and choice of removal action procedures. It should be noted that a removal action may become the final remedial action if the risk screening/ assessment results indicate that further remediation is not required for protection of human health and the environment. Where no further action is required at a site that is in the RI phase and has undergone a removal action, a no action ROD will be completed in order to remove the site from the program. For sites in the SI phase, if the removal action results in no further action at the site, the no further action decision will be documented in a decision document (e.g., a technical memorandum or consensus letter), and the site will be removed from the program.

Removal actions have been conducted at both WPNSTA Yorktown and CAX. These removal actions are identified in the site descriptions in Appendices A and B, respectively.

2.7.5 Interim Remedial Actions

Interim remedial actions are those activities designed to provide temporary mitigation of potential risks posed by a site until a final remedial action is selected. As with removal actions, interim remedial actions usually take place prior to initiation of a full-scale FS because of the risks posed by the contamination in the area. For example, installation of a groundwater pump and treat system to control plume migration would be considered an early remedial action. Initiation of remedial action early in the CERCLA process might reduce costs in the long-term by limiting the extent of contaminant migration.

Rather than preparing an FS, a focused FS is completed, as is an early action ROD to document the activities to be performed. Design and implementation activities follow. It should be noted that an early remedial action may become the final remedial action, if the risk screening/assessment results indicate that further remediation is not required.

Interim remedial actions have been conducted at both WPNSTA Yorktown and CAX. These removal actions are identified in the site descriptions in Appendices A and B.

2.7.6 Presumptive Remedies

Presumptive remedies help to streamline the site cleanup process by eliminating the need for initial identification and screening of numerous remedial alternatives during the FS process. Presumptive remedies are preferred technologies for common categories of sites based on historical patterns of remedy selection at similar types of sites. The selection of a presumptive remedy must be considered at the beginning of the RI/FS process so that particular attention can be directed to the risk evaluation, areas of potential contaminant migration, and identification of “hot spots.”

2.7.7 Treatability Studies

Treatability studies may be conducted prior to finalization of FS reports or prior to removal actions to better evaluate the performance of a particular technology. Treatability studies are conducted to:

- Provide sufficient data to allow treatment alternatives to be fully developed and evaluated.
- Support the remedial design of a selected alternative.
- Reduce cost and performance uncertainties for treatment alternatives to acceptable cleanup levels to aid in remedy selection.

2.7.8 No Further Response Action Planned

The NCP states that sites that USEPA decides need no additional evaluation are given a No Further Remedial Action Planned (NFRAP) designation within the CERCLA Information System, as defined in Section 300.5 of the NCP. This system contains the official inventory of CERCLA sites and supports the USEPA’s site planning and tracking functions. This designation means that no supplemental investigation or remediation work will be performed at the site(s) unless new information about the site(s) is presented indicating that the initial decision was not appropriate.

Decisions to recommend sites for NFRAP status or to proceed with site-specific response actions are integral to the execution of the ERP and generally occur at one of four phases in the environmental response process. The decisions are reached on the basis of site or operable unit information, which is commonly organized in terms of hazardous substance sources, exposure pathways, and receptors. The NFRAP decision can be implemented upon completion of any of the following phases of the RI process: (1) the PA; (2) the SI; (3) the RI/FS; and (4) the removal action or remedial action phase.

NFRAP decision criteria are typically derived from statutory and regulatory provisions under federal statutes, such as CERCLA and RCRA, as well as similar state statutes. In general, these statutes and regulations require that human health and the environment be adequately protected in the event of a release or threatened release of a hazardous substance. The following area designations along with other federal and state criteria provide the foundation associated with the NFRAP decision:

- Areas of no suspected contamination.
- Areas below action levels where no response or remedial action is required to ensure protection of human health and the environment.
- Areas where remedies have been implemented/completed.

The NFRAP decision is usually made on the basis of an SI, an ESI, or an equivalent effort, if it can be shown that the levels of hazardous substances detected in a given area do not:

- Exceed media-specific action levels (e.g., chemical-specific applicable or relevant and appropriate requirements or risk-based concentrations).
- Result in a non-carcinogenic hazard index above 1.0.
- Result in a cumulative carcinogenic baseline site risk to an individual within the USEPA's acceptable risk range of 1 x 10-6 to 1 x 10-4, using reasonable maximum exposure assumptions for either current or future land use.
- Otherwise exceed applicable federal or state requirements.

The following NFRAP reports have been completed for WPNSTA Yorktown and CAX:

TABLE 2-6
Summary of NFRAPs

Activity	Title	Year
Yorktown	None to date	
CAX	Final NFRAP Decision Document for CAX Sites 2, 3, 5, 6, 8, and 10	2003
	Final NFRAP Decision Document for CAX Site 12	2004

2.7.9 Site Completion

Following remedial actions, steps must be followed to ensure that the cleanup methods are working properly. Once the remedy implemented is operational and functional and meets its designated environmental, technical, legal, and institutional requirements, the site status will be designated as "site completion." Clean Closure may also need to be evaluated in accordance with 40 CFR 264 Subpart G.

2.7.9.1 Operations and Maintenance

Once the remedial actions have been completed, continuing site operation and maintenance (O&M) activities may be needed to maintain the effectiveness of the remedy and to ensure that no new threat to human health or the environment arises.

O&M activities are dictated by the amount of hazardous substances remaining at the site after the completion of the remedial action. The RCRA land disposal closure standards apply to waste removed from the site under CERCLA. If hazardous materials remain, post-closure groundwater monitoring is required. Only in those cases where no hazardous substances remain at a site and no residual groundwater contamination is present, is it possible to avoid groundwater monitoring. If the remedial action results in any hazardous substance remaining at the site, CERCLA, Section 121(c), requires review of such action at least every five years after the initiation of the remedial action. It is the installation's responsibility to ensure that this review is conducted and further action taken, if necessary.

In accordance with CERCLA, Section 121(c), if hazardous substances, pollutants, or contaminants remain at a site after the remedial action step, monitoring records will be reviewed to ensure that human health and the environment are being protected. The compliance review will be made every five years beginning with the initiation of the remedial action step until the remedy is no longer needed.

Many types of remedial technologies require O&M of equipment after the remedial action is installed. Structures and earthworks may require maintenance. Most sites that have hazardous substances remaining after the remedial action is installed will require periodic monitoring. Appropriate plans for these post-project activities will have been identified in the FS, ROD or decision document, detailed during remedial design, and implemented as appropriate.

The first Five Year Review for WPNSTA Yorktown was conducted in 2002 for Sites 1, 6, 7, 12, 16, and 19 (Baker, 2002). The second Five-Year Review for WPNSTA Yorktown was submitted in 2007 for Sites 1, 6, 7, 12, 16, and 19 (CH2M HILL, 2007). The third Five-Year Review for WPNSTA Yorktown was submitted in 2013 for Sites 1, 6, 7, 12, 16/SSA16, and 19 (CH2M HILL, 2013c). There have been no five-year reviews conducted for CAX because no further action was required in the two RODs completed for CAX.

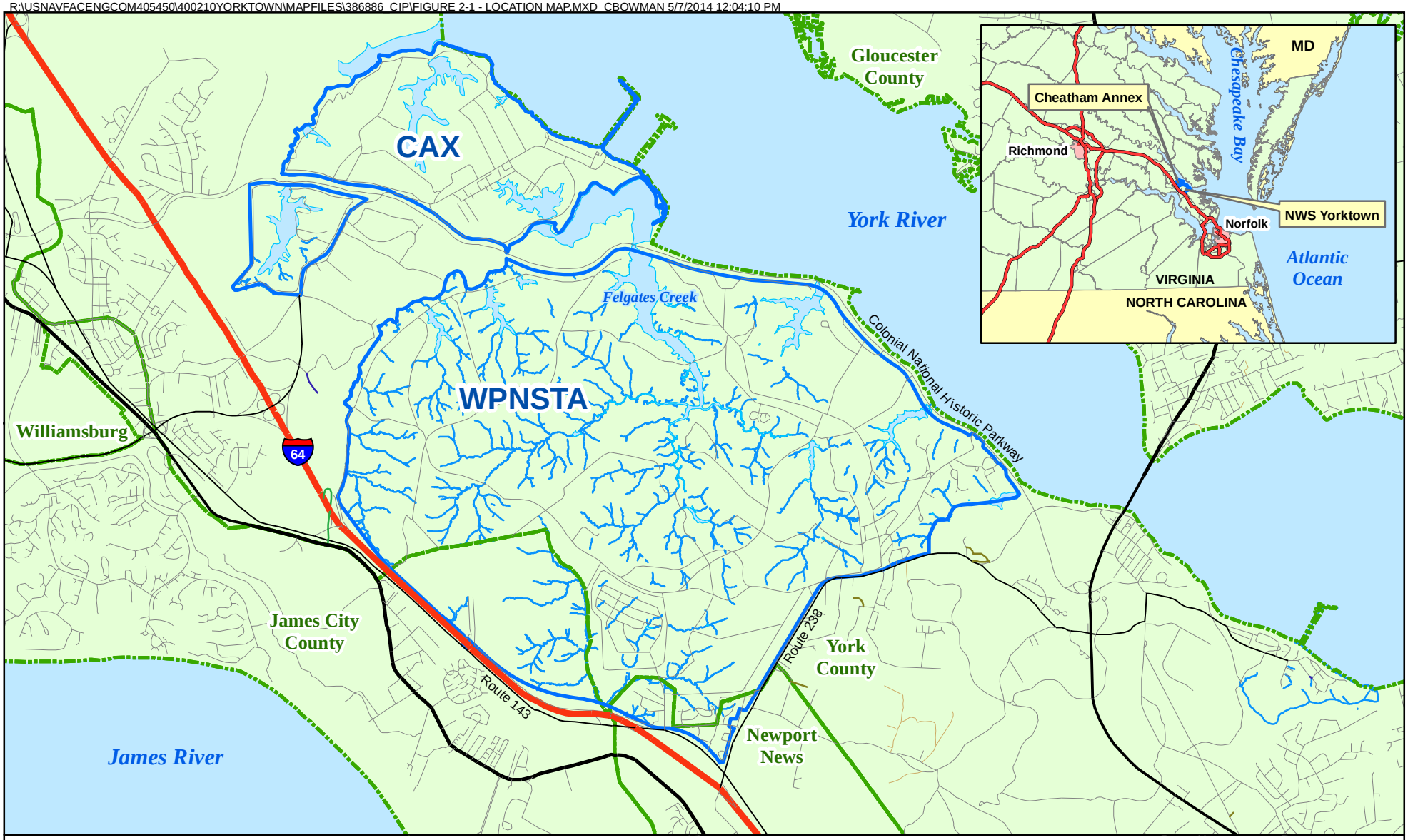
2.7.9.2 Site Closeout

The end point for all sites that enter the remedial action phase is closeout. A closeout is appropriate when no further response actions under the ERP are considered appropriate for the site.

2.7.9.3 NPL Delisting

Section 300.425(e) of the NCP identifies the actions that must be completed and the procedures to follow in deleting a site from the NPL. Sites having releases may be deleted from, or re-categorized on, the NPL, when no further response is appropriate.

R:\USNAVFACENGCOM405450\400210YORKTOWN\MAPFILES\386886_CIP\FIGURE 2-1 - LOCATION MAP.MXD CBOWMAN 5/7/2014 12:04:10 PM



Legend

Activity Boundaries

City/County Boundaries

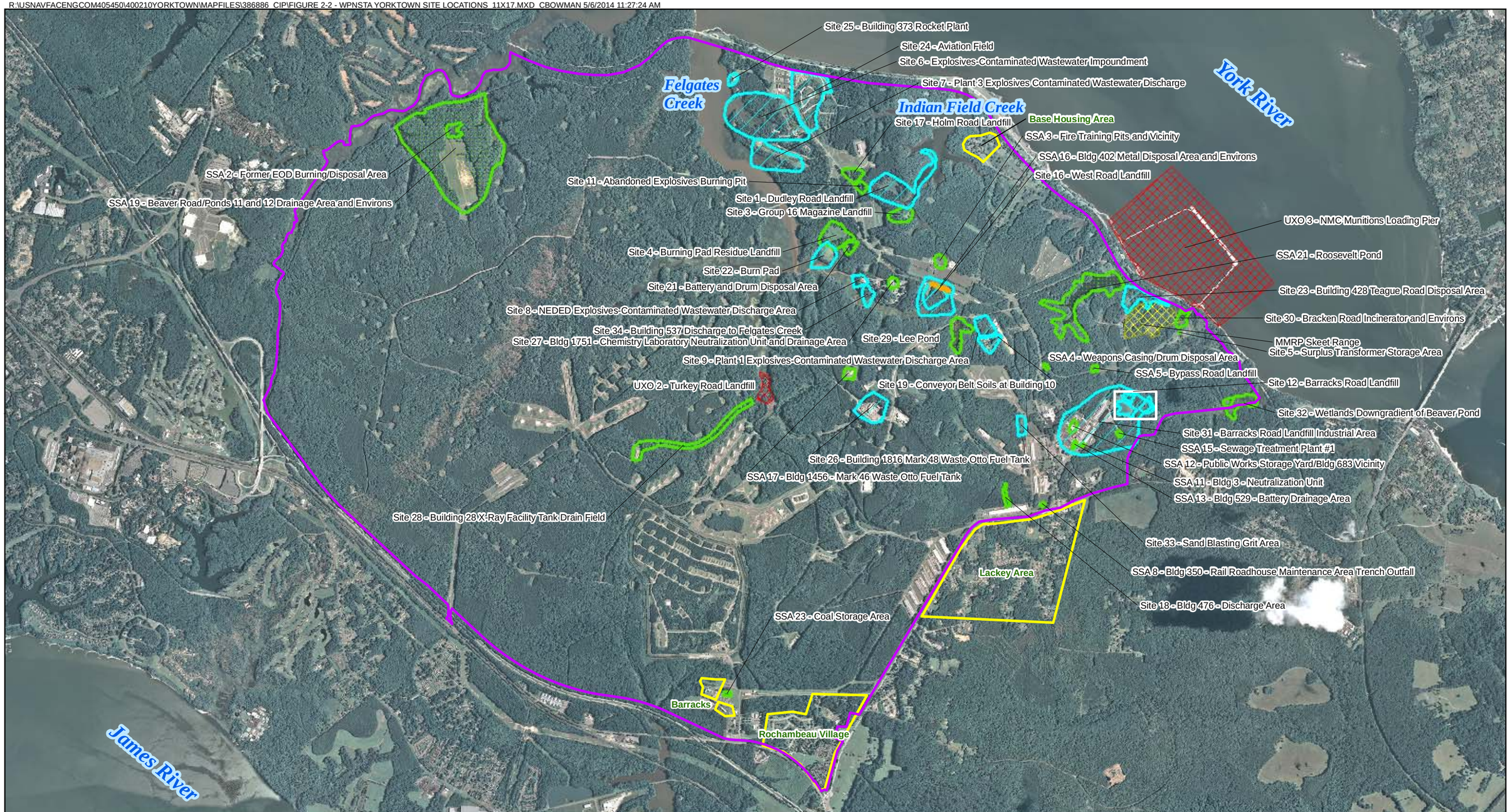
N

0 0.6 1.2 Miles

Figure 2-1
Location Map
Community Involvement Plan
WPNSTA Yorktown and Cheatham Annex

CH2MHILL

R:\USNAVFACENGCOM405450\400210YORKTOWN\MAPFILES\386886_CIP\FIGURE 2-2 - WPNSTA YORKTOWN SITE LOCATIONS_11X17.MXD_CBOWMAN 5/6/2014 11:27:24 AM



Legend

- Activity Boundary
- ARIFS
- NFA
- ASPSA
- MMRP
- NFA-MMRP
- Housing Areas

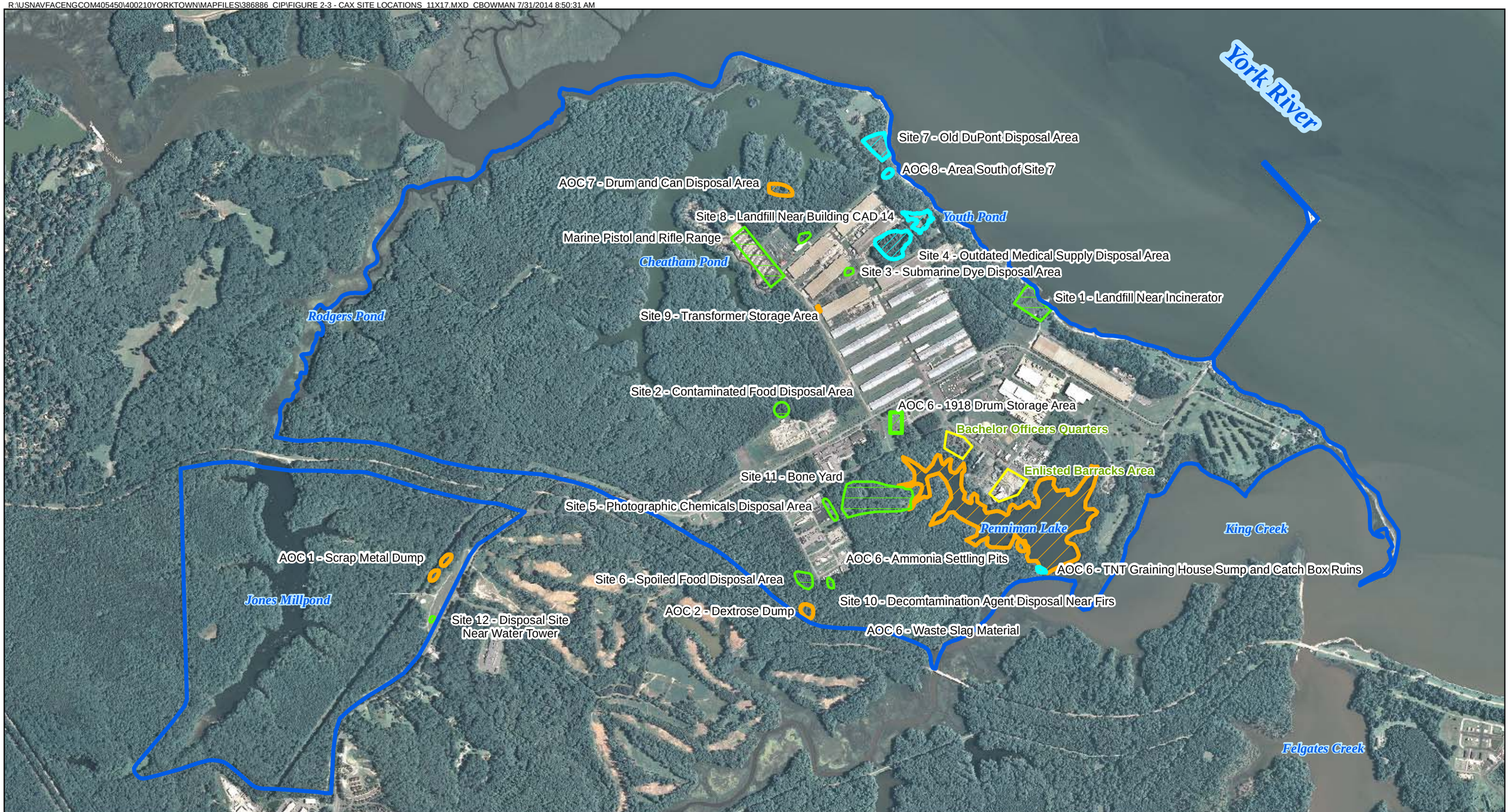
N

0 1,500 3,000 Feet

Figure 2-2
WPNSTA Yorktown Site Locations
Community Involvement Plan
WPNSTA Yorktown and Cheatham Annex

CH2MHILL

R:\USNAVFACENGCOM405450\400210YORKTOWN\MAPFILES\386886_CIP\FIGURE 2-3 - CAX SITE LOCATIONS_11X17.MXD CBOWMAN 7/31/2014 8:50:31 AM



Legend

- Activity Boundary
- Active RI/FS (one or more media) Site or AOC
- Active SI Site or AOC
- No Further Action Site or AOC
- Housing Areas

N

0 750 1,500 Feet

Figure 2-3
CAX Site Locations
Community Involvement Plan
WPNSTA Yorktown and Cheatham Annex

CH2MHILL

SECTION 3

Community Overview

3.1 Community Demographics

Approximately 75 percent of WPNSTA Yorktown is located within York County, and the remainder is situated in James City County and the City of Newport News. CAX is located entirely within York County.

Demographically, both WPNSTA Yorktown and CAX are located within the Virginia Beach-Norfolk-Newport News, VA-NC Metropolitan Statistical Area (MSA). An MSA is a delineated contiguous area of relatively high population density as defined by the federal government. The Virginia Beach-Norfolk-Newport News, VA-NC MSA includes four cities (Hampton, Newport News, Williamsburg, and Poquoson) and two counties (James City County and York County) on the Virginia Peninsula. It also includes two counties to the northeast (Gloucester County and Mathews County), two counties to the southwest (Surry County and Isle of Wight County), five cities to the south (Chesapeake, Norfolk, Portsmouth, Suffolk, and Virginia Beach), and one county to the south in North Carolina (Currituck County). As of the 2010 U.S. Census, population for the entire MSA was 1,676,822.

WPNSTA Yorktown and CAX are immediately surrounded by York County, James City County, and the City of Newport News, with the City of Williamsburg located just west of the bases. Therefore, demographic data were collected for these municipalities and are shown in Table 3-1. Data for the Commonwealth of Virginia are also shown for comparison.

3.1.1 Population

The population growth in York County from 2000 to 2010 was 16.3 percent, compared with 13 percent for the Commonwealth of Virginia. James City County experienced the most growth, with a population growth of 39.3 percent while the City of Williamsburg experienced a growth of 17.3 percent. The population of the City of Newport News remained stable

While all of these municipalities have grown in the past 30 years, York County and James City County have experience the most rapid population change. Table 3-2 shows regional growth from 1970 to 2007. Both York County and James City County are predominantly suburban counties. Although annual resident births have regularly outnumbered deaths, the majority of these counties' population growth is due to net migration – people moving into York County and James City County from other places (York County, 2013; James City County 2009).

TABLE 3-1
Census Data for Counties and Cities near WPNSTA Yorktown and CAX compared with Virginia

	Commonwealth of Virginia	York County	James City County	City of Williamsburg	City of Newport News
POPULATION					
Total Population 2000	7,712,091	56,297	48,102	11,998	180,697
Total Population, 2010	8,001,024	65,434	67,009	14,067	180,719
Percent change (2000-2010)	+13.0%	+16.3%	+39.3%	+17.3%	0.0%
RACE AND ETHNICITY[1]					
White	68.6%	76.4%	80.3%	74%	49.0%
Black or African American	19.4%	13.4%	13.1%	14%	40.7%
American Indian and Alaska Native	0.4%	0.4%	0.3%	0.3%	0.5%
Asian	5.5%	4.9%	2.2%	5.7%	2.7%
Native Hawaiian and Other Pacific Islander	0.1%	0.2%	<0.05%	0.0%	0.2%

TABLE 3-1
Census Data for Counties and Cities near WPNSTA Yorktown and CAX compared with Virginia

	Commonwealth of Virginia	York County	James City County	City of Williamsburg	City of Newport News
Two or more races	2.9%	3.4%	2.6%	3.5%	4. 3%
Hispanic or Latino[2]	7.9%	4.4%	4.5%	6.7%	7.5%
AGE[1]					
18 Years and Under	26.1%	28.9%	23.4%	24.9%	27.9%
65 Years and Over	12.2%	12.2%	20.6%	13.4%	10.6%
HOUSEHOLDS					
Persons per household, 2010	2.54	2.70	2.45	2.17	2.45
Homeownership rate, 2000	67.2%	75.2%	76.1%	43.7%	51.0%
ECONOMICS					
Per capita money income, 2010	$33,326	$36,020	$39,056	$23,007	$25,549
Median household income, 2010	$63,636	$82,454	$76,767	$50,865	$50,744
Persons below poverty, 2010	11.1%	5.4%	8.7%	18.4%	14.5%

1. 2010 estimate
2. Hispanic or Latino" is based on language and national origin and may include members of all the above racial groups.
Source: U.S. Census Bureau: State and County QuickFacts

TABLE 3-2
Population Growth, 1970-2010

Population	Commonwealth of Virginia	York County	James City County	City of Williamsburg	City of Newport News
1970	4,651,448	27,762	17,853	9,069	138,777
1980	5,346,797	35,463	22,339	10,294	144,903
1990	6,015,100	42,434	34,970	11,409	171,439
2000	7,712,091	56,297	48,102	11,998	180,697
2010	8,001,024	65,434	67,009	14,067	180,719
Percent change 1970-2010	+72.0%	+135.7%	+275.3%	+55.1%	+30.2%

Sources: U.S. Census Bureau, 1970-2010
U.S. Census Bureau: State and County QuickFacts

In terms of age, overall the United States' population is getting older. The baby boom generation has started to retire, birth rates are declining, and life expectancies are rising. Similarly, the Hampton Roads area in general and James City County in particular, also are aging. Regional trends suggest that the area's location, cost of living and quality of life are attracting retirees to the region, particularly military retirees (Hampton Roads Planning District Commission, 2013).

3.1.2 Employment

Employment in the Hampton Roads area is dominated by the military and military employment. The largest concentration of military in the United States is in the greater Hampton Roads area. Local military includes all five branches of the service -Army, Navy, Air Force, Marines, and Coast Guard – although the Navy makes up

86.7 percent of the active military personnel in the region (2008 Hampton Roads Statistical Digest). The military's share of York County's labor force shrank slightly between 1990 and 2000 (the military made up 12.4 percent of the County labor force in 1990 and 11.8 percent in 2000. (York County, 2005). However, in 2010, military made up 14.0 percent of the County Labor force (York County, 2013)

Table 3-3 shows military employment at WPNSTA and CAX.

TABLE 3-3
Military Employment at WPNSTA Yorktown and CAX

Base	Active-Duty	Civilian	Reservists	Contractors	NAF	TOTAL
WPNSTA Yorktown	830	628	322	201	84	2065
CAX	508	165	195	247	50	1165

NAF = Non-Appropriated Fund Employee

Source: WPNSTA Yorktown Administrative Officer, November 2006

Primary businesses in the region include military installations, shipyards, and tourism. The largest private sector employers are Northrop Grumman Newport News Shipbuilding and Sentara Healthcare, both with more than 15,000 employees. Major manufacturing companies with more than 1,000 employees include Measurement Specialties, Inc., Canon Virginia, BEA Systems Norfolk, and STIHL Inc. Major non-manufacturing companies in the region include: Riverside Regional Medical Center, Dominion Enterprises, Chesapeake Regional Medical Center, Portfolio Recovery Associates, FHC Health Systems, MANCON, Inc. and Cox Communications, Inc. (Virginia Hampton Roads Regional Overview, 2007).

Major tourist attractions include Colonial Williamsburg, Busch Gardens, and Water Country USA, in addition to historic sites at Jamestown and Yorktown.

3.2 Community Setting

Figure 3-1 shows WPNSTA Yorktown and CAX in relation to residential areas, schools, parks, and other specific community attributes, as described in this section.

3.2.1 Proximity to Area Residents

The nearest residents to the hazardous waste sites at WPNSTA Yorktown are located within the base boundary, while at CAX they are located outside the base boundary. Within the WPNSTA Yorktown boundary, Site 1 is physically the closest active (i.e., investigation continues) site to any residential area (Figure 2-2); however, Indian Field Creek separates those homes from Site 1 and the homes are topographically upgradient from Site 1. There are no active sites within a mile of the base barracks or the largest WPNSTA residential area, Hamilton Redoubt, which consists of approximately 232 family dwellings and is located in the southernmost portion of the base. Beyond the WPNSTA Yorktown perimeter, the closest private residences are located directly outside Gate 1 in the small community of Lackey. The closest active site to Lackey is Site 31, which is approximately 2,000 feet to the north-northeast (Note: Site 18 is inactive and was a small drainage channel that drains north, opposite direction of Lackey, and the site has been closed with no hazardous waste issues remaining.)

Beyond the CAX perimeter, the closest private residences are along State Route 641 (a.k.a. Penniman Road) about a mile from the CAX main gate. These residences are closest to CAX's Jones Pond area, which has two sites within its confines - Site 12 and AOC 1 (Figure 2-3). Site 12 has been closed with no hazardous waste issues remaining. AOC 1 is currently under investigation and is located within two adjacent ravines, which means it is downgradient of the homes.

3.2.2 Proximity to Schools or Playgrounds to the Site

The closest schools to WPNSTA Yorktown and CAX are:

- James River Elementary Schools in James City County (approximately 0.8 miles southwest of WPNSTA Yorktown)
- Magruder Elementary School in York County (approximately 1.3 miles west of CAX)
- Queens Lake Middle School in York County (approximately 1.3 miles west of CAX)
- Lee Hall Elementary School in the City of Newport News (approximately 1.3 miles south of WPNSTA Yorktown)
- Matthew Whaley Elementary School (approximately 3 miles west of CAX)
- Yorktown Elementary School in York County (approximately 3.5 miles southeast of WPNSTA Yorktown)
- Yorktown Middle School in York County (approximately 3.5 miles southeast of WPNSTA Yorktown)
- York High School/Yorktown River Academy in York County (approximately 3.5 miles southeast of WPNSTA Yorktown)
- Waller Mill Elementary School (approximately 3.8 miles west of CAX)
- Rawls Byrd Elementary School (approximately 4.5 miles south-southwest of CAX)

Other private daycare centers, preschools, and church schools are also located in the communities surrounding WPNSTA Yorktown and CAX.

Both the public and private schools have playgrounds and playing courts and fields (e.g., soccer and baseball fields, tennis courts, etc.)

3.2.3 Presence of Livestock, Crops, or Other Vegetation

There are no large commercial farms in the area. Some WPNSTA Yorktown and other area residents may maintain their own small gardens.

3.2.4 Location of a Public Water Supply

The nearest reservoir is the Skiffes Creek Reservoir, located in Lee Hall. This water supply system is operated by the City of Newport News, and supplies WPNSTA Yorktown, CAX, as well as surrounding area residents. This area is not a drainage receptor for any of the sites.

3.2.5 Proximity to Recreational Lakes, Ponds, Rivers, Streams, and Parks

Several unnamed ponds are used for fishing at WPNSTA Yorktown and CAX. The main surface water drainage receptors for WPNSTA Yorktown - Felgates Creek and Indian Field Creek - are not used for recreation. However, the York River is heavily used for both commercial and recreational fishing and crabbing. Commercial and pleasure boat traffic is moderate along the river.

Penniman Lake, Youth Pond, Jones Pond, and Cheatham Pond on CAX are used for passive recreation. Fishing at Penniman Lake and Youth Pond is catch-and-release.

The surrounding area also has several parks including the Colonial National Historical Park, New Quarter Park, the Yorktown battle trenches and battlefields, and the Yorktown Victory Center. The Colonial National Historical Park, Yorktown battles trenches and battlefields offer hiking and interpretive trails. The Yorktown Victory Center is an historic park, with a visitor center, interpretive walkway, and re-created Continental Army encampment. York County's New Quarter Park, located immediately west of CAX, has picnic shelters, hiking trails, an 18-hole disc golf course, basketball and sand volleyball courts, a softball field, horseshoe pits, and a large playground. Charles E. Brown Park is located in the village of Lackey, just outside WPNSTA Yorktown Gate 1. Park facilities include: a baseball diamond, basketball and tennis courts, a playground, and a nature trail.

Several public and private golf courses are situated nearby, and a golf course is located at WPNSTA Yorktown and at CAX.

3.3 History of Community Outreach

3.3.1 WPNSTA Yorktown

WPNSTA Yorktown has maintained a low profile in the community due to the nature of its mission and the nature of materials handled there. It employs many people in the surrounding areas; thus, the nearby communities have a close working relationship with WPNSTA Yorktown. For these reasons, WPNSTA Yorktown did not have a formal Community Relations Plan until 1991. Instead, WPNSTA Yorktown responded to community concerns as they arose.

The Public Affairs Office has maintained a working relationship with the public, elected officials and media throughout the years. When an information inquiry was received, the PAO addressed the query, and if it did not deal with classified information, the PAO prepared the desired data for release. Tours of WPNSTA Yorktown had been given previously to public officials and media representatives to establish a relationship of mutual understanding.

WPNSTA Yorktown participated in community events and celebrations to foster closer ties with the community. WPNSTA Yorktown assisted civic ventures by setting up bandstands for parades and special celebrations, and by helping to clear highway litter. WPNSTA Yorktown also had onsite community activities such as the Red Cross Blood Drive and seasonal festivals.

The WPNSTA Yorktown/CAX Restoration Advisory Board (RAB) was established in 1994, taking over the functions of the former CAX TRC, which first met in March 1989 and is described in the next section. The WPNSTA Yorktown/CAX RAB continues to meet twice a year.

Since the initial community relations program was implemented in the late 1980s and early 1990s, regular community relations activities have been conducted to support the ERP. These activities have included fact sheets, brochures, and presentations to explain work at specific sites; regular RAB meetings; and public notices, public meetings, and a public comment period for applicable documents/milestones at specific sites. Site tours and briefings have been conducted, as needed, primarily for RAB members (the most recent site tour with RAB members was conducted in November 2012). Public meetings generally attract small groups of local residents and media attention has been sparse. Community relations activities are documented in the community relations section of the Administrative Record (AR).

3.3.2 CAX

Initially, CAX was part of the Naval Supply Center and community relations activities were conducted in conjunction with Yorktown Fuels and Craney Island. On December 1988, the first TRC was established. Letters were sent to a variety of local organizations and government agencies asking them to nominate two potential TRC members, one from the organization and one from the community.

The first TRC meeting was held on January 6, 1989 at Yorktown Fuels. It included an introduction to the ERP and a windshield tour of the sites. Members included representatives from local government and the National Park Service, as well as community members.

Approximately 1 month after the first TRC meeting was held, an article on CAX appeared in the local newspaper discussing the ERP at York County Navy facilities including CAX. Two specific issues, a dye spill in the York River and waste syringes that had been found in deer hooves, were discussed. Both of these issues were historic and had been resolved. CAX was also mentioned in a number of articles that discussed regional environmental issues on military facilities.

A CRP for three naval supply center facilities, including CAX, was prepared in 1992. To prepare the plan, the Navy conducted community interviews. At the time the CRP was developed, there appears to have been minimal

interest in CAX. This may be a result of the environmental issues at Yorktown Fuels and Craney Island, which attracted more public attention.

In 1993, an introductory fact sheet was developed for CAX and made available to the public. At that time, Sites 1, 10, 11, and 12 were being investigated as part of the ERP. The fact sheet discussed the program in general and provided photographs and background information on the four sites.

Public interest in the ERP continued to wane until the TRC was disbanded. Since operational control of CAX was reassigned to WPNSTA Yorktown, the WPNSTA Yorktown RAB jointly addresses community concerns for WPNSTA Yorktown and CAX.

3.4 Community Issues and Concerns

3.4.1 Past Community Issues and Concerns

3.4.1.1 1991 Community Issues and Concerns

To support the initial CRP, community interviews were conducted in 1991 to inform the community, primarily through elected officials, public agencies, interest groups and concerned citizens, of the ERP and the sites at WPNSTA Yorktown. Additionally, it was of paramount concern to obtain feedback from the community-at-large on the perception of WPNSTA Yorktown, and the reaction concerning placement of WPNSTA Yorktown on the NPL as a Superfund Site.

Twenty-six people were interviewed by the consultant team. The WPNSTA Yorktown PAO interviewed additional citizens. Attempts were made to speak with a wide variety of individuals representing local and state government, community groups, and educational groups. Citizens representing the area closest to the station, the community of Lackey, were also interviewed.

The 1991 community interview results indicated that the community was concerned with three main issues:

- **Water** – Those who rely on the York River for their income and public officials voiced concern about water. Surrounding areas, like James City County, have water supply problems and citizens were concerned with possible migration of WPNSTA Yorktown contaminants to the water supply. Additionally, one of the reservoirs for Newport News is within 4 miles of WPNSTA Yorktown. The working watermen of the Gloucester area had concerns with York River pollution because fishing and crabbing depend on the water quality of the York River. York County has approximately 200 miles of shoreline, which is vital to the tourist economy. "No Fishing/Swimming" signs had already appeared on parts of the shoreline, and citizens were concerned about beach closures due to contamination or other causes. Lastly, many people expressed concern for the possible effects of York River pollutants upon the Chesapeake Bay.
- **Money** – This issue centered on adequate funding availability to clean up the hazardous waste sites. Citizens and officials alike expressed a lack of confidence with waste site cleanup in Virginia, and doubted whether sufficient funds would be appropriated, or if the sites would actually be cleaned up.
- **Validity of Information** - Due to the high security nature of WPNSTA Yorktown, the PAO could not release all requested information to the public. However, the Navy planned to release all environmental information to the public. Citizens expressed surprise at this change in the information release policy, but expressed concern that WPNSTA Yorktown would be thought to be hiding a larger problem or masking information. Citizens commented that WPNSTA Yorktown would always be thought to be telling only part of the story based upon past history. In general, misunderstanding and misinformation was cited as a major concern, having the potential to fuel rumors and cause WPNSTA Yorktown to lose credibility.

Reviewing all the interview responses, it appeared that skepticism of the government's commitment, financial and otherwise, would be a community relations concern until actual cleanup progresses, and the community could see physical progress. The overall response from the community interviews was otherwise very positive.

After the community relations interview with a reporter, an article appeared, describing the hazardous waste sites. With the exception of two misquotes, the article was factual. No citizen calls in reaction to the article were recorded by the PAO. This article is one of the first published with detailed site information.

3.4.1.2 2007 Community Issues and Concerns

In 2007, a series of articles ran in the *Daily Press*, focusing on environmental "destruction" at a number of regional military bases, including WPNSTA Yorktown and CAX. The Navy's Remedial Project Manager (RPM) at the time, Ms. Linda Cole, invited the reporter for a tour of some of the sites. A subsequent article was printed with additional photos. The article did not generate any contact from the public.

3.4.1.3 2008 Community Issues and Concerns

To support the 2009 CIP update, a total of 3,141 written survey was mailed to residents living within 1 mile of the WPNSTA Yorktown and CAX base boundaries in May and June 2008. In addition, written surveys were handed out at tenants' meetings on the bases and were available to base residents and employees through the Public Affairs Office. To supplement the data received through the written surveys, telephone and in-person interviews were conducted in January and February 2009. Seven people - representing County government, a civic organization, RAB members, and an environmental organization - agreed to participate in telephone or personal interviews.

In summary, both the written survey responses and the results of the personal interviews revealed the following:

1. The local populace generally trusts the Navy and feels that the Navy has a good relationship with the community; the Navy is a good neighbor.
2. Local residents are generally, but not specifically, aware of environmental contamination on the bases and activities to address the contamination;
3. Respondents were almost universally <u>unaware</u> of ways to get more information, such as RAB meetings and the Information Repository; and
4. Respondents want more information about ER at WPNSTA Yorktown and CAX.

3.4.2 Process to Assess Current Community Issues and Concerns

To update this CIP, a written survey was prepared and mailed to residents living within 1 mile of the WPNSTA Yorktown and CAX base boundaries. A total of 2,733 surveys, along with self-addressed stamped envelopes, were mailed in May 2014. A total of 118 survey responses were received, representing a 4 percent response rate. Appendix C contains a copy of the written survey.

To supplement the data received through the written surveys, telephone and in-person interviews were also conducted in May 2014. As requested by the WPNSTA Yorktown Deputy Public Works Officer (DPWO), the County Administrator for York County, the Assistant County Administrator for James City County, the City Manager for the City of Newport News, and the Superintendent for the National Colonial Parkway were contacted to request an interview. After several attempts to contact these individuals, only two agreed to participate in telephone or personal interviews. The questions asked in the community interviews followed the questions in the written survey, but were more open-ended to encourage the interviewee to elaborate on their responses. Appendix D contains a copy of the questions used for the in-person and telephone interviews.

3.4.3 Current Community Issues and Concerns

The following are highlights of the results of the written community survey. Appendix E provides more details on these results, including the written comments that were provided.

- The majority of those participating in the survey live off-base in the neighboring community (93 percent) and have never worked at either WPNSTA Yorktown or CAX (85 percent).
- 62 percent of respondents were <u>not</u> aware of the Navy's ERP, which is actually a lower percentage than identified during the 2009 CIP update (74 percent).

- 67 percent of respondents were not aware that the Navy is conducting environmental studies at WPNSTA Yorktown and CAX, again, a lower percentage than identified during the 2009 CIP update (74 percent).
- 85 percent of respondents (as opposed to 96 percent in 2009) were not aware of the existence of the RAB and the RAB meetings. Of the 18 respondents who were aware, nine had attended RAB meetings. Out of these nine respondents, three of them attended only one RAB meeting, one person attended RAB meetings occasionally, and five people attend RAB meetings frequently. The majority of attendees found the meetings to be very informative.
- Reasons cited as not attending RAB meetings included: not aware (77 percent), not interested (10 percent), and inconvenient time of day (8 percent), date (4 percent) or location (1 percent).
- 86 percent of respondents were not aware that there is a Navy contact who may be reached for information regarding the ERP for both WPNSTA Yorktown and CAX.
- 91 percent of respondents were not aware that the Navy places WPNSTA Yorktown and CAX documents in the York County Public Library for public review, a lower percentage than identified during the 2009 CIP update (96 percent). Of the 11 respondents who were aware, three had reviewed documents at least once. All respondents found the document easy to find, review, and provide comments.
- Reasons cited as not reviewing WPNSTA Yorktown or CAX documents at the York County Public Library included: not aware (78 percent), not interested (15 percent), inconvenient location (2 percent), and other reasons (5 percent).
- 80 percent of respondents were not aware that public notices are periodically run in the Daily Press and VA Gazette, also a lower percentage than identified during the 2009 CIP update (94 percent). However, only 38 of the respondents actually receive either the Daily Press or VA Gazette.
- 13 percent of respondents have seen a WPNSTA Yorktown or CAX ERP Public Notice. The majority saw the public notice in the Daily Press (70 percent).
- 92 percent of respondents were not aware that these are ERP public websites for WPNSTA Yorktown and CAX. Of the nine respondents who were aware, half of them had viewed either the WPNSTA Yorktown or CAX website and all found the information useful (one respondent who was aware of the public website did not respond on whether they had viewed either website).
- 89 percent of respondents own a computer.
- 49 percent of respondents believe (either strongly or just below strongly) that the Navy is concerned about protecting human health and the environment through the ERP at WPNSTA Yorktown and CAX.
- 49 percent of respondents have confidence (either a lot of or just below a lot of) in the Navy's ability to investigate and cleanup contaminated sites at WPNSTA Yorktown and CAX.
- Of the 50 percent of respondents who had an opinion on the Navy's communication with the community regarding the ERP, 15 percent ranked the Navy's communication as above average or excellent.
- Of the 59 percent of respondents who had an opinion on the relationship between the WPNSTA Yorktown and CAX ERP and the community, 20 percent ranked the relationship as needing only a little improvement or not needing any improvement.
- 63 percent of respondents did not have any concerns regarding environmental site investigation and cleanup at WPNSTA Yorktown and 70 percent of respondents did not have any concerns regarding environmental site investigation and cleanup at CAX.
- Of those that were concerned regarding environmental site investigation and cleanup at WPNSTA Yorktown and CAX, all were equally concerned about impacts to health (26 percent), impacts to other's health (22 percent), impacts to wildlife (25 percent), and impacts to the York River and other water bodies (24 percent).

Results of the telephone and personal interviews revealed the following highlights:

- The interviewees were aware that the Navy has an ERP that manages the investigation and cleanup of historical disposal sites ad that there are ongoing investigations and cleanup activities being conducted at WPNSTA Yorktown and CAX.
- The interviewees were aware that there is a RAB that meets with the public twice a year, but they themselves had not attended a meeting.
- The interviewees were aware that other public meetings are periodically held to solicit input from the public on upcoming ERP decisions, but they themselves had not attended a meeting.
- One of the interviewees mentioned he works with the Navy RPM for WPNSTA on a regular basis and reviews documents when they are submitted.
- The interviewees' attitude toward the bases is favorable, and they tend to be pro-military and pro-Navy.
- None of the interviewees could recall seeing a public notice in the newspaper advertising a RAB or public meeting.
- The interviewees felt the Navy does a good job of communicating with the community regarding ERP environmental investigation and cleanup at WPNSTA Yorktown and CAX.
- The interviewees felt that the Navy was concerned about protecting human health and the environment and have confidence in the Navy to investigate and cleanup contaminated sites at WPNSTA Yorktown and CAX.
- The interviewees did not have any concerns regarding the environmental site investigation and cleanup at WPNSTA Yorktown or CAX.

In summary, both the written survey responses and the results of the personal interviews revealed the following:

1. The majority of respondents did not have any concerns regarding environmental site investigation and cleanup at WPNSTA Yorktown or CAX;
2. While respondents were almost universally unaware of ways to get more information, such as RAB meetings, the Information Repository, and the public websites, the percentage of those who were unaware decreased between 2009 and 2014;
3. Of those respondents who were aware of the ways to get more information, they found the information to be easy to find and informative, and;
4. Respondents want more information about ER at WPNSTA Yorktown and CAX.

R:\USNAVFACENGCOM405450\400210YORKTOWN\MAPFILES\386886_CIP\FIGURE 3-1 - COMMUNITY MAP.MXD CBOWMAN 7/31/2014 9:02:13 AM

Legend
- Activity Boundaries
- City/County Boundaries
- Parks

N

0 1 2 Miles

Figure 3-1
Community Setting
Community Involvement Plan
WPNSTA Yorktown and Cheatham Annex

CH2MHILL

SECTION 4

The Community Involvement Program

The main goal of the WPNSTA Yorktown/CAX CIP is to achieve effective, open communication between WPNSTA Yorktown and CAX, and the communities of York and James City counties; the cities of Newport News and Williamsburg; the VDEQ, and USEPA Region III.

As a result of the community interviews and ongoing community involvement activities, the Navy has identified the information and methods of communication that community members would prefer. This section provides details of the community involvement activities currently being conducted for WPNSTA Yorktown and CAX, and those that will be implemented based on the results of the community survey and interviews described in Section 3.4.3.

WPNSTA Yorktown has always had a cooperative relationship with the community, but until the ERP, WPNSTA Yorktown and CAX never had to focus on informing and educating the public about environmental issues. The effectiveness of the WPNSTA Yorktown/CAX community involvement program is dependent on timely and accurate information dissemination, feedback from the public, the Navy's response to community concerns, and an effective dialogue with the regulatory agencies. The Navy is committed to a proactive community involvement program, supplying complete information to the community in a timely fashion and in a clear, concise form.

This CIP has been prepared to document local community issues of concern as expressed through written community surveys, telephone and in-person community interviews, as well as comments made at RAB meetings, Public Meetings, and/or following a document review. As community response is an integral component of the CIP's success, it has been purposefully designed to provide concerned citizens, elected officials, interest groups and others an avenue to express their ideas and concerns. Finally, an open relationship among regulatory agencies, the community, and WPNSTA Yorktown and CAX is necessary to foster the free flow of ideas, information, and mutual trust.

4.1 Objectives of the Community Involvement Program

The main objectives of the community involvement program are to:

1. Inform all participants in the ERP of the CIP and encourage their cooperation.
2. Assure the community at large that the health, welfare, and safety of their environment is of the utmost importance to the Navy (WPNSTA Yorktown and CAX).
3. Provide information, in non-technical terms and in a proactive manner, concerning the ERP in general, and the sites at critical stages in the process to all members of the civilian and military community, elected officials, and federal and state regulatory agency staff in a timely manner.
4. Provide all interested members of the civilian and military community, elected officials, and federal and state regulatory agency staff opportunities and avenues to present opinions and ideas during the ERP process.
5. Provide the media with interviews, briefings, and requested information, as available, in a timely manner to ensure accurate coverage of the ERP events.
6. Swiftly and effectively respond to expressed concerns of the civilian and military community, elected officials, and federal and state regulatory agency staff.
7. Cultivate and maintain a cooperative and productive, two-way dialogue with the civilian and military community, elected officials, and federal and state regulatory agency staff by a proactive PAO to ensure a climate of trust and understanding during the ERP process.
8. Provide one point of contact through which all inquiries are directed to ensure continuity and reduce confusion.

9. Evaluate the effectiveness of the CIP during the ERP process and revise its methods and activities as deemed appropriate.

4.2 Recent Community Involvement Activities

The Navy has implemented many community involvement activities in conjunction with the ERP at WPNSTA Yorktown and CAX. Many of these activities are required under CERCLA regulations and guidance, while some activities are additional.

Table 4-1 lists required and additional activities that are currently or have recently been conducted. Section 5 contains a table providing more details about the community involvement activities required at various technical steps in the remediation process.

TABLE 4-1
Required and Additional Community Involvement Activities Conducted at WPNSTA Yorktown and CAX

Required Activities	Additional Activities
Designate Navy Contacts	
Maintain mailing list	List Includes those community members who wanted to receive additional information after taking the 2008 CIP Survey and will be updated with those community members who want to receive additional information after taking the 2014 CIP Survey. Regular mail and email lists will be maintained
Maintain Information Repository	
Maintain Administrative Record	The Administrative Record is available for public download on the public websites.
Fact Sheets	
Five-Year Review	Fact sheet on catch-and-release fishing at CAX, May 2007
	Fact sheet on indoor air quality at Sheds 3 – 6 at Site 31, 2012
RAB meetings	
Display ad for RAB meetings	Conduct Site visits with the RAB members on an occasional basis
PP	
Display ad for PP	
Public comment period	
Public meeting	
Meeting transcript	
Responsiveness Summary	
CIP	
Community interviews	Written survey

Source: Superfund Community Involvement Handbook (USEPA, 2002)

4.3 Current and Future Community Involvement Activities

In spite of the Navy's efforts to implement not only required community involvement activities, but also some additional activities, the community interviews and surveys indicate that the local population:

- generally is unaware of the status and progress of the ERP at WPNSTA and CAX;
- generally is unaware of how to get more information; and
- is interested in getting more information about environmental restoration activities at WPNSTA and CAX.

Therefore, the remainder of this section describes details of current and future community involvement activities that will be implemented to continue to meet the information needs of the local community.

4.3.1 Designate Navy Contacts

Description: Provide points of contact and information resources to respond to inquiries from the public.

Goal: Provide accurate, timely, and easy-to-understand information to community members seeking information about the ERPs at WPNSTA Yorktown and CAX.

Current Implementation: The Navy designated Mr. Mark Piggott, the Navy PAO for WPNSTA Yorktown and CAX, as its primary point of contact for the ERP at these bases in 2007. Mr. Piggott is listed as the primary point of contact on the WPNSTA Yorktown and CAX its ERP Web sites and in all articles, announcements, and advertisements. As the primary point of contact for the ERP for WPNSTA Yorktown and CAX, Mr. Piggott serves as the central information source for public and media inquiries. As the key spokesperson, he is responsible for answering telephone calls and responding to written inquiries about site activities. In addition, Mr. Piggott will keep the region's PAO informed of ongoing issues involving the CIP. Mr. Piggott provides daily updates to the region's PAO that are seen by Commander Navy Region Mid-Atlantic and Commander Navy Installations Command. Mr. Piggott's contact information is provided in Appendix F.

Mr. Bryan Peed from NAVFAC MIDLANT is the RPM for the investigation and clean-up of the WPNSTA Yorktown ERP sites and took over this role in June 2014. Mr. Scott Park, also of NAVFAC MIDLANT, is the RPM for the investigation and clean-up of CAX ERP sites and took over this role in March 2012. While the public may contact Mr. Peed or Mr. Park directly, they may refer calls to Mr. Piggott, the designated Navy contact person.

Planned Implementation: The Navy will continue to publicize Mr. Piggott as the primary point of contact on its ERP Web site and in all articles, announcements, and advertisements.

Timing: Ongoing

4.3.2 Mailing List of Interested Parties

Description: A mailing list of persons known to be interested in WPNSTA Yorktown and CAX and ERP activities. The list may include mailing addresses, as well as e-mail addresses.

Goal: To provide project information to stakeholders who want to be kept informed about ERP activities**.**

Current Implementation: Currently, the Navy maintains two mailing lists for the RAB, one regular mail and one e-mail list. These mailing lists were created as a direct result of the written surveys received when the 2009 CIP was completed. The RAB members and interested parties receive notification of the RAB meeting by regular mail or/e-mail (as they have designated). Those interested parties who attend the RAB meetings receive meeting minutes by e-mail.

Planned Activity: The Navy will update the mailing lists developed from community surveys and the list of community contacts, and then will continue to maintain and update this list of interested parties. Interested citizens and groups will be added to the list upon request.

The updated mailing list will be maintained in a database to facilitate sorting and printing labels for different types of mailings. In addition, e-mail addresses will be maintained to the extent possible, to enable the Navy to send out electronic notifications. The Navy will use this updated mailing list (electronic and print) to send notifications of upcoming activities, such as RAB meetings and public meetings, as well as proposed plans and other site activities.

Timing: Ongoing

4.3.3 Web Site

Description: Internet technology allows new information to be made available quickly, and enables information to be delivered in a user-friendly manner, at the convenience of the user. Increasingly, people rely on the Internet to obtain information. Furthermore, maintaining a Web site rather than printing large numbers of documents and fact sheets saves paper and money spent on printing and mailing.

Goal: To enable community members to access key information about CERCLA in general and more detailed information about the ERPs at WPNSTA Yorktown and CAX on their own time and at minimal expense.

Current Implementation: The Navy has established a public Web site for information about ER at WPNSTA Yorktown (http://go.usa.gov/DynG) and CAX (http://go.usa.gov/DynP). The Web sites provide historic and overview information about the ERP, as well as contact information and AR documents.

In addition, the USEPA maintains site information specific to WPNSTA Yorktown and CAX on the Internet at (http://www.epa.gov/superfund/sites/npl/nar1586.htm). General information about USEPA and CERCLA can be found at the USEPA Headquarters Web site (http://www.epa.gov). Links to these sites are provided on the WPNSTA Yorktown/CAX Web site.

Planned Implementation: The Navy will continue to update the website on a regular basis. When significant actions occur, such as remedial construction, photos and updated information may also be added to the Web site. Documents such as fact sheets, final RAB minutes, this updated CIP, annual Site Management Plan Update, the Five-Year Review, and other documents of interest to the public will also be posted on the Web site.

Timing: Ongoing.

4.3.4 Information Repository

Description: The Information Repository is a one-stop collection of documents for the public, where people can easily find information about CERCLA in general and the status of the cleanup and remediation at project sites. It should be located in a convenient public location where community members can read and copy official documents about the status of the WPNSTA Yorktown and CAX ERPs.

Goal: To provide convenient access to site-related information for community members.

Current Implementation: An Information Repository has been established in the York County Public Library, in Yorktown, approximately 4 miles from Gate 3 of WPNSTA Yorktown. As of June 2014, the Information Repository for WPNSTA Yorktown and CAX consists of an AR index for WPNSTA Yorktown and an AR index for CAX. In addition, copies of the most recent SMPs for both WPNSTA Yorktown and CAX are also located in the Information Repository. Documents that are available for public review are placed in the library and then removed again after 30 days or after a public comment period has ended.

Planned Implementation: The Navy will continue to use the York County Public Library as the Information Repository location since RAB meetings are also held there. This location has been convenient and centrally located for RAB meetings, and is an easy-to-find location on a main street. Table 4-2 shows the locations and hours of the York County Public Library.

TABLE 4-2
Public Information Repositories

Status	Information Repository Location	Address and Telephone	Hours	Distance from WPNSTA Yorktown
Current	Yorktown Library	8500 George Washington Memorial Highway Yorktown, VA 23692 (757) 890-3377	Mon-Thurs 10am-9pm Friday 10am-6pm Saturday 10am-5pm Sunday 1pm-5pm	4.0 miles

The Navy will seek to expand the content of the Information Repository to include more general information about CERCLA. Documents prepared as handouts for RAB or public meetings may also be left in the repository for a specified period of time following the meeting.

Every fact sheet and public notice that is issued about the WPNSTA Yorktown and CAX ERPs should identify the location of the Information Repository.

Timing: Ongoing. The Information Repository will be maintained as needed for documents available for public comment.

4.3.5 Maintain the AR File

Description: The AR includes documents that were considered or relied upon in selecting a response action.

Goal: To provide community members with a comprehensive record of all documents, resources, etc. used by the Navy in reaching all decisions about the NPL site and its cleanup.

Current Implementation: For WPNSTA Yorktown and CAX, copies of AR documents are available by contacting the PAO or the Navy RPMs. In addition, electronic versions of AR documents are available on the WPNSTA Yorktown and CAX public websites (web addresses provided in Section 4.3.3).

Planned Implementation: The Navy will continue to update the AR file as needed.

Timing: The AR was opened as soon as site investigations began and it will remain open until the last ROD has been signed. After the last ROD has been signed, the AR may be closed but a records file may remain open for post-ROD documents, such as the Five-Year Review. Instead, the Navy may choose to keep the AR open until the bases have been de-listed from the NPL.

The Navy will continue to update the AR file as needed and will update the index available on the Web site and in the Information Repository semi-annually or more often, as needed.

4.3.6 Prepare and Distribute Fact Sheets

Description: Fact sheets are brief documents intended to inform stakeholders about technical information and progress of the investigation and cleanup process. Fact sheets are written for non-technical audiences and use straightforward graphics to describe technical issues.

Goal: To provide stakeholders with current, accurate, easy-to-understand information about the Navy's environmental investigations and munitions response activities at WPNSTA Yorktown and CAX.

Current Implementation: The Navy currently produces fact sheets as required (such as for a Five-Year Review) or as needed to communicate a specific on-base issue (such as the 2007 Catch-and-Release Fishing fact sheet related to on-base pond fishing or the Indoor Air Quality fact sheet for Sheds 3 – 6 at Site 31). Fact sheets are distributed various ways. Those related to the ERP (such as for a Five-Year Review) are given out at a RAB meeting, mailed to the RAB mailing list, placed in the York County library (where the RAB meetings are held), and placed in common areas of base housing. For specific on-base issues, such as Catch-and-Release for fishing on-base water bodies, the Morale, Welfare, and Recreation office informs recreational users through flyers/fact sheets and posting signs, as appropriate. For the indoor air evaluation at WPNSTA, fact sheets were distributed to building occupants and a meeting was held to review the fact sheet and answer any questions by the occupants.

Planned Implementation: WPNSTA Yorktown and CAX ERP and public affairs staff will continue to develop required fact sheets, such as for 5-Year Reviews and Completion of Remedial Design. For proposed remedial actions that require a public comment period, the PP is a summary document that serves the function of a fact sheet.

Timing: The Navy will produce required fact sheets in accordance with CERCLA policy. Fact sheets will be posted on the Web site, with limited hard-copies made available at the PAO's office and at the Information Repository.

4.3.7 Restoration Advisory Board

Description: The RAB is an advisory group for the restoration process, with members from the public, the Navy, and the regulatory agencies. These individuals are considered a key resource in efforts to communicate openly and effectively with the community at large. The RAB is designed to act as a focal point for the exchange of information between WPNSTA Yorktown and CAX and the local community regarding ER activities. The RAB is intended to bring community members who reflect diverse interests within the local community together with government officials representing the Navy, USEPA and VDEQ. This enables the early and continued two-way flow of information, concerns, values, and needs between the community and WPNSTA Yorktown and CAX. Although WPNSTA Yorktown and CAX have separate ERPs, they maintain a joint RAB, because they have the same CO, are within close proximity, and for the convenience of community members.

Goal: To gain effective input from stakeholders on cleanup activities and increase installation responsiveness to the community's concerns about the ERPs.

Current Implementation: One of the most notable accomplishments of the WPNSTA Yorktown and CAX ERPs is the establishment and continued successful operation of the RAB. The community involvement programs at WPNSTA Yorktown and CAX will continue to enlist the support and cooperation of the RAB members by providing regular information to members and actively seeking their input into remedial decisions. These individuals are considered a key resource in efforts to communicate openly and effectively with the community at large.

The WPNSTA Yorktown/CAX RAB is co-chaired by the WPNSTA Yorktown CO and a community member elected by other community members of the RAB as the Community Co-Chair. The RAB meets twice a year (May and November) to review technical documents and discuss cleanup actions and alternatives. All RAB meetings are open to the public. RAB members receive phone calls, mailings and e-mail reminders of upcoming RAB meetings. The Navy advertises the RAB meetings in *The Virginia Gazette* and the *Daily Press*.

In accordance with the 2006 DoD RAB rules and regulations, the RAB meeting minutes are recorded for each meeting and are emailed to all RAB members in attendance.

In 2006, the RAB meetings were changed from evening meetings at Charles E. Brown Park in Lackey (near WPNSTA Yorktown) to afternoon meetings at the York County Public Library. In 2009, the Navy began mailing RAB notification postcards out to interested parties.

The RAB membership has increased since the CIP Update of 2009. The list of current RAB members is provided in Appendix F.

Planned Implementation: As required, the Navy will continue to publish newspaper notices as a means of inviting the public to attend RAB meetings. The Navy will also continue to send postcard and email notifications to those members of the public who have indicated they would like to receive additional information about the ERP at WPNSTA Yorktown and CAX. In addition, Web site updates will be made prior to each RAB meeting.

In spite of the newspaper advertisements and regular/email notifications, about 85 percent of survey respondents were not aware of the existence of the RAB or of RAB meetings. While people may still choose not to attend RAB meetings for a variety of reasons, "being unaware" should not be a significant reason. The Navy will continue to send regular/email notifications regarding upcoming RAB meetings and update the Web site prior to each RAB meeting.

In addition to emailing RAB meeting minutes to RAB members, the minutes are also available on the Web site and in the public Information Repository so that people who were unable to attend the meeting may still access the information that was discussed.

Timing: The WPNSTA Yorktown/CAX RAB was established in 1994 as an expansion of the smaller TRC established in March 1989. The Navy will continue to maintain the RAB and hold RAB meetings twice per year.

4.3.8 Public Meetings

Description: A public meeting is an open forum, usually featuring a presentation on a specific topic by the RPMs and other members of the site team, as well as an opportunity to interact with them. The public may ask questions and make public comments. The Navy is required to consider such comments when making cleanup decisions. If a public meeting is held during a public comment period, a court reporter is used to produce a written transcript of the meeting to become part of the AR. Public meetings must be held upon request whenever a formal public comment period is required under CERCLA regulations.

In contrast, a RAB meeting is a regularly-scheduled meeting of a specific group of people to discuss a variety of environmental restoration activities. While RAB meetings are open to the public, the extent to which the public may make comments and ask questions may be controlled so that the RAB members can proceed with their meeting. In addition, questions and comments at a RAB meeting do not become part of an official legal transcript.

Goal: To provide stakeholders with opportunities to learn about the status of site cleanups, receive responses to their questions and concerns, and have an opportunity to submit comments on proposed actions or decisions.

Current Implementation: Currently, public meetings are held as required for specific technical activities, such as during the public comment period on proposed plans. Public meetings and RAB meetings are held at the Yorktown Library. This library offers a well-equipped and accessible meeting room which is convenient to both WPNSTA Yorktown and CAX employees and local community residents and does not require entry to the installation through security checkpoints. Recent public meetings during public comment periods have been held on a weekday afternoon following a RAB meeting.

Public meetings during comment periods are publicized at the opening of the public comment period and are held during the comment period. In accordance with CERCLA and DoD policy and guidance, a paid notice advertising public meetings is published in the *Daily Press* and the *Virginia Gazette.* This notice is placed as a display advertisement in the main section, not in the legal notice section.

During the public meeting for a PP, Navy officials discuss the findings of the RI and FS reports, the various cleanup alternatives, the Navy's preferred cleanup/treatment alternative, and the rationale for the choice. Members of the public have an opportunity to ask questions and make comments at the meeting. A transcript is prepared by a court reporter and made available to the public at the Information Repository and placed in the AR.

Planned Implementation: WPNSTA Yorktown and CAX public meetings have been held during the day, immediately following the RAB meeting (with a short break in between the two meetings and if the public meeting schedule coincides with the RAB schedule) for the convenience of the RAB members.

Because 85 percent of survey respondents indicated that they have not seen a newspaper advertisement for public meetings, the Navy may consider using other methods in conjunction with the newspaper ads to advertise public meetings, such as a postcard announcement to the mailing list and Web site updates.

Timing: The Navy will continue to hold public meetings whenever a formal public comment period is required (for example, upon completion of draft final proposed plans).

4.3.9 Provide Comment Periods

Description: Public comment periods lasting a minimum of 30 days are held to give community members an opportunity to provide input on major decisions in the WPNSTA Yorktown and CAX ERPs, primarily interim actions or selection of final remedies.

Goal: Provides the citizens with an opportunity for meaningful involvement in the process and also provides the Navy with valuable information for use in making decisions.

Current Implementation: Public comment periods are held as required under CERCLA and DoD policy for specific technical activities, such as during the public comment period on proposed plans. Section 5 of this CIP addresses the timing of specific community involvement activities, including activities that are required under CERCLA.

Comment periods are provided to solicit public input on major decisions regarding the selection of removal actions or selected cleanup remedies for the WPNSTA Yorktown and CAX ERPs. The public is provided an opportunity to comment on removal actions (documented by EE/CAs) and PPs, during an announced formal public comment period, as required. The Navy issues the EE/CA or PP by placing the documents in the Information Repository at the York County Public Library and publishes a notice announcing a 30-day public comment period (for an EE/CA) or a 45-day public comment period (for a PP) in the *Daily Press* and the *Virginia Gazette*. The notice includes a brief description of the document and advertises the availability of the document in the Information Repository.

When a public meeting is held during a public comment period, a court reporter is used to accurately capture comments made during the meeting. This transcript becomes part of the final ROD. Community members may also submit written comments at any time during the public comment period. The public comment period can be extended an additional 30 days if requested by the public. As required, a written response is prepared for significant comments received and included in the ROD.

Planned Implementation: The Navy will continue to hold and publicize comment periods as appropriate.

Timing: Comment periods will be held and publicized for specific technical activities as required.

4.3.10 Prepare a Responsiveness Summary

Description: At the conclusion of a public comment period, a Responsiveness Summary will be prepared summarizing comments received and the Navy's responses to public comments.

Goal: The purpose of a Responsiveness Summary is to summarize comments received during comment periods, to document how the Navy has considered those comments during the decision making process, and to provide responses to major comments. The summary will inform the decision makers about the community preferences, as well as any general concerns. It also provides the public with documentation of the concerns raised and the Navy's responses to those concerns. The Responsiveness Summary will be made available to the public in the Information Repository.

Current Implementation: Responsiveness summaries are prepared and published as an appendix to the ROD. A ROD is placed in the Information Repository for 30 days after it has been signed and is placed in the AR.

Planned Implementation: The Navy will continue to produce responsiveness summaries as part of RODs and will place the RODs in the Information Repository and AR. Depending on space available at the Information Repository, a ROD may be left there longer than 30 days. In addition, a ROD will be placed on the Navy's public Web site for WPNSTA Yorktown/CAX.

Timing: The Navy will continue to issue responsiveness summaries as part of RODs whenever a ROD is prepared.

4.3.11 Community Involvement Plan

Description: A written plan of action that provides for interaction with the public, elected officials and environmental groups, including obtaining their input at appropriate points during the environmental restoration process.

Goal: To provide a foundation for establishing two-way communication with the public to create an understanding of ERP and related actions, to assure public input into decision making processes related to affected communities, and to make certain that the Navy is aware of and responsive to public concerns.

Current Implementation: The last CIP Update was published in August 2009. Similar to the 2009 update, this CIP Update is based on the results of written surveys of local residents and telephone and personal interviews with representatives of local government, civic and environmental groups.

Planned Implementation: This CIP Update will be made available to the public in the Information Repository and on the Web site.

Timing: This Plan was originally published in April 1991 and was updated in September 2006, in August 2009, and again now with this update. Under CERCLA, a revision to the CIP should be considered: (1) after a ROD is signed, if significant community concerns are discovered that pertain to the remedial design and construction phase, or (2) as appropriate when a major change in the ERP at WPNSTA Yorktown and/or CAX occurs. Otherwise, the CIP should be updated every 3 to 5 years.

SECTION 5

Timing of Community Involvement Activities

Table 5-1 presents the general timing of community involvement activities associated with potential environmental restoration activities. Community involvement activities related to these sites may be combined or separate, depending on timing and level of public concern and interest relative to the status and schedule of ERP activities.

TABLE 5-1
Timing of Required and Recommended Community Involvement Activities

	Preliminary Assessment Site Inspection	Remedial Investigation Feasibility Study	Proposed Plan	Record of Decision	Remedial Design Remedial Action	No Further Action Decision Document	Pre-ROD Significant Changes	Post-ROD Significant Changes	Removal Action < 120 days	Removal Action > 120 Days	Removal Action > 6 months
Designate Navy Contacts	■								■	■	
Mailing List of Interested Parties	■	▭	▭	▭	▭	▭	▭	▭	▭		
Website	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Information Repository	■	▭	▭	▭	▭	▭	▭	▭	▭	■	■
Administrative Record		■							■	■	■
Notice of Availability[1]		■	■	■				■	■	■	■
Fact Sheets			■[2]		■						
Restoration Advisory Board	■	▭	▭	▭	▭	▭	▭	▭	▭		
Public Meetings			■					■			
Meeting Transcript			■					■			
Public Comment Period			■				■	■	■	■	■
Responsive-ness Summary				■			■	■	■	■	■
Community Involvement Plan	■									■	■

▭ Ongoing activity

■ Required activity

❍ Optional activity, as needed or requested

1. Content of Notices of Availability varies based on what technical activity is involved. See Superfund Community Involvement Handbook (EPA 2002) for details.

2. PP serves as a fact sheet

Source: Superfund Community Involvement Handbook (EPA 2002)

SECTION 6

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Appendix A
Site-Specific Descriptions—WPNSTA Yorktown

APPENDIX A
Site-Specific Investigation and Remedial Action
WPNSTA Yorktown, Yorktown, Virginia

Site	Site Location	Historic Land Use	Source of Potential Contamination	Site Remedial Action	Site Status	Current Land Use	References
Site 1 – Dudley Road Landfill	Northern portion of WPNSTA Yorktown west of Indian Field, Creek and north of an unnamed tributary of Indian Field Creek.	Used for sand mining activities, resulting in the construction of two borrow pits. The borrow pits were used as a disposal site for waste materials (asbestos from insulation on steam piping; empty oil, grease, paint, and solvent containers; nitramine-contaminated carbon; household appliances; scrap metal banding; construction debris; tree limbs; lumber; packaging wastes; electrical wires; waste oil; and plastic lens-grinding waste) between 1965 and 1979. In 1979, the landfill was closed except for the disposal of plastic lens-grinding residues, which continued for 2 years after the closure of the main landfill. In 1985, the landfill was closed to the receipt of all waste materials.	Waste at Site 1 was the source of contamination to soil, groundwater, sediment, and surface water.	Metal surface debris and soil were removed and the soil cover was restored in 2000.	A Record of Decision (ROD) for Site 1 was signed June 1999 to address soil and surface debris, and the 2013 5-Year Review concluded that the site remedy is currently protective of human health and the environment. However, there are some uncertainties that may affect the future protectiveness. The Navy conducted additional studies to confirm the lateral extent of landfill waste, to confirm the vertical and lateral extent of the soil cover over the landfill, and to delineate waste within the landfill potentially not covered by the existing soil cover. Both the extent of landfill waste material and the soil cover were delineated All areas of landfilled waste were found to be covered by at least 2 feet of soil, and the boundaries of the landfill cover could be determined with confidence from the available data. Groundwater, surface water, and sediment were not addressed in this ROD and are currently under further investigation. Land use controls (LUCs) prohibiting residential development of Site 1 and disturbance of the soil cover are maintained by the Navy through routine inspections.	Undeveloped and covered with grass.	CH2M HILL, Site Management Plan, 2013
Site 3 – Group 16 Magazine Landfill	Northern portion of WPNSTA Yorktown south of Indian Field Creek	Originally used for sand mining and included of one borrow pit to a depth of 10 feet below ground surface (bgs). Between 1940 and 1970, Site 3 was operated as a landfill. Waste disposed of in the borrow pit reportedly included solvents, sludge from boiler cleaning operations, grease trap wastes, Imhoff tank skimmings (containing oil and grease), and animal carcasses.	The waste at Site 3 was the source of potential contamination to soil, groundwater, sediment, and surface water.	Post-ROD remedial actions included the removal of metal surface debris and excavation and offsite disposal of polynuclear aromatic hydrocarbons (PAH) - contaminated soil and landfill waste (galley waste), drums of solidified resin, and dry cell batteries.	A ROD for Site 3 was signed June 1999 to address soil and surface debris. Confirmation soil samples verified that contaminant concentrations remaining in place are below levels that allow for unlimited use unrestricted exposure (UU/UE). No unacceptable risks from exposure to soil or waste remain at the site. An Explanation of Significant Difference (ESD) stating the changes to the ROD and No Further Action for these media was finalized in 2008. A ROD for surface water, sediment, and groundwater at Site 3 is expected to be signed in September 2014. The selected remedy for surface water and sediment was NFA. Implementation of the groundwater remedy is anticipated to begin in 2015.	Undeveloped and covered with grass.	CH2M HILL, Site Management Plan, 2013
Site 4 – Burning Pad Residue Landfill	North-central portion of WPNSTA Yorktown	Used as a disposal area for carbon-zinc batteries from underwater weapons, burning pad residues, tree stumps, fly ash from coal-fired boilers, mine casings, electrical equipment, and transformers. An ash pile resulting from burning of explosives and volatile organic compounds (VOCs) at Site 22 was once located in the northeast corner of the site.	Waste at Site 4 was the source of potential contamination to soil, groundwater, sediment, and surface water.	Surface debris (concrete, drums, batteries, inert ordnance, cables, construction debris, and roofing shingles), the ash pile, and buried batteries were removed in 1994 included. Additional waste (construction debris, transformers, drums, and ordnance items) and contaminated soil were excavated in 2001.	A No Further Action (NFA) ROD for Site 4 was signed in September 2005 to address soil. Confirmation soil samples verified that soil concentrations met remediation goals. A NFA ROD for Site 4 was signed in September 2011 to address groundwater, surface water, and sediment. No unacceptable risk to human health or the environment were identified due to exposure to groundwater, surface water and sediment.	An undeveloped open field	CH2M HILL, Site Management Plan, 2011
Site 5 – Surplus Transformer Storage Area	Northeastern portion of WPNSTA Yorktown, in a fenced area adjacent to the north end of Building 76, off Barracks Road	Used from 1940 to 1981 as a storage area for surplus polychlorinated biphenyl (PCB)-containing transformers. Following 1981, only non-PCB containing transformers were stored at this location. Building 76 was demolished and all storage materials were removed when the building was razed.	PCB transformer storage at Site 5 was the source of potential contamination.	Contaminated soil was removed from the site in 1982.	An NFA ROD for all media was signed in September 1994.	Vacant area with two concrete pads and covered with gravel.	CH2M HILL, Site Management Plan, 2008

APPENDIX A
Site-Specific Investigation and Remedial Action
WPNSTA Yorktown, Yorktown, Virginia

Site	Site Location	Historic Land Use	Source of Potential Contamination	Site Remedial Action	Site Status	Current Land Use	References
Site 6 – Explosives-Contaminated Wastewater Impoundment, Flume Area and Excavation Area, Buildings 109, 110 and 501	Northern portion of WPNSTA Yorktown consisting of three areas: an impoundment area, a flume area, and an excavated pit	Wastewater possibly containing explosives generated in Building 109 for explosives reclamation, and Building 110 for explosives loading, mixing, and casting, was discharged through a network of flumes into the Site 6 impoundment area from 1942 to 1975. In 1975, a carbon adsorption tower was installed to treat the contaminated wastewater prior to discharge into the drainage way. In 1986, the effluent from the tower was diverted to the sanitary sewer and ultimately to the Hampton Roads Sanitation District (HRSD) facilities. Wastewater was discharged to the impoundment from the flume network from 1942 to 1975. After 1986, the impoundment collected only surface runoff from the area around Buildings 109 and 110. Wastewater discharges ceased in 2003 when operations in Buildings 109 and 110 terminated. The excavated pit may have been the soil borrow pit for construction of the cofferdam for the impoundment; it may have also been used to contain packed explosives.	Wastewater discharge from the flumes at the site and the possible storage of explosives within the excavated area at Site 6 were the potential sources of contamination to soil, groundwater, sediment and surface water.	Soil and sediment that exceeded remediation levels (RLs) was excavated and transported to the onsite biocell, where it was treated by ex situ biological treatment. To allow for adequate treatment time in the bio-cell, implementation of the remedy continued into 2006. Treatment was deemed complete once two consecutive sampling events confirmed that soil and sediment contained VOC and explosive concentrations below RLs.	A ROD for Site 6 soil and sediment, and flume area residue was signed in October 1998. The 2013 5-Year Review concluded that the remedy was currently protective of human health and the environment. However, due to some uncertainties, the remedy may not be protective in the long-term. Additional investigations will be recommended to address uncertainties and ensure future protectiveness of the remedy. Although the ROD required long-term monitoring (LTM) of surface water, sediment, and groundwater, it was specified this would not be the final remedy for these media. Groundwater, surface water, and sediment are currently under investigation. LUCs prohibiting residential development of the Site 6 area and disturbance of the excavated area's soil cover have been maintained through routine inspections. The LUCs will be maintained until they are no longer required to protect human health or the environment.	Site 6 is generally wooded with some open areas near buildings.	CH2M HILL, Site Management Plan, 2013
Site 7 – Plant 3 Explosives-Contaminated Wastewater Discharge Area	Northern portion of WPNSTA Yorktown in the vicinity of Poe Road and adjacent to an unnamed tributary leading to Felgates Creek, approximately 1 mile upstream from the confluence of Felgates Creek and the York River	The site was used as a weapons loading facility beginning in 1945. Between 1945 and 1975, wastewater from the plant was discharged directly into the drainage area. The wastewater possibly contained the explosive compounds RDX and TNT, as well as cyclohexane, and trichloroethene (TCE). From 1975 to 1986, the wastewater was treated in an activated carbon unit, which removed dissolved explosives from the water prior to discharge to the site. After 1986, the carbon-treated wastewater was directed to the sanitary sewer system and ultimately to HRSD facilities. The site has reverted to a natural drainage area and received no discharge from the Plant 3 complex after 1986.	The nitromine-contaminated wastewater discharged from Plant 3 was the source of potential contamination to soil, groundwater, sediment, and surface water.	A bioremediation full-scale pilot study was conducted in 1996 and mitigated potential human health risks and ecological concerns for soil and sediment. LTM of surface water and sediment in Felgates Creek, and groundwater associated with the site was conducted from 2000-2005 but has been postponed due to additional investigations being conducted.	A ROD was signed in October 1998 for site soils and drainage area sediment. The ROD included proposed LUC boundaries. The 2013 5-Year Review concluded that the remedy was protective of human health and the environment. Although the ROD indicated LTM would be conducted for surface water and groundwater, it specified that LTM was not the final remedy for these media. In 2009 all site buildings were demolished, the site boundary was expanded, and it was determined that additional soil, sediment, surface water, groundwater, pore water and seep data were needed to further evaluated the nature and extent of CERCLA-related contamination due to the potential release to have occurred in the vicinity of the former buildings once located at Plant 3. This investigation is currently in progress.	Vacant	CH2M HILL, Site Management Plan, 2013
Site 8 – NEDED Explosives-Contaminated Wastewater Discharge Area	North-central portion of WPNSTA Yorktown along the Eastern Branch of Felgates Creek, approximately 1.5 miles from the confluence of the creek and the York River	From 1940 to 1975, Site 8 received wastewater from the NEDED complex. The wastewater reportedly contained unspecified solvents, spent/neutralized acids, and nitramine compounds. In 1974, a carbon adsorption tower was installed to treat the contaminated wastewater prior to discharge. In 1986, the effluent from the tower was diverted to the sanitary sewer serviced by HRSD. Since 1986, the site has reverted to a natural drainage area.	Historical wastewater discharge was the source of potential contamination to soil, groundwater, sediment, and surface water.	A soil removal action was initiated in March 2007.	In May 2008, the Navy reached a consensus with EPA and VDEQ that NFA for soil was required. Groundwater, surface water, and sediment have not yet been addressed by any remedial actions and are currently under investigation.	Vacant buildings exist on site and the ground surface is paved with the exception of the wooded western and northern portions of the site.	CH2M HILL, Site Management Plan, 2013
Site 9 – Plant 1 Explosives-Contaminated Wastewater Discharge Area	East-central portion of WPNSTA Yorktown, consisting of a 600-foot drainage way and the immediate surrounding area east of Lee Pond and topographically downgradient of Site 19	From the late 1930s to 1975, the discharge area was used as a drainage way for Plant 1 (Building 10) explosives-contaminated wastewater and (possibly) organic solvents. A carbon adsorption tower was installed in 1974 to treat the wastewater prior to discharge in accordance with a National Pollution Discharge Elimination System permit. In 1986, the effluent from the tower was diverted to the sanitary sewer and ultimately to HRSD facilities. Wastes, including weapons casings and railroad ties, were discarded along the drainage way bank prior to flowing under Bollman Road. In addition, on the other side of Bollman Road, several drums were discarded along the drainage way. No information is available regarding the date(s) this material was disposed. The weapon casings, railroad ties, and drums were removed, along with contaminated soils and sediment in 1994.	The Plant 1 wastewater discharge was the source of potential contamination to soil, groundwater, sediment, and surface water.	A removal action was completed in December 1994 to address contaminated soils and sediments, as well as surface and subsurface debris. The removal action included the concurrent removal of ordnance and railroad ties to a depth of 4 feet bgs at the lower end of the drainage way before it crosses Bollman Road.	A ROD for soil, surface water, and sediment was signed in March 1998 and documented the decision for NFA. Following the demolition of all site buildings, the site boundary was expanded, and it was determined that additional soil and groundwater data were needed to further evaluated the nature and extent of CERCLA-related contamination due to the potential release to have occurred in the vicinity of the former buildings once located at Plant 1. This investigation is currently in progress	Currently, the site has reverted to a natural drainage way for surface runoff from surrounding areas and receives no discharge from the Plant 1 complex.	CH2M HILL, Site Management Plan, 2013

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Site-Specific Investigation and Remedial Action
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Site	Site Location	Historic Land Use	Source of Potential Contamination	Site Remedial Action	Site Status	Current Land Use	References
Site 11 – Abandoned Explosives Burning Pits	North-central portion of WPNSTA Yorktown, east of Main Road, north of a steep ravine leading to Indian Field Creek, and just south of Site 17 and west of Site 1	Explosives burning was conducted in pits at Site 11 from 1930 to 1950. Solid waste explosives, explosives-contaminated sludges, and packaging contaminated with explosives were placed in pits and ignited.	Burning waste residue was the source of potential contamination to soil and groundwater.	A removal action was conducted in 2000.	A ROD for Site 11 soil was signed in October 2000 to address risks to ecological receptors from elevated levels of copper and mercury in site soil. The 2007 5-Year Review concluded that the remedy was protective of human health and the environment. A NFA ROD for Site 11 was signed in September 2010 to address groundwater. No unacceptable risk to human health or the environment were identified due to exposure to groundwater.	Generally wooded and undeveloped with grass clearings.	CH2M HILL, Site Management Plan, 2010
Site 12 – Barracks Road Landfill	Southeast corner of WPNSTA Yorktown, consisting of three former disposal areas: Area A, Area B/C, and the Wood/Debris Disposal Area. Areas A and B/C are east of Barracks Road and adjacent to the access road to Area A, and the Wood/Debris Disposal Area is east of Areas A and B/C adjacent to Ballard Creek.	The former disposal areas at Site 12 operated from 1925 to the mid-1960s and received an estimated 1,400 tons of waste, including general refuse, scrap wood, piping, steel containers, and nitramine-contaminated packaging. Wastes were transported to Area A by truck and railcar and burned in two open incinerators prior to disposal. Incinerator ash was disposed of on the hillside behind the incinerator and spread across the top of Area A.	The waste materials burned/disposed of in the Site 12 disposal areas are the sources of potential contamination to soil, groundwater, sediment and surface water.	It was concluded that only soil in Area A required active remediation. Remedial action construction for Area A began in July 1997 and consisted of well abandonment; demolition of the incinerator facility, incinerator stack, and a one-story maintenance shed; and implementation of erosion and sediment controls. Metal debris scattered throughout the site was removed and sent to a recycling facility.	The ROD for Site 12 was signed in April 1997 to address lead in soil in Area A, TCE in shallow groundwater, and inorganics and PAHs in sediment in Ballard Creek watershed. The 2013 5-Year Review concluded that the remedy was protective of human health and the environment. For groundwater, the selected remedy is LUCs consisting of restrictions throughout Area A, Area B/C, and the Wood/Debris Disposal Area to prohibit the use of groundwater as a drinkable source, and groundwater monitoring of shallow and deep wells across the Site 12 Study Area. The remedy for surface water and sediment was LTM of Ballard Creek and its tributaries. LTM was completed in 2013, consistent with the ROD, and a draft LTM report is anticipated in August 2014. Because the industrial area upgradient of Site 12 (now Site 31) is the source of VOCs in groundwater, the Navy has initiated investigation of this area. Consequently, the objective of LTM for Site 12 is now focused on monitoring for the detection of potential releases from waste remaining in place in the Site 12 Disposal Areas.	With the exception of some relatively flat, grassy field areas, Site 12 is predominantly wooded.	CH2M HILL, Site Management Plan, 2013
Site 16 – West Road Landfill and Site Screening Area (SSA) 16 – Building 402 Metal Disposal Area and Environs	East-central portion of WPNSTA Yorktown. Site 16 is adjacent to West Road near Lee Road, and SSA 16 overlies the northern portion of Site 16 landfill.	The Site 16 disposal area received waste) dry carbon batteries, banding materials, pressure transmitting fluid, other chemicals, and 55-gallon drums with unknown contents) from 1950 to the early-1960s. SSA 16 is used for scrap metal storage. SSA 16 was also used for waste container storage prior to the remodeling and conversion of Building 402 into a hazardous waste storage facility.	The landfill materials at Site 16 are the sources of potential contamination to soil and groundwater.	Scrap metal was partially removed from the surface along the northeastern section of Site 16. The area was backfilled with soil and re-vegetated. In 1994, the landfill wastes and debris including were removed from the site.	A ROD for soil and groundwater was signed in September 1995 with institutional controls, including land-use and aquifer-use restrictions. The selected remedy for Site 16/SSA 16 was NFA with institutional controls, following a removal action completed in 1994. The 2012 5-Year Review concluded that the remedy was protective of human health and the environment. An ESD was signed in January 2014 indicating that no further remedial action is required for the site.	The northern portion of Site 16 (including SSA 16), south of railroad tracks, is predominantly covered with grass. The remaining portion of Site 16 is wooded.	CH2M HILL, Site Management Plan, 2012
Site 17 – Holm Road Landfill	North-central portion of WPNSTA Yorktown, south of Holm Road and east of Main Road.	Disposal activities at Site 17 occurred for approximately 10 years from the 1950s to the 1960s. Wastes reportedly disposed included acid batteries from underwater weapons, hydraulic fluids from the de-milling of torpedoes, drums, and scrap metal. Interviews with Navy personnel, during the 1984 Initial Assessment Study indicate the landfill waste had been removed; however, there is no documentation of construction of a soil cover on the landfill or removal of landfill waste.	Disposal activities were the potential source of contamination to soil and groundwater.	Remedial activities completed were in August 2000 and included the excavation of PAH-contaminated soil to a depth of 2 feet. Clean fill from an on-base source was placed within the excavated area, and imported topsoil was placed over the contaminated area.	A ROD for soil was signed in October 2000 to address human health risks associated with exposure to PAHs. The 2007 5-Year Review concluded that the remedy was protective of human health and the environment. A NFA ROD for Site 11 was signed in September 2010 to address groundwater. No unacceptable risk to human health or the environment were identified due to exposure to groundwater.	Most of the area is cleared, with woodlands to the south and east and cleared areas with industrial buildings to the north and west.	CH2M HILL, Site Management Plan, 2010
Site 18 – Building 476 Discharge Area	Southeastern corner of WPNSTA Yorktown, within a wooded area north of Building 476	Wastewater discharge from Building 476 into the ditch reportedly contained battery acid waste, consisting of hydrochloric acid or calcium hydroxide and dissolved metals such as lead, cadmium, nickel, and antimony.	None	None.	An NFA ROD for all media was signed in September 2005.	Currently, Site 18 is overgrown and the drainage ditch receives surface water runoff from the surrounding area and Building 476.	CH2M HILL, Site Management Plan, 2008

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Site 19 – Conveyor Belt Soils at Building 10	East-central portion of WPNSTA Yorktown, west of Building 10 and 300 feet south of Site 9	The conveyor belt was used for transport of packaged TNT from the 1940s to the 1970s. Holes were observed along the floors and walls of the conveyor belt and in the conveyor belt enclosure. The walls and floor of the conveyor belt were periodically sprayed with water to control dust. The area has not been active for any other land use since operations ceased in the 1970's.	Fine particulates released through the holes and the rinse water sprayed on the conveyor belt were a source of potential contamination to soil and groundwater.	An undocumented quantity of soil from beneath the conveyor belt and the surrounding area was removed between 1973 and 1974. Transite panels and asbestos-insulated piping were removed from the site along with the dismantling and disposal of the conveyor system and excavation of explosives- contaminated soils in April 1998.	A ROD for soils was signed in March 1998 to mitigate the potential for direct contact of explosives in soils by human receptors, to prevent ecological effects to terrestrial receptors from exposure to aluminum in soils, and to eliminate the potential migration of these contaminants to other environmental media. Following the demolition of all site buildings, the site boundary was revised, and it was determined that additional soil and groundwater data were needed to further evaluated the nature and extent of CERCLA-related contamination due to the potential release to have occurred in the vicinity of the former conveyor belt. This investigation is currently in progress.	Although the area has not been active for any other land use since operations ceased in the 1970's, the site remains relatively cleared and has not been excessively overgrown with vegetation.	CH2M HILL, Site Management Plan, 2013
Site 21—Battery and Drum Disposal Area	North-central portion of WPNSTA Yorktown	Site 21 was reportedly used as a land disposal area in the 1950s. Filling operations reportedly occurred three to four times a week. A site reconnaissance in October 1991 identified exposed waste throughout the site, with several areas of concentrated waste disposal (batteries and drums). Empty solvent containers and scrap metal were observed.	Waste disposed of at Site 21 is the source of potential contamination to soil, groundwater, sediment, and surface water.	A removal action in 1994 consisted of excavation and disposal of batteries and screened soils, debris, drums, and soils. A removal action was completed in 2002 consisting of the excavation and offsite disposal of soil.	Confirmation samples indicated that all potential human health and ecological risks in surface soil at Site 21 were mitigated, and an NFA ROD for soils was signed in September 2003. A NFA ROD for Site 21 was signed in September 2011 to address groundwater, surface water, and sediment. No unacceptable risk to human health or the environment were identified due to exposure to groundwater, surface water and sediment.	Site 21 is an open field surrounded by trees and brush.	CH2M HILL, Site Management Plan, 2011
Site 22 – Burn Pad	North-central portion of WPNSTA Yorktown, south of Site 4	Site 22 contained a 150-foot-diameter circular array of 11 steel burning pans that were used for burning waste plastic explosives and spent solvents. Open burning operations at the burn pads ceased in 1994. Site 22 was also used for the treatment of nitramine-contaminated soils and TNT-contaminated soils from Site 7. A biocell was constructed to treat contaminated soils from Sites 7 and 19. Biocell operations ceased in 1998, and treated (clean) soils were pumped into an impoundment area in a topographical low area directly southeast of the existing biocell to dewater treated soils. Erosion control measures were implemented in 1999 to prevent discharge to the wetlands west of the biocell. An earthen dam was built to hold clean soil, and water in the impoundment area was also opened to prevent rainwater from overflowing into Felgates Creek.	Historical burning operations were the source for potential contamination to soil, groundwater, sediment, and surface water.	A soil removal action was conducted in 2002	Confirmation samples were collected and demonstrated that the soils remaining in place were below remediation goals. Based on the removal actions conducted and confirmation sampling results, the Navy in partnership with USEPA and VDEQ, agreed all potential human health and ecological risks for soil were mitigated and an NFA ROD for soil was signed in September 2003. A NFA ROD for Site 22 was signed in September 2011 to address surface water and sediment. No unacceptable risk to human health or the environment were identified due to exposure to surface water and sediment. A ROD for groundwater at Site 22 was signed in September 2013. Implementation of the groundwater remedy currently in progress.	The site consists of a grassy field surrounded by woods.	CH2M HILL, Site Management Plan, 2013
Site 23 – Building 428 Teague Road Disposal Area	Eastern portion of WPNSTA Yorktown, northeast of Building 428	A former railroad track that bisected the site was constructed in 1919 and operated until 1989. Disposal activities reportedly began at the site in 1940 and ceased in 1960 and included debris from a pier fire in the mid-1950s. Aerial photography suggests the area was also used for waste storage in 1945. From 1960 to the present, there is no evidence of additional waste storage/disposal or release, except for discrete piles of surface debris and partially buried debris identified during a 1993 land survey.	Waste materials disposed of at Site 23 were the source of potential contamination to soil, groundwater, sediment, and surface water.	A removal action at Site 23 was completed in 1994 and consisted of the removal of drums, creosote timbers, debris, non-friable asbestos debris, pipe wrapped with friable asbestos, recyclable metal, and TNT-and TNB-contaminated ash/soil. In 2003, debris and soil were removed based on cleanup goals developed for human and ecological receptors. A third removal action in 2004 was conducted to remove zinc-contaminated soil south of the railroad tracks. A fourth removal action in 2009 was conducted to correct deficiencies from the incomplete removal action in 2003.	An investigation to determine the nature and extent of contamination in groundwater, surface water, sediment, remaining debris, residual soil contamination, an decontaminated backfill (if present) following the removal actions completed from 1994 to 2009 is currently in progress.	The site generally consists of open, maintained grass-covered areas and woods	CH2M HILL, Site Management Plan, 2013

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Site 24 – Aviation Field	Northern portion of WPNSTA Yorktown, around the helicopter landing pad and just south of the York River	Historically, the site was used as an aviation field until 1927, after which it was used for storing munitions on the surface and in underground caches. The site was also used for storing miscellaneous debris, including batteries and cables. Aerial photographs indicate that peak surface storage occurred in 1968. Areas of surface debris are no longer evident at the site. The area where the helicopter landing pad is currently located may also have been used briefly as an explosives burning area. Sludge from WPNSTA Sewage Treatment Plant #1 was reportedly dried in the eastern portion of the site. A Daramend™ greenhouse/biocell was constructed in 1999 to treat explosive-contaminated soil and sediment from Site 6, and was removed in August 2006 once treatment was complete.	Several areas of buried debris present at Site 24 are the potential source of contamination to soil and groundwater.	None.	An EE/CA to remove contaminated soil is currently in progress. No potential unacceptable risk exists due to exposure to groundwater.	Site 24 is an open grassy area around the helicopter landing pad at WPNSTA Yorktown.	CH2M HILL, Site Management Plan, 2013
Site 25 – Building 373 Rocket Plant	Northern portion of WPNSTA Yorktown, at the end of Main Road, just east of Felgates Creek	Building 373 is an explosives loading plant. Prior to the 1960s, wash/rinse water from cleanup of formulation/pouring equipment drained into a settling basin within the building for removal of suspended solids. The solids were incinerated and dumped at Site 4 (Burning Pad Residue Landfill). The wash/rinse water was then discharged through discharge pipe towards Felgates Creek. The discharge line to the creek was plugged in the early 1980s, and a 220-gallon underground storage tank (UST) was installed to contain the wash/rinse water. The use of the UST was curtailed in the early 1980s, and an aboveground storage tank (AST) was installed at the north end of the building. Materials contained within the tanks included binders, stabilizers, and explosives.	The former UST and associated piping was the potential source of contamination to soil, groundwater, sediment, and surface water.	The UST, associated piping, and surrounding soils at Site 25 were removed in 1996.	Explosives decontamination of the buildings at Site 25 was completed in 2013. An investigation to further characterize the nature and extent of contamination in soil and groundwater and evaluate potential transport and contaminant discharge from the site to sediment and surface water is currently in progress.	The majority of the site consists of paved or grassy areas; however, a wooded area lies just west of a surface depression and separates the site from Felgates Creek.	CH2M HILL, Site Management Plan, 2013
Site 26 – Building 1816 Mark 48 Waste Otto Fuel Tank	Central portion of the WPNSTA, outside Building 1816	Site 26 contains a 2,500-gallon concrete UST and network of ancillary drain pipes that were formerly used to store waste Otto fuel. This fuel consisted of a mixture of Otto fuel and water, which may have also contained oil, denatured ethyl alcohol, detergent, and trace amounts of cyanide, halogenated hydrocarbons, and heavy inorganics. In late 1987, waste Otto fuel was discovered leaking from the tank. The fuel was removed; the tank was cleaned; and a Resource Conservation and Recovery Act (RCRA) closure permit was filed. In March 1995, the 2,500-gallon waste Otto fuel UST and a nearby 8,000-gallon UST were removed. Site 26 has been retained as an Installation Restoration Program site because of chlorinated VOCs detected in shallow groundwater.	The product contained in the USTs that were removed in 1995 was the potential source of contamination in soil and groundwater.	In March 1995, the 2,500-gallon waste Otto fuel UST and a nearby 8,000-gallon UST were removed from the site. No CERCLA remedial actions have taken place at Site 26.	An investigation to further characterize the nature and extent of contamination in soil and groundwater is currently in progress.	Building 1816 is surrounded by asphalt and grassy and wooded areas.	CH2M HILL, Site Management Plan, 2013
Site 27 – Building 1751 Chemistry Laboratory Neutralization Unit and Drainage Area	North-central portion of WPNSTA Yorktown, near Site 8 and the headwaters of an unnamed tributary that drains into the Eastern Branch of Felgates Creek	Site 27 consists of a below-grade cylindrical unit into which acids from the Chemistry Lab were discharged for neutralization and four underground septic tanks in the area that may have stored industrial waste (Baker, 2005). The Chemistry Lab unit was used from 1969 to early 1995 when discharge was diverted to HRSD facilities; the integrity of the below-grade unit is unknown.	The potential source of contamination was from the chemistry lab neutralization unit.	None	CERCLA documentation complete with RI/Feasibility Study and NFA ROD for all media.	The ground surface is grass covered and bisected by an asphalt road.	CH2M HILL, Site Management Plan, 2008
Site 28 – Building 28 X-Ray Facility Tank Drain Field	South-central portion of WPNSTA Yorktown, adjacent to Building 28 and an unnamed tributary that drains into the southern branch of Felgates Creek	Site 28 consists of a septic tank drain field that received sanitary wastewater from the X-Ray Facility at Building 28 beginning in the late 1960s until 1998, when wastewater was diverted to the sanitary sewer and ultimately to HRSD facilities. Before silver recovery units were installed, the tanks may have stored hazardous wastes.	None	None	A NFA ROD for soil, groundwater, sediment, and surface water at Site 28 was signed in June 2011. No unacceptable risk to human health or the environment were identified due to exposure to these media.	The ground surface consists of landscaped lawn and asphalt parking lot.	CH2M HILL, Site Management Plan, 2011

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Site 29 – Lee Pond	East central portion of WPNSTA Yorktown	Historical reports indicate that Site 29 has always been used as a pond. The pond receives stormwater runoff from Building 10 by way of Site 9 and the industrial area containing Sites 18, 19, SSA 8 and Site 33 Lee Pond empties into a channel, which in turn flows around Site 16/SSA 16 into Felgates Creek. In the northwest portion of the site, an engineered dam prevents water from flowing into an unnamed tributary that drains into the Eastern Branch of Felgates Creek.	There is no history indicating a source of contamination in Lee Pond.	None	A NFA ROD for soil, groundwater, sediment, and surface water at Site 29 was signed in May 2010. No unacceptable risk to human health or the environment were identified due to exposure to these media.	Site 29 is an approximately 4.1 acre pond	CH2M HILL, Site Management Plan, 2010
Site 30 – Bracken Road Incinerator and Environs	Eastern portion of WPNSTA Yorktown, north of Site 5, and south of a former railroad tracks.	The incinerator was used to burn unknown waste for an unknown period of time. Historical information indicates that Venezuelan crude oil may have been burned at the site in the mid-1970s.	Ash residue from incinerator operations is the source of potential contamination to soil, groundwater, sediment, and surface water.	The removal action for soil began in April 2008 and is currently in progress.	A NFA ROD for soil, groundwater, sediment, and surface water at Site 30 was signed in September 2010. No unacceptable risk to human health or the environment were identified due to exposure to these media.	Currently the site is vacant because of soil removal activities.	CH2M HILL, Site Management Plan, 2010
Site 31 (formerly AOC 23) – Barracks Road Landfill Industrial Area	Southeast corner of WPNSTA Yorktown, northwest of Site 12 and SSA 15	The industrial area consists of four large buildings (Buildings 3 through 6) and several smaller buildings. Building 3 houses a paint booth, blast booth, satellite accumulation area for aerosol paint cans, and parts washer and is currently used for wing and fin repair. The building was also historically used as a missile component rework facility and a boiler plant. Building 4 is currently used as a storage warehouse. The building was historically used for container repair and testing. Building 5 is currently used for administrative and training purposes and was historically used for mine and depth charge rework. Building 6 is currently used to support public works and utilities maintenance and was historically used for missile component rework and equipment maintenance. Railroad tracks lie to the northwest of the buildings. A UST used to contain waste oil was previously located by the northern corner of Building 5, but was removed in December 1993. Two other USTs and one AST were also located onsite and were used for storing heating oil.	Cleaning and degreasing activities associated with historical sandblasting, cleaning and painting activities at Sheds 3 & 6 provided a source of contamination to soils, groundwater, and surface water. Unknown at this time	None.	Investigation is currently ongoing to evaluate the results of indoor/outdoor air, sub slab soil gas, subsurface soil, groundwater, surface water, and sediment samples as part of an RI.	The area is a warehouse area with several buildings. The areas where buildings are not present are predominantly paved asphalt or covered in gravel. Those areas where surface water are impacted are predominantly wooded.	CH2M HILL, Site Management Plan, 2013
Site 32 (formerly SSA 25) – Wetlands Downgradient of Beaver Pond	Eastern portion of WPNSTA Yorktown	During its operational period, the STP No. 2 trickling filter discharged via a regulated outfall directly to the wetland area. The unit was installed in 1952 and reportedly managed sanitary waste. The trickling filter used elemental mercury as a water seal in the pivot point. Although this seal was maintained, it is likely that mercury leaked into the trickling filter tank and was subsequently discharged to Site 32 via the STP outfall. It is assumed that treatment operations ceased in the early 1970s because mercury-sealed trickling filters were banned from use in Virginia in 1971. STP No. 2, prior to being dismantled and removed in 2000, was an inactive treatment plant consisting of a clarifier, settling tanks, and sludge drying beds.	STP No. 2 is the source of contamination to the sediment and surface water in the wetlands.	None.	A NFA ROD for sediment and surface water at Site 32 was signed in September 2011. No unacceptable risk to human health or the environment were identified due to exposure to these media.	Wetland area, downgradient of Beaver Pond	CH2M HILL, Site Management Plan, 2011
Site 33 (formerly SSA 22) – Sand Blasting Grit Area	Eastern portion of WPNSTA Yorktown	A sand blast grit area was adjacent to Building 530, which operated from 1945 until the early to mid-1980s. Bomb fins and wings, inert bomb casings, and various other inert ordnance items were grit-blasted in a blasting booth inside Building 530, and outside at the northern end of the building. Grit blasting material may have been composed of coal slag or steel grit. The blasting booth within the building used a dust collector; accumulated dust may have been deposited in the vicinity of the northern side of Building 530.	Sand blasting activities within and near former Building 530 and the grit pile that was possibly located in the north corner of Building 530 is the potential source of contamination to soil, groundwater, sediment, and surface water.	In 1998, an RA consisted of the removal of lead- contaminated soil and sandblasting grit from 6 inches to 2 feet bgs.	An investigation to determine if soil, groundwater, sediment, and surface water have been impacted by activities at Building 530 and by the waste debris area is currently in progress.	Site 33 is mostly a cleared grassy area, bounded by woods to the west, south, and north and Bollman Road to the east.	CH2M HILL, Site Management Plan, 2013

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Site 34 (formerly SSA 14) – Building 537 Discharge to Felgates Creek	North-central portion of WPNSTA Yorktown	Site 34 is the discharge pipeline from Building 537. Nitramine contaminated wastewater was reportedly discharged through this pipeline.	Wastewater discharged from the Building 537 pipeline is the primary source of contamination to soil, groundwater, sediment, and surface water.	A removal action was completed in 2007 to address concentrations of HMX, chromium, iron, mercury, vanadium and zinc in Site 34 soils and selenium and BEHP in site sediment.	Explosives decontamination of the buildings at Site 34 was completed in 2013. An investigation to further characterize the nature and extent of contamination in soil, groundwater, sediment, and surface water is currently in progress.	Site 34 is a pipeline that originates at Building 537 and extends south to Felgates Creek.	CH2M HILL, Site Management Plan, 2013
SSA 2 – Former Explosive Ordnance Disposal (EOD) Burning/ Disposal Area	Northwestern corner of WPNSTA Yorktown, at the north end of the existing EOD range	Debris including non-explosive arming devices, MK 46 shipping containers, and various types of scrap metal were identified at SSA 2. Numerous earthen berms and depressions indicate the historical use of bulldozers and other earth-moving equipment throughout the SSA. Demolition records indicate that the area was the original EOD range for WPNSTA Yorktown, and was actively used throughout the 1950s and 1960s for the routine destruction of ordnance material. The area was closed in 1970, and operations were moved south to the current site of the existing EOD range (SSA 19). Anecdotal information indicates that the move was prompted by growing concerns that range operations might cause forest fires in the wooded areas bordering the SSA.	None	In 1994, scrap metal (torpedo casings, bomb casings, powder cans, used detonation devices, tractor parts, marsh matting, and other miscellaneous debris), 14 containers of lead, and 11 live ordnance pieces were removed.	An NFA Decision Summary was signed in March 1996.	The SSA 2 area consists of a wooded ravine that drains into Pond No. 11.	CH2M HILL, Site Management Plan, 2008
SSA 3 – Fire Training Pits and Vicinity	North-central portion of WPNSTA Yorktown	Fire-training activities were conducted in the grass field, which contains three former concrete/masonry block oil pits, a confined space training area consisting of a Quonset hut, and an area of burnt surface soil. Berms were built around each of the pit areas in 1986 and a roof was added to each area in 1991. Debris was reportedly placed in each of the pits, doused with jet fuel, and set on fire. The Quonset hut, used for confined space entry training, was in the center of SSA 3 and had a blackened and burned earthen floor. The area of burnt surface soil was identified at the northern portion of the SSA, north of the confined space training area.	The potential source of contamination at SSA 3 consisted of petroleum-based substances and solvents that were ignited during fire-training exercises.	A removal action was conducted in 1996, consisting of excavating and removing the fire training pits, confined space training area (Quonset hut), and the area of burnt surface soil.	An NFA Decision Summary was signed in May 2004.	SSA 3 consists of a grass field.	CH2M HILL, Site Management Plan, 2008
SSA 4 – Weapons Casing/Drum Disposal Area	East-central portion of WPNSTA Yorktown between Main Road and By-Pass Road at the headwaters of a tributary leading to Roosevelt Pond	SSA 4 was used to dispose of debris, including weapons casings and drums.	The potential source of contamination at SSA 4 was related to waste disposal.	A removal action to remove surface debris from the ravine was conducted at SSA 4 in 1994. Debris removed included various types of ordnance, empty drums, miscellaneous construction/ demolition debris, fire extinguishers, and nominal amounts of paint wastes and paraffin wax.	An NFA Decision Summary was signed in May 2004.	SSA 4 consists of a wooded ravine.	CH2M HILL, Site Management Plan, 2008
SSA 5 – By-Pass Road Landfill	East-central portion of WPNSTA Yorktown, just north of By-Pass Road	Metal debris, with lesser amounts of concrete and miscellaneous materials, was present at SSA 5.	The potential source of contamination at SSA 5 was related to the waste disposal.	A removal action was conducted at SSA 5 in 1994 to remove the small amount of debris including empty drums, pipes, scrap metal, and rubble.	An NFA Decision Summary was signed in May 2004.	SSA 5 consists of a wooded ravine.	CH2M HILL, Site Management Plan, 2008
SSA 8 – Building 350 Rail Roundhouse Maintenance Area Trench Outfall	Southeast corner of WPNSTA Yorktown, outside of former Building 350	A concrete trench within Building 350 was used to access train engines for repair and maintenance. The floor of the concrete maintenance trench was stained. The drainage pipe from the trench to the outside sewer system was plugged in 1985 (wooden plug and grout). The plugged drain pipe in the floor of the trench led to a catch basin approximately 100 yards south Building 350. This catch basin also collected stormwater from the area around the Main Gate (Gate 1) and Building 350. The outfall associated with the catch basin extends under the former railroad tracks, northwest, toward Bollman Road.	None	None.	An NFA Decision Summary was signed in July 1997.		CH2M HILL, Site Management Plan, 2008

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SSA 11 – Building 3 Neutralization Unit	Eastern section of WPNSTA Yorktown, inside Building 3 and southwest of Site 12 and near SSAs 12 and 13	It is assumed that this tank was used for acid neutralization of wastes generated from an unknown process. The tank has reportedly been inactive since the early 1980s. Chipping and pitting were observed in the trench and sump during a 1997 Site Screening Process (SSP) site visit; however, no cracks or holes were identified in the floor. Based on a review of as-built drawings, the trench and drain discharge into the storm sewer system.	None	None.	An NFA Decision Summary was signed in July 1997.	SSA 11 is an open, metal tank with piping that leads to a trench and sump inside the southeast corner of Building 3.	CH2M HILL, Site Management Plan, 2008
SSA 12 – Public Works Storage Yard/Building 683 Vicinity	Eastern portion of WPNSTA Yorktown, in the Public Works storage yard, near Site 12 and SSAs 11 and 13	SSA 12 was used to store waste generated by the Public Works Department (used motor oil, used batteries and old tires) and to store new electrical transformers and other electrical equipment (used or damaged transformers have not been stored at SSA 12). Also, within the fenced yard is a formerly wooded area where demolition debris was reportedly deposited.	None	None.	An NFA Decision Summary was signed in July 1997.	SSA 12 comprises two areas: a field about 150 feet by 300 feet and a fenced yard controlled by Building 645.	CH2M HILL, Site Management Plan, 2008
SSA 13 – Building 529 Battery Drainage Area	Eastern portion of WPNSTA Yorktown, outside Building 529, near Site 12 and SSAs 11 and 12	Operations at Building 529 began in the 1940's, and battery washing occurred at SSA 13 until 1987. The battery wash area is underlain by 6-inches of concrete.	None	None.	An NFA Decision Summary was signed in July 1997.	SSA 13 is currently a paved area.	CH2M HILL, Site Management Plan, 2008
SSA 15 – Sewage Treatment Plant (STP) #1/Sludge Drying Beds and Discharge Area	Southeast corner of the WPNSTA, east of Buildings 3 and 4 and south of Site 12	Wastewater reportedly entered an Imhoff tank, which operated as a primary settling basin for the waste. The water then was passed through a trickling filter for biological treatment and pumped back to the Imhoff tank for secondary settling. The water was chlorinated in the chlorination unit and discharged to a tributary of Ballard Creek. Sludge from the Imhoff tank was periodically removed and placed in a sludge drying bed. STP #1 received and managed only sanitary waste but may have treated nitramine-containing and other industrial wastewater. WPNSTA personnel have reported that during the operation of STP #1, a mercury-containing bearing on the trickling filter cracked, allowing mercury to be released.	None	In 2001, the Imhoff tank, trickling filter, sludge drying bed, and chlorination unit were removed.	An NFA Technical Memorandum was signed in April 2011.	SSA 15 comprises STP #1/Sludge Drying Beds and Discharge Area.	CH2M HILL, Site Management Plan, 2011
SSA 17 – Mark 46 Torpedo Support Facility	Central portion of WPNSTA Yorktown, north of Sharpe Road and northwest of the intersection of Sharpe and Lee Roads	This area previously contained a 10,000-gallon UST and ancillary drain pipes that was used to store waste Otto fuel generated during the cleaning of MK 46 torpedoes. In June 1988, the tank system failed a tank integrity test, and it was subsequently taken out of service and the floor drains leading to the tank were sealed. The UST system was removed in March 1995. The MK 46 torpedo shop subsequently stored waste Otto fuel in 55-gallon drums for later offsite disposal. Waste Otto fuel is no longer generated or stored at SSA 17.	The source of contamination was waste Otto fuel stored in an UST.	A removal action was conducted in 1995 to remove the UST system.	An NFA Decision Summary was signed in March 1996.	SSA 17 is the fenced in compound surrounding Building 1456	CH2M HILL, Site Management Plan, 2008
SSA 19 – Beaver Road/Ponds 11 and 12 Drainage Areas	Northwestern portion of WPNSTA Yorktown	SSA 19 is identified as former SWMUs 31(EOD Holes), SWMU 32 (EOD Burn Containers), and AOC B (EOD Range Pond). The EOD range began operations in 1970 when the former disposal range (SSA 2) was taken out of service. The open burn/open detonation range was used for explosive waste destruction conducted in accordance with permitted RCRA requirements, including groundwater monitoring. EOD operations involved detonation of ordnance in soil berms. Metal containers of varying sizes were used when higher temperatures were needed to adequately burn explosive waste. Unlined settling ponds collect runoff through pipes from this area. Effluent from these ponds may discharge to nearby Ponds 11 and 12.	None	None.	An NFA Decision Summary was signed in March 1996.	During the winter, this area is covered and grass is grown to prevent erosion.	CH2M HILL, Site Management Plan, 2008

APPENDIX A
Site-Specific Investigation and Remedial Action
WPNSTA Yorktown, Yorktown, Virginia

Site	Site Location	Historic Land Use	Source of Potential Contamination	Site Remedial Action	Site Status	Current Land Use	References
SSA 21 – Roosevelt Pond	Eastern portion of WPNSTA Yorktown.	SSA 21 is a freshwater pond and receives runoff from the industrial area to the south including SSA 12, SSA 4, and SSA 5. Roosevelt Pond discharges into the York River within 500 feet of the WPNSTA Yorktown facility boundary.	Potential contamination of SSA 21 is from surface water runoff received from upgradient sites and SSAs.	None.	An NFA Decision Summary was signed in May 2004.	SSA 21 is currently Roosevelt Pond.	CH2M HILL, Site Management Plan, 2008
UXO 2 (formerly Site 2) – Turkey Road Landfill	Central portion of WPNSTA Yorktown, east of Turkey Road adjacent to a wetland area of the Southern Branch of Felgates Creek and two unnamed tributaries.	Used as a disposal site for mercury and carbon-zinc batteries, tree stumps and limbs, construction rubble, missile hardware (e.g., wings, fins and power packs), electrical devices, and unidentified drums and/or tanks. Operations at the landfill reportedly began in the 1940s and ceased in 1981.	Waste at Site 2 is the potential source of contamination to soil.	Surface and near-surface debris, including large concrete masses, asphalt, scrap metal, empty drums, miscellaneous construction/demolition debris, scrap ordnance, and batteries, were removed from the site in 1994.	In 2005, soil sampling unearthed an ordnance item and the site was transferred to the Munitions Response Program on June 19, 2007. Investigation at UXO 2 is currently on hold until funding from the Munitions Range Program (MRP) can be obtained.	Landfill waste remains in place.	CH2M HILL, Site Management Plan, 2013
UXO 3 – NMC Munitions Loading Pier		A current pier and former pier occupy the site. Pier R-1 (the former pier) was constructed in 1919, the year after the United States Mine Depot opened, to facilitate munitions loading. Prior to the construction of the pier, munitions loading and handling occurred in the York River from barge to boat. The wooden pier was badly damaged by the Chesapeake-Potomac hurricane in 1933. In the 1940s, construction began on a concrete pier immediately adjacent to Pier R-1. The new pier (Pier R-3, the current pier) was originally L-shaped, consisting only of the southern arm of the current pier and a portion of the crossbar, but in the 1950s was completed to the current U-shape. In 1954, the wooden Pier R-1 suffered damage due to a fire. Pier R-3 eclipsed Pier R-1 for use as a munitions loading, unloading, and handling facility, and continues in service for that purpose. In the 1990s, Pier R-1 was referred to as a recreational pier by the United States Army Corps of Engineers (USACE). This pier was standing until the mid-2000s, after which time the pier was no longer present with the exception of pilings remaining beneath the water surface.	The potential presence of MEC is the potential source of contamination to sediment and surface water.	None	Site inspection activities to determine if MEC is present at UXO 3 are currently in progress.	UXO 3 is the current and former piers and pier areas along the shoreline of the York River.	CH2M HILL, Site Management Plan, 2013

Appendix B
Site-Specific Descriptions—CAX

APPENDIX B
Site-Specific Investigation and Remedial Action
Cheatham Annex, Williamsburg, Virginia

Site	Site Location	Historic Land Use	Source of Potential Contamination	Site Remedial Action	Site Status	Current Land Use	References
Site 1 – Landfill near Incinerator and former AOC 5 – Debris Area	Eastern portion of CAX, along the York River	Used for burn residues from 1942 to 1951, and as a general landfill from 1951 to 1972. A variety of wastes, including empty paint cans and paint thinner cans, cartons of ether and other unspecified drugs, railroad ties, tar paper, sawdust, rags, concrete, and lumber, were burned and disposed in the landfill until disposal activities ceased in 1981. In addition, an additional northern area of impacted soils (referred to as the debris pile) contained cables, metal storage containers, an empty storage tank, automobiles, airplane and boat parts, and other miscellaneous items.	The waste at Site 1 was the source of potential contamination to soil, groundwater, sediment, and surface water.	Removal actions were conducted in 2003, 2004, 2005, and 2007. In addition to the 2007 removal action, a riparian buffer was constructed adjacent to the depression pool to reduce erosion of the bank.	An NFA Record of Decision (ROD) for all media was signed in September 2009.	Wetland and wildlife viewing area.	CH2M HILL, Site Management Plan, 2010
Site 2 – Contaminated Food Disposal Area	Central portion of CAX, within the woods behind Building 40 (Cold Storage Warehouse, which was razed in 2005).	Approximately 100 cubic yards of ammonia-contaminated food were buried, with cellophane wrappers and boxes intact, in a disposal pit in 1970.	None. The contaminated food did not pose an environmental hazard.	None.	A NFRAP was signed in August 2003 (Baker, 2003).	Undeveloped and wooded	CH2M HILL, Site Management Plan, 2008
Site 3 – Submarine Dye Disposal Area	North-central portion of CAX, at the southeastern corner of CAD 15; presently used as a storage lot	Used for storing 55-gallon drums of fluorescein dye. The fluorescein dye was stored on two or three pallets between the warehouses. Drum corrosion allowed dye to leak onto the ground and into the storm sewer system. On rainy days, puddles containing a green fluorescent dye were observed and, at times, the dye would leak into the storm sewer leading to the York River. The drums were removed in the early 1970s.	None. The fluorescein dye is non-hazardous, does not adversely affect environmental media, and naturally degrades.	None.	A NFRAP was signed in August 2003 (Baker, 2003).	Asphalt parking/loading area	CH2M HILL, Site Management Plan, 2008
Site 4 – Outdated Medical Supply Disposal Area (formerly AOC 4; includes former AOC 3 and Youth Pond)	Northeastern portion of CAX, at the headwaters of a pond upstream of Youth Pond and between Buildings CAD 11 and CAD 12	In the late 1960s, out-of-date, unused, medical supplies, including syringes and empty intravenous bottles, and 1-inch metal banding, were unloaded down a bank in this area and covered with soil. In addition, railroad ties and concrete debris were dumped along the main drainage channel to the upstream pond.	The surface and buried debris at Site 4 is the source of potential contamination to soil, groundwater, sediment, and surface water.	Surface debris and sharps (metal and plastic) were removed by Reactives Management, Inc. in May 1998	An RI Report was submitted to the USEPA and VADEQ in May 2014 and is currently under review.	Site 4 - Undeveloped and wooded Youth Pond – used for catch-and-release fishing activities	CH2M HILL, Site Management Plan, 2013
Site 5 – Photographic Chemicals Disposal Area	South-central portion of CAX, east of Second Street and south of Antrim Road. Site 5 drains to Penniman Lake and is adjacent to Site 11.	Site 5 was used for the disposal of outdated photographic developers and fixers in 1967 or 1968. The material was reportedly disposed in a pit of unknown dimensions.	None. An Estimated 20 to 40 gallons of developers/fixers were disposed in a "marl pit." Marl is native clayey sediment that would restrict migration of wastes. Also, the volume of waste was small.	None.	A NFRAP was signed in August 2003 (Baker, 2003).	Undeveloped and vacant	CH2M HILL, Site Management Plan, 2008
Site 6 – Spoiled Food Disposal Area	Southern portion of CAX, southwest of First Street in a vegetated area between First Street and Patrol Road	Used as spoiled food disposal area for approximately 750 cubic yards of food spoiled in cold storage. The food was buried in a 12- to 15–foot-deep pit around 1970.	None. The spoiled food did not pose an environmental hazard.	None.	A NFRAP was signed in August 2003 (Baker, 2003).	Undeveloped and wooded	CH2M HILL, Site Management Plan, 2008
Site 7 – Old DuPont Disposal Area	Northern portion of CAX, along the York River, east of Chase Road	During the early 1900s, non-hazardous and/or inert wastes from the City of Penniman and the DuPont Company Penniman facility were reportedly disposed in what was thought to be a topographic depression along the York River.	The buried debris at Site 7 is the source of potential contamination to soil, groundwater, sediment, and surface water.	In 2004 a Time-critical Removal Action (TCRA) was signed to prevent further erosion of the disposal area contents into the York River and included beach surface debris cleanup activities. In addition, a presumptive removal action was completed in 2008 to remove visible debris from the disposal area and the former cabin site areas.	RI field activities were completed in April 2014. A Draft RI Report for Site 7 is being prepared, with submission to the Partnering Team expected in January 2015.	Undeveloped and vacant	CH2M HILL, Site Management Plan, 2013

APPENDIX B
Site-Specific Investigation and Remedial Action
Cheatham Annex, Williamsburg, Virginia

Site	Site Location	Historic Land Use	Source of Potential Contamination	Site Remedial Action	Site Status	Current Land Use	References
Site 8 – Landfill near Building CAD 14	North-central portion of CAX, approximately 300 feet north of Building CAD 14	The disposal area reportedly consisted of a series of trenches 2,000 feet long and 10 feet deep. The site was used at various times since the early 1940s but was most active before the Site 1 Landfill (near the incinerator) was opened. Waste was reportedly disposed at the site as recently as 1980. Reportedly, only non-hazardous materials such as spoiled meat, spoiled candy, and clothing have been disposed at the site.	None. Only non-hazardous waste (clothing) and spoiled food were disposed at the site and did not pose an environmental hazard.	None.	A NFRAP was signed in August 2003 (Baker, 2003).	Undeveloped and wooded	CH2M HILL, Site Management Plan, 2008
Site 9 – Transformer Storage Area	North-central portion of CAX, adjacent to the northwest corner of Building CAD 16	Between 1973 and 1980, electrical transformers, some of which contained polychlorinated biphenyls, were reportedly stored at the site for repair or disposal. The storage area was not paved; however, it was enclosed by an earthen wall. Transformers were not stored at the site after 1980, and the area was graded and covered with gravel.	Under investigation	None.	Expanded SI (ESI) field activities were completed in March 2014. A Draft ESI Report for Site 9 is being prepared, with submission to the Partnering Team expected in November 2014	Concrete walkway and gravel area.	CH2M HILL, Site Management Plan, 2013
Site 10 – Decontamination Agent Disposal Area near First Street	Southern portion of CAX, south of First Street	A decontamination agent (DS-2) was reportedly buried at the site before 1982. DS-2 was used for decontaminating equipment contaminated with nerve or blister agents and is a known human toxin with corrosive properties. It is not known if the DS-2 at Site 10 was neutralized prior to disposal.	None. SI and SSP investigation sampling did not locate any significant sources of contamination at the site. Based on the results of these investigations and the relatively small volume of DS-2 that was reportedly buried, the site does not appear to pose a significant threat to human health or the environment.	None.	A NFRAP was signed in August 2003 (Baker, 2003).	Undeveloped and wooded.	CH2M HILL, Site Management Plan, 2008
Site 11 – Bone Yard	South-central portion of CAX, 250 feet south of Antrim Road and the Public Works facility	Used between 1940 and 1978 to store containers of waste-oil, tar, asphalt, and other scrap materials.	The material stored at Site 11 was the source of potential contamination to soil, groundwater, sediment, and surface water.	In 1987, a total of 18 drums were removed from the site for disposal. In 1997, a total of 59 drums, 2 empty storage tanks, 2 tar storage boxes, and miscellaneous surface debris were removed for offsite disposal	A NFA ROD for all media was signed in September 2011.	Undeveloped and partially wooded.	CH2M HILL, Site Management Plan, 2011
Site 12 – Disposal Site near Water Tower	Southwestern portion of CAX, between Patrol Road and railroad tracks	Site 12 was used for surface disposal of scrap metal, primarily old automobile parts, and iron pipe. Non-hazardous materials are believed to have been disposed of at the site and no signs of stressed vegetation were noted.	None. Non-hazardous wastes were staged at the site. A review of available information and a limited field investigation support the determination that no significant risk or threat to human health or the environment exists.	None.	A NFRAP was signed in April 2004 (Baker, 2004c).	Undeveloped and vacant	CH2M HILL, Site Management Plan, 2008
AOC 1 – Scrap Metal Dump	Southwestern portion of CAX, just west of Chapman Road	Two ravines (North and South) associated with unnamed tributaries to Jones Mill Pond. Wood and metal debris have been disposed of in the ravines	The surface and buried debris at AOC 1 is the source of potential contamination to soil, groundwater, sediment, and surface water.	None.	ESI field activities were completed in March 2014. A Draft ESI Report for AOC 1 is expected to be submitted to the Partnering Team in November 2014.	Undeveloped and wooded	CH2M HILL, Site Management Plan, 2013
AOC 2—Dextrose Dump	Along the southern perimeter of CAX, in the woods, north of Garrison Road	AOC 2 was identified during site visits in 1998 by the Navy, USEPA, and VDEQ. The area contains several rows of concrete foundation piers, which at one time supported a Shipping House at the former Penniman Shell Loading Plant. Most of the Penniman facility was demolished between 1918 and 1925. Grass-covered lanes, which lead to the area, are likely locations of former rail lines that have been removed. Several glass bottles, many of which are labeled dextrose, are present at this AOC. In addition, several partially buried empty drums were also noted. Mounds of soil that are present may also indicate buried materials.	The buried debris at AOC 2 is the source of potential contamination to soil.	In 1998, 470 bottles were removed from the site as part of a routine housekeeping operation.	Supplemental SI field activities to collect additional soil samples were conducted in May 2014. The results will be used to develop a removal action EE/CA. A NFA Consensus Letter for groundwater was signed by the Partnering Team in September 2013	Undeveloped and wooded	CH2M HILL, Site Management Plan, 2013

APPENDIX B
Site-Specific Investigation and Remedial Action
Cheatham Annex, Williamsburg, Virginia

Site	Site Location	Historic Land Use	Source of Potential Contamination	Site Remedial Action	Site Status	Current Land Use	References
AOC 6 –Penniman AOC	Generally in the southeastern portion of CAX	Five sub-areas related to the former Penniman Shell Loading Plant. The TNT Graining House Sump subarea consists of a concrete-lined, open top pit believed to be the sump pit for the TNT graining house in the former shell loading area. The TNT Catch Box Ruins subarea consists of an earthen, brick-lined depression located immediately adjacent to the TNT graining house in the former shell loading area. This area was used to separate TNT particles from wastewater. The Waste Slag Material subarea consists of waste metallic slag material that is located throughout the shell loading area predominantly along the railroad tracks. The 1918 Drum Storage subarea was used for the storage of wooden kegs when the shell loading area was active. The Ammonia Settling Pits subarea consists of earthen ammonia settling pits that were part of a former shell loading area located on CAX. Wastewater from an ammonia finishing building was discharged through these settling pits.	Historical activities conducted at the Penniman Shell Loading Plant is the source of potential contamination to soil and groundwater.	None.	RI field activities for the TNT Graining House Sump and TNT Catch Box Ruins subareas were completed in December 2013. A Draft RI Report for these two subareas is expected to be submitted to the Partnering Team in August 2014. A NFA Consensus Letter for all media at the Waste Slag Material subarea was signed September 2013. An NFA Consensus Letter for all media at the 1918 Drum Storage subarea was signed in September 2013. Expanded SI field activities at the Ammonia Settling Pits subarea were completed in March 2014. A Draft Expanded SI Report for this subarea is expected to be submitted to the Partnering Team in November 2014.	All sub-areas are undeveloped and wooded, except for the 1918 Drum Storage area, which is currently an open, mowed grassy area and parking lot behind Building 225.	CH2M HILL, Site Management Plan, 2013
AOC 7 – Drum and Can Disposal Area	Northern portion of CAX, north of Building 14 and Site 8	Consists of several small surface debris disposal areas containing a 55-gallon drum and numerous cans. One of the areas of note is a pit approximately 30 ft by 20 ft and 8 ft deep that contained 40 to 50 10-gallon rusted cans with labeling containing the word "tetrachloroethene." No additional information is known at this time.	The surface and buried debris at AOC 7 is the source of potential contamination to soil and groundwater.	In June 2006, Shaw Environmental conducted a housekeeping effort and removed all of the surface debris.	A removal action EE/CA was finalized for soil in March 2014. The removal action is expected to be completed before the end of 2014. Expanded SI field activities for groundwater were completed in March 2014. A Draft Expanded SI Report for AOC 7 groundwater is expected to be to the Partnering Team in August 2014.	Undeveloped and wooded	CH2M HILL, Site Management Plan, 2013
AOC 8 – Area South of Site 7 (formerly referred to as Site 7)	Northern portion of CAX, along the York River on a flat, sparsely vegetated depression, with a berm along the northern perimeter	Gravel and ballast rock can be seen on the ground surface. To the east of the flat area, the land drops off slightly, and in a very small area along the perimeter, buried debris (pipe, metal, and wood) can be seen cropping out from the edge of the slope and along the beach. No additional information is known at this time.	The surface and buried debris at AOC 8 is the source of potential contamination to soil and groundwater.	None.	RI field were completed in December 2013. However, due to a gap in the groundwater data, additional field activities are needed. A Uniformed Federal Policy – Sampling Analysis Plan (UFP-SAP), outlining additional investigation activities at AOC 8 is expected to be submitted to the Partnering Team in August 2014	Undeveloped and wooded	CH2M HILL, Site Management Plan, 2013
AOC 9 – Penniman Lake	Generally in the southeastern portion of CAX	Penniman Lake was created in 1943 when a portion of King Creek was dammed	Unknown	None	SI activities are being conducted using a stepped approach, a Step 2 Technical Memorandum, summarizing the results of the Step 2 field activities is expected to be submitted to the Partnering Team in June 2014.	Recreational activities including catch-and-release fishing.	CH2M HILL, Site Management Plan, 2013

Appendix C
Written Community Survey

WPNSTA Yorktown/CAX Community Involvement Plan Questionnaire

1. Where do you live:
   WPNSTA Yorktown ☐ CAX ☐ or Off-Base, neighboring community ☐

2. Do/did you work:
   WPNSTA Yorktown ☐ (No. of Years: ____), CAX ☐ (No. of Years: ____), or I don't/didn't work on either base ☐

3. Do you or any members of your family participate in any recreational activities offered at:
   WPNSTA Yorktown?
   Yes ☐ or No ☐ and/ or CAX? Yes ☐ or No ☐

4. Did you know the Navy has an Environmental Restoration Program (ERP) that manages the investigation and clean-up of historical disposal sites at Navy installations?
   Yes ☐ or No ☐

5. Did you know that ERP site investigations and clean-ups are on-going at WPNSTA Yorktown and CAX?
   Yes ☐ or No ☐

6. Are you aware there is a Restoration Advisory Board (RAB) where representatives from the Navy, USEPA, and Virginia Department of Environmental Quality meet with the public twice a year to provide updates on WPNSTA Yorktown and CAX ERP? (meetings are held in May and November at the York County Public Library on George Washington Highway from 1:00 to from 3:00 PM)
   Yes ☐ or No ☐

7. Are you aware that in addition to the RAB meetings, the Navy periodically holds public meetings at the York County Public Library to solicit public input on upcoming ERP site decisions at WPNSTA Yorktown and CAX?
   Yes ☐ or No ☐

8. Have you ever attended a RAB or other public meeting?
   Yes ☐ or No ☐
   a. If yes
      i. How often:
         Once ☐ on occasion ☐ or frequently ☐
      ii. On a scale of 1 to 5, with 5 being informative and 1 being not very informative, how informative were the presentations?
         1☐ 2☐ 3☐ 4☐ 5☐ No opinion☐
   b. If no:
      Not aware ☐ Not interested ☐ Inconvenient day ☐ Inconvenient time ☐ Inconvenient location ☐

9. Typically, what would be the best time for you (day of week and time of day) to attend a RAB or other public meeting (please check those that apply)?

	Monday	Tuesday	Wednesday	Thursday	Friday
10 am-12pm					
1-3 pm					
3-5 pm					
5-7 pm					
7-9 pm					

10. Are you aware there is a Navy contact (i.e., Public Affairs Officer [PAO]; 757-887-4939; 160 Main Road, Yorktown VA 23691-0169) who may be contacted for information regarding the ERP for both WPNSTA and CAX?
Yes ☐ or No ☐

11. Are you aware the Navy places WPNSTA Yorktown and CAX ERP documents that require public review in the York County Public Library on George Washington Highway?
Yes ☐ or No ☐

12. Have you ever reviewed WPNSTA Yorktown or CAX ERP material placed in the York County Public Library?
Yes ☐ or No ☐

   a. If yes

      i. How often?
      Once ☐ On occasion ☐ Always ☐

      ii. Was it easy to find, review, and provide comments?
      Yes ☐ or No ☐

   b. If no, check all the reasons that apply:
   Not aware ☐ Not interested ☐ Inconvenient location ☐ Other ☐

13. Are you aware that public notices are periodically run in the Daily Press and VA Gazette to inform the public of upcoming RAB or other public meetings and to solicit review of documents placed in the York County Library?
Yes ☐ or No ☐

14. Have you ever seen a WPNSTA Yorktown or CAX ERP public notice in either the Daily Press or VA Gazette? The purpose of these notices are to inform the community of an upcoming RAB or other public meeting or soliciting public review of a document that was placed in the York County Public Library.
Yes ☐ or No ☐

   a. If yes,

      i. Which newspaper(s)? (check all that apply):
      Daily Press ☐ VA Gazette ☐

   b. If no, do you receive the Daily Press or VA Gazette?
   Yes ☐ or No ☐

15. Are you aware there are ERP public websites for WPNSTA Yorktown (http://go.usa.gov/DynG) and CAX (http://go.usa.gov/DynP)?
Yes ☐ or No ☐

a. If yes,

i. Have you viewed it?
Yes ☐ or No ☐

ii. Did you find the information useful?
Yes ☐ or No ☐

b. If no, do you have a computer?
Yes ☐ or No ☐

16. On a scale of 1 to 5, with 5 being Excellent and 1 being Poor, how would you rank the Navy's communication with the community regarding ERP site investigation and cleanup at WPNSTA Yorktown and CAX?

1☐ 2☐ 3☐ 4☐ 5☐ No opinion☐

17. On a scale of 1 to 5, with 5 being no improvement needed and 1 being needs improvement, how would you rank the relationship between the WPNSTA Yorktown/CAX ERP and the community?

1☐ 2☐ 3☐ 4☐ 5☐ No opinion☐

18. On a scale of 1 to 5, with 5 being strongly believe and 1 being do not believe, how would you rank your belief that the Navy is concerned with protecting human health and the environment through its ERP at WPNSTA Yorktown and CAX?

1☐ 2☐ 3☐ 4☐ 5☐ No opinion☐

19. On a scale of 1 to 5, with 5 being a lot of confidence and 1 being no confidence, how would you rank your confidence in the Navy's ability to investigate and cleanup contaminated sites at WPNSTA Yorktown and CAX?

1☐ 2☐ 3☐ 4☐ 5☐ No opinion☐

20. Do you have any concerns regarding environmental site investigation and cleanup at: WPNSTA Yorktown?
Yes ☐ or No ☐ and/or CAX? Yes ☐ or No ☐

a. If yes, in what ways are you concerned?
Impacts to your health☐ Impacts to others' health ☐ Impacts to wildlife ☐
Impacts to the York River and other water bodies ☐ Other (please specify) _____
_____

21. In the space below, please provide any additional thoughts you would like to share about the environmental site investigation and cleanup at WPNSTA Yorktown and/or CAX.

_____

_____

_____

_____

_____

Are you interested in attending a WPNSTA Yorktown or Cheatham Annex Restoration Advisory Board meeting?

Please fill out and return the enclosed postcard to get on our mailing/email list.

Appendix D
Community Interview Questions

Community Interview Questions for Naval Weapons Station Yorktown and Cheatham Annex Community Involvement Plan Update

May 2014

1. Do/did you ever work at either WPNSTA Yorktown or CAX? If so, for how long?
2. Do you or any members of your family participate in any recreational activities offered at WPNSTA Yorktown or CAX?
3. Did you know the Navy has an Environmental Restoration Program (ERP) that manages the investigation and clean-up of historical disposal sites (i.e., Superfund Sites) at Navy installations and that there are on-going investigations and clean-up activities being conducted at WPNSTA Yorktown and CAX?
4. Are you aware there is a Restoration Advisory Board (RAB) where representatives from the Navy, USEPA, and Virginia Department of Environmental Quality meet with the public twice a year to provide updates on WPNSTA Yorktown and CAX ERPs?
5. Are you aware that in addition to the RAB meetings, the Navy periodically holds public meetings to solicit public input on upcoming ERP site decisions at WPNSTA Yorktown and CAX?
6. Are you aware there is a Navy contact who may be contacted for information regarding the ERP for both WPNSTA and CAX?
7. Are you aware the Navy places WPNSTA Yorktown and CAX ERP documents that require public review in the York County Public Library on George Washington Highway? If so, have you ever reviewed any of these documents?
8. Are you aware that public notices are periodically run in the Daily Press and VA Gazette to inform the public of upcoming RAB or other public meetings and to solicit review of documents placed in the York County Library? If so, have you ever seen a WPNSTA Yorktown or CAX ERP public notice?
9. Are you aware there are ERP public websites for WPNSTA Yorktown and CAX)? If so, have you ever visited either of these websites?
10. Do you feel the Navy effectively communicates with the community regarding ERP environmental site investigation and cleanup at WPNSTA Yorktown and CAX?
11. Do you feel the relationship between the WPNSTA Yorktown and CAX ERP and the community needs improvement?
12. Do you believe the Navy is concerned with protecting human health and the environment through its ERPs at WPNSTA Yorktown and CAX?
13. Do you have confidence in the ability of the Navy to investigate and clean up contaminated sites at WPNSTA Yorktown and CAX?
14. Do you have any concerns regarding environmental site investigation and cleanup at WPNSTA Yorktown and/or CAX? If you do, in what ways are you concerned.
15. Is there anything else you've like us to know?

Appendix E
Written Survey Results

Written Survey Results

Question	Responses N=120	
	number	percentage
1. Where do you live?		
WPNSTA Yorktown	8	7%
CAX	0	0%
Off-Base, neighboring community	112	93%
2. Do/did you work at		
WPNSTA Yorktown?	12	10%
No. of Years		
CAX?	4	3
No. of Years		
I don't/didn't work on either base	102	86%
3. Do you or any members of your family participate in any recreational activities offered at:		
WPNSTA Yorktown - yes	25	40%
WPNSTA Yorktown - no	38	60%
CAX – yes	15	15%
CAX – no	83	85%
4. **Did you know the Navy has an ERP Program that manages the investigation and clean-up of historical disposal sites at Navy installations?**		
Yes	45	38%
No	75	62%
5. Did you know that ERP site investigations and clean-ups are on-going at WPNSTA Yorktown and CAX?		
Yes	39	33%
No	82	67%
6. Are you aware there is a Restoration Advisory Bard (RAB) where representatives from the Navy, USEPA, and VADEQ meet with the public twice a year to provide updates on the WPNSTAT Yorktown and CAX ERP?		
Yes	18	15%
No	102	85%
7. Are you aware that in addition to the RAB meetings, the Navy periodically holds public meetings at the York County Public Library to solicit public input on upcoming ERP site decisions at WPNSTA Yorktown and CAX?		
Yes	18	15%
No	101	85%
8. **Have you ever attended a RAB or other public meeting?**		
Yes	9	8%
No	111	92%
a. If Yes:		
i. How often		
Once	3	33%
On occasion	1	11%
Frequently	5	56%
ii. On a scale of 1 to 5 with 5 being informative and 1 being not very informative, how informative were the presentations?		
1	1	12%

Question	Responses N=120	
	number	percentage
2	0	0%
3	0	0%
4	2	25
5	5	63%
No opinion	0	0%
b. If no:		
Not aware	87	77%
Not interested	11	10%
Inconvenient day	4	4%
Inconvenient time	9	8%
Inconvenient location	1	1%
9. Typically, what would be the best time for you (day of week and time of day) to attend a RAB or other public meeting?		

	Monday	Tuesday	Wednesday	Thursday	Friday
10 am-12pm	11	10	12	9	12
1-3 pm	10	12	12	11	12
3-5 pm	8	9	11	10	9
5-7 pm	15	21	19	18	
7-9 pm	23	27	24	25	

10. Are you aware these is a Navy contact who may be contacted for information regarding the ERP for both WPNSTAY and CAX?		
Yes	16	14%
No	102	86%
11. Are you aware the Navy places WPNSTA Yorktown and CAX ERP documents in the York County Public Library on George Washington Highway?		
Yes	11	9%
No	108	91%
12. Have you ever reviewed WPNSTA Yorktown or CAX ERP material placed in the York County Library?		
Yes	3	3%
No	116	97%
a. If yes,		
i. How often?		
Once	1	33%
On occasion	2	67%
Always	0	0%
ii. Waste it easy to find, review, and provide comments?		
Yes	3	100%
No	0	0%
b. If no, check all the reasons that apply		
Not aware	73	78%
Not interested	14	15%
Inconvenient location	2	2%
Other	5	5%

Question	Responses N=120	
	number	percentage
13. Are you aware that the public notices are periodically run in the Daily Press or VA Gazette?		
Yes	24	20%
No	94	80%
14. Have you ever seen a WPNSTA Yorktown or CAX ERP Public Notice in either the Daily Press or VA Gazette?		
Yes	16	13%
No	102	87%
a. If yes, which newspaper?		
Daily Press	12	70%
VA Gazette	5	30%
b. If no, do you receive the Daily Press or VA Gazette?		
Yes	30	38%
No	50	62%
15. Are you aware there are ERP public websites for WPNSTA Yorktown and CAX?		
Yes	**9**	**8%**
No	**111**	**92%**
a. If yes,		
i. Have you viewed it?		
Yes	4	50%
No	4	50%
ii. Did you find the information useful?		
Yes	4	100%
No	0	0%
b. If no, do you have a computer		
Yes	79	89%
No	10	11%
16. On a scale of 1 to 5, with 5 being excellent and 1 being poor, how would you rank the Navy's communication with the community regarding ERP site investigation and cleanup at WPNSTA Yorktown and CAX?		
1	25	21%
2	11	9%
3	16	13%
4	8	7%
5	10	8%
No opinion	51	42%
17. On a scale of 1 to 5, with 5 being no improvement and 1 being needs improvement, how would you rank the relationship between the WPNSTA Yorktown/CAX ERP and the community?		
1	18	15%
2	12	10%
3	17	14%
4	11	10%
5	12	10%
No opinion	49	41%
18. On a scale of 1 to 5, with 5 being strongly believe and 1 being do not believe, how would you rank your belief that the Navy is concerned with protecting human health and the environment through its ERP at WPNSTA Yorktown and CAX?		

Question	Responses N=120	
	number	percentage
1	7	6%
2	7	6%
3	13	11%
4	21	18%
5	36	31%
No opinion	33	28%
19. On a scale of 1 to 5, with 5 being a lot of confidence and 1 being no confidence, how would you rank your confidence in the Navy's ability to investigate and cleanup contamianted sites at WPNSTA Yorktown and CAX?		
1	9	8%
2	6	5%
3	18	15%
4	25	21%
5	33	28%
No opinion	28	23%
20. Do you have any concerns regarding environmental site investigation and cleanup at WPNSTA Yorktown and/or CAX		
WPNSTA Yorktown - yes	35	37%
WPNSTA Yorktown - no	59	63%
CAX – yes	27	30%
CAX – no	62	70%
a. If yes, in what ways are you concerned?		
Impacts to health	32	26%
Impacts to others' health	27	22%
Impacts to wildlife	31	25%
Impacts to the York River and other water bodies	30	24%
Other	4	3%

Other Comments Received that Referred to the Environmental Restoration Program

I attended one meeting. I feel the cleanup is going well. Keep up the good work

I get lots of information at the [RAB] meetings.

I've never noticed a public notice in the newspaper – I do get postcards announcing the meetings

Wow, this really makes me look like a dunderhead! Now that I'm retired, I had better get involved! I live in Queen's Lake and think I'll send in the postcard!

Only suggestion for better visual impact on the ERP website(s) would be short before & after clean-up videos and picture slides

Funding is my concern

Knowing the problem has been identified and work is underway to address it is enough – Do not need to go to a meeting. I trust the USN more than the USG.

Totally unaware of any of these items mentioned. I live in a neighborhood across the street from NWSWY and never heard it before.

Just as I received this survey, can WNPSTA/CAX mail information regarding environmental impact from its clean-up efforts?

The Navy is concerned with neighbors and the facilities which they occupy

My father was employed at CAX for many years and passed away at age 50. Were these any factors involved in his early demise (at CAX) that could have impacted his health and well being.

This is the first I've heard of some of these things

I am pleased to see that this operation is ongoing as much material used by the military is of a dangerous an[d] unhealthy character. The transient nature of military makes it essential that every effort be made to return the environment to its original status

I appreciate that the information has apparently been posted at the library, but I do not frequent it, and had no idea.

I don't subscribe to the Daily Press. Are your notices posted in the online edition of the paper?

Years ago I visited even played golf at WPNSTA Yorktown enjoyed a drive thru area clean and peaceful. Have not visited in years. Being retired military we use the NEX Shopett and on occasion MWR facilities. I believe if more MWR and WPNSTA Yorktown & CAX were available at the ShopEx I would more likely visit, knowing what's going on.

I'm really not sure what this is all about. We live in Yorktown Navy housing. We need the speed limit lowered, and speed bumps installed. I have witness children almost getting hit by speeding cars coming from the CDC and speeding cars down Leborne Church Road.

I am new to this area. Moved here in Jan. This Questionnaire actually informed me of most of the areas I checked no to

Cost(s) to the general public?

Keep up the good work!

What concern should there be to the local community? Impact on property value?

I don't think that people of this community know the extent of contamination that exists in and around the bases here. Do we really know how much of these contaminants are leaching into the waterways and affecting people and wildlife? Is the government ready to spend the money in order to understand how to best treat these hazards? We don't have enough money to fix our bridges and roads, not to mention to pay a decent wage to our teachers and fund education. I'm skeptical.

Many years ago a man in a Navy truck wanted a well water sample. I never found out why. Daily Press write an article and said no one was using their well. I ask DP to continue but they were not interested. I wrote to you and received no feedback. Several people use their well for garden and lawn.

Has there been any site surveys along Penniman Road corridor in recent years as to residual contaminates?

Why don't you put your info in the York County Newsletter which everyone in York County gets?

I know it is difficult, but try to do with the least environmental disruption (e.g., cutting trees, disturbing wetlands)

It is a wonderful thought hope you keep at it

Great job – Keep up the information visible and frequent. I live in Lee Hall

Consider conducting surveys online in the future

I strongly support cleanup programs but also think prevention is more important. There use to be huge oyster farming along the York River and Chesapeake Bay which [is] mostly gone due to pollution. I didn't find the websites.

Proactive sustainability should become/remain a fundamental component of NWSYT's planning and operations, regardless of available resources, optemp or political/social climate. It's just the right ste of principals to adhere to.

We would like more information about his initiative as this is great news. And we'd love to know how to be involved.

Appendix F
Key Community Contacts

Naval Weapons Station Yorktown/Cheatham Annex
Key Contacts

U.S. Navy			
Organization/Department	**Name**	**Address**	**Phone**
WPNSTA/CAX Public Affairs Office	Mark O. Piggott	Code OOP PO Drawer 160 Yorktown, VA 23691 E-mail: mark.piggott@navy.mil	Tel: 757-887-4939
Remedial Project Manager, WPNSTA Yorktown	Bryan Peed	NAVFAC MIDLANT, Code OPHREV4 9742 Maryland Avenue Bldg N-26 Norfolk, VA 23511-3095 E-mail: bryan.peede@navy.mil	Tel: 757-341-0480
Remedial Project Manager, CAX	Scott Park	NAVFAC MIDLANT, Code OPHREV4 9742 Maryland Avenue Bldg N-26 Norfolk, VA 23511-3095 Email: scott.park@navy.mil	Tel: 757-341-0481
U.S. Environmental Protection Agency			
Organization/Department	**Name**	**Address**	**Phone**
USEPA Region 3 Remedial Project Manager, WPNSTA Yorktown	Moshood Oduwole	Office of Superfund Federal Facilities 1650 Arch Street Philadelphia, PA 19103	Tel: 215-814-3362
USEPA Region 3 Remedial Project Manager, CAX	Gerald Hoover	Office of Superfund Federal Facilities 1650 Arch Street Philadelphia, PA 19103	Tel: 215-814-2077
Virginia Department of Environmental Quality			
Organization/Department	**Name**	**Address**	**Phone**
Virginia DEQ Remedial Project Manager	Wade M. Smith	629 E. Main Street Fourth Floor Richmond, VA 23219	Tel: 804-698-4125

Federal and State Elected Officials			
Organization/Department	**Name**	**Local Address**	**Local Phone**
U.S. Senator	Senator Timothy Kaine	222 Central Park Ave. Suite 120 Virginia Beach, VA 23462	Toll-free: 1-866-507-1570 Tel: 757-518-1674 Fax: 757-518-1679
U.S. Senator	Senator Mark Warner	101 W. Main Street Suite 4900 Norfolk, VA 23510	Tel: 757-441-3079 Fax: 757-441-6250
U.S. Representative	Rep. Robert Wittman	4904-B George Washington Memorial Hwy. Yorktown, Virginia 23692	Tel: 757-874-6687 Fax: 757-874-7164
Governor	Governor Terry McAuliffe	1111 East Broad Street, Richmond, VA 23219	Tel: 804-786-2211 Fax: 804-371-6351
State Senate, 1st District	Senator John Miller	PO Box 6113 Newport News, Virginia 23606	Tel: 757-595-1100 Fax: 757-595-1106
State Senate, 2nd District	Senator Mamie E. Locke	P.O. Box 9048 Hampton, VA 23670	Phone: (757) 825-5880 Fax: (757) 825-7327
State Senate, 3rd District	Senator Thomas Norment, Jr.	PO Box 6205 Williamsburg, Virginia 23188	Tel: 757-259-7810 Fax: 757-259-7812
State House of Delegates 91st District	Del. T. Montgomery Mason	P.O. Box 232 Williamsburg, VA 23187	Tel: (757) 229-9310 Fax: (804) 698-6793
State House of Delegates 96th District	Del. Brenda Pogge	P.O. Box 196 Norge, VA 23127	Tel: 757-223-9690
York County			
Organization/Department	**Name**	**Address**	**Phone**
County Supervisor, District 1	Walter C. Zaremba	106 Royal Grant Drive Williamsburg, VA 23185	H: 757-253-0477 VM: 757-890-3328
County Supervisor, District 3	Donald E. Wiggins Chairman	301 Dawson Drive Seaford, VA 23696	H: 757-890-2980 VM: 757-890-3330
County Administrator	James O. McReynolds	224 Ballard Street P.O. Box 532 Yorktown, VA 23690	757-890-3320
Public Information Office	Not Available.	224 Ballard Street PO Box 532 Yorktown, VA 23690	757-890-3300
Department of Fire and Life Safety	Stephen P. Kopczynski Fire Chief/Coordinator of Emergency Management	301 Goodwin Neck Road Yorktown, VA 23690	757-890-3600

James City County			
Organization/Department	**Name**	**Address**	**Phone**
County Supervisor Roberts District	John J. McGlennon	2817 Mockingbird Ln. Williamsburg, VA 23185 101-D Mounts Bay Road P O Box 8784 Williamsburg, VA	H: 757-220-0568 O: 757-221-3034 F: 757-221-1868
Secretary to the Board of Supervisors	Teresa Fellows	101 D Mounts Bay Road P.O. Box 8784 Williamsburg, VA 23187-8784	757-253-6609
County Administrator	M. Douglas Powell	101-D Mounts Bay Road Williamsburg, VA 23187	757-253-6604
Communications	Jody Puckett	101-D Mounts Bay Road Williamsburg, VA 23187	757-253-6864
Fire Administration	Tal Luton, Chief	5077 John Tyler Highway Williamsburg, VA 2318	P: 757-220-0626 F: 757-220-9125
Environmental Division	Darryl E. Cook	101 D Mounts Bay Road Williamsburg, VA 23187	757-253-6639
City of Newport News			
Organization/Department	**Name**	**Address**	**Phone**
Mayor at-large	McKinley L. Price, DDS	City of Newport News 2400 Washington Avenue Newport News, VA 23607	757-926-8618
City Council, North District 1, Seat B	Sharon P. Scott	City of Newport News 2400 Washington Avenue Newport News, VA 23607	757-926-8618
City Council, North District 1, Seat A	Robert S. Coleman	City of Newport News 2400 Washington Avenue Newport News, VA 23607	757-926-8618
City Manager	James M. Bourey	2400 Washington Avenue Newport News, VA 23607	757-926-8411
Office of Emergency Management	George Glazner	513 Oyster Point Road Newport News, VA 23602	757-269-2900 757-269-2904
Public Works	H. Reed Fowler Jr. Director of Public Works	Dept. of Public Works 513 Oyster Point Rd. Newport News, VA 23602	757-269-2700
Fire	Robert Alley, III Fire Chief	2400 Washington Ave, 6th Fl Newport News, VA 23607	757-926-8404

City of Williamsburg			
Organization/Department	**Name**	**Address**	**Phone**
Public Works	Dan Clayton Director of Public Works	401 Lafayette Street Williamsburg, VA 23185-3617	757-220-6140
Fire	Chief Pat Dent (beg. July 2009)	401 Lafayette Street Williamsburg, VA 23185-3617	757-220-6220
Business Organizations			
Organization/Department	**Name**	**Address**	**Phone**
York County Chamber of Commerce	Carl Loveland, President	P.O. Box 1103 Yorktown, VA 23692	757-898-7472 757.877.5920
Virginia Peninsula Chamber of Commerce (Newport News)	Mike Kuhns, President Public Policy and Military Affairs	21 Enterprise Parkway Suite 100 Hampton, Virginia 23666	757-262-2000, x210
Greater Williamsburg Chamber and Tourism Alliance (Williamsburg, York County, and James City County)	Karen Riordan President & Chief Executive Officer	421 North Boundary Street PO Box 3495 Williamsburg, VA 23187-3495	757-229-6511, x253
Environmental Organizations			
Organization/Department	**Name**	**Address**	**Phone**
York River/Croaker Landing Working Waterman's Association	Robert L. Weagley Sr. President	10201 Carriage Road Providence Forge, VA 23140	804-966-5429
Chesapeake Bay Foundation	**Ann Jennings**, Virginia Executive Director Peter Gnoffo Ex-Officio Trustee, York Chapter	Capitol Place 1108 East Main Street Suite 1600 Richmond, VA 23219-3539	804-780-1392
Virginia Watersheds Alliance York River and Small Coastal Rivers	May Louise Sligh	203 Governor Street Richmond, VA 23219-2094	804-443-1494
Civic Organizations			
Organization/Department	**Name**	**Address**	**Phone**
J4Cs (James City County Citizens' Coalition)	Jack Haldeman Co-Chair Sarah Kadec Co-Chair Chair	J4C P.O. Box 5322 Williamsburg, Virginia 23188	Personal contact information for private citizens is not published.
Kiwanis Club, Yorktown	Not available.	P.O. Box 1122 11115 Carlton Drive Yorktown, VA 23692	757-898-2908
Kiwanis Club, Grafton	Jon Piche, President Johnny Francum, President Elect (9/30/14)	Post Office Box 2092 Yorktown, VA 23692-2092	Not available.
Lions Club, York	Not available.	149 John Rolfe Lane - Williamsburg, VA 23185	Not available.
Rotary Club, Yorktown	Not available.	P.O. Box 142 Yorktown, VA 23690	Not available.
York Ruritans	Not available.	219 Mt Vernon Dr Yorktown, VA 23693	Not available.
Beautification Committee, York County	Not available.	P.O. Box 532 Yorktown, VA 23693	757-867-8101

Junior Federated Women's Club Of York	Not available.	Yorktown, VA 23692	Not available.
Women's Club, Yorktown	Not available.	P.O. Box 404 Yorktown, VA 23690	Not available.
Lions Club	Not available.	13629 Warwick Boulevard Newport News, VA 23602	757-872-8115
Kiwanis Club of Williamsburg	Nathan Hill, President Heather Larson Casone, President -Elect Mike Rock, Vice President	P.O. Box 1265 Williamsburg VA 23187	757-873-7333
Nearby Schools/Churches			
Organization/Department	**Name**	**Address**	**Phone**
Southern Virginia Baptist Church	Not available.	624 Queens Creek Rd. Williamsburg, Virginia 23185	757-229–0093
St. John Baptist Church	Rev. Walter Hudson, Pastor	1397 Penniman Road - Williamsburg, Virginia 23185	757-229-0759
James York Ministry Fellowship	Reverend Nicholas E. Corsi	1042 Penniman Road Williamsburg, VA 23186	757-565-5001
Thomas Nelson Community College	Dr. John T. Denver President,	161-C John Jefferson Square Williamsburg, VA 23185	757-253-4300
Resurrection Ministries	Edward G Clemons	138 Howard Dr Williamsburg, VA 23185	757-220-9227
Little Zion Baptist Church	Not available.	8625 Pocahontas Trl Williamsburg, VA 23185	757-229-9788
Mount Calvary Seventh Day Adventist Church	Eric Hatcher	200 Railroad St Williamsburg, VA 23185	757-229-3926
RAB Members			
Organization/Department	**Name**	**Address**	**Phone**
Community Co-Chair	Mr. Steven Oyer	*Personal contact information for private citizens is not published.*	
Active Member	Mr. John Hummel		
Active Member	Mr. Jay Diedzic		
U.S. National Park Service, Colonial National Historic Park	Ms. Dorothy Geyer	PO BOX 210, 209 Read St. Yorktown, VA 23690	757-898-2433 Main: 757-898-3400

Local Media			
Type	**Name**	**Address**	**Phone**
Daily newspaper *Daily Press*	Ryan Gilchrest News Assigning Editor Dave Hendrickson Editor - Hampton, Newport News and Politics	7505 Warwick Blvd. Newport News, VA 23607 rgilchrest@dailypress.com dhendrickson@dailypress.com	757-247-4673 757-247-7824
Twice-weekly newspaper *The Virginia Gazette*	Rusty Carter, Editor	216 Ironbound Rd. Williamsburg, Va. 23188	757.220.1736 Fax: 757.220.1665
Daily newspaper (Norfolk) *Virginian Pilot*	Lou Hanson Kate Wiltrout (Military Editor) Meredith Kruse	150 W. Brambleton Avenue Norfolk, VA 23510 luis.hanson@pilotonline.com kate.wiltrout@pilotonline.com meredith.kruse@pilotonline.com	757-446-2322 757-446 2629 757-446-2164
WTKR TV-3 (CBS)	Blaine Stewart	blaine.stewart@wtkr.com newsroom@wtkr.com desk@wtkr.com	757-446-1349 757-679-1327
WAVY TV-10 (NBC)	Nicole Livas Tom Schaad	nicole.livas@wavy.com newsdesk@wavy.com tom.schaad@wavy.com	757-393-1010
WVEC TV-13	Mike Gooding	mgooding@wvec.com news@wvec.com (main)	757-628-6209
Associated Press	Brock Vergakis	bvergakis@ap.org	757-625-2047
Navy Times	Sam Fellman (managing editor) Mark Faram (reporter)	sfellman@navytimes.com mfaram@earthlink.net	757-963-8488 703-750-8645
WNIS AM790 (News/Talk)	Not available	WNIS Radio 999 Waterside Drive Ste 500 Norfolk, VA 23510 jaywest@sinclairstations.com	(757) 627-7979 (live call-in) (888) 756-7979 (live call-in) (757) 622-6397 (fax)
WTAR AM850 (News/Talk)	Not available	AM 850 WTAR 999 Waterside Drive Ste 500 Norfolk, VA 23510 jaywest@sinclairstations.com	(757) 627-9827 (live call-in) (888) 989-8585 (live call-in) (757) 622-6397 (fax)
WHRV 89.5 FM (Public Radio)	Not available	5200 Hampton Boulevard Norfolk, Virginia 23508	757-889-9400
WCWM 90.9 FM (College of William and Mary)	Not available	WCWM 90.9 FM College of W&M Campus Center P.O. Box 8793 Williamsburg, VA 23186	757-221-3287
Lite 94 WXEZ	Not available	4026 George Washington Memorial Highway, Yorktown, VA 23692	757-898-9494
WYCS	Not available	PO Box 1007, Yorktown, VA 23692	757-886-7490
Davis Media LLC	Not available	500 New Point Road # 2201, Williamsburg, VA 23188 http://tideradio.com	757-565-1079 757-565-7094 Fax

Local Media			
Type	**Name**	**Address**	**Phone**
WMBG AM 740	Not available	1005 Richmond Road, Williamsburg, VA 23185	757-229-7400
WLEE FM 96.5	Not available	4039 Ironbound Road, Williamsburg, VA 23188	757-253-1828
WCDG COOL 92.1 WJCD SMOOTH JAZZ 107.7	Not available	1003 Norfolk Square, Norfolk, VA 23502	757-466-0009
WKUS KISS 105.3	Not available	1003 Norfolk Sq, Norfolk, VA 23502 www.1053KISS.com	757-466-1053

Regulatory Acceptance

From: Peed, Bryan K CIV NAVFAC MIDLANT, EV <bryan.peed@navy.mil>
Sent: Monday, September 29, 2014 1:53 PM
To: Sawyer, Stephanie/VBO
Cc: Friedmann, William/VBO; Wachter, Brian/VBO
Subject: FW: Draft Community Involvement Plan
Attachments: image001.gif; image002.png

Stephanie,

FYI on no comments from Moshood on the CIP.

Thanks
Bryan

-----Original Message-----
From: Oduwole, Moshood [mailto:Oduwole.Moshood@epa.gov]
Sent: Monday, September 29, 2014 12:37 PM
To: Peed, Bryan K CIV NAVFAC MIDLANT, EV; Brian.Wachter@CH2M.com; William.Friedmann@CH2M.com; wmsmith@deq.virginia.gov
Subject: Draft Community Involvement Plan

Bryan:

EPA has completed review of the subject referenced document. We do not have any comment.

Regards

Moshood.

epa_seal_small_trim

Moshood G. Oduwole

US EPA Region III

Hazardous Site Cleanup Division

NPL/BRAC Federal Facilities Branch (3HS11)

T: 215.814.3362 * F: 215.814.5518 * oduwole.moshood@epa.gov * www.epa.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

September 24, 2014

Mr. Scott Park
NAVFAC MIDLANT, Building N-26, Room 3208
Attention: Code OPHE3, Mr. Scott Park
9742 Maryland Avenue
Norfolk, VA 23511-3095

Subject: Community Involvement Plan, Naval Weapons Station Yorktown and Cheatham Annex, September 2014

Mr. Park:

Thank you for the opportunity to review the subject document. I have no comments on the document. Please submit a final copy of the subject document for my records. If you have any questions, please contact me at 215-814-2077.

Sincerely,

Gerald F. Hoover, RPM
NPL/BRAC Federal Facilities Branch

cc: Wade Smith, VDEQ

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

November 7, 2014

Mr. Bryan Peed and Mr. Scott Park
NAVFAC MIDLANT, Building N-26
Hampton Roads Restoration Product Line, Code OPHREV4
9742 Maryland Avenue
Norfolk, VA 23511-3095

RE: Community Involvement Plan
Naval Weapons Station Yorktown, Yorktown, Virginia and
Naval Weapons Station Yorktown Cheatham Annex, Williamsburg, Virginia

Dear Mr. Peed and Mr. Park:

The Virginia Department of Environmental Quality (DEQ) has received the *Draft Community Involvement Plan* (CIP) for Naval Weapons Station (WPNSTA) Yorktown and Cheatham Annex (CAX). The CIP, prepared by CH2M HILL, was received by the DEQ on September 15, 2014.

Thank you for providing the DEQ's Office of Remediation Programs the opportunity to review the above-referenced CIP. Subsequent to DEQ's internal review and per discussions conducted during WPNSTA Yorktown and CAX Partnering Meetings, this office has no comments, and recommends preparation of the *Final Community Involvement Plan*.

Please contact me at (804) 698-4125 or wade.smith@deq.virginia.gov with any additional questions.

Sincerely,

Wade M. Smith
Remediation Project Manager
Office of Remediation Programs

cc: Moshood Oduwole, EPA
Jerry Hoover, EPA
Kyle Newman, DEQ