

## **Defense Environmental Restoration Program/ Formerly Used Defense Sites Program, NC**

CONGRESSIONAL DISTRICT: NC 1, 3, 6, 8, 9, and 12

DATE: 01 APRIL 2022

### **BACKGROUND:**

The U.S. Army Corps of Engineers (USACE), Savannah District is the Program Manager for the DERP/FUDS program in North Carolina with the USACE, Wilmington District as the Project Manager.

### **PROGRAM STATUS:**

- To date, 211 DERP/FUDS sites have been identified in the state of North Carolina.
- Of the initial 211 sites, 102 sites were determined to be eligible for the FUDS program. Of these 102 sites, 68 sites were determined to have no hazard present. Potential hazards have been identified at the remaining 34 sites. No Further Action (NFA) or No Defense Action Indicated (NDAI) has been determined at 16 of these 34 sites.
- There are 18 FUDS remaining with 31 projects at these 18 sites in North Carolina identified for response or project closeout under the Military Munitions Response Program (MMRP), Hazardous, Toxic & Radioactive Waste (HTRW), Containerized/ Hazardous Toxic & Radioactive Waste (CON/HTRW), and Potentially Responsible Party (PRP/HTRW) programs. Work will be conducted on 12 of the 31 projects in the FY 2022 program.
- The DERP/FUDS work plan for North Carolina FUDS for FY22 is approximately \$665.8K.

### **PROJECT HIGHLIGHTS:**

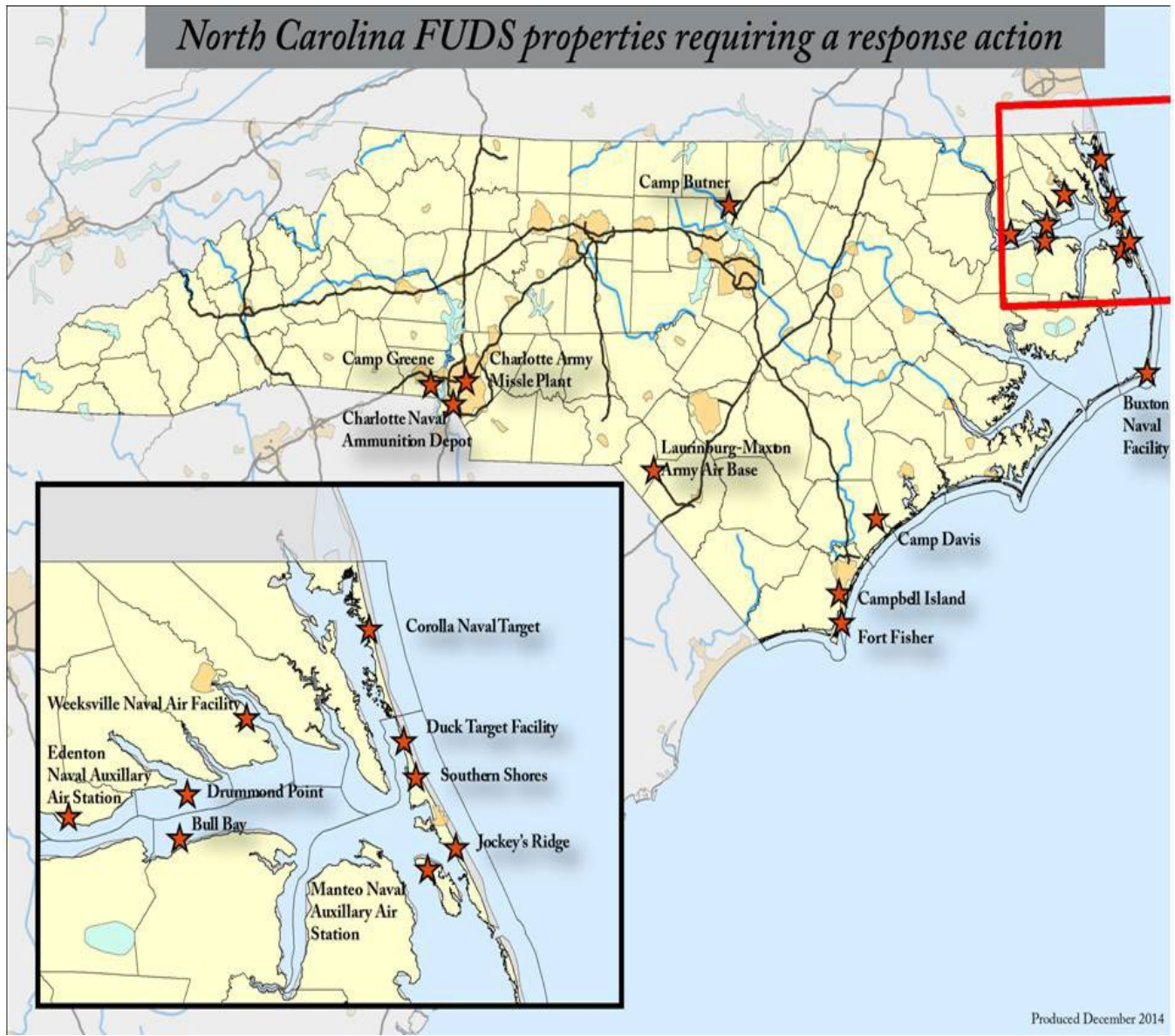
- **Buxton Naval Facility, NC:** (NC-3) PetroFix™ injections were conducted in 2020/2021 to enhance bioremediation. Petroleum hydrocarbons continue to be detected at low levels in the groundwater and quarterly monitoring is currently being conducted.
- **Camp Butner, NC:** (NC-1, 6) Remedial investigation conducted in 2013 discovered several munitions and explosives of concern including high explosive projectiles, mortars, rockets, and hand grenades. The Corps has addressed comments on the remedial investigation report from the North Carolina Department of Environmental Quality and the Environmental and Munitions Center of Expertise. The Remedial Investigation Report was finalized in 2016. The Feasibility Study (FS) was reviewed by the Corps of Engineers and is scheduled to be finalized in 2017. The Proposed Plan was presented to the public in April 2018 summarizing the preferred remedial alternative to address military munitions at Camp Butner. The Decision Documents

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(DD) for project 04 was approved in September 2021 and DD for the remaining projects (5-11) at the Camp Butner FUDS are being prepared and anticipated to be approved in FY22.

- **Charlotte Army Missile Plant, NC:** (NC-12) Feedback from property owners at stakeholder meetings conducted in 2015 indicated refusal to accept land use controls (i.e., deed or groundwater use restrictions), which were the recommended remedial alternative. USACE awarded a contract in FY18 to conduct additional investigative activities to address data gaps for the remedial investigation (RI). Field work for the RI is ongoing and is scheduled to be completed in December 2022. RI report is scheduled to be finalized in 2024.
- **Charlotte Naval Ammunition Depot, NC:** (NC-9) The remedial action system was constructed in 2013 which consists of injection wells, structures to house a water tank, molasses tank, and electronic controls to inject a diluted molasses solution to address chlorinated solvent contamination in the groundwater. Post injection monitoring events indicate biodegradation is occurring with decreased concentrations of Trichloroethylene (TCE) and increased concentrations of biodegradation daughter products including methane. USACE awarded a contract in FY18 to continue remedial activities (injection events) prior to monitored natural attenuation (MNA) activities, which is the second phase of the remedial action. Injection events are scheduled to continue through 2022.
- **Corolla Naval Target, NC:** (NC-3) A contract was awarded in late FY14 to conduct the remedial action to address munitions and explosives of concern (highly explosive 20 mm projectiles) historically identified at the site. No munitions and explosives of concern were discovered during the remedial investigation in 2013 (only inert munitions debris were discovered). The remedial action includes land use controls consisting of installation of unexploded ordnance warning signs and distribution of educational pamphlets. The remedial action was implemented in January 2018.
- **Duck Target Facility, NC:** (NC-3) Historical discoveries of munitions and explosives of concern (primarily practice munitions with no spotting charge) have occurred at this site. The majority of the property is currently owned by the Department of Defense (DOD). A Remedial Investigation report was completed in 2015. The Feasibility Study was completed in 2016. The proposed plan, which summarizes the preferred remedial alternative, was presented to the public for comment in February 2018. The remedial action consisting of land use controls (installation of fencing, cable barriers, and warning signs, and development and distribution of educational materials was implemented in September 2020.
- **Manteo Naval Auxiliary Air Station, NC:** (NC-3) PetroFix™ injections were conducted in 2020/2021 to enhance bioremediation. Petroleum hydrocarbons continue to be detected at low levels in the groundwater and quarterly monitoring is currently being conducted.
- **Naval Auxiliary Air Station Edenton, NC:** (NC-3) PetroFix™ injections were conducted in 2020/2021 to enhance bioremediation. Petroleum hydrocarbons continue to be detected at low levels in the groundwater and quarterly monitoring is currently being conducted.

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**PROJECT STATUS FOR PRIORITY PROJECTS:**

- **Buxton Naval Facility, NC:** (NC-3) The site consists of about 50 acres and is located in Buxton, North Carolina. The site is owned by the National Park Service (NPS) and is part of the Cape Hatteras National Seashore (CHNS). From 1956 until 1982, the U.S. Navy used the site as a submarine monitoring station. Soil and groundwater contamination have been identified at the site as the result of several fuel storage tanks and an oil change rack associated with the former Naval Facility, which were previously removed. Petroleum contamination in the groundwater is currently in the long term maintenance (LTM) phase with groundwater monitoring

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scheduled for FY22.

- **Camp Butner, NC:** (NC-1) WW II artillery training facility which covered approximately 45,000 acres of property in Granville, Person, and Durham Counties. An Engineering Evaluation/Cost Analysis (EE/CA) investigation completed in 2004 recommended unexploded ordnance (UXO) clearance for several areas of interest. The recommended clearance activities were completed in December 2010. A Restoration Advisory Board (RAB) comprised of representatives from the Corps, North Carolina Department Environmental Quality (NCDEQ), local government, and community meets semi-annually to facilitate communication regarding issues associated with this project. UXO discovered near residences at Camp Butner in FY2010 include a 60 mm mortar, (5) 81 mm mortars, a 2.36" rocket, and a 155 mm High Explosive (HE) projectile. A contract for the Remedial Investigation/Feasibility Study (RI/FS) was awarded in FY11. Field work for the RI was completed in early FY14. The RI report was finalized in 2016. The FS report was finalized in 2019 and the proposed plan was finalized in 2020. The decision documents are scheduled to be completed in 2022.
- **Charlotte Army Missile Plant, NC:** (NC-12) The site consists of 81 acres and is located in downtown Charlotte, North Carolina. Site of the Charlotte Quartermaster Depot post World War II and utilized to produce NIKE guided missiles and repair parts from 1954-1967. The site is currently used as an industrial park and has several owners. A RI was completed in April 1999 and October 2000 and identified a chlorinated solvent plume (trichloroethylene – TCE) in the groundwater. The FS was completed in November 2008 and a public meeting was held in September 2009 to present the proposed plan for the remedial action. Groundwater data and modeling is currently being reevaluated to determine if the recommended alternative in the proposed plan is the most cost effective. A baseline groundwater monitoring event was conducted in FY12 and indicated TCE groundwater concentrations are consistent with historical results. Bio-traps were installed in early FY13 in various selected wells and analytical results will be included in the remedial alternative evaluation. USACE awarded a contract to conduct remedial investigation activities to address data gaps which is scheduled be conducted in through 2022.
- **Charlotte Naval Ammunition Depot, NC:** (NC-9) The site consists of 2,266 acres and is located in Mecklenburg County, 10 miles southwest of downtown Charlotte, NC. The site was used as a 40-millimeter shell loading and assembly plant, beginning in 1941, by the U.S. Rubber Company under contract with the U.S. Navy. In 1941, operation of the facility was transferred to the U.S. Navy. A RI was completed in April 1995 and October 2005 and identified a chlorinated solvent plume (trichloroethylene – TCE) in the groundwater. The FS was completed in February 2009 and a public meeting was held in September 2009 to present the proposed plan for the remedial action. The ROD was approved in April 2011 and a contract was awarded in FY11 to conduct the remedial action (RA) which is enhanced reductive chlorination (ERD) and monitored natural attenuation (MNA). Construction of the remedial action system was completed in September 2014. Implementation of the remedial action continued in FY15 with 4 ERD injection events. All eight injection events have been completed by the end of 2017. Biodegradation is occurring with decreased concentrations of Trichloroethylene (TCE) and increased concentrations of biodegradation daughter products

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including methane. USACE awarded a contract in FY18 to continue injection events as part of the remedial action which is scheduled to continue through 2022. Upon completion of the injection events, monitored natural attenuation (MNA) will be conducted, which is the second phase of the remedial action.

- **Corolla Naval Target, NC:** (NC-3) The site consists of 297 acres and is located on the Outer Banks north of Corolla, North Carolina. The site is part of the Currituck National Wildlife Refuge and is owned by the Department of Interior. The site was used by the U.S. Navy as a target area from 1944 through 1965. UXO has been discovered on the site and may present an explosive hazard. A RI was conducted in 2008 and 2009 and several UXO (20 mm projectiles) were discovered. The primary landowner, U.S. Fish and Wildlife Service (USFWS) identified data gaps which will be addressed by a second phase of the RI in 2012. A time critical removal action (TCRA) was conducted in 2011 to address the potential for UXO to exist on the surface. UXO was not discovered during the TCRA. The second phase of the RI was completed in FY12 with no UXO being discovered. The RI/FS document has been submitted to the stakeholders (NCDEQ and USFWS) for their review. The RI/FS was finalized, and the Proposed Plan public meeting was conducted in FY13. The Decision Document will be finalized, and a contract was awarded to implement the remedial action (land use controls – installation of UXO information signs and distribution of informational brochures) in FY14. The remedial action was implemented in January 2018.
- **Duck Target Facility, NC:** (NC-3) The site consists of about 176 acres and located approximately 0.5 miles north of Duck, North Carolina. The site currently consists of the U.S. Army Corps of Engineer Research and Development Center (ERDC), Field Research Facility (FRF). The site was used by the U.S. Navy as a bombing and rocket target range from 1941 until 1965. The property is known or suspected to contain military munitions and explosives of concern (MEC) and therefore may present an explosive hazard. A non-time removal action (NTCRA) was conducted in 2000. The site has been in long term monitoring (LTM) since 2000. The 1<sup>st</sup> MMRP Recurring Review Final Report (five-year review) was prepared in August 2006 and recommended a removal action to address potential hazards with MEC. This removal action was completed and a MEC item was discovered.

A MMRP Site Inspection (SI) Report was completed in June 2009 and recommended a modified Remedial Investigations/Feasibility Study(RI/FS) focusing on a long-term management program, based on numerous previous actions, including an Engineering Evaluation/Cost Analysis(EE/CA), several removal actions, and the site is already in a long-term management program. The RI report was finalized in FY15. The FS and Proposed Plan was completed in 2016 and the Proposed Plan public meeting was held in February 2018. The Decision Document is anticipated to be approved in December 2018. The remedial action consist of land used controls (installation of fencing, cable barriers, and warning signs and development and distribution of educational material) and was implemented in 2020.

- **Manteo Naval Auxiliary Air Station, NC:** (NC-3) The site consists of 250 acres and is located in Manteo, North Carolina. The site is currently the Manteo Airport. The site was used by the

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U.S. Navy in the 1940s as an auxiliary landing field. Two 50,000-gallon concrete petroleum above ground storage tanks (ASTs) associated with the landing field were removed in September 2007. Petroleum contamination was identified in the soil and groundwater and is currently being addressed. A Final Corrective Site Assessment (CSA) was completed in March 2010. Soil contamination (petroleum hydrocarbons) was identified, at several locations at former underground storage tanks (USTs) and distribution lines, above the North Carolina soil screening levels. Groundwater concentrations also exceeded the North Carolina groundwater quality standards (NCGQS) at several monitoring wells. The CSA recommended excavation of the contaminated soil above the screening levels and installation of additional monitoring wells to further delineate the groundwater contamination. Soil excavation conducted in 2011 concluded no further action was required for the soil. Groundwater monitoring will continue to be conducted in FY22 to address petroleum contamination detected above the NCGQS in several wells.

- **Naval Auxiliary Air Station Edenton, NC:** (NC-3) The site consists of 3,108 acres and is located in Edenton, North Carolina. The site is currently occupied by the local airport, industrial park, farmland, and several residences. The site was used by the U.S. Marine Corps as an air station in the 1940s through 1955 and by the U.S. Navy as an auxiliary air station from 1955 through 1959. Soil and groundwater contamination have been identified at the site as a result of several fuel storage tanks associated with the former air station, which were previously removed. Residual petroleum contamination in the soil and groundwater is currently being addressed. Soil excavation was conducted at monitoring well locations (MW-15/21 and 22), where persistent groundwater concentrations have exceeded the NCGQS for petroleum hydrocarbons in 2011. These wells have been replaced and additional monitoring will be conducted in FY22 to address groundwater concentrations which exceed the NCGQS.