

Camp Lejeune Marine Corps Base: Site 21 Lot 40
Onslow County, North Carolina
Region 4
NC6170022580

Site Exposure Potential

The Camp Lejeune Marine Corps Base was established in 1941 and occupies 440 km² in Onslow County, North Carolina (Figure 1). Site 21 Lot 140 is one of 22 sites on the base identified by the U.S. Navy as a waste disposal area posing a potential threat to the environment. Site 21 Lot 140 is an 18,000 m² area where pesticides were mixed and pesticide application equipment was cleaned. In addition, PCB-contaminated transformer oil was reportedly dumped in a 2.5-meter deep pit on the site during 1950 and 1951 (EPA 1986).

The site is 900 meters from the marshland around Bearhead Creek. Surface water runoff drains via a railroad ditch into Bearhead Creek, 2.5 km west of the site (EPA 1987). Bearhead Creek flows for 2 km before entering Wallace Creek, which discharges into the tidal portion of the New River, 1.5 km further downstream (USGS 1971). The river drains into the Atlantic Ocean 25 km south of the mouth of Wallace Creek (USFWS 1980).

Another NPL site, ABC One Hour Cleaners, is north of Camp Lejeune on Northeast Creek, which also drains to the New River.

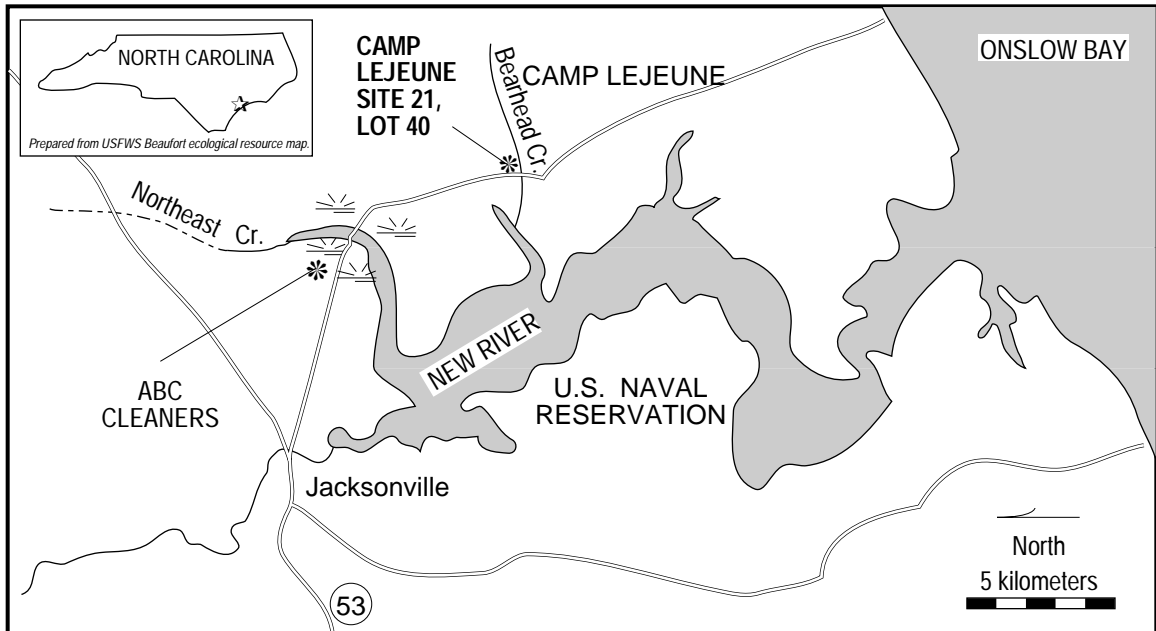


Figure 1. Camp Lejeune Site 21 Lot 40 in Onslow County, North Carolina.

Possible contaminant migration pathways to NOAA trust resources include surface water runoff and groundwater flow to Bearhead Creek, Wallace Creek, and the New River.

Site-Related Contamination

The contaminants of concern to NOAA are pesticides and PCBs. Soil sampling and analyses conducted on-site indicated the presence of DDT, DDE, DDD, aldrin, and heptachlor in the soils. The extent or severity of this contamination could not be determined with the information available. It is not known whether PCB contamination was detected on-site. There was no information on groundwater contamination in the documents reviewed (EPA 1986).

Trust Habitats and Species in Site Vicinity

Habitats of interest to NOAA include Bearhead Creek, Wallace Creek, and the New River (Table 1). No information was available regarding the aquatic habitats of Bearhead Creek. Wallace Creek, at its confluence with Bearhead Creek, is 100 meters wide and is a tidally influenced, mid-salinity estuarine creek. There are saltwater wetlands along the lower reaches of the creek. The New River is a high-salinity, channelized estuarine system. Channelization has reduced habitat diversity (Nelson 1989).

Table 1. NOAA trust resource use of lower Wallace Creek, and the New River (USFWS 1980; Nelson 1989).

Species	Lower Wallace Creek	New River
INVERTEBRATES		
blue crab	S,N,A,R,C	S,N,O,A,R,C
brown shrimp	N,C,R	N,R,C
pink shrimp	N,C,R	N,R,C
white shrimp	N,R,C	N,R,C
FISH		
alewife		M
American eel	A,R,C	S,N,A,R,C
American shad		M
Atlantic croaker	N,A,R,C	N,A,R,C
Atlantic menhaden	N,A,C	N,A,C
Atlantic sturgeon		M
blueback herring		M
hickory shad		M
mullet	N,A,R,C	N,A,R,C
southern flounder	A,R,C	A,R,C
southern kingfish	N,A,R,C	N,A,R,C
spotted seatrout	N,A,R,C	S,N,A,R,C
striped bass		M,A,R,C
summer flounder	A,R,C	A,R,C
weakfish	N,A,R,C	S,N,A,R,C
white perch		M,A,R,C
MISCELLANEOUS		
Atlantic bottlenose dolphin		A
green sea turtle		A
harbor seal		A
Kemp's Ridley turtle		A
loggerhead sea turtle		A *

S: spawning area ; N: nursery area; A: adult concentration; O: overwintering area; M: migratory route
R: recreational fisheries; C: commercial fisheries; * reported to nest along coastline of Onslow Bay

The use of Bearhead Creek by NOAA resources has not been documented, but American eel are probably present in the creek. The lower stretch of Wallace Creek is used by several marine species as nursery and adult habitat. The New River contains numerous NOAA trust resources, some of which are of special interest due to state and/or Federal law. North Carolina law protects Atlantic sturgeon, American shad, green turtle, loggerhead sea turtle, and Kemp's Ridley turtle. The loggerhead and green turtles are also federally listed threatened species, and the Kemp's Ridley turtle is federally listed as an endangered species (USFWS 1980; Nelson 1989).

Response Category: Federal Facility

Current Stage of Site Action: RI/FS Workplan

EPA Site Manager

Victor Weeks	404-347-3402
--------------	--------------

NOAA Coastal Resource Coordinator

John Lindsay	404-347-5231
--------------	--------------

References

EPA. 1986. Hazardous Ranking System Package, Camp Lejeune Marine Corps Base, Onslow County, North Carolina. Atlanta: U.S. Environmental Protection Agency, Region 4.

EPA. 1987. Hazardous Ranking System Package, ABC One-Hour Cleaners, Jacksonville, North Carolina. Atlanta: U.S. Environmental Protection Agency, Region 4.

Nelson, K., fisheries biologist, North Carolina Department of Natural Resources and Community Development, Bureau of Inland Fisheries, Greenville, North Carolina, personal communication, January 24, 1989.

USFWS. 1980. Atlantic coast ecological inventory: Beaufort, North Carolina. Washington, D.C.: U.S. Fish and Wildlife Service. 1:250 000 map scale. 34076-A1-EI-250.

USGS. 1971. Camp Lejeune, North Carolina. Washington, D.C.: U.S. Geological Survey. 7.5 minute series map.