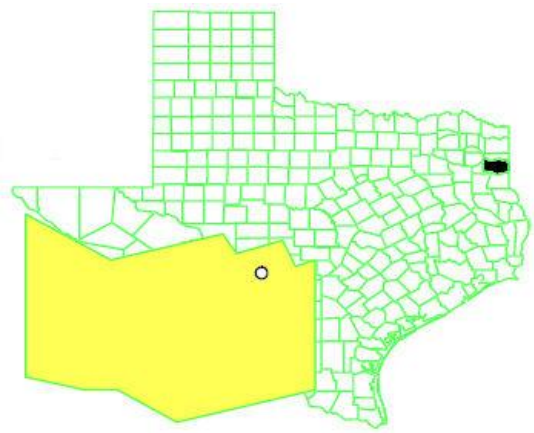
LONGHORN ARMY AMMUNITION PLANT
Harrison County, Texas



EPA Region 6
EPA ID# TX6213820529
Site ID: 0603606
State Congressional District: 1

Contact: Stephen Tzhone (214) 665-8409
Richard Mayer (214) 665-7442

Last Updated: April 2013

Background

Location: The site is located between State Highway 43 and Caddo Lake in Karnack, Harrison County, Texas, which is approximately 14 miles northeast of Marshall, Texas, and approximately 40 miles northwest of Shreveport, Louisiana.

Population: The site is in a rural area with few residences in close proximity. Approximately 1500 people live within a one-mile radius of the site.

History: The facility operated from 1942 to 1997, historically manufacturing TNT, rocket motors and various pyrotechnic items. Site operations included loading, assembling and packing pyrotechnic and signal ammunition, manufacturing solid propellant rocket motors, and rocket demilitarization pursuant to the Intermediate-Range Nuclear Force (INF) treaty between the United States and USSR.

The Army declared the Longhorn Army Ammunition plant (LHAAP) excess to its needs in July 1997. From 1998 to 2001, all personal assets and specific installed property and buildings were liquidated and/or demolished. In Oct 2002, LHAAP was transferred to the Base Realignment and Closure (BRAC) Division to be managed as excess property.

On October 19, 2000, the FWS approved the establishment of the Caddo Lake National Wildlife Refuge (Caddo Lake NWR) on LHAAP. In April 2004, the Army and FWS entered into a Memorandum of Agreement (MOA) that sets forth the transfer process of LHAAP acreage.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WAR DEPARTMENT


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Current Status

- Per the 1991 Federal Facilities Agreement (FFA), the Army conducts environmental investigation and cleanup of LHAAP, with oversight from EPA and the TCEQ. Other agencies involved include the U.S. Geological Survey and the FWS.
- Approximately 7,200 acres out of 8,416 acres have been transferred from the Army to FWS for the Caddo Lake NWR.
- The Caddo Lake NWR has been opened to the public since September 2009.

Benefits

The establishment of the Caddo Lake NWR ensures the conservation and protection of the migratory and resident waterfowl and neotropical migratory birds associated with the Caddo Lake wetland ecosystem. Studies on the Caddo Lake wetland ecosystem and LHAAP have listed up to 224 species of birds, 22 species of amphibians, 46 species of reptiles, and 93 species of fish in this area.

In addition, the adjacent Caddo Lake is a primary source for drinking water for several surrounding communities, as well as, a location for recreational activities (i.e., fishing). Remediation of contaminated areas on LHAAP will assure that Caddo Lake and its wetland ecosystem will be protected from any potential contamination from historical activities on the site.

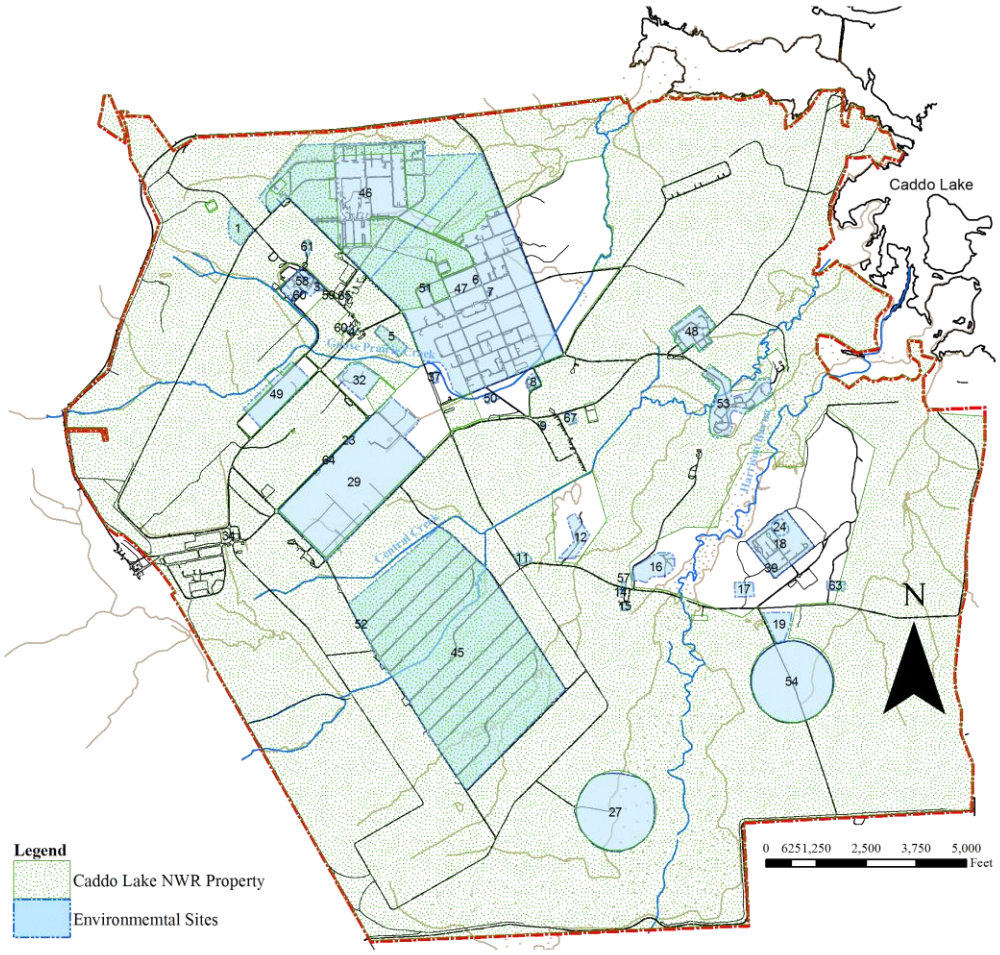
The Caddo Lake NWR has been opened to the public since September 2009.

National Priorities Listing (NPL) History

Proposal Date: 7/14/89
Final Listing Date: 8/30/90

The NPL Final listing date was for the complete LHAAP installation. Specific areas on LHAAP were then designated to be addressed as NPL or non-NPL after completion of the site inspection for that area. Designated NPL sites are addressed via the CERCLA process with EPA as the lead regulator while non-NPL sites will be addressed with TCEQ as the lead regulator.

Site Map



Wastes and Volumes

As part of the interim remedial action in 1997, 30,000 cubic yards of soil were excavated and treated at Burning Ground No. 3 (LHAAP-18) and the Unlined Evaporation Pond (LHAAP-24). In 1997, the groundwater treatment plant (GWTP) for LHAAP-18 & 24 and 5,000 feet of interception collection trenches were constructed.

A dispute resolution decision agreed upon between the EPA, TCEQ and the Army (December 1999) required compliance with perchlorate discharge criteria from the GWTP within 3 years (December 2002). Perchlorate, designated as a emerging contaminant, was present in groundwater being treated at the GWTP at concentrations ranging from 15,000 to 35,000 micrograms per liter. By the end of March 2001, the treatment process, known as a fluidized bed reactor, had been installed to successfully remove perchlorate from the treated groundwater to concentrations below the discharge criteria (13 micrograms per liter).

During the period of January 2001 through March 2008, the GWTP processed approximately 84 million gallons of water, treating the groundwater for metals, volatile organic compounds and perchlorate.

Health Considerations

The primary hazardous substances that have been documented at Longhorn Army Ammunition Plant are solvents associated with the production operations at the site. These compounds, including methylene chloride and trichloroethene, have been detected in the groundwater at locations within the installation, but have only limited detections in streams flowing into Caddo Lake.

Perchlorate has been found in groundwater, surface water and soil at the installation. The installation's GWTP successfully treats perchlorate to reduce the concentration to concentrations below all action levels (and below the prevalent analytical detection limit).

Sediment samples collected by the Army, from Caddo Lake near the mouths of two branches of Goose Prairie Creek, indicated elevated lead and mercury. The sampling locations are outside the installation boundary. An investigation of contaminants in fish tissues, from three Caddo Lake Sites, one of which is upgradient at Clinton Lake, was funded by USEPA Region 6 and performed by TCEQ Region 5 in 2004. The investigation concluded that mercury was present at elevated levels from all three sites and that dioxin was also present (but highest at Clinton Lake) and that pesticides, polychlorinated biphenyl (PCBs) and perchlorate were not detected in either edible fish fillets or whole fish.

Record of Decision

Records of Decision (RODs) have been issued for the following sites:

- May, 1995, Interim Remedial Action ROD for LHAAP-18/24 was signed, addressing soil and groundwater contamination.
- September, 1995, Interim Remedial ROD for LHAAP-12 & 16 was signed, addressing landfills at the two sites by the installation of multilayered landfill caps
- February, 1996, ROD for No Further Action at LHAAP-13 and 14 was signed.
- January, 1998, ROD for No Further Action at Group 1 Sites (LHAAP-01, 11, 27, and XX (54)) was signed
- May, 2002, Closure of LHAAP-05 approved by TNRCC (former name of TCEQ)
- July, 2006, ROD for LHAAP-12 was signed, addressing groundwater and soil contamination at the site.

Operations and Maintenance

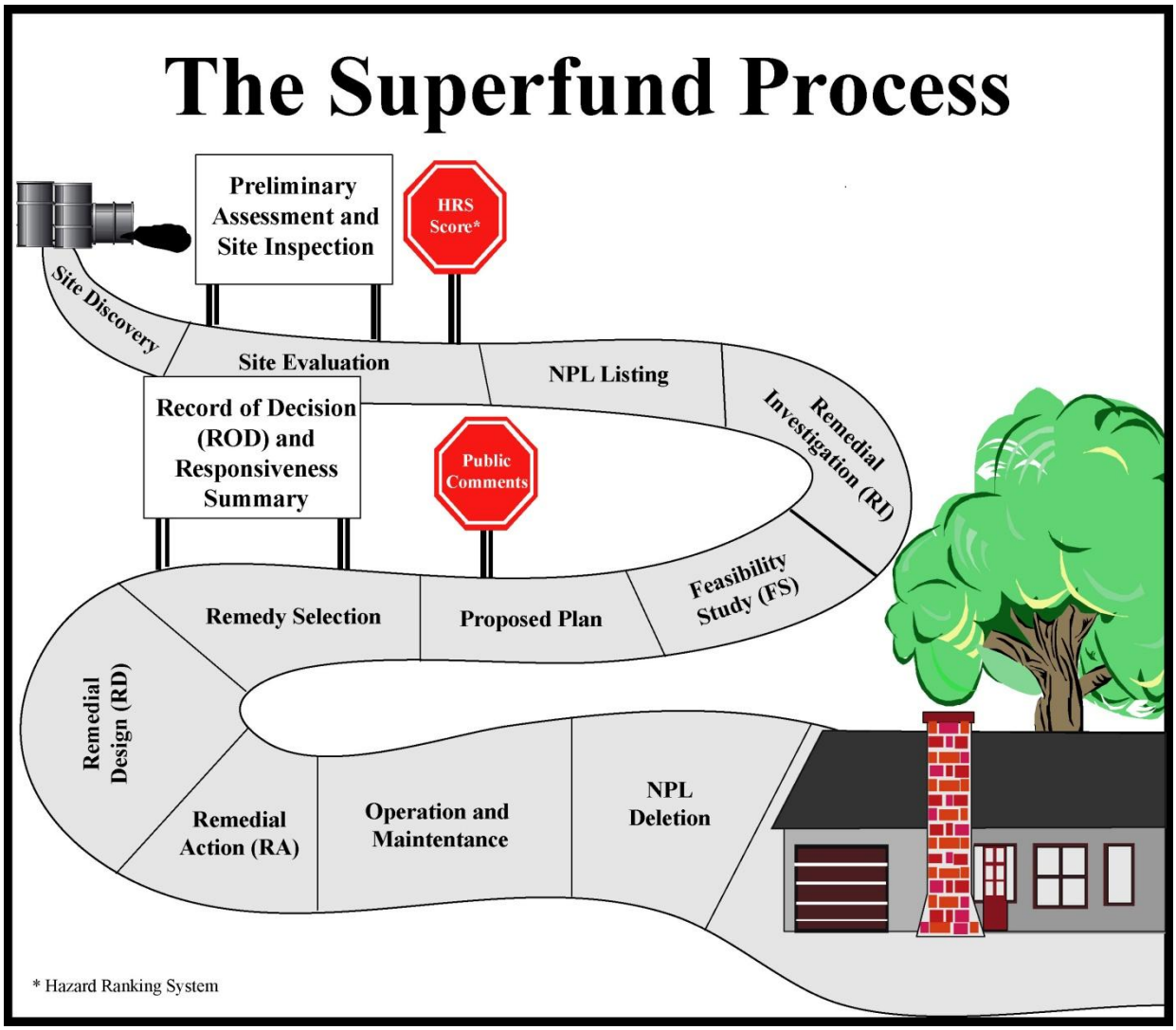
Currently, operations at the site associated with environmental work include operations and maintenance of the GWTP for treatment of groundwater extracted from sites LHAAP-16, 18 and 24. Remediation and monitoring activities are ongoing for more than 10 sites on the installation. The goal for all sites is the installation of remedies, as needed, with eventual transfer of property to the FWS.

Community Involvement

In 2004, a Restoration Advisory Board (RAB) comprised of local citizens was established by the Army at LHAAP. Quarterly updates to the community on the status of environmental restoration efforts at LHAAP are held at the RAB meetings. Formal public meetings on proposed plans are also frequently held to coincide with the RAB meetings.

In 2010, the EPA awarded a technical assistance grant (TAG) to Caddo Lake Institute to assist the local community further in the understanding of the environmental restoration efforts at LHAAP, in addition to the Army RAB.

The NPL sites on LHAAP are currently in the Remedial Investigation to Record of Decision stages:



Site Contacts

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EPA Site Attorney:	George Malone	(214) 665-8030
EPA Regional Public Liaison:	Donn Walters	(214) 665-6483

EPA Toll Free Region 6 Superfund Information Line: (800) 533-3508

Information Repository:

- Marshall Public Library: 300 South Alamo Boulevard, Marshall, TX 75670 (903) 935-4465
- U.S. EPA, Region 6, 1445 Ross Avenue, Dallas, TX 75202 (214) 665-6444

EPA Region 6 Freedom of Information Act Online Request Form:
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