



# Caddo Lake/Karnack

## DSHS Document Summaries

### November 2013

The Texas Department of State Health Services (DSHS) has evaluated environmental and biological data collected from the Caddo Lake/Karnack area to determine whether the presence of environmental hazards could pose a danger to public health. The following are summaries of the documents DSHS has produced:

#### **Longhorn Army Ammunition Plant (LAAP) Public Health Assessment (1999)**

LAAP was an 8,943 acre U.S. Department of Defense facility that operated intermittently from 1942 to 1997. While in operation, LAAP produced 2,4,6-trinitrotoluene (TNT), pyrotechnic ammunition, rocket motors, and plastic explosives. As a result of these activities, metals, volatile and semi-volatile organic compounds, and explosives contaminated on-site surface water, sediment, surface soil, and groundwater. LAAP was placed on the U.S. Environmental Protection Agency's (EPA) National Priorities List on August 30, 1990. Since 2004 several thousand acres of LAAP land has been transferred to the Caddo Lake National Wildlife Refuge (NWR).

In 1999, DSHS evaluated environmental data to determine the possible human health impact from exposure to contaminants found on the LAAP property. As a result of site visit observations and a review of environmental data, DSHS concluded that exposure to site contaminants posed no apparent public health hazard. Although contaminants had been detected, they were not accessible on or off the site at levels of public health concern. The full report can be found at the following link: <http://www.atsdr.cdc.gov/HAC/pha/PHA.asp?docid=108&pg=0>



#### **United State Fish and Wildlife Service (USFWS) Buildings at Caddo Lake National Wildlife Refuge (NWR) Health Consultation (2003)**

In 2003, USFWS asked DSHS to evaluate the human health significance of sampling data collected from within various buildings at the Caddo Lake NWR. DSHS specifically evaluated wipe sampling data collected from the surfaces within the Administration Office, the Fire Station, and the Magazine. It was determined that the primary contaminant of concern was lead. Based on the information provided, DSHS could not determine if occupants in the USFWS Administration Office and the Magazine were being exposed to lead at levels of concern. DSHS concluded that the presence of lead in the buildings posed an indeterminate public health hazard, and recommended that the areas be thoroughly cleaned. The full report can be found at the following link: <http://www.atsdr.cdc.gov/HAC/pha/PHA.asp?docid=109&pg=0>



### **Mercury Exposure Investigation Caddo Lake Area (2005)**

In 1995, due to elevated levels of mercury in fish, DSHS issued a consumption advisory for largemouth bass and freshwater drum from Caddo Lake. In 2003, DSHS began receiving reports from a community group that people, possibly including subsistence fishers, continued to eat contaminated species of fish from Caddo Lake. In May 2004, DSHS investigated whether people who ate fish from Caddo Lake were potentially being exposed to harmful amounts of methylmercury (MeHg). Blood samples were collected from area residents and tested for mercury. DSHS determined that blood mercury levels were lower than expected in people who regularly eat fish known to be contaminated with methylmercury. DSHS noted that eating a variety of fish species, as locals reported doing, may be an effective way to manage exposure. However, DSHS concluded that people should limit consumption of largemouth bass and freshwater drum from Caddo Lake. The full report can be found at the following link: [http://www.dshs.state.tx.us/epitox/consults/caddo\\_lake.pdf](http://www.dshs.state.tx.us/epitox/consults/caddo_lake.pdf)



### **Consumption of Deer Tissue Collected at Caddo Lake National Wildlife Refuge (2006)**

USFWS was considering offering limited deer hunting on the NWR to the public. Prior to doing this, USFWS collected liver and muscle tissue from white-tail deer from the refuge and determined the presence of metals and pesticides in the tissue. USFWS asked DSHS whether eating deer from the NWR could present a human health risk. DSHS evaluated the sampling results and concluded that although eating muscle from deer taken from the refuge would not pose a public health hazard, eating liver could result in adverse health effects. The full report can be found at the following link: [http://www.dshs.state.tx.us/epitox/consults/caddo\\_deer.pdf](http://www.dshs.state.tx.us/epitox/consults/caddo_deer.pdf)

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