

**FINAL  
OPERATIONAL RANGE ASSESSMENT PROGRAM  
PHASE I QUALITATIVE ASSESSMENT REPORT  
TOSOHATCHEE LOCAL TRAINING AREA  
CHRISTMAS, FLORIDA**

---

MARCH 2008

Prepared for:

**UNITED STATES ARMY CORPS OF ENGINEERS, BALTIMORE DISTRICT**  
P.O. Box 1715  
Baltimore, Maryland 21203

and

**UNITED STATES ARMY ENVIRONMENTAL COMMAND**  
Aberdeen Proving Ground, Maryland 21010

Prepared by:

**MALCOLM PIRNIE, INC.**  
1300 East 8<sup>th</sup> Avenue  
Suite F100  
Tampa, Florida 33605



---

## EXECUTIVE SUMMARY

The United States (U.S.) Army is conducting qualitative assessments at operational ranges to meet the requirements of Department of Defense policy and to support the U.S. Army Sustainable Range Program. The operational range qualitative assessment (hereinafter referred to as Phase I Assessment) is the first phase of the U.S. Army Operational Range Assessment Program. This Phase I Assessment evaluates the operational range area at Tosohatchee Local Training Area (LTA) to assess whether further investigation is needed to determine if potential munitions constituents of concern (MCOC) are or could be migrating off-range at levels that may pose an unacceptable risk to human health or the environment. In conducting the Phase I Assessment, MCOC sources, potential off-range migration pathways, and potential off-range human and ecological receptors are evaluated as appropriate.

Tosohatchee LTA covers approximately 3,451 acres in Orange County, Florida. The site is located approximately eight miles southeast of the city of Christmas, Florida, in the central portion of the William Beardall Tosohatchee Reserve State Park (hereinafter referred to as Tosohatchee Reserve), a 28,000-acre Florida state park. The site is utilized by the Florida Army National Guard (FLARNG) 2<sup>nd</sup> Battalion, 124<sup>th</sup> Infantry Regiment for simulated light infantry training through a land use agreement with the State of Florida.

A review of available records and background data, as well as interviews with the Tosohatchee Reserve Manager and FLARNG personnel, indicated that the range at Tosohatchee LTA has not been used for training involving live-fire military munitions. Training currently conducted at Tosohatchee LTA is limited to simulated light infantry squad and platoon attack and defense scenarios using blank ammunition. The FLARNG typically trains at the site no more than four weekends per year. Historically, training activities may have involved the occasional use of pyrotechnics and/or smoke grenades; however, the FLARNG was required to remove munitions debris at the conclusion of training events.

### **Unlikely – Five-Year Review**

The single operational range at Tosohatchee LTA is categorized as Unlikely, totaling 3,451 acres. This range is a training and maneuver area. Because historical training activities involved a limited source of military munitions, which were collected and removed at the conclusion of training exercises, and current activities involve only the use of small caliber blanks, which are collected and removed, there are very limited potential sources of MCOC. Ranges where, based upon a review of readily available information, there is sufficient evidence to show that there are no known releases or source-receptor interactions on range that could present an unacceptable risk to human health or the environment are categorized as Unlikely. Ranges categorized as Unlikely are required to be re-evaluated at least every five years. Re-evaluation may occur sooner if significant changes (e.g., change in range operations or site conditions, regulatory changes) occur that affect determinations made during this Phase I Assessment.

**Table ES-1** summarizes the Phase I Assessment findings.

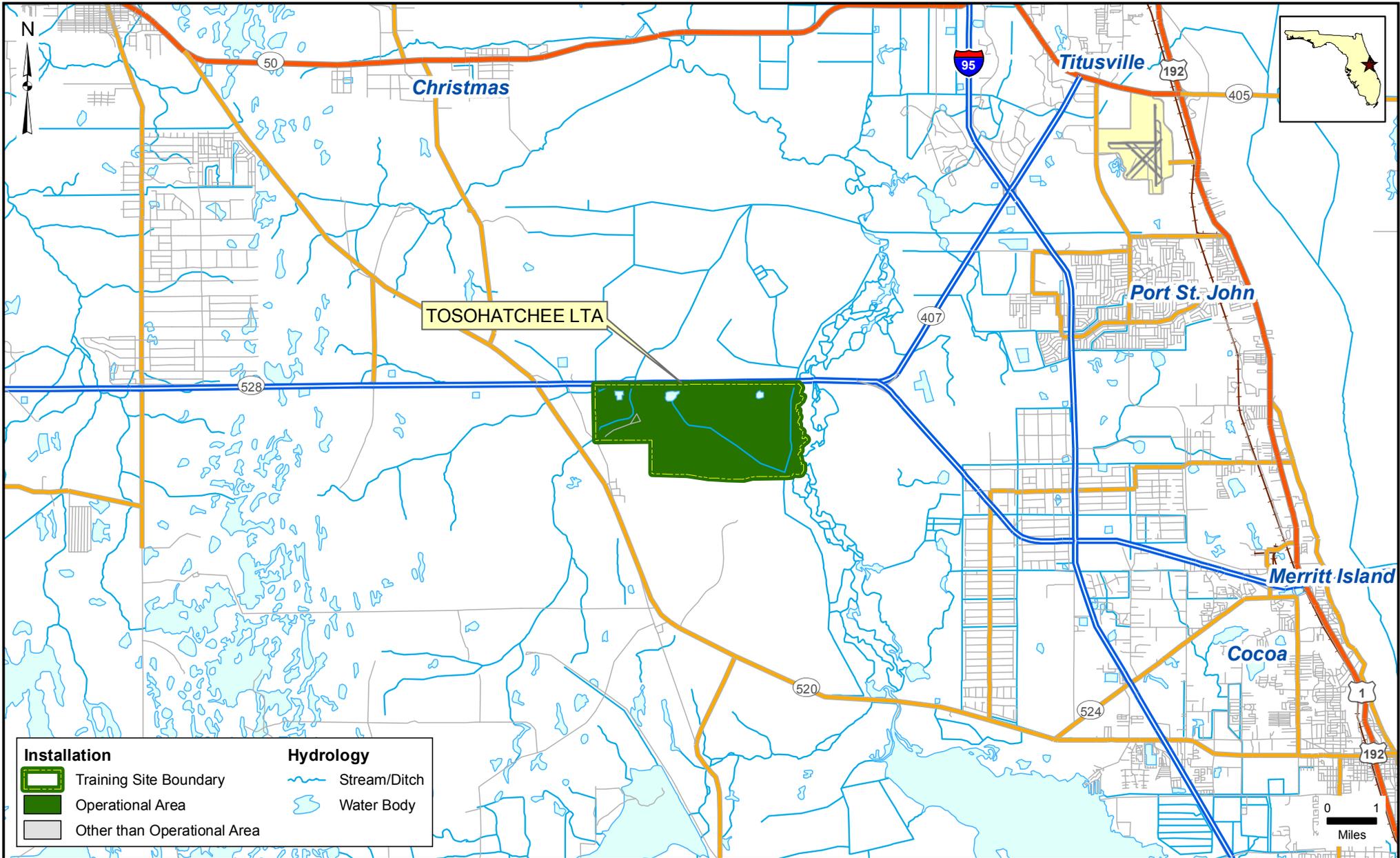
**Table ES-1: Summary of Findings and Conclusions for Tosohatchee LTA**

Category	Total Number of Ranges and Acreage	Source(s)	Pathway(s)	Human Receptors	Ecological Receptors	Conclusions and Rationale
Unlikely	One operational range; 3,451 acres	Limited source – no current or historical use of live-fire military munitions; limited use of small caliber blanks; limited historical use of pyrotechnics		Not evaluated (limited source was identified)		Re-evaluate during the five-year review. Limited source was identified.

## ABBREVIATIONS/ACRONYMS

ARID-GEO	Army Range Inventory Database - Geodatabase
ARNG	Army National Guard
bgs	Below Ground Surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	Conceptual Site Model
DoD	Department of Defense
DODI	Department of Defense Instruction
E	Ecological receptors identified. (This refers to range grouping, pathway designation always precedes E designation.)
FDEP	Florida Department of Environmental Protection
FDOH	Florida Department of Health
FGDL	Florida Geographic Data Library
FLARNG	Florida Army National Guard
FNAI	Florida Natural Areas Inventory
GIS	Geographic Information System
GW	Groundwater pathway identified. (This refers to range grouping, M designation always precedes GW designation.)
H	Human receptors identified. (This refers to range grouping, pathway designation always precedes H designation.)
LS	Limited Source
LTA	Local Training Area
M	Munitions used. (This refers to range grouping, M designation always precedes applicable pathway.)
MCOC	Munitions Constituents of Concern
MGW	Munitions / Groundwater
MPU	Migration Pathway Unlikely
msl	Mean Sea Level
MSW	Munitions / Surface Water
MSWG	Munitions / Surface Water and Groundwater
NGVD 29	National Geodetic Vertical Datum of 1929
NW	Northwest
ORAP	Operational Range Assessment Program
PU	Pathway unlikely or incomplete. (This refers to range grouping, M designation always precedes PU designation.)
PWS	Public Water Supply
RFE	Robert F. Ensslin
SJRWMD	St. Johns River Water Management District
SSC	Species of Special Concern
St.	Saint
SW	Surface water pathway identified. (This refers to range grouping, M designation always precedes SW designation.)
U.S.	United States
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USDA	United States Department of Agriculture

USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
WSRP	Water Supply Restoration Program
°F	Degrees Fahrenheit



**Operational Range Assessment Program**  
**Phase I Qualitative Assessment**  
**Tosohatchee LTA, FL**  
**Figure 1-1**  
**General Location and Operational Range Area**

Data Sources:  
 AEC, ARID-GEO, June 2005  
 ESRI, StreetMap USA, 2005

Date: ..... May 2007  
 Prepared By: ..... Malcolm Pirnie, Inc.  
 Prepared For: ..... U.S. Army  
 Contract: ..... W912DR-05-D-0004



**MALCOLM  
PIRNIE**