



**US Army Corps
of Engineers®**
Buffalo District

UNDERGROUND UTILITIES REMEDIAL INVESTIGATION (UURI) AT THE FORMER LAKE ONTARIO ORDNANCE WORKS (LOOW)

Fact Sheet

U.S. Army Corps of Engineers, Buffalo District • May 2009

The Defense Environmental Restoration Program (DERP) was established in 1986 to address contamination caused by Department of Defense (DoD) activities. Sites no longer owned by the DoD as of 17 October 1986 are addressed under the DERP Formerly Used Defense Sites (FUDS) program. The US Army is the executive agent responsible for the DERP-FUDS program. This fact sheet has been prepared to address community outreach needs and is consistent with provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Site Description

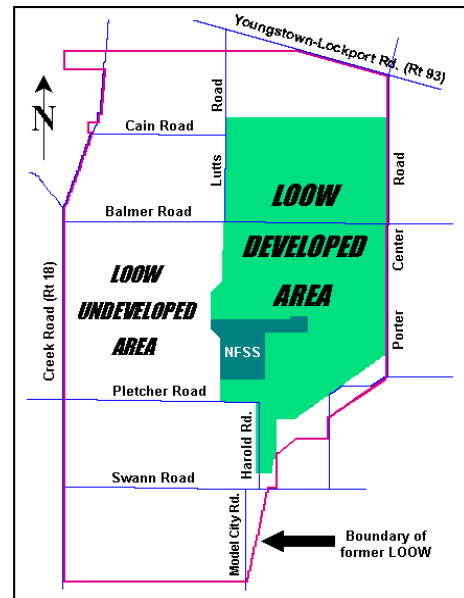
The site is located approximately 10 miles north of the City of Niagara Falls within the Towns of Lewiston and Porter in Niagara County, New York. Underground utility lines included in this RI traverse properties owned by Somerset Group, Waste Management LLC (WM), the Town of Lewiston, National Grid, Occidental Chemical Corporation (OCC), and the Lewiston-Porter Central School District.

Site History

The original site was established in 1942 and encompassed approximately 7,500 acres. During World War II, the US Army built and operated a TNT plant on approximately 2,500 acres of the site known as the “developed zone”. The remaining 5,000 acre “undeveloped zone” served as a “buffer area” around the TNT plant. The plant manufactured bulk TNT for approximately 9 months and was decommissioned in 1943.

- **Undeveloped Zone:** Beginning in 1945, the 5,000 acre “undeveloped zone” was declared excess, subdivided, and sold to the public through 1950. This acreage now consists of over 450 individual parcels which have been redeveloped for residential, commercial, agricultural, and local government use. The Lewiston Porter Schools campus was built on former “undeveloped zone” property.

- **Developed Zone:** Beginning in 1944, the remaining 2,500 acre “developed zone” was used for a number of US Army, Navy, and Air Force activities. The Manhattan Engineer District (MED) and the Atomic Energy Commission (AEC) also used approximately 1,650 acres in the “developed zone”. From 1944 to 1952 the MED and AEC brought radioactive materials from the nation's early atomic energy program to the site. The AEC gradually reduced the footprint of its operation and the property was subdivided and sold to the public.



Current federal ownership of the former “developed zone” is limited to two properties. The first is the 191-acre Niagara Falls Storage Site (NFSS) which contains the Interim Waste Containment Structure (IWCS) built by the US Department of Energy to serve as a repository for the MED and AEC radioactive residues and wastes. The second is the 860 acre National Guard training site (the former TNT storage area) north of Balmer Road.

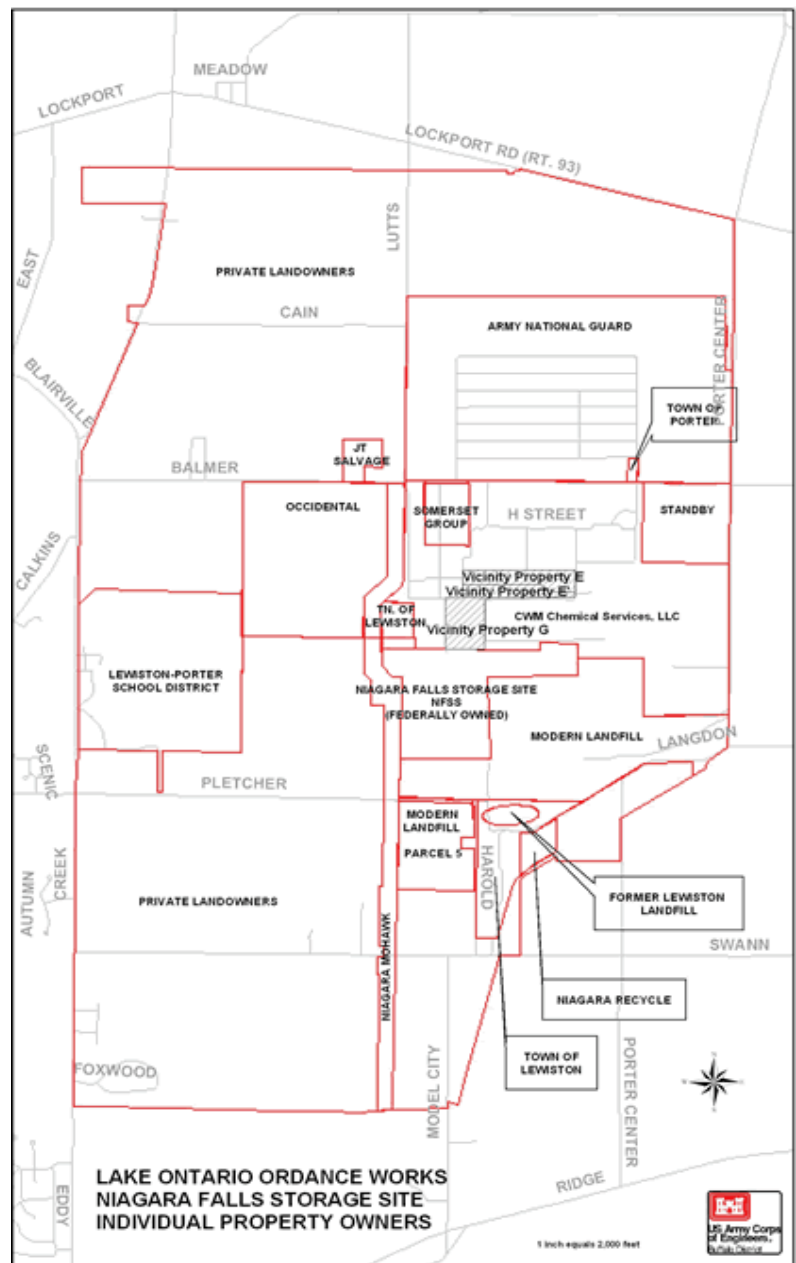
Current non-federal land use in the “developed zone” includes chemical waste treatment, storage, and disposal services, hazardous waste and solid waste landfill operations, industrial operations, power transmission line right of way, and local government uses.

Current Status

The project boundaries for the UURI were limited to sludge and wastewater within, subsurface soil beneath, and surface soil at discharge points associated with underground utilities that were put in place to support the formerly used defense sites within the footprint of LOOW, and which did not appear to have been impacted heavily by non-DOD site users.

The majority of the underground utilities are on property currently owned by Waste Management (WM), Somerset Group, and the Town of Lewiston. A discharge line (referred to as the 30-in. outfall) from the formerly used LOOW wastewater treatment plant (WWTP) to the Niagara River traverses multiple property owners, including the Lewiston-Porter Central School District.

During the UURI, an evaluation of the location of lines and line contents through a camera and geophysical survey was conducted. Data gathered was used to design a sampling and analysis program, which included excavation of lines to gain access, and sampling of sludge, wastewater, subsurface soil, and liquid.



Constituents of Potential Concern (COPCs) for the following analytical groups were identified during the UURI: Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs) [including, but not limited to, Polycyclic Aromatic Hydrocarbons (PAHs)], pesticides, Polychlorinated Biphenyls (PCBs), explosives, and metals.

Results indicated that lines in several areas have been impacted by COPCs. Impact to subsurface soil from COPCs in sludge and/or wastewater was observed in Air Force Plant-68 (AFP-68) Process Areas 2, 8, 14, 20 and lines exiting the Fortifier Building at the existing Nitration House area. Bedding material appears to be providing a pathway for COPC migration, primarily along the secondary wastewater lines associated with AFP-68. Possible impact to ground water was evaluated indirectly by comparing subsurface soil concentrations to Soil Screening Levels. Results indicated a potential for ground water impact from VOCs in the vicinity of Process Area 14 and from pesticides in Process Areas 2, 8 and 20.

As present and possible future site use may bring human receptors into contact with the COPCs, a Human Health Risk Assessment (HHRA) has been conducted to evaluate the possible risk from contact with them. Several exposure scenarios were evaluated. The HHRA will be released in the spring of 2009. Details of the DERP-FUDS and Formerly Utilized Sites Remedial Action Program (FUSRAP) investigations are available at our district website:

<http://www.lrb.usace.army.mil/derpfuds/loow-nfss/index.htm>

For More Information

For more information, please call the Buffalo District's toll-free public access line:

1-800-833-6390

Additional information regarding the former Lake Ontario Ordnance Works (LOOW) Site can be found on the Buffalo District Website:

www.lrb.usace.army.mil/derpfuds/loow/index.htm

Please let us know if you would like to be included on the mailing list for the former LOOW Site particular FUSRAP Site. E-mail us at **derpfuds@usace.army.mil** or you may also contact us by mail:

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