



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



# Project Progress Report

Former Lake Ontario Ordnance Works  
Niagara County, New York

May 2006

## Executive Summary

### PROGRAM AND PROJECT SUMMARY

**Project Authority:** The USACE is addressing environmental issues at the former LOOW under two federal programs:

1) **The Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) Program.** The program is used to investigate and respond to environmental contamination at property that was once owned or used by DoD, but is no longer owned by the DoD.

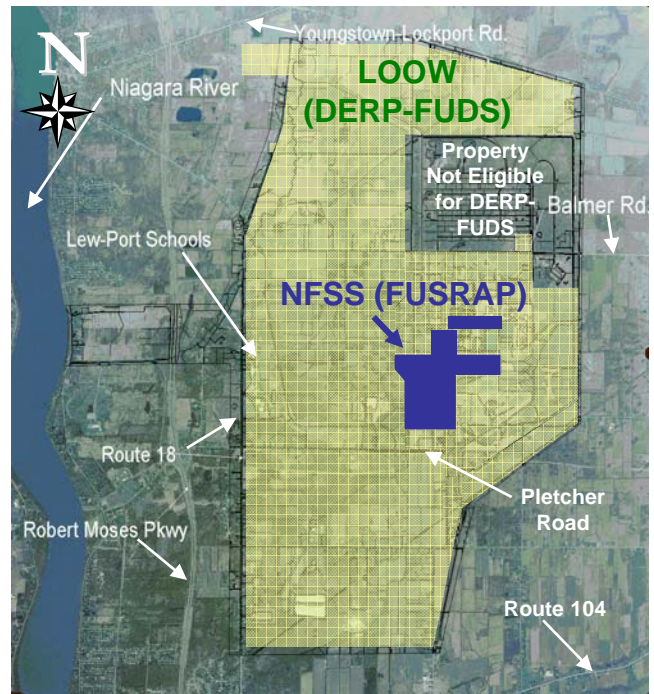
2) **The Formerly Used Sites Remedial Action Program (FUSRAP).** The Niagara Falls Storage Site (NFSS) is part of the Formerly Utilized Sites Remedial Action Program (FUSRAP), a program to investigate and decontaminate or otherwise control sites where residual radioactive materials remain from the nation's early atomic energy program. The FUSRAP was administered by the USDOE until October 1997 when a Congressional Act resulted in the transfer of the program to the USACE.

**Overall Project Objectives:** To characterize the nature and extent of chemical and radiological contamination, at eligible properties, resulting from federal activities at the site. To assess risks to human health and the environment from federal contamination. To develop and implement risk-based cleanup alternatives that are protective of human health and the environment.

**Project Methodology:** USACE executes environmental investigations and cleanup actions in accordance with the process established by Congress and codified in federal law and regulations – the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Oil and Hazardous Substances Contingency Plan (NCP). This process was developed by the United States Environmental Protection Agency (USEPA) and is the standard by which federal environmental response projects are implemented.

**Project Scope:** The USACE is addressing all of the former 7,500 acre LOOW site with the exception of two properties which are ineligible under DERP-FUDS and FUSRAP.

- The US Army / NY Army National Guard Weekend Training Site (860 acres north of Balmer Road).
- The US Air Force Youngstown Test Annex Site (98 acres) on Porter-Center Road.



### CERCLA PROCESS

- Step-1 Preliminary Assessment / Site Investigation (PA/SI)
- Step-2 Remedial Investigation (RI)
- Step-3 Feasibility Study (FS)
- Step-4 Proposed Plan / Record of Decision (PP/ROD)
- Step-5 Remedial Design (RD)
- Step-6 Remedial Action (RA)
- Step-7 Site Closure / Site Monitoring (SC/SM)

#### LOOW Project Status

▼ *We Are Here*

PA SI	RI	FS	PP ROD	RD	RA	SC SM
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#### NFSS Project Status

▼ *We Are Here*

PA SI	RI	FS	PP ROD	RD	RA	SC SM
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*Additional information will be available on our website which is currently being revised*



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### LOOW (DERP-FUDS) PROGRESS SUMMARY

**Projects Completed:** History Search Report, Aerial Photography Analysis, Phase I and II Remedial Investigations, interim removal actions on TNT and chemical sewer pipelines, engineering evaluations and cost estimates on known contamination sources. *See Administrative Record File in Lewiston and Youngstown libraries for more information.*

**Work In Progress:** Underground Utilities Remedial Investigation (UURI). Administrative Record File Improvement Project, Public Website Improvement Project, Inventory Project Report (INPR), coordination with Community LOOW Restoration Advisory Board.

**Projected Work in 2007:** Complete UURI, continue ARF and website improvements, continue planning efforts to identify and integrate existing and future projects, decision documents, and community outreach activities.

**Budget:** In FY2006, the national DERP-FUDS program allocated \$1.8M for the LOOW site. Overall, the national DERP-FUDS program distributes approximately \$250M over 9,000 projects each year. Future funding is anticipated to remain in this range.

### NFSS (FUSRAP) PROGRESS SUMMARY

**Projects Completed:** Three phases of remedial investigation field work, gamma walkover of NFSS and Lew-Port School property, geophysical assessment of entire NFSS property, demolition and disposal of Building 403, completion of Potentially Responsible Party study, and yearly execution (since 1997) of surveillance sampling and reporting, asbestos remediation of Building 401. *See Administrative Record File in Lewiston and Youngstown libraries for more information.*

**Work in Progress:** Continuation of work on the following reports: Remedial Investigation (RI), Baseline Risk Assessment (BRA), Fate and Transport Model, yearly surveillance sampling, website improvement, continuation of work on the Feasibility Study, and work with the Radiation Committee of the LOOW Restoration Advisory Board.

**Projected Work in 2007:** Complete the following reports: Remedial Investigation (RI), Baseline Risk Assessment (BRA), Fate and Transport Model, yearly surveillance sampling and report. Continue work on the feasibility study.

**Budget:** In FY 06, funding for NFSS is \$3,150,000. Overall funding for the national FUSRAP program in FY 06 is \$140,000,000.

### LOOW Project Schedule Forecast

	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>LOOW (DERP-FUDS)</b>	RI	RI	FS	PP	ROD	RD/RA	RA	RA	RA
<b>NFSS (FUSRAP)</b>	RI	FS	FS	PP	ROD	RD/RA	RA	RA	RA

<b>RI</b>	Remedial Investigation	Determine nature and extent of contamination, perform risk assessments
<b>FS</b>	Feasibility Study	Identify and evaluate potential cleanup alternatives
<b>PP</b>	Proposed Plan	Identification of preferred alternative after public review and input period
<b>ROD</b>	Record of Decision	USACE definition of, and decision on, the legal remedy
<b>RD</b>	Remedial Design	Engineering and design activities required to safely execute cleanup remedy
<b>RA</b>	Remedial Action	Execute the cleanup remedy
<b>SC/SM</b>	Site Closure/Site Monitoring	Site Closure/Site Monitoring Ensure the cleanup remedy is working

- Projects are funded annually from national programs and priorities.
- Actual schedule is subject to availability of funds.

*Additional information will be available on our website which is currently being revised*



## DERP-FUDS

## LOOW - Upgrade Administrative Record File (ARF)

Project Type	Other
Property Owners	N/A
Project Objective	Update and upgrade the existing Administrative Record File. Existing ARF is found in the Lewiston Public Library. Provide public access to USACE decision documents throughout CERCLA process.
Project Delivery Method	In-house and/or contract
Project Description	Review existing Administrative Record File and update with documents completed since 2001 (last ARF update). Update ARF inventory. Upgrade to digital files vs. hardcopies. Investigate possibility of making web-based ARF.

### PROJECT FUNDING

Total Cost	Under Development
Amount Funded	Under Development
Amount Unfunded	TBD

### PROJECT STATUS AND SCHEDULE

CERCLA Phase	Remedial Investigation	Start Date	2/1/2006
Phase	Planning	Estimated Completion Date	Ongoing
Status	In Progress	Conditions Impacting Schedule	USACE workflow and staff availability at district. Funding requirements unknown at this time.
% Complete	10		

### PROJECT PROGRESS AND ISSUES

Deliverables Required	Administrative Record File Plan / Inventory, Digital copies of Administrative Record File documents
Deliverables Status	None
Progress This Period	Initial planning to determine requirements, budget, schedule
Plans for Next Period	Continue planning to determine requirements, budget, schedule
Project Issues	None



**DERP-FUDS**     ***LOOW - Addendum-1, DERP-FUDS Inventory Project Report (INPR), Findings and Determination of Eligibility (FDE)***

Project Type	Inventory Project Report (INPR)
Property Owners	All former LOOW properties across the entire 7,500 acre site except those owned by the Department of Defense after 17 October 1986 (US Air Force and US Army-NY Army National Guard properties)
Project Objective	Inventory the former LOOW properties which are eligible for defense funding for environmental investigations and activities under the DERP-FUDS program
Project Delivery Method	In-House and Contract
Project Description	Update the 1986 internal USACE Inventory Project Report (INPR) to include all eligible properties. The INPR is an internal USACE programming document establishing the DERP-FUDS eligible properties and projects. The FDE is the document which addresses property eligibility. Project eligibility is documented in the INPR Project Summary Sheets.

***PROJECT FUNDING***

Total Cost	Not separately budgeted
Amount Funded	Not separately budgeted
Amount Unfunded	None

***PROJECT STATUS AND SCHEDULE***

CERCLA Phase	Non-CERCLA	Start Date	10/1/2004
Phase	Execution	Estimated Completion Date	9/30/2005
Status	In Progress	Conditions Impacting Schedule	USACE workflow and staff availability at district and division level
% Complete	90		

***PROJECT PROGRESS AND ISSUES***

Deliverables Required	Addendum-1, to the 1986 Inventory Project Report, Findings and Determination of Eligibility
Deliverables Status	In progress
Progress This Period	Revised Findings and Determination of Eligibility (FDE) being staffed within the USACE for signature. USACE is preparing response to NYSDEC on comments.
Plans for Next Period	Secure required USACE signatures. Publish final document on website and in Administrative Record File. Respond to NYSDEC comments.
Project Issues	None.



## **DERP-FUDS** ***LOOW - Addendum-1, Inventory Project Report (INPR), Property & Project Summary Sheets***

Project Type	Inventory Project Report (INPR)
Property Owners	All former LOOW properties across the entire 7,500 acre site except those owned by the Department of Defense after 17 October 1986 (US Air Force and US Army-NY Army National Guard properties)
Project Objective	Define the types of environmental projects eligible at the former LOOW site under the DERP-FUDS program.
Project Delivery Method	In-House and Contract
Project Description	Update the 1986 internal USACE Inventory Project Report (INPR). The INPR is an internal USACE programming document establishing the DERP-FUDS eligible properties and projects. Update the Property Summary Sheet, the Hazardous, Toxic, and Radiological Waste (HTRW) Potentially Responsible Parties (PRP) Summary Sheet, Building Demolition/Debris Removal (BD/DR) Summary Sheet, Military Munitions Response Program (MMRP) Summary Sheet, and Containerized HTRW (Con-HTRW) Summary Sheet, and supporting documents.

### ***PROJECT FUNDING***

Total Cost	Not separately budgeted
Amount Funded	Not separately budgeted
Amount Unfunded	None

### ***PROJECT STATUS AND SCHEDULE***

CERCLA Phase	Non-CERCLA	Start Date	10/1/2004
Phase	Execution	Estimated Completion Date	9/30/2005
Status	In Progress	Conditions Impacting Schedule	USACE workflow and staff availability at district and division level
% Complete	70		

### ***PROJECT PROGRESS AND ISSUES***

Deliverables Required	Property Summary Sheet, HTRW-PRP Summary Sheet, BD/DR Summary Sheet, MMRP Summary Sheet, and Con-HTRW Summary Sheet, and supporting documents.
Deliverables Status	Property Summary Sheets are being reviewed, revised, and checked for quality prior to staffing up USACE chain of command for signature.
Progress This Period	Complete final draft BD/DR Summary Sheet. Complete final draft HTRW-PRP Summary Sheet.
Plans for Next Period	Complete final draft MMRP Summary Sheet, Con-HTRW Summary Sheet, and supporting documents
Project Issues	Resolve and answer NYSDEC comments on draft Addendum-1 to 1986 INPR



## **DERP-FUDS** *LOOW - Remedial Investigation - Underground Utilities*

Project Type	Hazardous/Toxic/Radiological Waste Project (HTRW)
Property Owners	Somerset Group Property, CWM Property, Town of Lewiston Property (WWTP and 30-inch outfall pipeline), Niagara Mohawk Power Corp, Occidental Chemical Corp, and the Lewiston-Porter School District
Project Objective	Locate and identify underground utilities related to former DoD plants on the developed portion of the LOOW. Determine nature and extent of DoD contaminants.
Project Delivery Method	In-House and Contract
Project Description	This is the third phase of the Remedial Investigation (RI). This phase focuses on buried pipelines and structures associated with former defense plants. The scope is limited to those underground utilities related to the LOOW TNT Plant, AFP-68, and the former NIKE Base. Project excludes utilities with known impacts from non-DoD entities, utilities currently in use by non-DoD owners, fresh-water supply lines, and lines already investigated.

### **PROJECT FUNDING**

Total Cost	\$2,708,537
Amount Funded	\$2,041,976
Amount Unfunded	\$666,561

### **PROJECT STATUS AND SCHEDULE**

CERCLA Phase	Remedial Investigation	Start Date	3/31/2005
Phase	Execution	Estimated Completion Date	3/31/2008
Status	In Progress	Conditions Impacting Schedule	Availability of funding. If fully funded in 2007, the best case estimated completion date would be approximately March 2008.
% Complete	30		

### **PROJECT PROGRESS AND ISSUES**

Deliverables Required	E&D Quality Control Plan, Non-Intrusive Field Work Plan of Action, Health and Safety Plan Addendum, Ordnance/Explosives Plan Addendum, Asbestos Removal Work Plan, Radiation Safety Plan, Field Sampling Plan, Summary Report of Geophysical Survey, Summary Report of Camera Survey, Quality Assurance Project Plan, Remedial Investigation Report
Deliverables Status	Completed Deliverables: E&D Quality Control Plan, Non-Intrusive Field Work Plan of Action, Health and Safety Plan Addendum, Ordnance/Explosives Plan Addendum, Asbestos Removal Work Plan, Radiation Safety Plan.
Progress This Period	Contractor continued brush clearing on former NIKE Base site. Contractor will prepare Field Sampling Plan after non-intrusive geophysical utility survey is complete.
Plans for Next Period	Contractor continue/complete brush clearing and non-intrusive geophysical utility survey.
Project Issues	The following tasks remain unfunded to date. USACE intent is to fully fund these tasks in 2007: Community Relations Support, Expanded Geophysical Surveys, Intrusive sampling at the NIKE Base, Nitration Houses, LOOW Lines South of M-Street, Remedial Investigation Report, Identification of ARARs and TBD Criteria, Human Health Risk Assessment, Ecological Risk Assessment, Site Demobilization



## FUSRAP

## NIAGARA FALLS STORAGE SITE - Site Surveillance

Project Type	Formerly Utilized Sites Remedial Action Program (FUSRAP)
Property Owners	FEDERAL GOVERNMENT
Project Objective	To monitor groundwater, surface water, sediment, and radon emissions to ensure current conditions remain protective of human health and the environment
Project Delivery Method	In-house + contractors
Project Description	Conduct sampling and analysis of all media

### PROJECT FUNDING

Total Cost	\$460,000 per year
Amount Funded	\$460,000
Amount Unfunded	0

### PROJECT STATUS AND SCHEDULE

CERCLA Phase	Non-CERCLA	Start Date	Oct 1997
Phase	Execution	Estimated Completion Date	Ongoing Annual Program
Status	In Progress	Conditions Impacting Schedule	USACE workflow and staff availability at District & Division. Availability of funds
% Complete	50		

### PROJECT PROGRESS AND ISSUES

Deliverables Required	Yearly Technical Surveillance Report
Deliverables Status	Data collection in progress
Progress This Period	Water level measurements and sampling for groundwater, surface water and sediment sampling.
Plans for Next Period	Preparations for radon sampling.
Project Issues	None



## FUSRAP

## **NIAGARA FALLS STORAGE SITE - Geophysical Study and Gamma Walkover**

Project Type	Formerly Utilized Sites Remedial Action Program (FUSRAP)
Property Owners	FEDERAL GOVERNMENT
Project Objective	To detect surface level of gamma radiation and to do non-intrusive investigation of the subsurface.
Project Delivery Method	In-house + contractors
Project Description	Performance of field investigation using detection instruments.

### **PROJECT FUNDING**

Total Cost	\$2,059,179
Amount Funded	\$2,059,179
Amount Unfunded	0

### **PROJECT STATUS AND SCHEDULE**

CERCLA Phase	Remedial Investigation	Start Date	22 Sep 2000
Phase	Closeout	Estimated Completion Date	Complete
Status	Complete	Conditions Impacting Schedule	None
% Complete	100		

### **PROJECT PROGRESS AND ISSUES**

Deliverables Required	Geophysical and gamma walkover combined report
Deliverables Status	Report finalized and issued: May 2003
Progress This Period	This task is complete. It was conducted as part of the overall Remedial Investigation Project
Plans for Next Period	None
Project Issues	None





## FUSRAP

## NIAGARA FALLS STORAGE SITE - Remedial Investigation

Project Type	Formerly Utilized Sites Remedial Action Program (FUSRAP)
Property Owners	FEDERAL GOVERNMENT
Project Objective	To determine the chemical and radiological types and concentrations of materials present in soil, groundwater, surface water, sediment, and air.
Project Delivery Method	In-house + contractors
Project Description	Conduct risk assessment using data obtained during sampling and analytical data from the RI field investigation.

### PROJECT FUNDING

Total Cost	\$13,171,000
Amount Funded	\$13,171,000
Amount Unfunded	0

### PROJECT STATUS AND SCHEDULE

CERCLA Phase	Remedial Investigation	Start Date	20 Nov 1999
Phase	Execution	Estimated Completion Date	Summer 2007
Status	In Progress	Conditions Impacting Schedule	USACE workflow and staff availability at District & Division. Availability of funds
% Complete	80		

### PROJECT PROGRESS AND ISSUES

Deliverables Required	RI report and data package
Deliverables Status	Data received, report in progress
Progress This Period	Work continues on report
Plans for Next Period	Work continues on report
Project Issues	None



## FUSRAP

## NIAGARA FALLS STORAGE SITE - Baseline Risk Assessment

Project Type	Formerly Utilized Sites Remedial Action Program (FUSRAP)
Property Owners	FEDERAL GOVERNMENT
Project Objective	To characterize the risk to human health and the environment attributed to chemical and radiological constituents present on site
Project Delivery Method	In House + Contractor
Project Description	Conduct risk assessment using data obtained during sampling and analytical data from the Remedial Investigation field sampling

### PROJECT FUNDING

Total Cost	\$525,000
Amount Funded	\$525,000
Amount Unfunded	TBD

### PROJECT STATUS AND SCHEDULE

CERCLA Phase	Remedial Investigation	Start Date	23 April 2002
Phase	Execution	Estimated Completion Date	Summer 2007
Status	In Progress	Conditions Impacting Schedule	USACE workflow and staff availability at District & Division. Availability of funds - total funding shortfall is TBD as total project cost is under development.
% Complete	85		

### PROJECT PROGRESS AND ISSUES

Deliverables Required	Risk Assessment Report
Deliverables Status	Data has been received. Report is in progress.
Progress This Period	Work continues on the preparation of the report.
Plans for Next Period	Continued work on the preparation of the report.
Project Issues	None



**FUSRAP**

**NIAGARA FALLS STORAGE SITE - Fate and Transport Assessment**

Project Type	Formerly Utilized Sites Remedial Action Program (FUSRAP)
Property Owners	FEDERAL GOVERNMENT
Project Objective	To model the fate and potential movement of chemical and radiological constituents through the subsurface.
Project Delivery Method	In-house + contractors
Project Description	Conduct the assessment by employing and calibrating a computer model of the site as it stands and under several failure conditions.

**PROJECT FUNDING**

Total Cost	\$1,352,000
Amount Funded	\$1,059,000
Amount Unfunded	\$293,000

**PROJECT STATUS AND SCHEDULE**

CERCLA Phase	Remedial Investigation	Start Date	01 Dec 2001
Phase	Execution	Estimated Completion Date	Summer 2007
Status	In Progress	Conditions Impacting Schedule	USACE workflow and staff availability at District & Division.
% Complete	80		Availability of funds

**PROJECT PROGRESS AND ISSUES**

Deliverables Required	Fate and Transport Report
Deliverables Status	Data received, report in progress
Progress This Period	Work continues on report
Plans for Next Period	Continued work on report
Project Issues	None



## FUSRAP

## NIAGARA FALLS STORAGE SITE - Feasibility Study

Project Type	Hazardous/Toxic/Radiological Waste Project (HTRW)
Property Owners	FEDERAL GOVERNMENT
Project Objective	To identify feasible technologies that can be employed to remediate the site
Project Delivery Method	In-house + contractors
Project Description	Investigate feasible remedial alternatives for remediating the site (including the waste containment structure) and evaluate them using the 9 CERCLA criteria.

### PROJECT FUNDING

Total Cost	\$3,907,000
Amount Funded	\$3,907,000
Amount Unfunded	0

### PROJECT STATUS AND SCHEDULE

CERCLA Phase	Feasibility Study	Start Date	26 Sep 2001
Phase	Execution	Estimated Completion Date	Summer 2008
Status	In Progress	Conditions Impacting Schedule	USACE workflow and staff availability at District & Division. Availability of funds - total funding shortfall is TBD as total project cost is under development.
% Complete	40		

### PROJECT PROGRESS AND ISSUES

Deliverables Required	Feasibility Study Report
Deliverables Status	Remediation alternative assessment in progress.
Progress This Period	Work continues on evaluations
Plans for Next Period	Continued work on evaluations
Project Issues	None



## Joint FUSRAP & DERP-FUDS

### **LOOW - Upgrade USACE LOOW Website**

Project Type	Other
Property Owners	N/A
Project Objective	Consolidate separate DERP-FUDS, FUSRAP, LOOW, NFSS content under a joint LOOW website. Upgrade and improve content. Eliminate password requirements for public access
Project Delivery Method	In-house and contract
Project Description	Establish and upgrade USACE LOOW website. USACE has directed all its websites to adhere to a basic structure and aesthetics. Buffalo District also seeks to integrate, share, and coordinate DERP-FUDS and FUSRAP information on the LOOW to improve public understanding and access. The website would be publicly accessible 24/7 with no passwords or perceived access limitation issues.

### **PROJECT FUNDING**

Total Cost	Under Development
Amount Funded	Under Development
Amount Unfunded	TBD

### **PROJECT STATUS AND SCHEDULE**

CERCLA Phase	Non-CERCLA	Start Date	1/1/2006
Phase	Planning	Estimated Completion Date	Ongoing
Status	In Progress	Conditions Impacting Schedule	USACE workflow and staff availability at district. Funding requirements unknown at this time.
% Complete	10		

### **PROJECT PROGRESS AND ISSUES**

Deliverables Required	Initial basic LOOW, NFSS (FUSRAP) and LOOW (DERP-FUDS) webpages to be activated in May 2006
Deliverables Status	In progress
Progress This Period	Development of website structure and initial content. To be followed up with additional content development and maintenance.
Plans for Next Period	Activate initial webpages. Continue to migrate key documents. Continue to develop content including Frequently Asked Questions database, link to LOOW-RAB website etc.
Project Issues	Planning is ongoing to determine content, budget, and implementation strategy