THE COMMUNITY LOOW PROJECT

Purpose of tonight's meeting

What is the Community LOOW Project ?

Why was the Community LOOW Project developed ?

How can the community help ?

Outline of tonight's meeting

- **Community LOOW Project - Overview**
- **The LOOW site: past and present uses**
- **Introduction of Science Team**
- **Distinctions between The Community LOOW Project and other initiatives**
- **Break**
- **Geographic Information System (GIS) Data Base**
- **Questions and comments**

Firemen's Field Day 2003

What is The Community LOOW Project?

- **Collection of past LOOW activity descriptions, investigations and clean-up**
- **Construction of a LOOW GIS Data Base**
- **Gap Analysis of LOOW work to date**
- **Final recommendations early 2007**

Why was the Community LOOW Project Developed?

- ⇨ Public concern that legacy and current operations at the LOOW may be impacting health risk
- ⇨ Fragmented jurisdiction of dozens of government agency programs at the LOOW
- ⇨ 2004 findings by the NYS Dept. of Health Environmental Radiation Protection Bureau suggests gaps in adequacy of radiological remediation on a portion of the LOOW site
- ⇨ Public concern about the potential for conflicts of interest by some agencies supervising the LOOW site

How can the Community Help?

Firemen's Field Day 2003

Information on historical investigations, cleanups, maps and data

Recollections, accounts of working at the LOOW

- contact the LOOW Restoration Advisory Board (RAB) Outreach and Historical Committees

Community LOOW Project

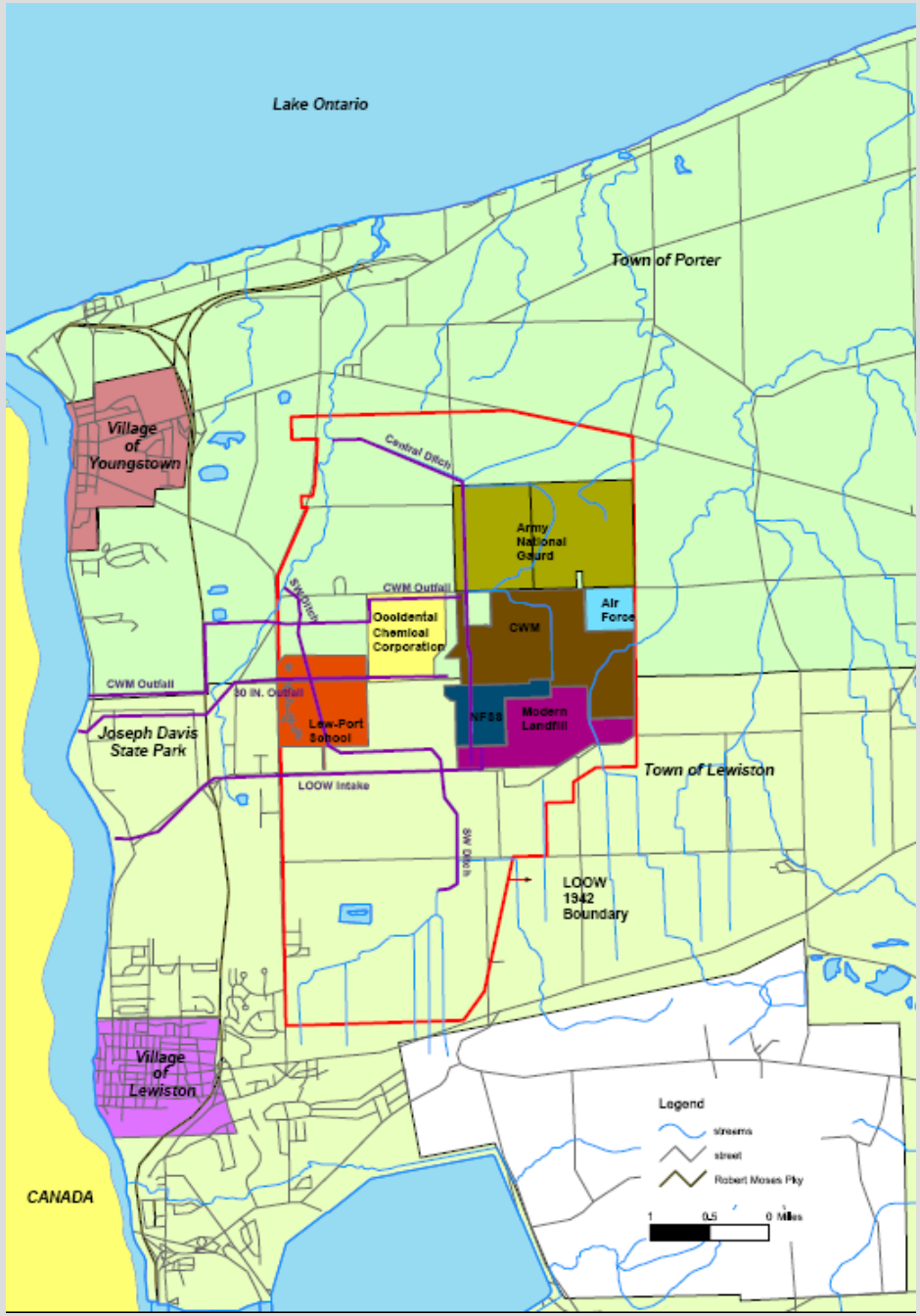
Funding Source	Amount	Status
Community Foundation for Greater Buffalo	$ 30,000	approved
WNY State Assembly & Senate Delegation	25,000	approved
Univ. at Buffalo Environ't & Society Institute	15,000	approved
Sen. George Maziarz	10,000	approved
Town of Porter	8,000	approved
Assemblywoman Francine DelMonte	5,000	approved
Niagara County	4,000	approved
Town of Lewiston	4,000	approved
Federal Delegation: Sen. Schumer & Clinton Congresswoman Slaughter	95,000	requested

What is the LOOW?

- Lake Ontario Ordnance Works
- Dates from World War II
- 7,500 acres acquired in 1942
- Subsequent Dept. of Energy and Defense activities
- Now, private and government ownership
- “Developed” and “Undeveloped” portions

Overview

LOOW Setting



Overview

What is the Community LOOW Project ?

- Response to concerns in community
  - Health risks from legacy or current activities
  - Fragmented jurisdictional issues
  - Legacy of mistrust
  - potential conflicts of interest by some agencies supervising the LOOW site
  - Apparent gaps in adequacy of radiological remediation (e.g. findings by the NYS Dept. of Health Environmental Radiation Protection Bureau 2004)
- NCDOH
- Ensure public safety and increase trust in restoration process
- Independent evaluation of past and current studies
- Comprehensive approach to entire LOOW

Overview

3 Main Parts to Community LOOW Project

1. Identify and compile relevant past LOOW historic activity, investigations and clean-ups into one GIS database
2. “Gap Analysis” of LOOW work
3. Collaboratively identify and recommend solutions (early 2007)

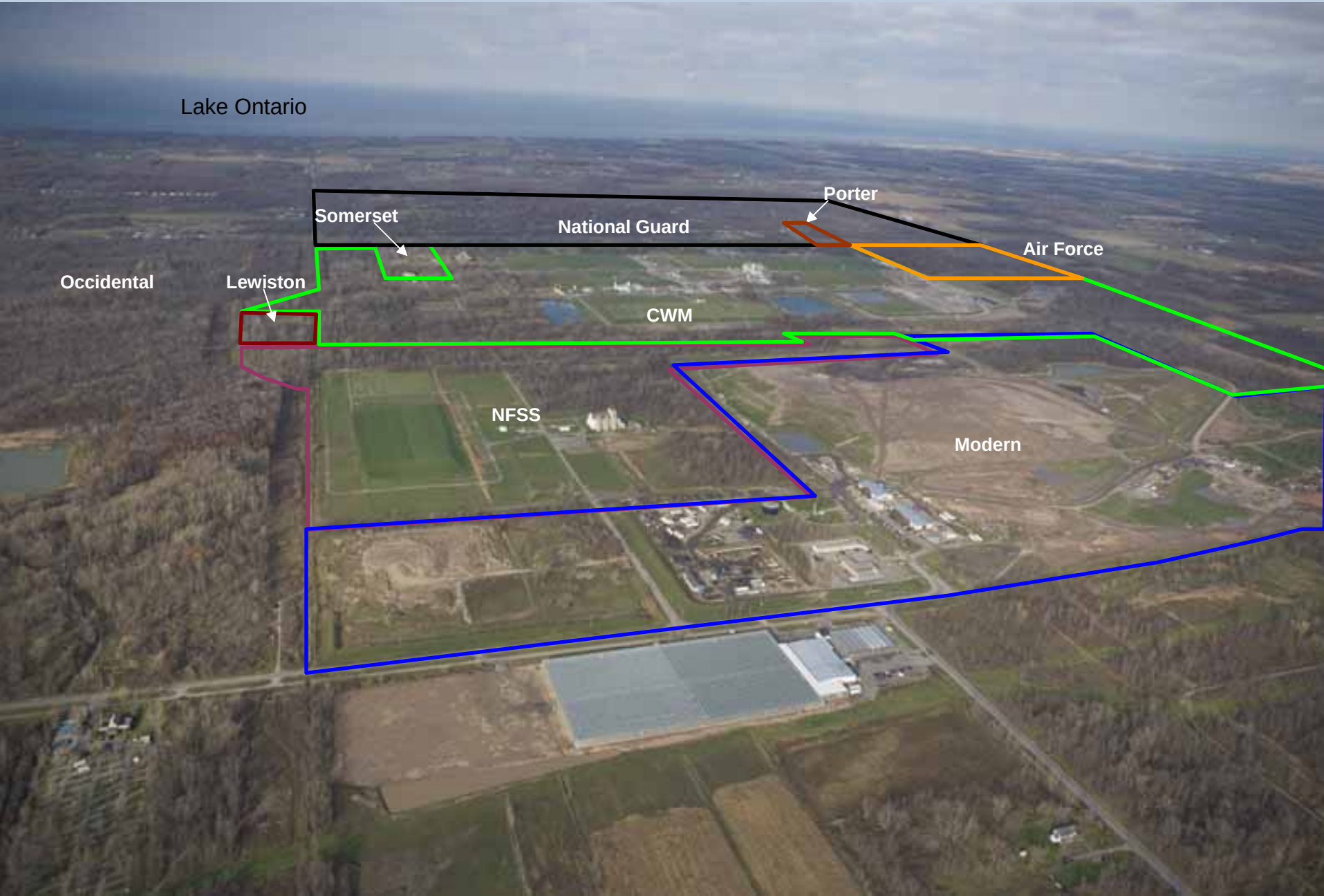
Why is this different ?

- “blind” to jurisdictional limitations of agency programs
- Site-wide approach
- Look at the “big-picture”
- Independent role of science team
- County Health Dept. is well-positioned to provide local input

LOOW Historical Highlights

1942-1943	**TNT Manufacturing Plant**
1944-1946	**Northeast Chemical Warfare Depot**
1944-Present	**Manhattan Eng. Dist. / AEC / DOE (NFSS Radioactive Storage)**
1950-1992	**U.S. Air Force Plant 38**
1957-1959	**U.S. Air Force Plant 68**
1956-1960	**Navy Interim Pilot Production Plant**
1953-1971	**Boron-10 Production Plant**
1954-1966	**NIKE Missile Base NF-03 and NF-05**
1958-1973	**Ransomville Test Annex - U.S. Air Force**
1966-Present	**Youngstown Test Annex - U.S. Air Force**
1979-Present	**Army National Guard Training Site**
1972-Present	**Chemtrol – SCA - CWM Chemical Services hazardous waste landfills**
1983-Present	**Modern Corporation - residential and industrial landfill**

View looking North 2005



Niagara Falls Storage Site (“NFSS”)

Looking west

Contaminants of Potential Concern

Volatile Organic Chemicals, Semi-volatile Organic Chemicals, Metals,
PAH's, Pesticides, PCBs, Explosives, Radiological

Acetone
Aldrin
Aluminum
Antimony
Anthracene
Arsenic
Asbestos
Barium
Benzene
Beryllium
Boron
Cadmium
Carbon Tetrachloride
Chromium
Cobalt
Copper (metal dust)
Dichlorobenzene
Dieldrin
Dinitrotoluene
Dinotrobenzene
Endosulfan
Ethyl Benzene
Fluorathene
Hexachloroethane
Iron
Lead
Lindane
Lithium
Manganese
Mercury
Methane
Methanol
Methlyphenol
Molybdenum
Naphthalene
Nickel
Nitric Acid
Nitroaromatics (other)
Nitrobenzene
Pentachlorophenol
Phenol
Phosgene
Selenium
Silver
Sodium Busulfate
Sodium Hydroxide
Sulfuric Acid
Tetrachloroethene
Thallium
Tin
Toluene
Trichloroethene
Trinitrotoluene
Trinitrobenzene
Vanadium
Polychlorinated Biphenyls
Polyaromatic Hydrocarbons (other)
Pyrene
RDX
TPH; various
Xylenes
Zinc

<u>Radionuclides</u>
Actinium-227
Americium-241
Cesium-137
Cobalt-60
Plutonium-238
Plutonium-239
Proactinium-231
Radium-226
Radium-228
Strontium-90
Thorium-228
Thorium-230
Thorium-232
Uranium-234

Environmental Pathways

Air

Streams

Soil

Ditches

Creeks

Groundwater

Stormwater

Scientific Disciplines
Community LOOW Project Team

Hydrogeology	Air Modeling & Sampling
Geology	Engineering
Geophysics	Health Physics
Chemistry	Nuclear Physics

GIS Data Base

- Identify relevant chemical and radiological contamination history, investigations, geological data, etc. of the LOOW Site for consolidation into a GIS database that will allow for interactive mapping capability by the public and agencies.

GIS Mapping and Gap Analysis

- Independent scientists to review investigations and use the GIS data base to produce maps identifying potential gaps or duplications in LOOW investigations.

Recommendations

- Collaboratively identify and promote effective long-term solutions for management of LOOW Site risk.

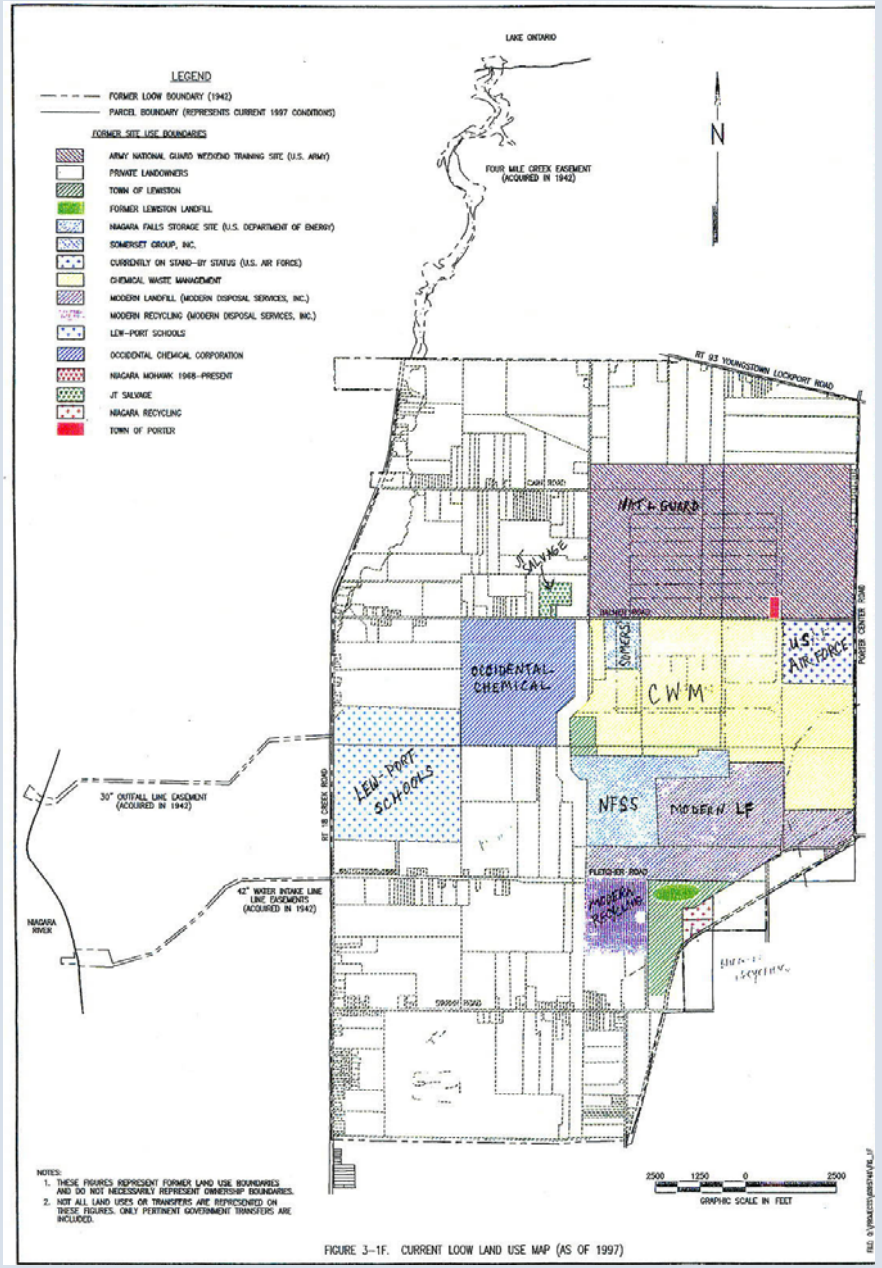
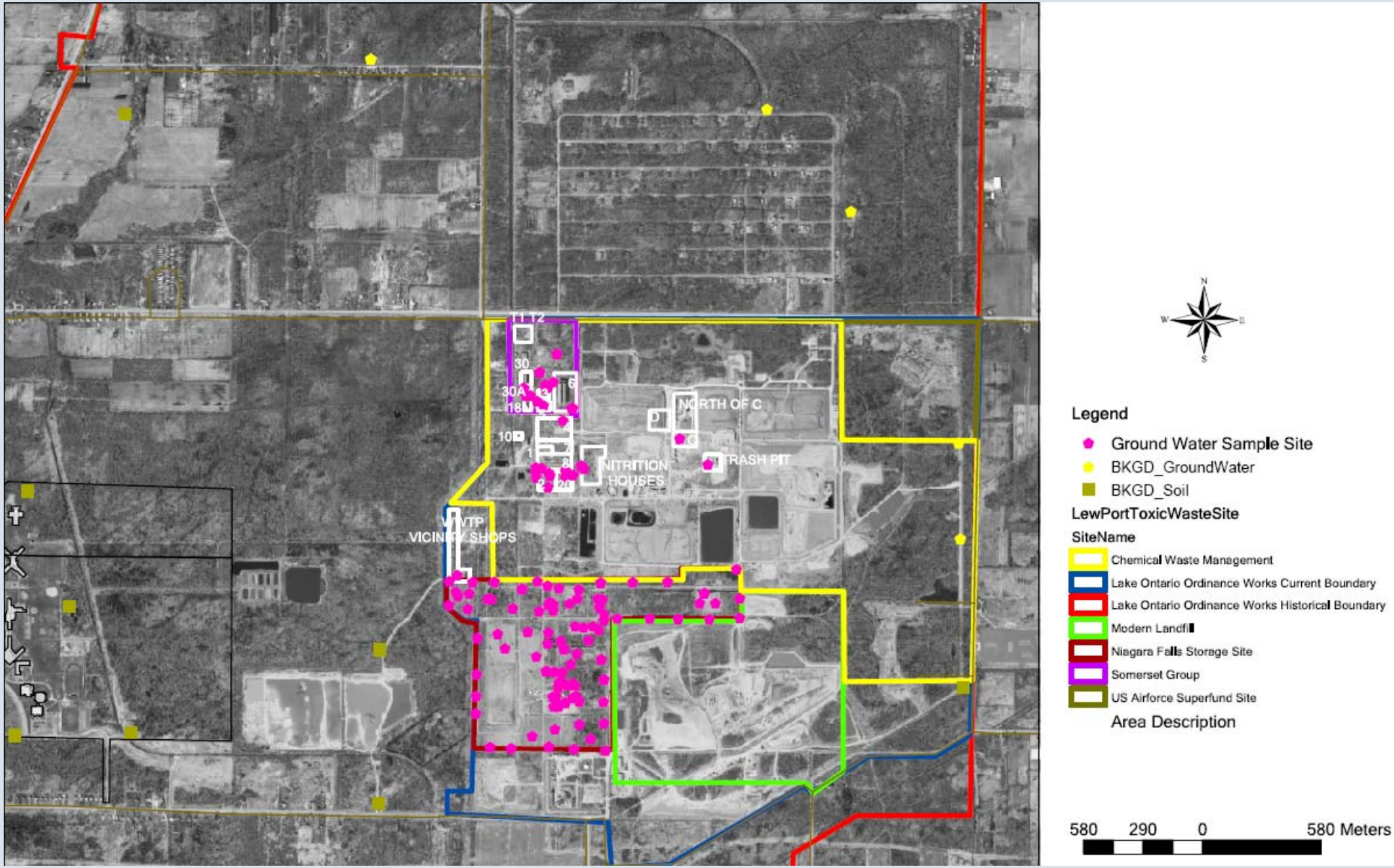


FIGURE 3-1F. CURRENT LOOW LAND USE MAP (AS OF 1997)

Example map #1



Sources of information solicited to date include:

- U.S. Army Corps of Engineers (FUSRAP and DERP-FUDS)
- Current LOOW property owners; CWM, Modern, Occidental, Lew-Port Central Schools, 3F Club, Fatima Shrine, etc.
- U.S. Army National Guard
- U.S. Air Force
- U.S. Dept of Energy and predecessor documents
- Oak Ridge National Laboratory, TN
- Knolls Atomic Power Laboratory – Schenectady, NY
- University of Rochester
- Niagara University
- NYS Dept. of Environ. Conservation and U.S. EPA
- University at Buffalo (Ecumenical Task Force docs)
- Area libraries, museums, municipalities
- Niagara County Health Dept, Highway Dept
- Tuscarora Indian Nation
- Area environmental groups and advisory boards such as RAB

What are Community questions and concerns?

- Is there historical documentation indicating possible activities or areas of concern that have not been investigated?
- Were investigations on the former “Buffer Zone” (now “Undeveloped Area”) adequate to allay fears of missed contamination?
- Were investigations and past cleanups adequate? How do they compare to today’s chemical and radiological standards?
- Are current monitoring programs sufficient? Coordinated?
- Is there evidence that any containment facility could be leaking?
- Has groundwater been impacted by LOOW activities? Has contaminated groundwater migrated offsite?
- Have jurisdictional constraints caused contamination to “fall through the cracks”?
- Is there plutonium (or other fission products) on the site?
- Are legacy contaminants incorporated into monitoring plans?

PROJECT/ Timeframe	OWNERSHIP	STAFFED BY	PURPOSE
Community LOOW Project 24 mos.	Niagara County Health Dept.	Independent scientists under contract	Assess potential for chemical and radiological environmental health risks on **entire LOOW site**.
RAB (Lake Ontario Ordnance Works Restoration Advisory Board) / Ongoing	U.S. Army Corps of Engineers	USACE staff, Stakeholders (agencies, property owners, etc.) academics and Community volunteers.	**Facilitate exchange of info about the LOOW**. Monitor/comment on USACE work to remediate **federal** contamination on portions of the LOOW site.
CWM Chemical Services - **CAC** (Community Advisory Committee) / Ongoing	Towns of Lewiston and Porter and County of Niagara	Members appointed by Town Boards and County Legislature.	Negotiate certain RMU-1 permit conditions and meet periodically with CWM thereafter to discuss **CWM operations/activities**.
Lew-Port School Soil Study / 12 mos.	Lew-Port Central School District	Univ. Buffalo ESI. Certified Labs and Environmental remediation contractors. (& Advisory Committee)	**Surface soil sampling of targeted areas on campus**. Surface/sub-surface sampling of area defined. Remediate contaminants exceeding establ'd level.
NYS Dept. Of Health Cancer Surveillance 18+ mos	NYS Dept. Of Health	NYS Dept. Of Health Epidemiologist	One-time **NYS DOH Cancer Incidence** report of statistics for Lewiston and Porter for certain cancers over 10 years
NCHD Well Water Study 12 mos. with possible 2nd phase	Niagara County Health Dept.	Hydrogeologist under contract and NCHD Environmental Health Staff (& Advisory Committee)	Identify and **test select potable and non-potable area water wells** for possible LOOW contaminants.
Lewiston Museum Archives Project 12 mos. with possible additional steps	Museum Board (501c3)	Museum admin and contract historian and/or archivists	**Identify locations of LOOW information sources**. (Subsequent steps may create archive list and or repository - TBD)

Break

GIS

Community LOOW Project
UB GIS Project Review

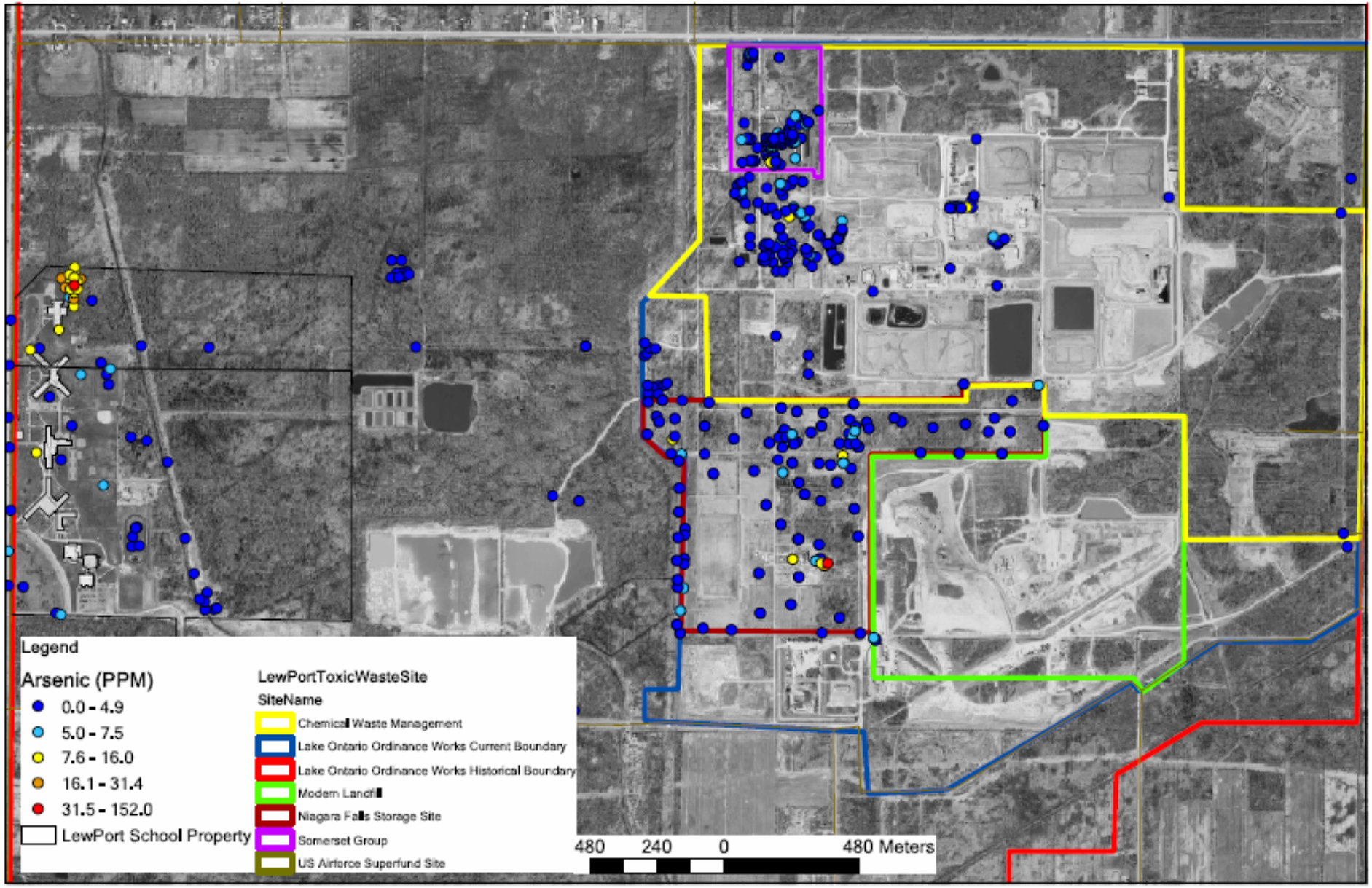
- Geographic Information Systems/Science (GIS)
  - Create a common database of public data to create maps
- Develop common map formats that the public understands
- Integration with county-wide GIS efforts
- Geographic Information ANALYSIS (GIA) to analyze the data
  - spatial distributions
  - changes over time
  - relationships with geography
  - Historical use data and maps

Examples of map design and information

- Overview of area
- Overlay of aerial photograph information (high resolution GIS Tiger maps (USGS)
- Overlay of historical map/aerial photos
- UB Center for Geographic Information Analysis

DRAFT

Arsenic In Soil, LOOW



Key Questions for GIS

1. Setting concentration ranges with color scales
2. Quality Control (QC) and Quality Assurance (QA) of data
3. Presenting maps in an understandable way
4. Documenting concentration levels which do or do not trigger decisions

Needs and Future Issues

- Identifying other databases for inclusion
- Incorporating other databases
  - DEC
  - NYS DOH
  - EPA, Dept of Energy, etc.
  - CWM
  - Older USACE studies
- Determine future mapping needs
- Funding

How can you help?

Firemen's Field Day 2003

We want:

- **Information on historical investigations, cleanups, maps and data**

If you have:

- **Recollections, accounts of working at the LOOW**
- **contact the LOOW Restoration Advisory Board (RAB) Outreach and Historical Committees**

Community Contact Information

Community LOOW Project
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LOOW RAB (Restoration Advisory Board)
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Historical Chair Kris Price (716) 285-3920

Niagara County Department of Health
Jim Devald (716) 439-7444

Lewiston Museum & Historical Society
Nona McQuay (716) 434-5052

CWM CAC
Porter: Mert Wiepert (716) 745-7243
Lewiston: Fred Newlin (716) 754-8213