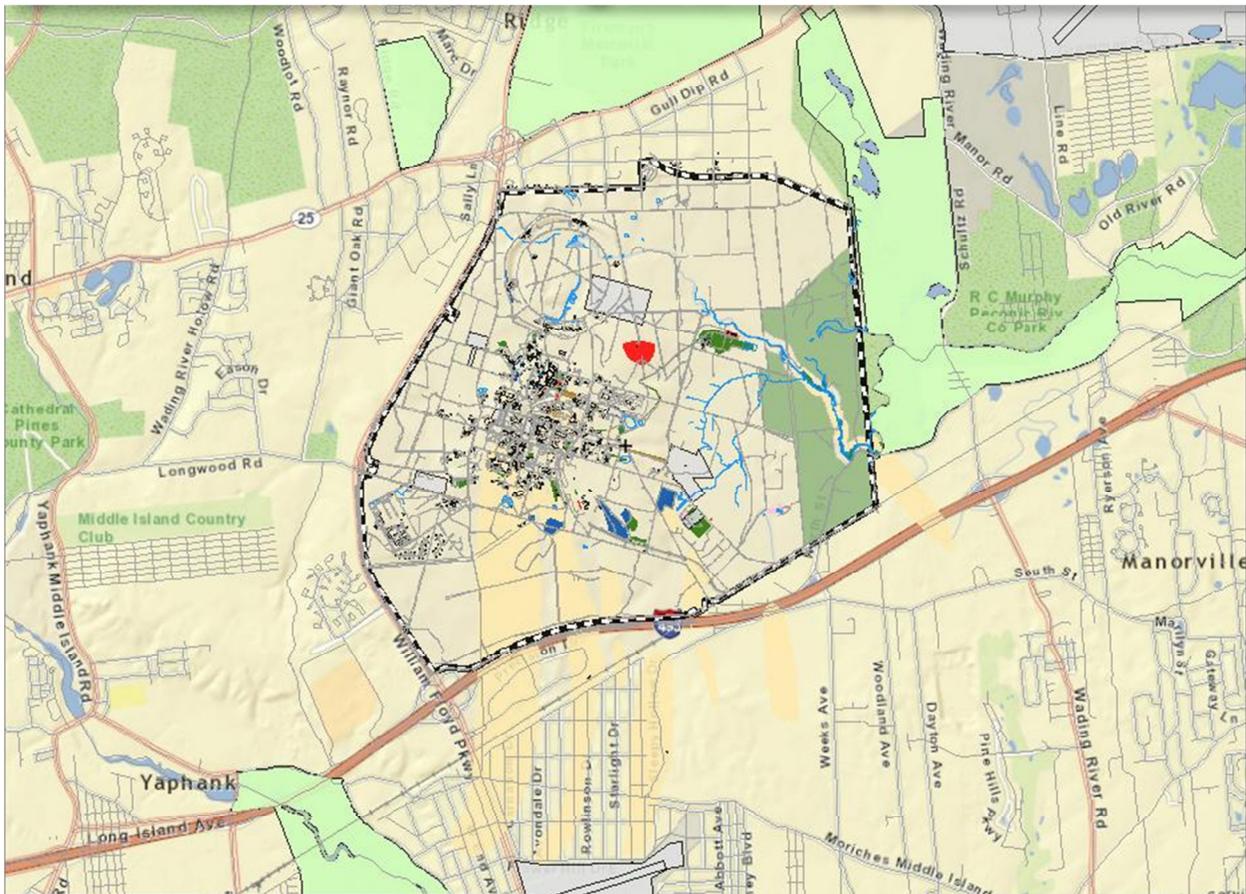


[1.0]  
Rohkohl, Andrew



## [ Land Use Institutional Controls Mapping User Manual ]

The purpose of this website is to provide centralized, integrated access to information pertaining to BNL remediation areas that are subject to land use and institutional controls.

## Revision History

Version	Date	Revision Description
1.0	11/11/2011	Guide Creation

# Table of Contents

## Contents

Revision History .....	ii
<b>Table of Contents .....</b>	<b>0</b>
<b>1. Introduction .....</b>	<b>1</b>
<b>Purpose .....</b>	<b>1</b>
<b>Related Documents .....</b>	<b>1</b>
<b>Conventions .....</b>	<b>1</b>
<b>2. Overview .....</b>	<b>1</b>
<b>Functional Description.....</b>	Error! Bookmark not defined.
<b>3. 3 Instruction .....</b>	<b>2</b>
<b>Overview .....</b>	Error! Bookmark not defined.

# 1. Introduction

Brookhaven National Laboratory (BNL) has been undergoing a comprehensive environmental cleanup program involving the closure of landfills, soils remediation, groundwater treatment, Peconic River restoration, and the decontamination and the decommissioning of its research reactors. Over 30 contaminated facilities and areas have been or are planned to be remediated as part of this cleanup program. This cleanup is being conducted under the requirements of the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, commonly known as Superfund law.

Each step of the cleanup process has been reviewed and approved by the U.S. Department of Energy, the U.S. Environmental Protection Agency, and the New York State Department of Environmental Conservation, under an agreement called the "Interagency Agreement". Under the terms of the agreement, finalized in 1992, the Department of Energy must conduct the cleanup in compliance with all federal and state regulations. The Environmental Protection Agency and Department of Environmental Conservation review all activities to ensure compliance. The public also had input into the cleanup decisions. As the agency with jurisdiction over the Laboratory, the Department of Energy is responsible for the cleanup.

## Purpose

The two primary purposes of LUICs are to:

- Minimize the potential for exposure to contaminants
- Protect the integrity of the remedy

The purpose of this website is to provide centralized, integrated access to information pertaining to BNL remediation areas that are subject to land use and institutional controls. It includes brief information on each of the BNL contaminated sites and facilities, their cleanup status, contaminants or concern, and maps depicting land use and land use restrictions. It defines the scope of activities intended within each contaminated area, so that stewards and stakeholders have a clear understanding of restrictions and stewardship responsibilities. This website replaces what was informally referred to at BNL as the "soil contamination map".

## Related Documents

The Land Use Controls Management Plan describes in detail the Department of Energy's commitment to prevent exposure to environmental contamination and to ensure the long-term effectiveness of the remedies conducted at BNL through land use planning and other controls.

# 2. Overview

## What Are Land Use Controls?

The purpose of this plan is to summarize the land use and institutional controls (LUICs) that will be deployed at Brookhaven National Laboratory (BNL) to prevent exposure to environmental contamination and to ensure the long-term effectiveness of the environmental cleanup remedies.

There are two categories of LUICs: Laboratory-wide that apply to all of the cleanup areas, and site-specific, which have been designed for a particular area. This plan provides an overview of both types. Land use and institutional controls, along with other mitigating or preventive measures as necessary, will be implemented to ensure that if one control temporarily fails, other controls will be in place, or actions will be taken, to mitigate consequences resulting from the failure. LUICs will be maintained for as long as necessary in order to ensure performance of the completed remedies as described and documented in the BNL Records of Decision (RODs).

**Key land use/institutional control requirements for BNL have been set forth by the USEPA and NYSDEC.**

**Internal Land Use Zoning** - Future land uses may be restricted where residual contamination remains after cleanup

- Industrial
- Residential
- Open Space

### **Groundwater Management**

- Installation of new supply wells prohibited in areas of potential groundwater contamination
- Hookup to public water is required by Suffolk County for new residential buildings
- Pump & Recharge Committee evaluation

### **DOE Orders and Site Specific Procedures**

- Working Planning and Control for Operations
- Excavation Safety
- Rad Worker Permits - ensure that workers are not exposed to radiation levels above established Administrative Control Levels

### **Landfills**

- No intrusive activities or actions that could compromise the integrity of cap.

This website is part of BNL's land use controls management system, which also includes:

- Procedures for reporting stewardship requirements to a centralized database

- Geographical information system to manage communicate the stewardship requirements
- Inspection and maintenance schedules
- Integrated monitoring
- Self-assessment
- Notification to regulatory agencies of a change in conditions
- 5 Year Review Reporting

## 3. Instruction

### Overview

There are four major sections to the Land Use Controls Website.

- The Map Application
- Factsheet Viewing
- Factsheet Creation, Modification, and Publishing
- Site Administration

All public users can use the map application and view any published factsheet data. The map can be used to visualize or query current land use as well as various BNL assets. Factsheet details can be accessed through the map or through the Factsheet listing. Access to the Factsheet Editor and website administration will depend on the current user's designated roles.

### Website Navigation

The main website navigation is located in a menu at the top of the page. From here the user can access all sections of the site available to public viewers. From this menu a variety of information is available about the LUIC program at BNL. Administrative navigation is located along the bottom of the page and is only visible when the user has sufficient privileges. Information available for public consumption includes the following pages:

- Land Use Controls – General overview of the LUIC process
- Glossary – Quick reference for a variety of acronyms and terms
- User Guide – Contains both a quick reference guide as well as in-depth PDF
- Links – Links to various programs at BNL associated with the LUIC
- Contact – Contact information for various aspects of the LUIC

### Using the Map

#### Map Navigation



##### **Pan Map Panel**

The arrows on this panel allow the user to move the map a set distance in the direction of the arrow pressed. To pan the map click the correct arrow for the direction you wish to move. The map will move a set distance in that direction. The map can also be panned by clicking and dragging with the left mouse button.



**Map Zoom**

**Draw Zoom In**

Allows the user the view the map with more detail. Click this mouse and drag to create a box around an area of interest. Release the mouse and the map will zoom to the defined location.

**Draw Zoom Out**

Allows the user the view a larger area of the map with less detail. Click this mouse and drag to create a box. Release the mouse and the map will zoom out based on the area of the box drawn.

**Zoom In**

Allows the user to zoom the map in a set distance. Click the button to zoom the map in.

**Zoom Out**

Allows the user to zoom the map out a set distance. Click the button to zoom the map out.

**Cycle Map Extent History**

This allows the user to cycle through any map extent that has been viewed through the session. Click the left arrow to cycle backwards through the extent history. Click the right arrow to cycle forwards.

**Reset Map Extent**

Resets the map zoom to the initial extent. This will quickly zoom to a full view of the BNL campus.

**Using the LUIC**

**Showing/Hiding Toolbars**



**Show/Hide Toolbar Panels:**

To show or hide any toolbar panel or map widget click the name of the panel or widget you wish to show/hide.

For example; to access the Identify Toolbar click the Identify Tools label to slide open the toolbar. To close the panel click the Identify Tools label again to slide it closed.

**Identify Toolbar**



This toolbar can be used to query the map and show additional information about specific map features.

**Find a BNL Building**

Click this button to display the building selection panel. Select the building number in question from the drop down list. Selecting a building will cause the map to zoom to and highlight the requested building.

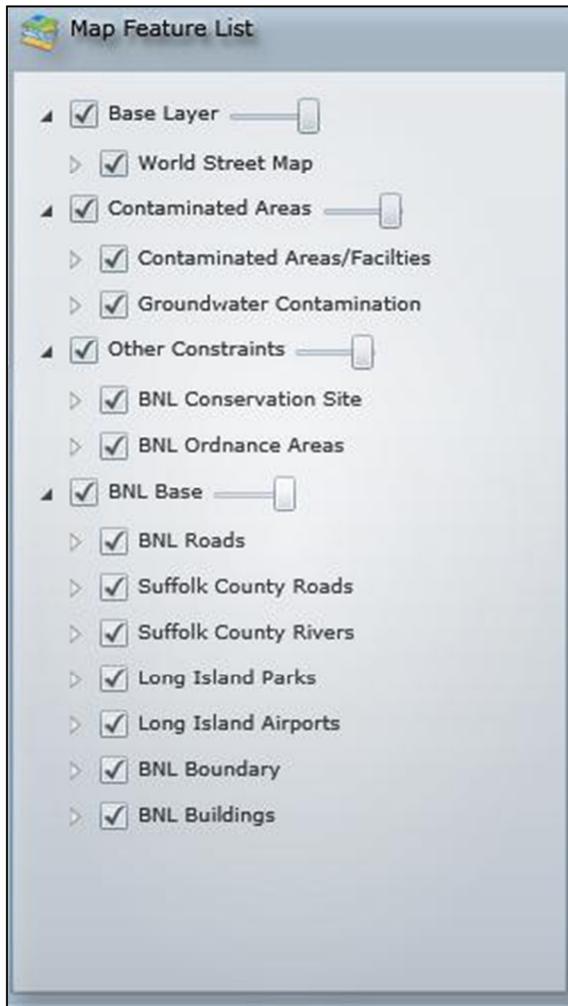
**Identify Features**

Allows the user to retrieve information on any map features. First click the identify button, and then click the feature(s) on the map to be identified. The user can switch

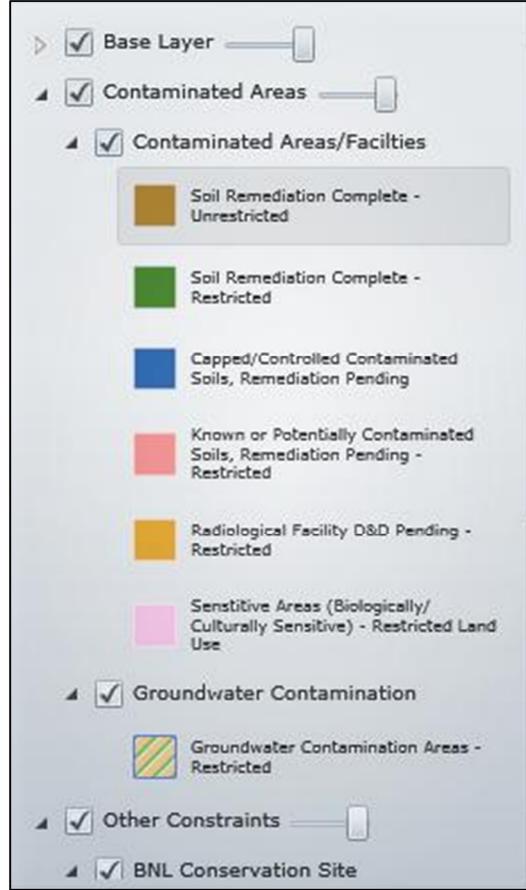
between found features using the identify panel drop down list.

**Identify Factsheet**

Allows the user to open a factsheet by clicking the desired area on the map. First click the Factsheet button, and then click inside of any controlled area to display the areas factsheet in a new window.

**Map Features List (Layer List)****Map Feature List:****Using The Layer List:**

The Layer List can be used to enable/disable map layers and their sub layers. It can also be used to alter the opacity of the layer, and can be expanded to display the map legend for any layer features.



To expand or hide the content for a map layer click the arrow next to the layer name. The contents of the layer will display with the map graphic representing that feature on the map.

**Layer Item**



A layer can contain sub layers. The layer can be turned on/off using the checkbox, and the opacity can be adjusted using the slider. These actions affect all sub layers of this layer.

**Sub Layer Item**



The sub layer item can be expanded to show the legend for that layers features. Each individual sub layer can also be turned on/off using the checkbox next to its name.

**Display Factsheet List**



factsheet list.

All of the contaminated areas have a factsheet list that can be displayed by clicking on the map graphic for that area in the layer list. This list displays all available factsheets for the selected land use classification. To view a specific factsheet click the link in the

**Map View Options**

**Toggle Base Map**

There are three different base maps which can be used to underlay the BNL data. Click the radio buttons of the desired base map to switch between the Street Map, Topographical Map, or the Aerial Photography.



**Toggle Full Screen**

Clicking this button allows the map application to enter full screen mode. This allows the application to use the entirety of the screen and gives the user a better view of the map. Full screen can be exited at any time using the **ESC** key or by clicking the button again.

**Print Map**

Click this button to print a copy of the current map view. When prompted enter a title for the map printout and click okay. The currently displayed map layers will print along with a brief map legend. This process can take several minutes to spool the map image to the printer.



**Keyboard Shortcuts for Map Navigation**

Action	Shortcut
Pan Map	<b>CLICK + HOLD</b> the <b>LEFT MOUSE BUTTON</b> and then <b>DRAG</b> to pan the map in a desired direction. The <b>ARROW KEYS</b> on the keyboard can also be used to pan the map a set distance.
Draw Zoom In	Hold the <b>SHIFT</b> key while dragging a box. Release to zoom in.
Draw Zoom Out	Hold the <b>CTRL+SHIFT</b> key while dragging a box. Release to zoom out.
Zoom In	Roll mouse wheel <b>UP</b> to zoom in towards the cursor. Press the <b>+</b> key to zoom the map in
Zoom Out	Roll the mouse wheel <b>DOWN</b> to zoom outwards. Press the <b>-</b> key to zoom the map out

**Viewing Factsheets**

Click the Factsheets tab to load a list of all available factsheets. The factsheets are listed by their Land Use Classification. Currently there are seven different types of remediation areas:

- Soil Remediation Complete – Unrestricted
- Soil Remediation Complete – Restricted
- Capped / Controlled Contaminated Soils – Restricted
- Known or Potentially Contaminated Soils, Remediation Pending – Restricted
- Groundwater Contamination Areas – Restricted
- Radiological Facility D&D Pending – Restricted
- Sensitive Areas (Biologically/Culturally Sensitive) – Restricted Land Use

In order to view a factsheet click on its name in the factsheet listing to load the factsheet details in a separate page.