

# Using Web-Enabled GIS to Track Land-Use Controls and Property Transfer

**Gaby A. Atik, P.E.**

FPM Group, Ltd.  
153 Brooks Rd., Rome NY 13441  
Phone: (315) 336-7721  
g.atik@fpm-group.com

**Michael F. McDermott**

Air Force Real Property Agency  
153 Brooks Rd., Rome NY 13441  
Phone: (315) 330-2275  
michael.mcdermott@afropa.pentagon.af.mil

## Coauthors:

Mitchell A. Mead, FPM Group, Ltd.  
Tom Griffith, Air Force Center for Environmental Excellence - MSC  
Roy T. Willis, Air Force Center for Environmental Excellence - ERB

## Introduction

This presentation discusses the use of web-enabled Geographic Information Systems (GIS) to implement Land-Use Controls (LUCs) and facilitate property transfer at Base Realignment and Closure (BRAC) bases.

## Background

Land Use Controls (LUC) are non-engineered instruments, such as administrative and/or legal controls, that minimize the potential for human exposure to contamination and/or protect the integrity of the remedy by limiting land or resource use. Institutional Controls (IC), a subset of LUCs, are primarily associated with the legal mechanisms imposed to ensure the continued effectiveness of LUCs. Examples of LUCs include industrial land use restrictions. Examples of ICs include easements, covenants, well drilling prohibitions, and zoning restrictions. LUCs/ICs are typically implemented at corrective action sites that have experienced treatment or engineering controls limitations or where the contamination does not pose a significant threat to the environment and human health. Recent issues associated with the implementation, monitoring, and enforcing of LUCs/ICs have been raised.

## Methods

With the increasing availability and cost-effectiveness of computer-based tools, GIS has emerged as a powerful environmental management tool. GIS integrates mapping and database features thus facilitating spatial data analysis, mapping, querying, and reporting. An increase in web-based functionality of GIS and other data management tools allows environmental managers to more easily disseminate geographically referenced information. This presentation will provide an overview of how off-the shelf GIS and web-based tools can be used to define and track LUCs.

## Demonstration

A presentation of the Griffiss web-enabled GIS site ([www.griffiss.com](http://www.griffiss.com)) will demonstrate how the GIS tools facilitate the identification and management of information associated with transferred property and the former environmental sites. Specifically, the following information will be highlighted:

- Tracking of transferred parcels including geo-referenced boundaries and links to electronic copies of the deeds
- Tracking of LUCs including geo-referenced boundaries, LUC type, links to deed covenants, contact information, and other LUC management information
- Identification of environmental sites and potential LUC drivers (e.g. landfills, sampling locations, ERPIMS data)
- Linking sites with LUCs to applicable Administrative Record documents