



Historical Photo Analysis

U.S. ARMY CORPS OF ENGINEERS

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Background

The Army Geospatial Center (AGC) conducts Geographic Information System (GIS) based Historical Photographic Analyses (HPA) of current, former and closing U.S. Military installations. Analysts use aerial photography and imagery to address environmental concerns related to land use change, such as historical wetland evaluation, shoreline change, watershed/land use mapping and produces a variety of baseline environmental analyses. The HPA allows customers to focus restoration and remediation efforts, resulting in significant cost avoidance.

The identification and remediation of hazardous sites is a problem faced by many active, closing and former U.S. military installations. These problems are complicated by the fact that many of these sites were created by practices and activities undertaken years or even decades ago. These hazardous sites are often completely obscured today due to the burial of materials, rapid revegetation, or dramatic changes in land use. AGC's Hydrologic and Environmental Analysis Branch (WSH) uses unclassified, historical aerial photography and satellite imagery, both CONUS and OCONUS, to locate potential sites of environmental contamination (e.g. chemical warfare materiel (CWM), unexploded ordnance (UXO), radioactive material or landfill locations). In addition to locating potential contamination sites, the branch conducts GIS-based Historical Photogeologic Analyses for areas where groundwater contamination is a concern. For example, analysts identify surface features, such as rock fractures, that can influence the migration of contaminants.



Key Capabilities

An interdisciplinary team (geologists, geographers, foresters, photogrammetrists, archival researchers, and others) provides GIS-based Historical Photographic Analyses and GIS-based Photogeologic Analyses support the Defense Environmental Restoration Program (DERP), Installation Restoration Program (IRP), Formerly Used Defense Sites (FUDS), Base Realignment and Closure (BRAC) and Formerly Utilized Sites Remedial Action Program (FUSRAP) site investigations. The use of Geographic Information Systems (GIS) is a primary component of the work. GIS allows a customer to view multi-layer, "time-sequenced" data in a digital environment. Access to key

government, private, and scholastic repositories in the National Capital Region equips analysts with a wealth of historical data in order to create a comprehensive understanding of all activities at the installation. Analysts are skilled in using various GIS and remote sensing platforms and applications.

The deliverables resulting from the detailed archival research and multi-temporal analysis include hardcopy reports, ortho-rectified imagery, and GIS data (in customer-specific formats, such as SDSFIE - Spatial Data Standards for Facilities, Infrastructure, & Environment). Each HPA study is designed to meet the unique requirements of the requestor.

Points of Contact

Customer requests for information are handled by the Environmental Analysis Team at (703) 428-6261, DLL-AGC-ENVIRO@usace.army.mil.

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