

## Environmental Data Dictionaries

*EVS has developed an environmental data dictionary for presentation of environmental baseline data collected as part of environmental assessments. The data dictionary provides geographic information system (GIS) data file descriptions and metadata, citations, and resource information for each environmental assessment area in a user-friendly format. The data dictionary provides military installation environmental management staff with baseline data essential for developing environmental management plans and for more general environmental documentation and planning purposes.*

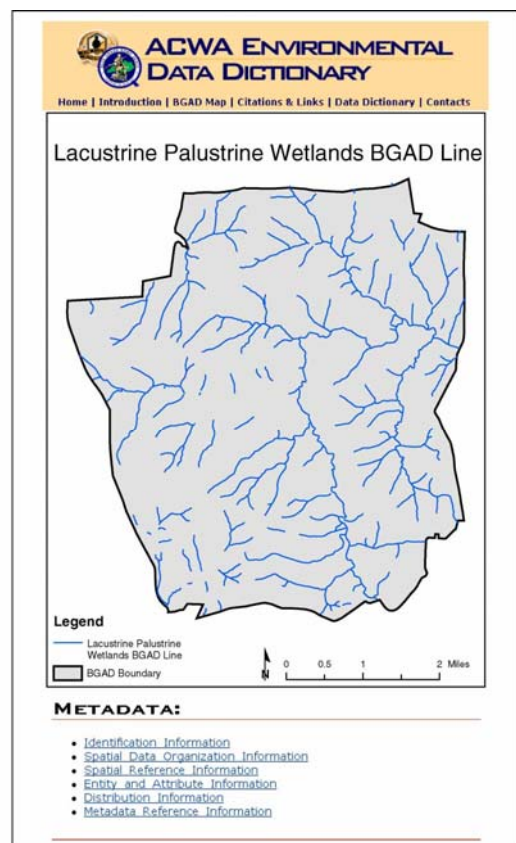
### PROBLEM/OPPORTUNITY

Environmental information is frequently collected for various purposes by multiple organizations on a military installation. Unless coordinated, these efforts can result in data duplication (with associated costs), data gaps, and data inconsistencies. The development of an integrated, installation-wide environmental database can help minimize these data management issues. Access to a comprehensive database of environmental information can facilitate the development of integrated environmental management plans and documents for the installation. In addition, a system of this type can support the implementation of an installation's environmental management system (EMS) in accordance with ISO 14001 recommended standards, and the requirements of Executive Order 13148, *Greening the Government Through Leadership in Environmental Management*.

### APPROACH

EVS has developed spatial data dictionaries for several military installations including the Blue Grass Army Depot in Kentucky, the Pueblo Chemical Depot in Colorado, and J-Field at Aberdeen Proving Ground, MD. The data dictionaries provide spatial representations of environmental data along with supporting information (metadata) that identifies the source of the data, its purpose, its vintage, spatial references such as bounding coordinates, and other supporting information. The data dictionaries are designed to maximize the installations' ability to capture, for other uses, environmental data collected as part of required environmental management and compliance tasks. The information includes maps, metadata, related GIS data files, reference citations and

hotlinks to websites that provide spatial information about particular environmental elements such as air quality or endangered species. The information in the dictionaries is organized using the categories specified in the new federal standards for GIS data, and is designed to provide the user with a quick reference to available baseline information. The core of the data dictionary is a listing of the available map coverages, with supporting metadata. "Snapshot" images of the GIS data layers provide non-GIS users with graphic representations of the GIS map



---

coverages. This information is accessed via standard Web browser software. The actual GIS data files are provided for downloading and use with ArcView software.

## RESULTS

The environmental data dictionary provides a flexible framework for collecting and organizing installation baseline information. New and revised environmental data can be placed in the data dictionary, thereby providing an installation with a user-friendly platform for sharing current data and for supporting future environmental management tasks.

The availability of an integrated, installation-wide environmental database is essential for developing environmental management plans and for more general environmental documentation and planning purposes. The dictionary can reside on a Web site or a CD-ROM, and the individual information layers can be printed. Its format allows easy integration into existing installation web sites or other environmental management systems.

## FUTURE

The current environmental data dictionaries house historical data collected for environmental impact studies. Additional features can be added at the request of the user. These might include: scanned versions of the documents on the reference list, procedures for updating the maps on a regular basis, and the inclusion of maps of environmental areas that are not currently part of the dictionary. This dictionary format can be applied to any installation or facility where environmental baseline data has been or is being collected for a number of compliance or planning activities.