

## CHAPTER EIGHT

### MULTI-MEDIA DATA COORDINATION RESPONSIBILITIES

As prescribed by the Remedial Action Plan Coordinating Committee, the responsibility of the Multi-Media Data Coordination (MMDC) team is to provide coherence and consistency in data for Stage II document. The MMDC team's primary tool for achieving this is implementation of a geographic information system (GIS) for Northwest Indiana. The GIS facilitates access to locational data sets common to the other Remedial Action Plan teams.

#### **I. Introduction**

A GIS is defined as an organized collection of computer hardware, software, geographic data, and personnel designed to efficiently capture, store, update, manipulate, analyze and display all forms of geographically referenced information. GIS technology provides a means of integrating information and organizing data so that users are better able to understand the spatial relationships of the issues being addressed from different data sets. GIS can answer questions on location, conditions, trends, and patterns, as well as create models to assess possible environmental changes. Although it can create maps at different scales using different projections, GIS serves more importantly as a powerful analytical tool by allowing the user to identify the spatial relationships between map features and to associate information with those features. GIS will provide IDEM staff with a way of maximizing the use of existing data sets.

To reduce the risk of miscommunication, each of the Remedial Action Plan teams appointed a data management liaison to the MMDC team. The liaisons provide direct exchange of technical information. They were asked to assess the quality and reliability of their team's data sets to determine how they could be used in a GIS layer. To aid the liaisons in determining each team's data needs, the MMDC team conducted a survey. The survey proved beneficial in prioritizing each team's data needs, determining overlap of data needs among the different teams, and ensuring against duplication of effort in data collection. The MMDC team expects to have a data dictionary which will provide a concise description of information and limitations of information contained in each data set. The level of detail and specificity in each subdirectory will be determined by the owner of those data sets. Should a more detailed description be required, the requestor will be directed to contact the owner of that data set. The MMDC team anticipates that liaisons and members of MMDC team will adequately represent the owners of the data.

In order for the MMDC team to function over the long term as a service group, providing and archiving other groups' data and allowing access to the archives, it must respond dynamically to other teams' changing needs. The inevitable changes in environmental regulations and GIS technology will necessitate that the team undergo a continuous review and evaluation process. Consequently, the MMDC team will rely on feedback from liaisons at periodic meetings. These meetings will provide a forum for review of the MMDC team's

progress and future goals. In the event this review process is ineffective, the MMDC team will again query teams using surveys to determine their data needs and priorities and define future activities.

## **II. Resource Assessment**

From a budgetary standpoint, short term needs are adequately addressed through existing resources. The dynamic nature of GIS means long term objectives may require long term funding. Options for funding projects include annual program grants from U.S. EPA and cooperative funding projects with federal and local agencies. Projects requiring this level of support would include the development and maintenance of new data sets and the establishment of GIS programs within a working unit. Should such needs be identified, the MMDC team will request the other committees implement such funding mechanisms.

In addition to one pentium computer and monitor, copies of GIS software were provided to Remedial Action Plan teams and supporting staff. This software, Arc View, is user-friendly and is produced by Environmental Systems Research Institute, Inc. (ESRI). IDEM's agency standard GIS software, ARC/INFO, also produced by ESRI is compatible with Arc View. Coverages which are created and manipulated using ARC/INFO can be made available to Arc View users, allowing GIS technology to be more broadly utilized within the agency. As IDEM currently has on staff an ESRI certified instructor, in-house training for Arc View will be provided for team members.

## **III. Data Sharing**

Data sharing is an issue of much concern for the MMDC team. When a data request is received, the team attempts to fill the request within one month. The shared coverages include boundaries, buildings, fences, and lakes. All were digitized from facility maps.

Requests that come from within IDEM are relatively easy to fill. Outside requests pose a number of problems. Some of the data in the Remedial Action Plan GIS is deliberative. Providing easy access to some of the information may have damaging consequences. For example, providing the general public with access to IDNR's Heritage database which identifies habitat location of rare, threatened and endangered species could ultimately threaten the well-being of these species.

Another difficulty regarding data sharing is the compatibility of data. Therefore, all data collection will conform to the Indiana State Agencies ARC/INFO Data Collection Standard (see Appendix). This will ensure that the data being collected and the technology being used complies with established guidelines of quality and compatibility. Standards for GIS are critically important to ensure consistency in the databases and GIS applications that are being developed within the state agencies. Standards will provide guidance in transferring files, overlaying data,

sharing data and developing integrated systems. Before submitting any datasets to the MMDC team in the specified electronic format, each team is responsible for quality assurance and quality control of its own data.

The MMDC team has formulated a data sharing policy that will be implemented upon approval by upper management and the completion of a data dictionary. In the interim, all data requests will go through the Remedial Action Plan Coordinating Committee to the agency GIS Coordinator who will fill the request from a limited selection of formats. This GIS Coordinator will also ensure that consistency concerns and legal obligations are being honored. Although the MMDC team has committed to forwarding data requests not owned by IDEM to the respective agency, the GIS coordinator will provide less restricted subsets in response to requests from within IDEM.

GIS technology used by collaborating agencies and groups has great potential to exponentially improve the decision-making capability of the individual groups through maximizing each group's existing data sets. An example of this type of collaboration is the Northwest Indiana Action Plan. This project is a collaboration between U.S. EPA and IDEM to bring about long term restoration and environmental protection, stronger communication and more effective use of resources. GIS advances made by Remedial Action Plan committees have the potential to aid Northwest Indiana Action Plan committees in the accomplishments of their goals. Similarly, any progress made by Northwest Indiana Action Plan committees could benefit Remedial Action Plan committees. U.S. EPA members of Northwest Indiana Action Plan committees have already incorporated Arc View and ARC/INFO to support their data needs. Some of the first projects to be undertaken involve making existing EPA data sets available through Arc View technology.

In addition to collaborating with other agencies as a way of enhancing data sharing capabilities, IDEM is currently investigating the appropriateness of using the internet as a medium for sharing data. In the event this becomes a reality, the MMDC team will develop a homepage for the Remedial Action Plan GIS. Ultimately, the data sharing process will be automated. IDEM perceives this as one of its strongest options for implementation of a data sharing service.