



# **Building Environmental Partnerships Through Information Sharing**

## **State/EPA Data-Management Program Progress Report 1988-1989**





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
ADMINISTRATION  
AND RESOURCES  
MANAGEMENT

To the Reader,

I am pleased to present the State/EPA Data Management Program progress report.

This report highlights the achievements and activities of the program during 1988 and 1989. The accomplishments and strides that the States and EPA have made during this period have been significant. They include progress in virtually all facets of environmental information, policies, practices and technology.

The State/EPA Data Management Program is one of EPA's highest management priorities. Environmental protection depends on managing, interpreting and presenting vast amounts of data. Effective management is essential. To meet these challenges, EPA must become more responsive to State and local governments that collect most environmental data and make most environmental protection decisions.

Thus, the need to manage information resources effectively is among the most important management challenges facing EPA. As we enter the 1990's, I envision that the continued dedication and high energy of State environmental agencies and the EPA Regions will ensure that we meet this challenge successfully.

I would like to thank everyone who has contributed to the State/EPA Data Management Program, especially EPA Headquarters, Regional and State managers whose leadership and hard work are making this program a success.

  
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# I. INTRODUCTION AND GOALS

## Program Background

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EPA's ability to identify and examine environmental trends and report on its own performance and that of delegated State programs — **to manage for environmental results** — depends directly on a timely and accurate data sharing program with States. For this reason, the Agency's State/EPA Data Management Program is committed to (1) build and maintain the infrastructure needed for effective State/EPA data management and sharing and (2) integrate data across media and programs so that EPA and State managers can target their efforts on environmental results.

## Program Phases

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This program has two phases - **Phase I: Data Sharing** and **Phase II: Data Integration**.

The **goals of Phase I** are to:

- Obtain and enter complete, timely and accurate information in all EPA enforcement, monitoring and compliance data bases
- Provide States high-speed, on-line access to all EPA data bases
- Ensure the integrity of State data in EPA data bases and due process for States in resolving data disputes with EPA.

The **goals of Phase II** are to:

- Provide EPA and the States the data, methods and technology required to conduct integrated environmental analyses and to plan and manage cross-media programs
- Build effective, long lasting arrangements for sharing data and technology between environmental agencies at all levels and with our colleagues in Federal, State and local agencies that are responsible for commerce, agriculture, science and natural resources conservation.

## **Phase I: Data Sharing**

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**Phase I** seeks to establish a reliable flow of regulatory and compliance data between EPA and the delegated States for seven systems. An important objective of **Phase I** is to have direct data access into these national systems:

Aerometric Information Retrieval System (**AIRS**): provides air quality , emissions and compliance data.

Compliance Data System (**CDS**): provides air compliance data.

Grants Information and Control System (**GICS**): provides Construction Grants and schedule information.

Water Quality Storage and Retrieval System (**STORET**) : provides water quality data.

Permit Compliance System (**PCS**): provides compliance data and effluent data for surface water discharges.

RCRA Information System (**RCRIS/HWDMS**): provides hazardous waste site information.

Other Information Systems have been implemented by State environmental agencies, among them are: Federal Report Data System (FRDS), CERCLA Information System (CERCLIS), Integrated Risk Information System (IRIS), Toxic Release Inventory System (TRIS), National Emission Data System (NEDS) and Storage and Retrieval of Aerometric Data (SAROAD). NEDS and SAROAD will be replaced by AIRS in the near future.

## **Phase II: Data Integration**

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**Phase II** focuses on assisting States and Regions in integrating data across programs and media. The Phase II goal is to develop and implement at the Regional and State levels the tools needed to pinpoint environmental problems, prioritize them on a risk-reduction basis, and manage program activities to maximize environmental results. EPA Regions began introducing the Phase II integration concepts to the Phase I States in 1988 and 1989.

Phase II is now being implemented in selected states in eight Regions. These efforts will help define the Phase II Program more precisely and provide additional models for future Region and State projects.

## Federal Responsibility

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Federal responsibility and support for the program is shared among the Regions, Office of Information Resources Management (OIRM), the National Data Processing Division (NDPD) and the Program Offices.

The Regional role is critical; the **senior IRM official** in each Region must guide this program at the Regional level and secure State participation. As the National Program Office, **OIRM** with assistance from the National Computer Center (NCC) and **NDPD**, is responsible for program policy, coordinating Program Office support, connecting States to EPA's data communication network, introducing and supporting data integration and other new technologies, and assisting Regions and States during implementation. Continued **Program Offices** support for the State-Regional Initiatives is vital to achieve complete, timely and accurate national data systems.

## Benefits to the Agency and States

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The four specific benefits of the State/EPA Data Management Program are:

**Efficiencies in data collection** which will result in significant gains in data handling and routine program operations

**Enhanced data quality** — accurate, timely and reliable — to guide programmatic decisions and support program oversight

**Improved data integration** to more effectively target regulatory and compliance activities on risk reduction, and to enhance the capability to manage for environmental results

**A more productive working relationship** between EPA and the States to focus on environmental management and minimize data disputes.

This program is of strategic importance to EPA's overall efforts to enhance vital data resources and move toward more productive Federal and State roles in environmental protection.

## II. Review of 1988-1989 Progress

### Summary

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Substantial progress was made in 1988 and 1989. Accomplishments affect all ten Regions:

**Implemented Phase I in forty-nine States, Puerto Rico and the District of Columbia**

**Completed installation of a high-speed data link** and necessary software in forty-six State capitols into the data network. These States now have the capability to directly enter and access the data they report to EPA

Created a more **constructive Regional-State attitude** toward improving the flow of State reported data

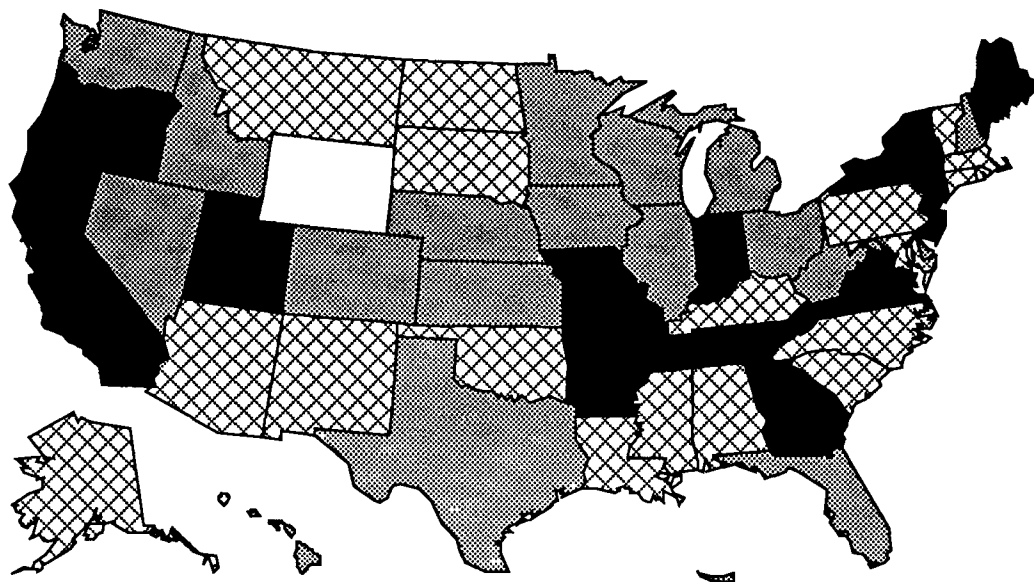
Continued a **forum to discuss data sharing initiatives** through the National State/EPA Data Management Conferences sponsored by the Office of Information Resource Management





Achieved numerous and concrete **improvements in the use of data**: efficiencies in handling data, timeliness of reported data, and greater use of EPA systems to support State program operations

Initiated actions to develop **protocols for resolving disagreements** over State reported data.

The Regions completed joint State-Regional implementation plans specifying actions to be taken in 1988-89 to accomplish Phase I objectives and selected Phase II data integration initiatives. Additional training is being provided to enhance and expand the States' use of EPA systems in managing operations.

# Region-By-Region Review



LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States   
 1990 Selected States 

## 1987 Selected States

- Maine
- New Jersey
- New York
- Virginia
- Georgia
- Tennessee
- Indiana
- Arkansas
- Missouri
- Utah
- California
- Oregon

## 1988 Selected States




- New Hampshire
- Puerto Rico
- West Virginia
- Delaware
- Florida
- Illinois
- Michigan
- Minnesota
- Ohio
- Wisconsin
- Texas
- Nebraska
- Iowa
- Kansas
- Colorado
- Hawaii
- Nevada
- Washington
- Idaho

## 1989 Selected States

- Vermont
- Massachusetts
- Rhode Island
- Connecticut
- Maryland
- Pennsylvania
- District of Columbia
- South Carolina
- North Carolina
- Mississippi
- Kentucky
- Alabama
- Louisiana
- Oklahoma
- New Mexico
- North Dakota
- South Dakota
- Montana
- Arizona
- Alaska

## 1990 Selected States

- Wyoming

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region I, Boston

State: Maine

Program Phase: Phase II

Key Regional Participants: Mike McDougall, Ed Woo

State Contacts: Ron Dolan, Systems Group Manager, Department of Environmental Protection (DEP)




Data Bases Involved: NEDS, SAROAD, CDS, PCS, GICS, STORET, and HWDMS/RCRIS

#### Major Accomplishments in 1988-1989:

- (1) Implemented the AIRS Air Quality Subsystem.
- (2) Hired a programmer/analyst to support EPA systems.
- (3) Initiated a study to develop a Comprehensive Automation Plan (CAP) for DEP. The study is evaluating functional needs and data requirements to support EPA and State information systems, providing DEP with a multi-year technology and systems enhancement plan and identifying areas of near-term, quick-fix opportunities. This study is scheduled for completion in July 1989.
- (4) As a second phase to the CAP project, DEP is initiating a set of tasks to develop an integrated, multi-media approach to permit processing and enforcement. The principal output from this proposal will be a detailed design for an integrated multi-media system to support the Air, Water, Solid Waste, Oil & Hazardous Material program functions.

#### Next Steps for Maine:

- (1) Implement the AIRS Facility Subsystems.
- (2) Evaluate applicability and pilot RCRIS for DEP.
- (3) Explore GIS project opportunities with Maine's newly acquired GIS technology.
- (4) Upgrade hardware and software to access Storage and Retrieval and/or Water Quality Analysis System graphics tools.
- (5) Complete detailed systems design and implementation of the integrated, multi-media permitting and compliance systems.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region I, Boston

State: New Hampshire

Program Phase: Phase II

Key Regional Participants: Mike McDougall, Ed Woo, Richard Henderson

State Contacts: Richard Henderson, MIS Administrator

Data Bases Involved: NEDS, AIRS, CDS, DEMO/RENO, PCS, FRDS, and RCRIS/HWDMS




Major Accomplishments in 1988-1989:

#### PHASE I

- (1) Installed high speed data link connecting Concord to EPA. All Major DES program offices at Concord can now access the IBM at National Computer Center through the Wang SNA Gateway.
- (2) Completed training and/or demonstration of all major EPA national and regional systems as tools as outlined in the Phase I Workplan.
- (3) Established EPA/State Data Quality Agreement.
- (4) New Hampshire is now a direct user of AIRS, CDS, GICS, Demolition/Renovation asbestos tracking system; retrieves HWDMS reports and directly updates handler information; and plans to use the AIRS Facility Subsystem in the near future.

#### PHASE II

- (1) Implemented the AIRS Air Quality Subsystem.
- (2) Began system development project to design and implement transaction files compatible with EPA FRDS reporting requirements.
- (3) Initiating a study of current agency-wide IRM capacity, future functional needs and data requirements to support state and EPA information systems.
- (4) Worked with Region I in developing and refining the Nashua Basin Wellhead Protection GIS Project.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region I, Boston

State: Vermont

Program Phase: Phase 2

Key Regional Participants: Mike McDougall, Ed Woo

State Contacts: Greg Heil, Technical Services Supervisor

Data Bases Involved: NEDS, SAROAD, CDS, PCS, GICS, STORET, and RCRIS/HWDMS

Major Accomplishments in 1988-1989:

(1) Initiated an agency-wide telecommunication and computer systems upgrade.




The project will accomplish the following:

- Upgrade existing HP computer at the Air Division to provide agency-wide distributed processing.
- Provide an SNA gateway linking Vermont's air, water and waste program offices to EPA.
- Provide RJE, high-speed file transfer and remote printing capability.
- Vermont expects to have the upgrade completed by October, 1989.

(2) Conducted meeting on phase 1 and 2 activities. Vermont is interested in becoming a direct user of AIRS and GICS; adoption of RCRIS in Logical Mainframe or PC platform; exploring decision support and graphics tools for STORET, River Reach Files, PCS, and working cooperatively with EPA in a number of GIS application areas.

Next Steps for Vermont:

- (1) Complete computer systems upgrade. EPA will assist Vermont in the configuration and procurement of Ssystem Network Architecture and Remote Job Entry equipment
- (2) Install high-speed data link to EPA.
- (3) Finalize project workplan and continue Phase 1 activities.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region I, Boston

State: Rhode Island

Program Phase: Phase 1

Key Regional Participants: Mike McDougall, Ed Woo

State Contacts: Pam Annarumou, Sr. Computer Programmer

Data Bases Involved: NEDS, AIRS, CDS, DEMO/RENO, PCS, FRDS, RCRIS/  
HWDMS and GICS

Major Accomplishments in 1988-1989:

#### PHASE 1

- (1) Initiated an agency-wide telecommunications and computer systems upgrade. The project will accomplish the following:
  - Increase the capacity and networking of existing Water Division's local area network (LAN).
  - Implement PC FOCUS as the standard departmental database tool.
  - Provide compatibility with EPA Token Ring LAN standards.
  - Serve as SNA gateway linking R.I.'s Air and Water LANs to EPA.
  - Provide RJE, high-speed file transfer and remote printing capability.
  - Rhode Island plans to have the systems upgrade accomplished by the end of FY 89.
- (2) Conducted demos and basic training on PCS, CDS and AIRS.
- (3) Conducted meetings on Phase 1 activities. Rhode Island is interested in becoming a direct user of PCS, AIRS, GICS: evaluating RCRIS on the LMF or PC platforms; exploring joint Geographic Information System project opportunities.

Next steps for Rhode Island:

- (1) Complete LAN systems upgrade. EPA will cooperate with and assist Rhode Island in the configuration and procurement of SNA and RJE equipments.
- (2) Install high-speed data link to EPA.
- (3) Finalize workplan and continue Phase 1 activities.

LEGEND: 1987 Selected States  
1988 Selected States  
1989 Selected States



Region: Region I, Boston

State: Massachusetts

Program Phase: Phase 1

Key Regional Participants: Mike McDougall, Ed Woo

State Contacts: Jackie Dougherty, Information Center Director

Data Bases Involved: NEDS, AIRS, CDS, DEMO/RENO, PCS, FRDS, RCRIS/  
HWDMS and GICS




Major Accomplishments in 1988-1989:

#### PHASE 1

- (1) Initiated an agency-wide telecommunication and computer systems upgrade. The project will accomplish the following:
  - Implementation of Ethernet Local Area Network (LAN) and Wide Area Network (WAN) linking the central office and regional offices of Department of Environmental Protection, the state EOEA central computing center and EPA.
  - Provide SNA access for all DEQE departments to EPA.
  - Support RJE, high-speed file transfer and remote printing capability.
  - Massachusetts plans to have SNA access for the LAN completed by July, and SNA access for the WAN by October, 1989.
- (2) Initiated a project to develop a Facilities Master File linking facilities and permits information across media and EPA. Region I will participate in systems design activities.
- (3) Initiated a project to upgrade the air quality data acquisition system in AIRS compatible format.
- (4) Conducted meetings on Phase 1 activities. Massachusetts is interested in becoming direct user of PCS, AIRS, GICS: evaluate RCRIS directly vs. data management decision and graphics tools in STORET and River Reach Files.

Next Steps for Massachusetts:

- (1) Complete implementation of LAN, WAN and SNA gateway.
- (2) Complete development and implementation of Facility Master File and Air Data Acquisition systems.
- (3) Finalize workplan and continue Phase 1 activities.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region II, New York

State: New York

Program Phase: Phase 1

Key Regional Participants: Herb Barrack, ARA for Policy and Management  
 Bob Messina, George Nossa

State Contacts: Tom Donovan, Acting Director, Division Management Planning  
 and Information Systems Development

Data Bases Involved: PCS, GICS, STORET, RCRIS/HWDMS and AIRS

Major Accomplishments in 1988-1989:

- (1) High-speed telecommunications link established in 1985 connecting Albany to the EPA network. Telecommunications services were expanded in 1989 to allow increased terminal access to EPA databases.
- (2) New York provides data to EPA in electronic format for all systems except HWDMS.
- (3) Phase 1 objectives for HWDMS were identified and work completed on HWDMS evaluation. State and EPA agreed to concentrate efforts on planning for RCRIS implementation which New York has indicated they will access as a direct user on the Region II LMF.
- (4) Additional \$60,000 funding provided to New York to expand its use of PCS in state regional offices.

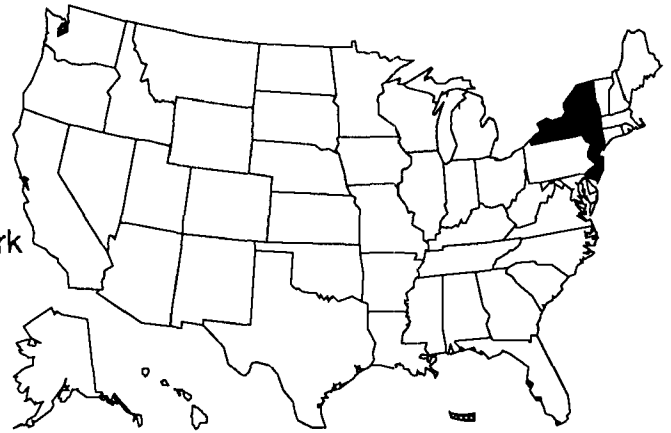
Next Steps for New York in 1990:

- (1) Complete RCRIS implementation using the Region II LMF and evaluate need for further telecommunications expansion.
- (2) Complete project for expanded use of PCS, providing links to the State regional offices.
- (3) Coordinate implementation of the AIRS Facility Subsystem and develop procedures for the electronic submission of air facilities compliance data and air emissions into the AIRS database.
- (4) Evaluate potential for Geographic Information Systems pilot project.

LEGEND: 1987 Selected States

1988 Selected States

1989 Selected States



Region: Region II, New York

State: New Jersey

Program Phase: Phase 1

Key Regional Participants: Herb Barrack, ARA for Policy and Management  
Bob Messina, George Nossa

State Contacts: Michele Putnam, Deputy Director, Hazardous Waste  
Operations  
George Caporale, Chief, Bureau of Information Systems




Data Bases Involved: PCS, GICS, STORET, RCRIS/HWDMS and AIRS

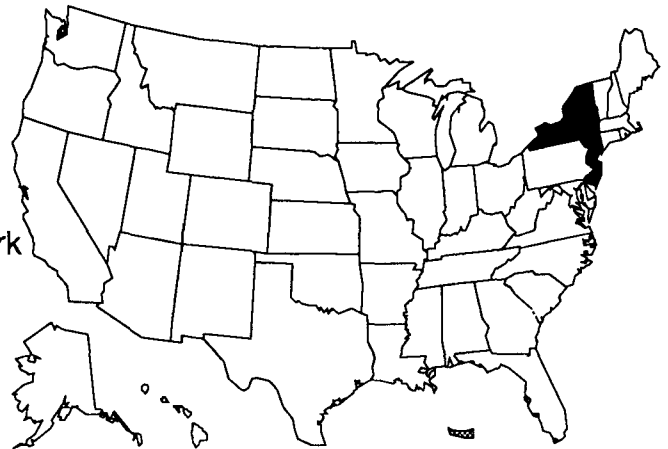
Major Accomplishments in 1988-1989:

- (1) High-speed telecommunications link established in 1986 and enhanced in 1987.
- (2) New Jersey provides data to EPA in an electronic format for all systems except HWDMS.
- (3) Phase 1 objectives for HWDMS were identified and work completed on the data element crosswalk between the state RCRA systems and HWDMS and then RCRIS. State has agreed to concentrate efforts on completing a component of their system and developing an interface/translator to RCRIS.
- (4) Completed EPA/State pilot project for a Geographic Information System within the New Jersey Department of Environmental Protection.

Next Steps for New Jersey in 1990:

- (1) Complete RCRIS implementation by developing translator software linking State systems to RCRIS.
- (2) Develop translator software linking a new State National Pollution Discharge Elimination system to PCS.
- (3) Coordinate implementation of the AIRS Facility Subsystem and develop procedures for the electronic submission of air facilities compliance data and air emissions into the AIRS database.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region II, New York

State: Puerto Rico

Program Phase: Phase 1

Key Regional Participants: Herb Barrack, ARA for Policy and Management  
 Bob Messina, George Nossa

State Contacts: Betty Morales, Chief, Validation and Data Services Air Quality




Data Bases Involved: PCS, GICS, STORET, RCRIS/HWDMS and AIRS

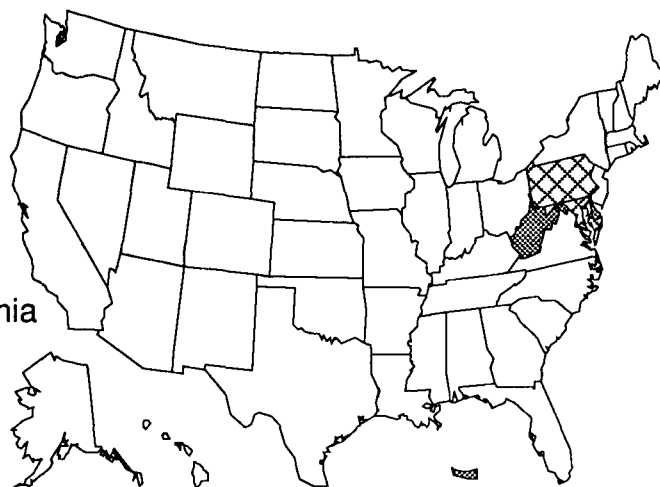
Major Accomplishments in 1988-1989:

- (1) Began Phase 1 in 1989, with a goal of installing a high-speed telecommunications link between San Juan and the EPA network. The line should be installed during the summer, 1989.
- (2) A grant in the amount of \$90,000 has been awarded to the Puerto Rico Environmental Quality Board (EQB) to purchase additional hardware to more effectively utilize the dedicated line.
- (3) Access has been provided to all EPA systems via remote terminals which has allowed EQB staff to expand their use of STORET, GICS, AIRS, PCS and HWDMS. In addition, workshops have been conducted on the use of GICS, PCS and STORET.

Next Steps for Puerto Rico in 1990:

- (1) With EPA grant assistance, develop an organizational/ management strategy for IRM function in EQB.
- (2) Implement Region II EQB FY 90 training agenda.
- (3) Coordinate implementation of the AIRS Facility Subsystem and develop procedures for the electronic transmission of air facilities compliance data and air emissions into the AIRS database.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region III, Philadelphia

State: Delaware

Program Phase: Phase 1

Key Regional Participants: Bill Wisniewski, ARA for Policy and Management  
 Joe Hamilton, Wendy Bartel

State Contacts: Sam Eaton, System Manager




Data Bases Involved: PCS, GICS, STORET, RCRIS/HWDMS, AIRS, NEDS,  
 and FRDS

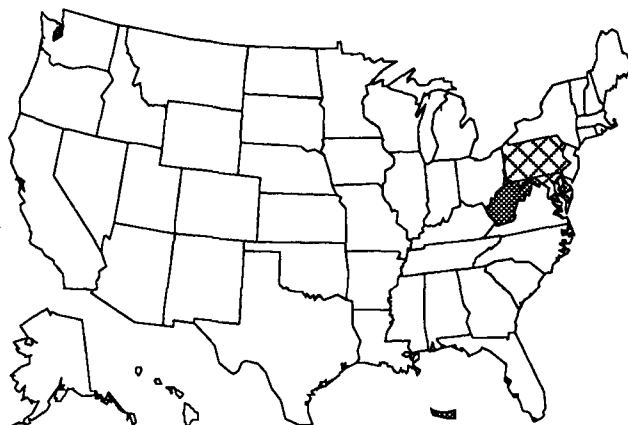
Major Accomplishments in 1988-1989:

- (1) Installed high-speed data link to connect Dover to EPA network.
- (2) Reviewed data bases, identified data management problem areas, prepared system-by-system workplan for Regional and State actions to accomplish Phase 1 objectives.
- (3) Developed user support and training programs addressing the needs of each system.
- (4) Delaware delegated Construction Grants Program which includes responsibility for GICS. Received FY 88 205 (g) grant funds to access GICS.
- (5) RCRIS State Implementation Plan developed for Delaware. The State plans to use the PC version of RCRIS in FY 90.
- (6) Implemented direct access to AIRS. They attended AIRS (AQS) training and assumed responsibility for updating 1st quarter calendar 1988 data.
- (7) The Region has provided several onsite training sessions in order to facilitate the State's access to GICS.
- (8) Delaware is a direct user of PCS, STORET and GICS. The State also has access to TRIS, NATICH and UNAMAP.
- (9) Delaware received grant funding to undertake a GIS project to develop an advanced identification system for the Inland Bays Watershed. The project, which will cover 18 months, will provide a planning tool for managers to access impacts of proposed land and water use actions on natural resources.

Next Steps for Delaware in 1989:

- (1) Implementation and monitoring development of AIRS (AQS), to facilitate State access during FY 90.
- (2) Evaluate implementation and monitor progress of RCRIS.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region III, Philadelphia

State: District of Columbia

Program Phase: Phase 1

Key Regional Participants: Bill Wisniewski, ARA for Policy and Management  
 Joe Hamilton, Wendy Bartel

State Contacts: James Sweeny, A. Padmanabha, Program Manager




Data Bases Involved: PCS, GICS, STORET, RCRIS/HWDMS, AIRS, NEDS, CDS, and FRDS

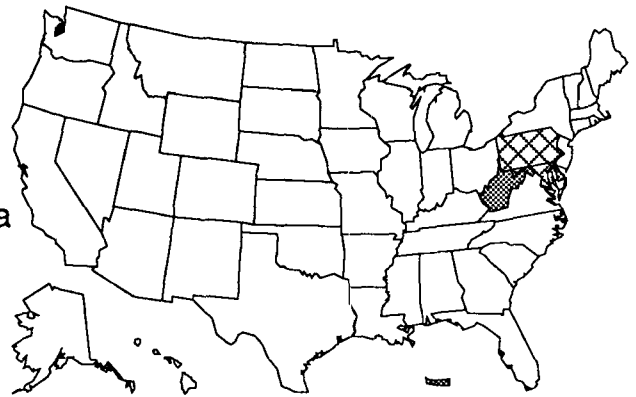
Major Accomplishments in 1988-1989:

- (1) Met with D.C. representatives to discuss an EPA/D.C. telecommunications link. Working with NCC and D.C. to begin implementation of connection.
- (2) D.C. attended AIRS (AQS) training in March.
- (3) RCRIS State Implementation Plan developed for the District. They plan to use the PC version of RCRIS.
- (4) D.C. is direct user of STORET.

Next Steps for District of Columbia in 1989:

- (1) Develop a formal agreement with D.C. to participate in the State/EPA data management program.
- (2) Continue implementation of a telecommunications link between D.C. and the EPA network.
- (3) Facilitate implementation of AIRS (AQS). Monitor development of AIRS (AFS) and facilitate State access during FY 90.
- (4) Monitor progress of RCRIS implementation and develop schedule for State access.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region III, Philadelphia

States: Maryland

Program Phase: Phase 1

Key Regional Participants: Bill Wisniewski, ARA for Policy and Management  
 Joe Hamilton, Wendy Bartel

State Contacts: Tom Damilowski

Data Bases Involved: PCS, GICS, STORET, RCRIS/HWDMS, AIRS, NEDS,  
 and FRDS

Major Accomplishments in 1988-1989:




- (1) Tymnet Engine installed in FY 87 to connect Baltimore to EPA network.
- (2) Schedule developed for State to become a direct user of PCS as part of FY 87 104 (b) grant agreement.
- (3) State has direct access to GICS, PCS and STORET. They also access CAPDET and NEEDS.
- (4) Received training from Region on new GICS online data entry system.
- (5) State attended AIRS (AQS) training in March 1989.
- (6) RCRIS State Implementation plan developed for Maryland. They plan to become a translator State. The Department is presently developing an in-house system called the Consolidated Waste Management Information System (CWMIS). Data from CWMIS will be transferred to RCRIS.
- (7) Maryland began access to TRIS and NATICH.
- (8) The Department attended FRDS 2.0 training.

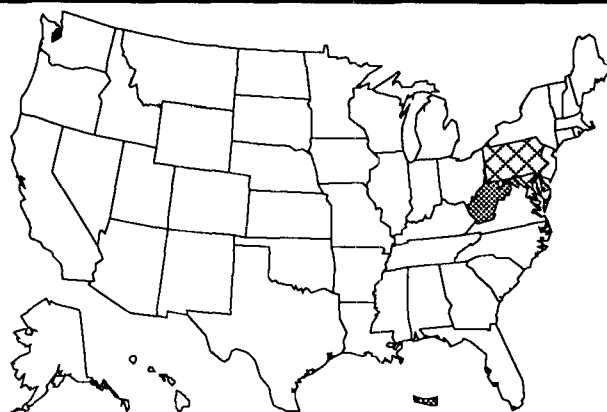
Next Steps for Maryland in 1989:

- (1) Facilitate implementation of AIRS (AQS).
- (2) Develop formal agreement with Maryland to participate in the State/EPA data management program.
- (3) Evaluate how RCRIS will be implemented by Maryland.

#### Next Steps for Maryland in 1989 continued

- (1) Facilitate implementation of AIRS (AQS).
- (2) Develop formal agreement with Maryland to participate in the State/EPA data management program.
- (3) Evaluate how RCRIS will be implemented by Maryland.
- (4) Develop formal agreement with Maryland to participate in the State/EPA data management program.
- (5) Facilitate implementation of AIRS (AQS). Monitor development of AIRS (AFS) and facilitate State access during FY 90.
- (6) Monitor progress on RCRIS implementation and develop schedule for Maryland's participation as a translator State.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region III, Philadelphia

State: Pennsylvania

Program Phase: Phase 1

Key Regional Participants: Bill Wisniewski, ARA for Policy and Management  
 Joe Hamilton, Wendy Bartel

State Contacts: Floyd Kefford, Bureau of Laboratories




Data Bases Involved: PCS, GICS, STORET, RCRIS/HWDMS, AIRS, NEDS,  
 CDS, and FRDS

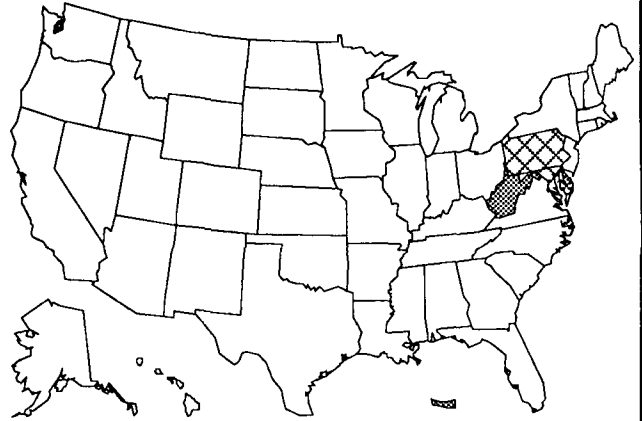
Major Accomplishments in 1988-1989:

- (1) RCRIS State Implementation Plan developed for Pennsylvania. Initially they will participate as a manual State, and by FY 92 to become a translator State.
- (2) Performed a preliminary review of data bases and identified data management problem areas.
- (3) Implemented direct access to AIRS. State attended AIRS (AQS) training.
- (4) Developed a draft formal agreement with Pennsylvania to participate in the State/EPA data management program.
- (5) Providing continued technical support on Enviro Link/90 project.
- (6) Met with State technical representatives to discuss upgrading the EPA/PA telecommunications network that will link the central office in Harrisburg to all the State regional offices. An EPA link to this network would allow high-speed access to all State users, rather than just those in Harrisburg that are presently served by the Tymnet Engine.
- (7) Pennsylvania attended FRDS 2.0 training.
- (8) Pennsylvania has direct access to GICS, STORET and FRDS. Working with the State to implement direct access to PCS in State Regional offices. Pennsylvania also accesses TRIS, NATICH, NEEDS and UNAMAP.

Next Steps for Pennsylvania in 1989:

- (1) Finalize formal State/EPA Data Management Agreement with Pennsylvania.
- (2) Monitor development of EPA/PA telecommunications upgrade.
- (3) Provide continued support and participation in State Enviro Link/90 project.
- (4) Monitor development of AIRS (AQS) and facilitate State access during FY 90.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region III, Philadelphia

States: Virginia

Program Phase: Phase 1

Key Regional Participants: Bill Wisniewski, ARA for Policy and Management  
 Joe Hamilton, Wendy Bartel

State Contacts: Jane Beckett-Camaratta, Assistant Director for Administration




Data Bases Involved: PCS, GICS, STORET, RCRIS/HWDMS, AIRS, NEDS, CDS, and FRDS

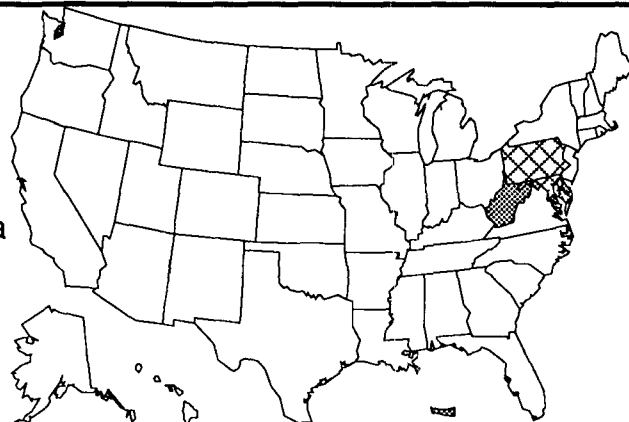
Major Accomplishments in 1988-1989:

- (1) Developed user support and training program for direct access to PCS and AIRS (AQS) .
- (2) Received training on new GICS online data entry system.
- (3) Virginia has direct access to all data bases except NEDS and HWDMS. The State also uses TRIS and NATICH.
- (4) RCRIS State Implementation Plan developed for Virginia.
- (5) User support and assistance provided to the Water Control Board in order to facilitate their access to PCS.
- (6) Virginia Health Department attended FRDS 2.0 training.
- (7) Several State agencies are working on an effort to consolidate and coordinate State groundwater data management activities. Future planning includes evaluating the use of GIS technology.

Next Steps for Virginia in 1989:

- (1) Evaluate how RCRIS will be implemented by the Virginia Department of Waste Management.
- (2) Facilitate implementation of AIRS (AQS) by the Department of Air Pollution Control.
- (3) Provide continued training and support to the Virginia Water Control Board for PCS access.
- (4) Provide training to Virginia on FRDS 2.0.
- (5) Continue work with VA. Department of Waste Management to develop a schedule and method of implementation for access to RCRIS.
- (4) Monitor development of AIRS (AQS) and facilitate implementation by the Department of Air Pollution Control during FY 90.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region III, Philadelphia

State: West Virginia

Program Phase: Phase 1

Key Regional Participants: Bill Wisniewski, ARA for Policy and Management  
 Joe Hamilton, Wendy Bartel

State Contacts: Rick Watson

Data Bases Involved: PCS, GICS, STORET, RCRIS/HWDMS, AIRS, NEDS,  
 CDS, and FRDS

Major Accomplishments in 1988-1989:




- (1) Installed high speed data link to connect Charleston to EPA network.
- (2) West Virginia formally agreed to participate in the State/EPA data management program.
- (3) Reviewed databases, identified data management problem areas, prepared system - by-system workplan for Regional and State actions to accomplish Phase I objectives.
- (4) Schedule developed for State to become a direct user of PCS as part of FY'87 106 grant agreement.
- (5) West Virginia received training on the new GICS online data entry system.
- (6) West Virginia has direct access to GICS, STORET and PCS. They also have access to NEEDS.
- (7) RCRIS State Implementation Plan developed for West Virginia. The State plans to use the PC version of RCRIS in FY 90.
- (8) State attended AIRS (AQS) training in march. They plan to start accessing the system during the second half of FY 89. They were also selected as one of the States to test the new AIRS (AFS) system.
- (9) The State attended FRDS 2.0 training.

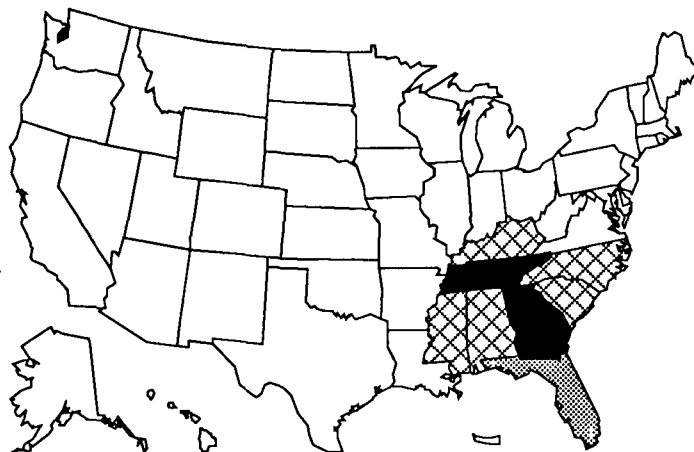
Next Steps for West Virginia in 1989:

- (1) Evaluate how RCRIS will be implemented by the West Virginia Department of Natural Resources.
- (2) Facilitate implementation of AIRS (AQS).

Next Steps for West Virginia in 1989:

- (3) Provide continued training and support in regards to PCS access.
- (4) Facilitate implementation of AIRS (AQS). Monitor development of AIRS (AFS) and facilitate State access during FY 90.
- (5) Monitor progress on RCRIS and facilitate implementation of State access during FY 90.
- (6) Develop a strategy to update the present telecommunications link in order to connect the West Virginia Air Pollution Control Commission to the EPA network.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region IV, Atlanta

State: Alabama

Program Phase: Phase 1

Key Regional Participants: Joe Franzmathes, ARA for Policy & Management  
Jack Sweeney, Chief, Information Management Branch  
Rebecca Slack, Chief, Information Services Staff  
Richard Ferrazzuolo, State/EPA Data Management

State Contacts: Walter Corbitt, Bradley Gane, Alabama Dept. of Environmental Management (ADEM)




Data Bases Involved: FRDS, AIRS, PCS, GICS, STORET, and HWDMS

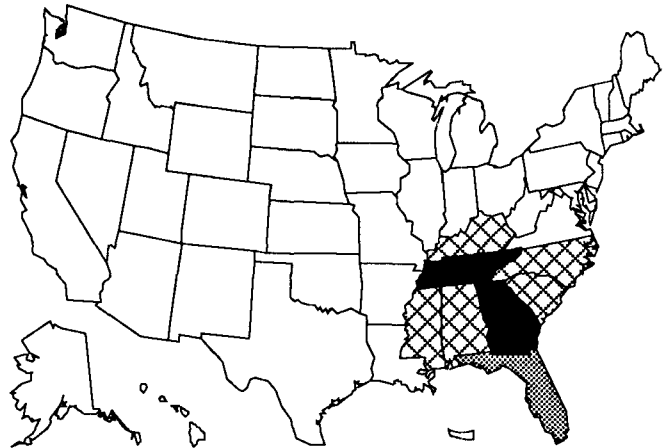
Major Accomplishments in 1988-1989:

- (1) GICS and PCS users not connected to dedicated line to NCC; State has ordered necessary hardware to enable direct access through computer to the dedicated line.
- (2) EPA contractor visited State to assist in eliminating duplicative data in PCS; PCS data quality problems are being addressed.
- (3) ADEM air programs using DEC microVAX to manage CDS and AIRS; this machine is linked to NCC via the 9600 baud dedicated line.
- (4) EPA and EPA contractor met with ADEM staff to discuss State/EPA Data Management Program with particular emphasis on information sharing with EPA; recommendations were made in areas of technical assistance, and attendance at user-training sessions.

Next Steps for Alabama in 1989-1990:

- (1) State plans to switch to a PC-based system for FRDS data entry.
- (2) In process of establishing State/EPA Data Management Memorandum-of-Understanding.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region IV, Atlanta

State: Florida

Program Phase: Phase 1

Key Regional Participants: Joe Franzmathes, ARA for Policy & Management  
Jack Sweeney, Chief, Information Management Branch  
Rebecca Slack, Chief, Information Services Staff  
Richard Ferrazzuolo, State/EPA Data Management

State Contacts: John Wilmott, Florida Dept. of Environmental Regulation




Data Bases Involved: FRDS, AIRS, CDS, RCRIS, GICS, STORET, and HWDMS

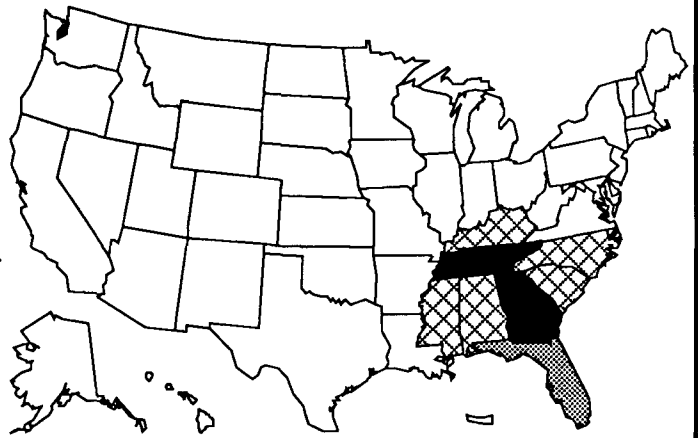
Major Accomplishments in 1988-1989:

- (1) Installation of a new IBM 3090 with access to the NCC dedicated line.
- (2) EPA Information Management personnel met with State counterparts to develop a State/EPA Data Management Implementation Plan.
- (3) Successful implementation of AIRS with direct data transfer quarterly.

Next Steps for Florida in 1989-1990:

- (1) PCS connectivity when program is delegated.
- (2) Development and management of AIRS-AFS data entry/editing programs.
- (3) In process of establishing State/EPA Data Management Memorandum-of-Understanding.
- (4) Selected as RCRIS pilot state.
- (5) FRDS II data entry verification.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region IV, Atlanta

State: Georgia

Program Phase: Phase 2

Key Regional Participants: Joe Franzmathes, ARA for Policy & Management  
Jack Sweeney, Chief, Information Management Branch  
Rebecca Slack, Chief, Information Services Staff  
Richard Ferrazzuolo, State/EPA Data Management

State Contacts: Jim Setser, Ted Jackson, Georgia Environmental Protection Division

Data Bases Involved: FRDS, AIRS, PCS, RCRIS, NEDS, GICS, STORET, and HWDMS




#### Major Accomplishments in 1988-1989:

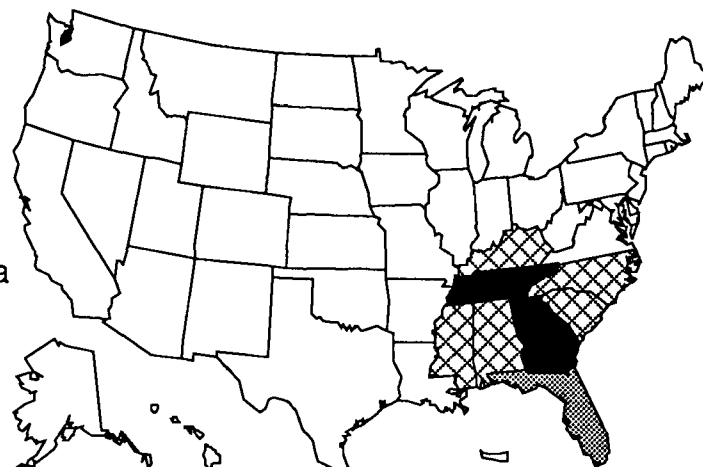
State completed Phase 2 in March 1988 encompassing three major target areas:

- (1) Data integration to support decision making.
- (2) Use of GIS to relate and analyze data from multiple media.
- (3) Support of the toxics and risk management program.
- (4) Development and demonstration of cost effective processes for entering quality-assured electronically reported data.
- (5) Planning and implementation of expanded initiatives to further reduce risk of exposure to toxic pollutants, particularly through the SARA-Title III program and the GIS Data Base System.
- (6) Transmitting and receiving of chemical spill information and management of data reported by facility owners, specifically as it relates to the needs of local governments that provide first response to environmental emergencies.

#### Next Steps for Georgia in 1989-1990:

- (1) Selected as RCRIS pilot State.
- (2) AIRS-AFS implementation/start-up of direct access.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region IV, Atlanta

State: Mississippi

Program Phase: Phase 1

Key Regional Participants: Joe Franzmathes, ARA for Policy & Management  
 Jack Sweeney, Chief, Information Management Branch  
 Rebecca Slack, Chief, Information Services Branch  
 Richard Ferrazzuolo, State/EPA Data Management

State Contacts: Charles Yates, Mississippi Bureau of Pollution Control

Data Bases Involved: FRDS, AIRS, PCS, RCRIS, GICS, STORET, and HWDMS

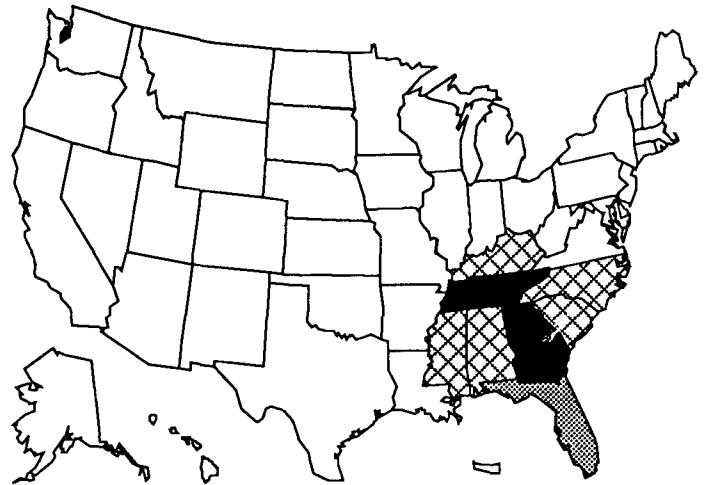
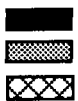
Major Accomplishments in 1988-1989:

- (1) Completed State/Data Management Memorandum-of-Understanding with the State Department of Health.
- (2) Dedicated 9600 baud line installed between NCC and IBM system 36 in Jackson.
- (3) Successful implementation of AIRS with direct data transfer from user on State main-frame to NCC.
- (4) Region IV personnel visited State to discuss the program and define its goals.

Next Steps for Mississippi in 1989-1990:

- (1) State will install single modem with several dedicated lines going to PC's in department to allow for direct connect to PCS.
- (2) Selected as RCRIS pilot state.
- (3) FRDS access to NCC from State Health Department.
- (4) Receive training, especially in FRDS, HWDMS, PCS, and STORET.
- (5) In process of establishing State/EPA Data Management Memorandum-of Understanding with the State Bureau of Pollution Control (PCS, AIRS, CDS, GICS, HWDMS/RCRIS).

LEGEND: 1987 Selected States  
1988 Selected States  
1989 Selected States



Region: Region IV, Atlanta

State: North Carolina

Program Phase: Phase 1

Key Regional Participants: Joe Franzmathes, ARA for Policy & Management  
Jack Sweeney, Chief, Information Management Branch  
Rebecca Slack, Chief, Information Services Branch  
Richard Ferrazzuolo, State/EPA Data Management

State Contacts: Sam Kornegay, North Carolina Dept. of Environmental Management Coordinator




Data Bases Involved: AIRS, PCS, CDS, GICS, STORET, FRDS and HWDMS

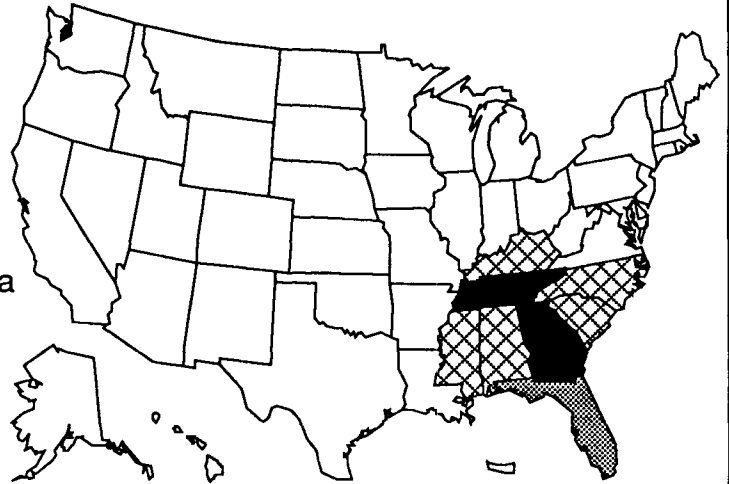
#### Major Accomplishments in 1989:

- (1) Implementation of conversion from State system to PCS nearly complete, most facility and Discharge Monitoring Report data entered into national system.
- (2) Completed State/EPA Data Management Memorandum-of-Understanding.
- (3) Dedicated 16800 baud line installed between NCC and IBM System 36 in Raleigh.
- (4) Region IV personnel visited State to discuss the program and define its goals.
- (5) Successful implementation of AIRS with direct data transfer in SAROAD format to NCC for conversion to AIRS format.

#### Next Steps for North Carolina in 1989-1990:

- (1) AIRS-AFS implementation/start-up of direct access.
- (2) FRDS and HWDMS programs currently in Health Department to be integrated with Department of Environmental Management.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region IV, Atlanta

State: South Carolina

Program Phase: Phase 1

Key Regional Participants: Joe Franzmathes, ARA for Policy & Management  
Jack Sweeney, Chief, Information Management Branch  
Rebecca Slack, Chief, Information Management Branch  
Richard Ferrazzuolo, State/EPA Data Management

State Contacts: Robert King, South Carolina Dept. of Health and Environmental Control




Data Bases Involved: FRDS, AIRS, PCS, GICS, STORET and CDS

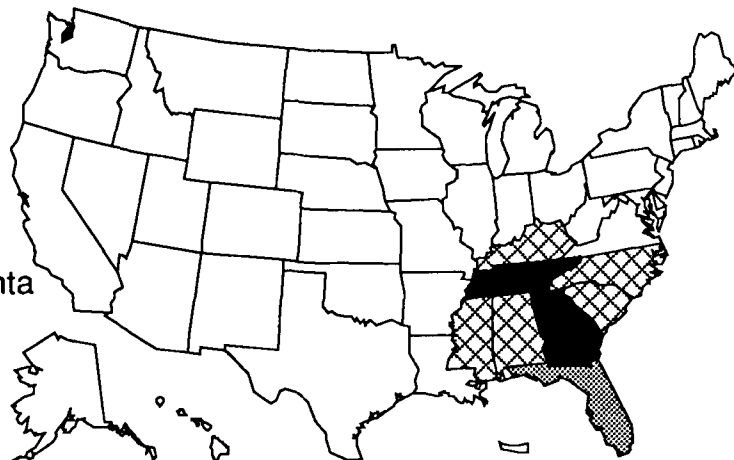
Major Accomplishments in 1988-1989:

- (1) Installation of 4800 baud line to State Air Lab Bldg. off dedicated line to NCC.
- (2) Assisted state in acquiring hardware to provide for full-screen editing for use with CDS.
- (3) Dedicated 16800 line installed between NCC and IBM mainframe in Columbia.
- (4) EPA provided technical assistance especially in the area of connectivity needs.

Next Steps for South Carolina in 1989-1990:

- (1) State LAN not connected to dedicated line to NCC; Computer Support Division involved in reassessment and long-range planning effort.
- (2) AIRS-AFS implementation/start-up of direct access.
- (3) In process of establishing State/EPA Data Management Memorandum-of-Understanding.
- (4) EPA and contractor visit State to provide technical assistance for upgrading intrastate connectivity, and for establishing GIS technology to enhance environmental protection services.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region IV, Atlanta

State: Tennessee

Program Phase: Phase 1

Key Regional Participants: Joe Franzmathes, ARA for Policy & Management  
 Jack Sweeney, Chief, Information Management Branch  
 Rebecca Slack, Chief, Information Management Branch  
 Richard Ferrazzuolo, State/EPA Data Management

State Contacts: Pat Turri, Tennessee Dept. of Health and Environment

Data Bases Involved: FRDS, AIRS, PCS, GICS, CDS, STORET, and HWDMS

- (1) Completed State/EPA Data Management Memorandum-of-Understanding.
- (2) EPA visited State and assisted in IRM planning and Prime computer operations.
- (3) Three PC's purchased for State with in-kind grants in support of State/EPA Data sharing efforts.

Next Steps for Tennessee in 1989-1990:

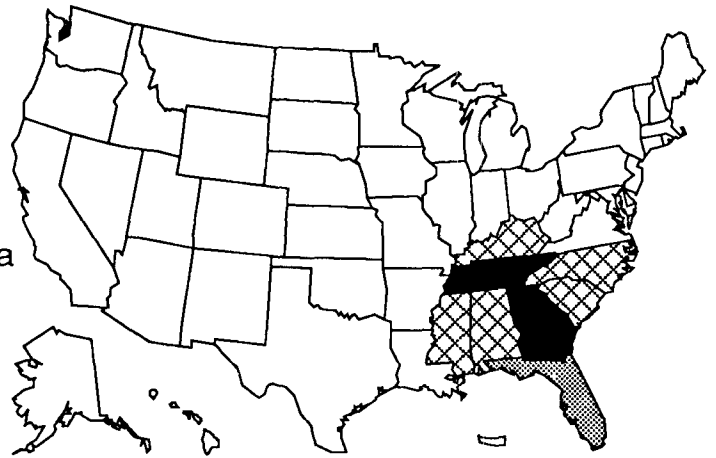
- (1) AIRS, CDS, and STORET need local networking.
- (2) AIRS-AFS implementation/start-up of direct access.
- (3) Phase-out of State Mark-IV based Hazardous Waste System at NCC and replacement with RCRIS and an additional State System.

Program Phase: Phase 2

Next Steps for Tennessee in 1989-1990:

Development of a three-year plan for data integration.

LEGEND: 1987 Selected States [Solid Black]  
1988 Selected States [Cross-hatch]  
1989 Selected States [Diagonal Hatch]



Region: Region IV, Atlanta

State: Kentucky

Program Phase: Phase 1

Key Regional Participants: Joe Franzmathes, ARA for Policy & Management  
Jack Sweeney, Chief, Information Management Branch  
Rebecca Slack, Chief, Information Services Staff  
Richard Ferrazzuolo, State/EPA Data Management

State Contacts: Russ Barnett, Kentucky Dept. of Environmental Protection

Data Bases Involved: FRDS, AIRS, PCS, RCRIS, NEDS, GICS, STORET, and HWDMS

Major Accomplishments in 1988-1989:

- (1) Installed dedicated 9600 baud line between NCC and IBM mainframe in Frankfort.
- (2) EPA contractor visited State and will provide IRM planning assistance and technical support.
- (3) Terminal loaned to State to resolve CDS data entry problem.

Next Steps for Kentucky in 1989-1990:

- (1) Selected as RCRIS pilot state.
- (2) Replace high-speed printer.
- (3) In process of establishing State/EPA Data Management Memorandum-of-Understanding.
- (4) FRDS direct data transfer.
- (5) Networking of PC's and upgrading RJE connectivity to all data centers.

Kentucky continued




Program Phase: Phase 2

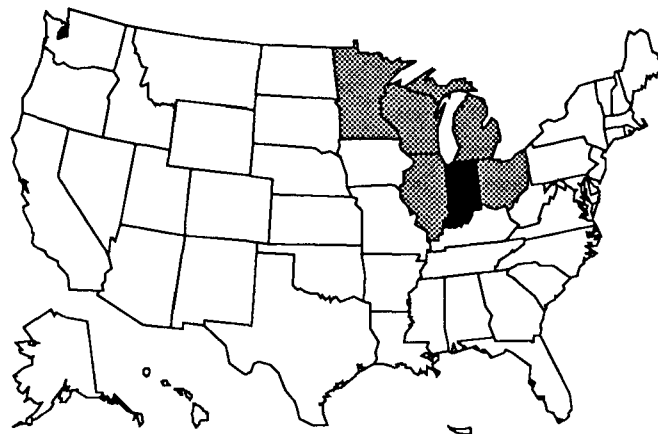
Major Accomplishments in 1989:

- (1) ARC-INFO GIS installed, and several State-wide coverages such as stream reaches have been developed.
- (2) Integration of existing permitting and compliance data bases.

Next Steps for Kentucky in 1989-1990:

- (1) Expansion of risk assessment capability.
- (2) Completion of laboratory information system and its integration with existing data bases.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region V, Chicago

State: Indiana

Program Phase: Phase 1

Key Regional Participants: Robert Springer, ARA for Planning & Mgmt.  
 Stephen Goranson, Chief, Information Management Branch  
 Sandra Darden, Chief, Systems Management Section  
 Karen Vasquez, Chief, Information Service Section  
 Daniel Werbie, Program Analyst, Planning & Budgeting Branch

State Contacts: Kathy Posser, Commisioner, IDEM  
 Fred Alvarez, Director Management Information Services  
 Patricia Hinds, EPA Data Base Coordinator




Data Bases Involved: AIRS/AQS, NEDS, CDS, FRDS, GICS, PCS, HWDMS/RCRIS,  
 STORET and TRIS

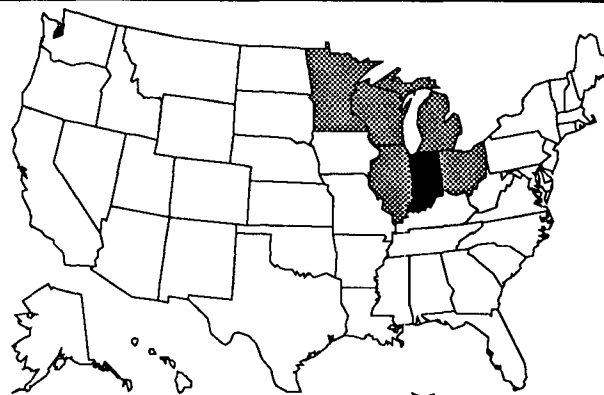
Major Accomplishments in 1988 -1989:

- (1) Installed Phase 1 of the planned upgrade to computer equipment and network. Connectivity to EPA is now available across program areas.
- (2) Financial Management System is being implemented. Target date is October, 1989.
- (3) Implementation of CDS providing Indiana with direct data entry and capability for ad-hoc retrievals. NEDS and CDS have been reconciled across the program.
- (4) An improved Air Emission Testing program has been installed.
- (5) Processing of air quality model information has been considerably improved.
- (6) Indiana was the first state in Region V to receive AIRS training and to assume update authority of the system in September of 1987. AIRS has improved data integrity due to better data entry control.

Next Steps for Indiana in 1989-90:

- (1) Intensify the development of applications that will increase the integration of State and EPA databases.
- (2) Complete the implementation of the network across computer platforms.
- (3) Complete requirements definitions for the Indiana GIS program.
- (4) Complete the implementation of FINDS as a system integration tool.
- (5) Implementation of AFS for EIS, CDS and AIRS.
- (6) Improve compatibility of air quality data acquisition system with AIRS format.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region V, Chicago

State: Illinois

Program Phase: Phase 1

Key Regional Participants: Robert Springer, ARA for Planning & Mgmt.  
 Stephen Goranson, Chief, Information Management Branch  
 Sandra Darden, Chief, Systems Management Section  
 Karen Vasquez, Chief, Information Service Section  
 Daniel Werbie, Program Analyst, Planning & Budgeting Branch

State Contacts: Bernard P. Killian, Director, IEPA  
 Roger Kanerva, Manager, Environmental Programs  
 Patricia Patino, IRM Coordinator




Data Bases Involved: AIRS/AQS, NEDS, CDS, FRDS, GICS, PCS, HWDMS/RCRIS,  
 STORET and TRIS

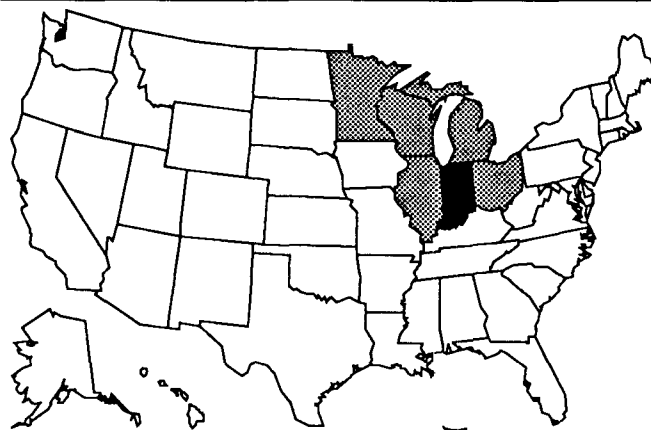
Major Accomplishments in 1988 -1989:

- (1) Installed equipment and data link to IEPA alternate headquarters building for hook-up to AIRS, since January, 1989, IEPA has been utilizing AIRS for their quarterly updates and reporting requirements.  
 Also successfully integrated state-run AQDHS II with AIRS. IEPA will continue utilizing AQDHS II for state weekly operating needs and pass data to AIRS quarterly.
- (2) In June, 1989, IEPA converted from the old batch Total Air System to a newly developed emissions inventory system called EIS.
- (3) Tentative RCRIS Implementation plan was completed and submitted to USEPA.
- (4) In 1989 IEPA for the first time submitted the biennial Hazardous Waste Report data via magnetic tape.
- (5) IEPA'S Division of Public Water Supply developed translator software to transmit the Safe Inventory and Compliance data to FRDS II. Illinois is participating as the pilot state in assisting USEPA in testing FRDS II Software .
- (6) IEPA implemented its 1987 Toxic Release Inventory data base and is in progress of making the necessary modifications for the 1988 Form R data submittal.
- (7) IEPA operates a Laboratory Information Management System (LIMS) which effectively processes effluent data to STORET.

Next Steps for Illinois in 1989-90:

- (1) Working with USEPA to implement a more efficient bulk data transfer protocol.
- (2) Interested in applying data integration and analysis tools to assess environmental risk around hazardous waste sites, especially in highly populated areas.
- (3) Plan to integrate RCRIS into the State mainframe computer system or choose to be a user of RCRIS on the Region V logical mainframe.
- (4) Perform future translation from the new IEPA EIS system to AIRS/AFS.
- (5) District offices will benefit from interactive access to facility information.
- (6) Improve compatibility of air quality data acquisition system with AIRS format.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region V, Chicago

State: Michigan

Program Phase: Phase 1

Key Regional Participants: Robert Springer, ARA for Planning & Mgmt.  
 Stephen Goranson, Chief, Information Management Branch  
 Sandra Darden, Chief, Systems Management Section  
 Karen Vasquez, Chief, Information Service Section  
 Daniel Werbie, Program Analyst, Planning & Budgeting Branch

State Contacts: David F. Hales, Director, MDNR  
 Delbert Rector, Deputy Director for Environmental Protection  
 Gary Hughes, Assistant Director, DEQ

Data Bases Involved: AIRS/AQS, NEDS, CDS, FRDS, GICS, PCS, HWDMS/RCRIS,  
 STORET and TRIS

Major Accomplishments in 1988 -1989:




- (1) MDNR Air Quality division has purchased new PC workstations that will have the ability to network with the mainframe computer in Lansing. This will allow electronic communication, transfer of documents, and access to data on the mainframe by all Air Quality DNR staff.
- (2) EPA's e-mail system has been especially useful in communicating/exchanging information and accessing the International Joint Commission bulletin board.
- (3) MDNR uses the Integrated Risk Information System (IRIS) to provide health based numbers used for risk assessment for Superfund sites and all contamination sites in the state.
- (4) The Toxic Chemical Release Inventory (TRI) is used by MDNR to determine the highest quality of pollutants used in the State and the companies that are the highest emitters for that type of chemical.

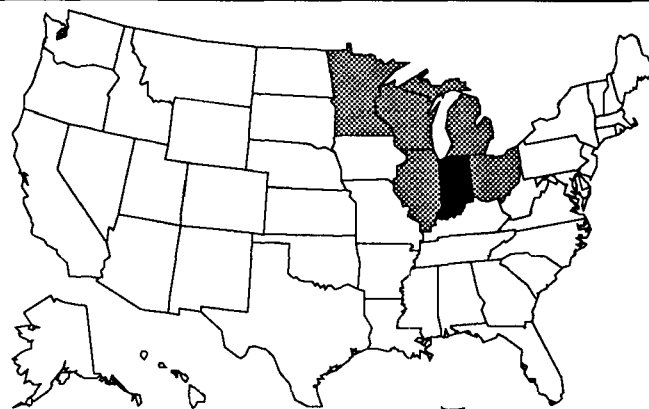
Major Accomplishments in Michigan 1988-1989 continued.

- (6) A geographic information system and staff were established to support all of the DNR for defining impacts of pollution on land use and natural resources. Milestones this fiscal year are:
  - (a) digitization of all 7.5 Minute USGS QUADRANGLE base maps for the State
  - (b) digitization of land cover/use data for entire State
  - (c) automation of water well logs information from four counties to groundwater data base and
  - (d) completion of Great Lakes Environmental Quality Data Base for Lake Michigan and Lake Huron.
- (7) Groundwater data are transferred from PC disk files into STORET. MDNR is already stored RCRA hazardous waste data in the system.
- (8) MDNR implemented a software application that allows direct batch update of selected State water permit information to PCS.
- (9) MDNR uses the host-to-host connection from State to EPA mainframe computer for file transfers and remote printing of water quality data (STORET). PC's are used to access interactive STORET and other systems/data such as BIOS, DWS, USGS, GAGE REACH, WBS, IFD, and PCS.

Next Steps for Michigan in 1989-90:

- (1) MDNR is continuing to investigate the potential of the AIRS facility subsystem, the steps that would have to be taken to utilize the subsystem, and the conversions necessary to utilize existing data.
- (2) MDNR's Permit Writing System will be modified to provide input of outfall and parameter level NPDES data in a format which emulates the PCS Discharge Monitoring Report (DMR).
- (3) EPA/MDNR are working to develop a quality assurance test for PCS effluent limit data.
- (4) The transfer and storage of fish tissue data from RBase to the STORET system and biological data into STORET BIOS is being explored.
- (5) MDNR has requested funds for a graphics terminal and software that could tie together land use GIS data and the data in STORET using the host-host connection with EPA-RTP.
- (6) MDNR is investigating file transfer of results from its labs to PC's and use of EPA's Region X LOTUS to STORET utility program to convert the data to a STORET format in order to eliminate multiple keying of data.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region V, Chicago

State: Minnesota

Program Phase: Phase 1

Key Regional Participants: Robert Springer, ARA for Planning & Mgmt.  
 Stephen Goranson, Chief, Information Management Branch  
 Sandra Darden, Chief, Systems Management Section  
 Karen Vasquez, Chief, Information Service Section  
 Daniel Werbie, Program Analyst, Planning & Budgeting Branch

State Contacts: Gerald L. Willet, Commissioner, MPCA  
 Bonnie Sims, Assistant Commissioner, MPCA  
 Greg Foley, Chief, Information Management




Data Bases Involved: AIRS/AQS, NEDS, CDS, FRDS, GICS, PCS, HWDMS/RCRIS, STORET and TRIS

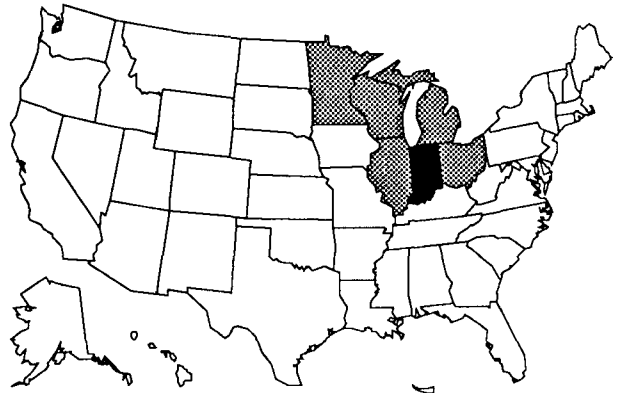
Major Accomplishments in 1988 -1989:

- (1) MPCA is an active State representative on the national State/EPA Data Management Steering Committee.
- (2) MPCA established a new VAX computer system to consolidate all program data files and provide more management access to systems.
- (3) MPCA developed the Integrated Ground Water Information System (IGWIS) which served as a model in EPA's development of the core ground water data elements. Eight environmental programs, including USGS, participated in establishing the IGWIS data dictionary.
- (4) Minnesota received AIRS/AQS training and assumed update of the systems in March 1989.

Next Steps for Illinois in 1989-90:

- (1) Continue conversion of IGWIS to the new VAX data base management system, INGRES.
- (2) Pursue facility data integration to allow managers to address program issues across media.
- (3) Conversion and integration of State hazardous waste data management system to the VAX and develop RCRIS translator.
- (4) Improve compatibility of air quality data acquisition system with AIRS format.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region V, Chicago

State: Ohio

Program Phase: Phase 1

Key Regional Participants: Robert Springer, ARA for Planning & Mgmt.  
 Stephen Goranson, Chief, Information Management Branch  
 Sandra Darden, Chief, Systems Management Section  
 Karen Vasquez, Chief, Information Service Section  
 Daniel Werbie, Program Analyst, Planning & Budgeting Branch

State Contacts: Richard L. Shank, Ph.D., Director, OEPA  
 Michael Mead, Director, Chief, Data Systems  
 Louwana Whitlow, Chief, Programming and Analysis

Data Bases Involved: AIRS/AQS, NEDS, CDS, FRDS, GICS, PCS, HWDMS/RCRIS, STORET and TRIS

Major Accomplishments in 1988 -1989:




- (1) OEPA personnel received training in AIRS, and, since April, 1988, OEPA has been utilizing AIRS for quarterly updates and reporting requirements. AQDHS will continue to be used because of the large amount of source specific air quality data submitted by power utilities in the State.
- (2) OEPA has performed extensive validation of facility information available to its geographic information system, PEMSO.
- (3) Training was given to OEPA in CDS. The State is providing data electronically to USEPA as well as retrieving directly from CDS.
- (4) OEPA is using PCS for compliance and inspection information sharing, and is converting daily DMR data to monthly values through a translator to PCS.
- (5) The Agency's minicomputer was expanded to accomodate a total of 128 users, each has 3270 SNA access to NCC applications as needed.

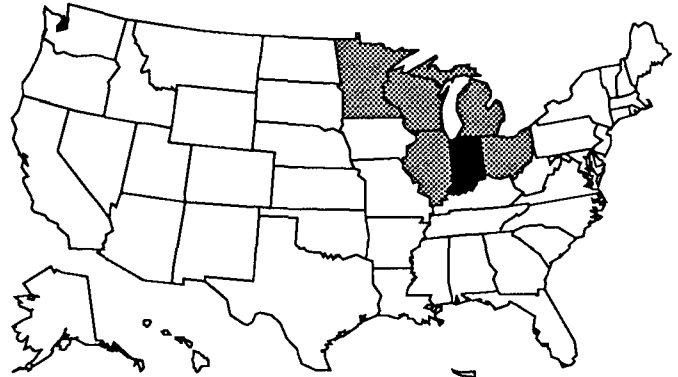
Next Steps for Ohio in 1989-90:

- (1) OEPA plans to implement the full RCRIS package on the State system and then upload directly to the Regional logical mainframe computer.
- (2) Improve compatibility of air quality data acquisition system with AIRS format.
- (3) OEPA is interested in participating with Region 5 in a GIS project concerning Ashtabula, Ohio.

Next Steps for Ohio in 1989-90 continued

- (4) The Agency will continue to support the PEMSO GIS system and explore interface with ARC/INFO. There is need to integrate transportation systems, public utilities, the Toxics Release Inventory information, and soil conservation data.
- (5) Interested in applying data integration and analysis tools to risk assessment.
- (6) Project to improve compatibility of State information with PCS, including evaluation of both State and Federal systems in light of program needs.
- (7) Plan to participate in Regional facility identification integration project.
- (8) Develop an interface between State MSIS system and FROS-II.
- (9) Develop a PC based network for State Revolving loan fund which will interface with GICS.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region V, Chicago

State: Wisconsin

Program Phase: Phase 1

Key Regional Participants: Robert Springer, ARA for Planning & Mgmt.  
 Stephen Goranson, Chief, Information Management Branch  
 Sandra Darden, Chief, Systems Management Section  
 Karen Vasquez, Chief, Information Service Section  
 Daniel Werbie, Program Analyst, Planning & Budgeting Branch

State Contacts: Carroll D. Besnady, Secretary, WDNR  
 Lyman F. Wible, Administrator, Division of Environmental Quality  
 Thomas Aten, Division Data Coordinator

Data Bases Involved: AIRS/AQS, NEDS, CDS, FRDS, GICS, PCS, HWDMS/RCRIS,  
 STORET and TRIS

Major Accomplishments in 1988 -1989:




- (1) Established a WDNR VAX computing system to replace dependence on the Department of Transportation system.
- (2) Safe Drinking Water data is submitted to EPA under FRDS 1.5 format and version 2 data when it will be required.
- (3) WDNR has been a pioneer in the development and implementation of AIRS. WDNR developed a new State data acquisition system that produces data in AIRS format.
- (4) The agency regularly provides recommendations to the National Aerometric Data Branch (NADB) for additional reports. They developed a quarterly data summary for AIRS, which has been widely reviewed and accepted. NADB is working with WDNR to further develop the program.
- (5) Extensively reviewed and modified the PCS interface to the WDNR system, using EPA funding.
- (6) Participated in the RCRIS database design effort, by initiating development efforts to support both State and EPA Data element requirements.
- (7) WDNR has standardized use of analytic parameter codes and table-referenced them to STORET parameter codes to facilitate both data transfer and cross media analysis.

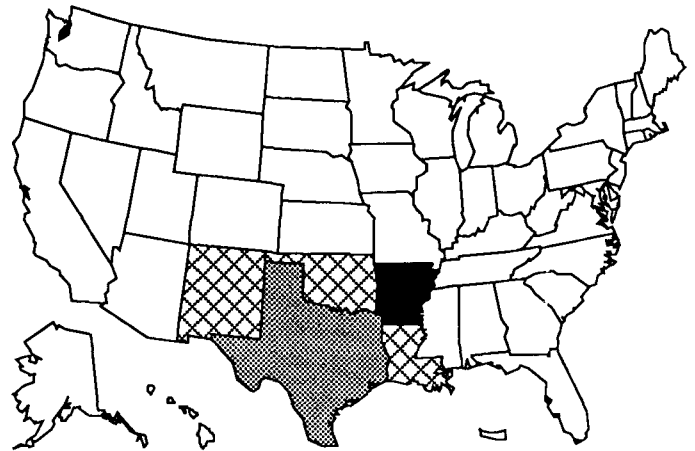
Major Accomplishments in 1988 -1989 continued

- (8) In general, WDNR has been trying to provide staff with better access to EPA database through installation of a TYMNET engine, which may now be accessed through the new VAX environment for both terminal and RJE/printing.

Next Steps for Wisconsin in 1989-90:

- (1) Cooperative evaluation and development of facilities to provide for integrating "facility" data between WDNR system and the EPA counterparts.
- (2) Investigate the use of a local GIS workstation to support the EPA's Green Bay Mass Balance project.
- (3) WDNR will participate as a RCRIS translator State, operating an integrated hazardous waste information system from which data will be extracted to export to the Regional Logical Mainframe as required.
- (4) File transfer facilities through TYMNET for updating EPA system with State data.
- (5) Evaluate the use of SARA Title 3 section 313 reported data in the environmental programs.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region VI, Dallas

State: Texas

Program Phase: Phase 1

Key Regional Participants: Harless Benthul, Acting ARA for Management  
 Jane Moore, Lynda Carroll, Julie Brown

State Contact: John Wilson, Manager, Applications Development Center  
 David Lancaster, Director of Programs  
 Bob Miller, Director, Data Processing




Data Bases Involved: NEDS, AIRS-AQSS, CDS, PCS, STORET, GICS and HWDMS

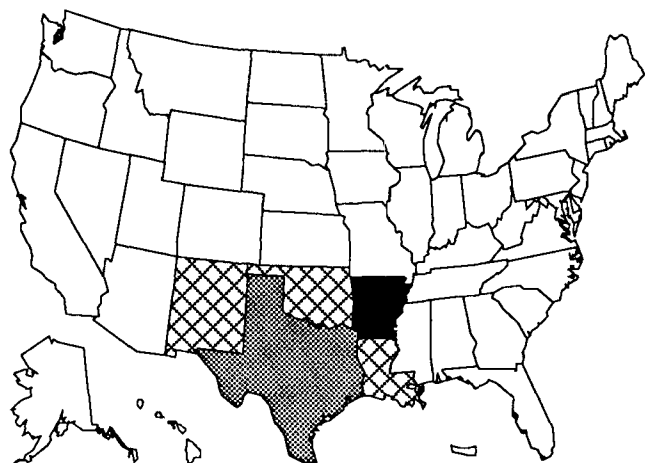
Major Accomplishments in 1988-1989:

- (1) High-Speed data link from Austin (TWRB) to EPA network installed.
- (2) Assessment of TWC, TACB and TWDB current and future use of EPA information systems was conducted by EPA, Region VI and American Management Systems. Following identification of data management strengths and weaknesses for the seven study systems, a proposed workplan was developed which specified Regional and State actions necessary to accomplish Phase I objectives.

Next Steps for Texas in 1989:

- (1) Negotiation, in conjunction with State and Regional program counterparts, of a joint State/EPA workplan to address data management weaknesses.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region VI, Dallas

State: Oklahoma

Program Phase: Phase 1

Key Regional Participants: Harless Benthul, Acting ARA for Management  
Jane Moore, Lynda Carroll, Julie Brown

State Contact: Ben Thorpe, Environmental Specialist Supervisor  
David Dillon, Chief, Water Quality Division  
David Jennings, Senior Environmental Specialist




Data Bases Involved: NEDS, AIRS-AQSS, CDS, PCS, STORET, GICS and HWDMS

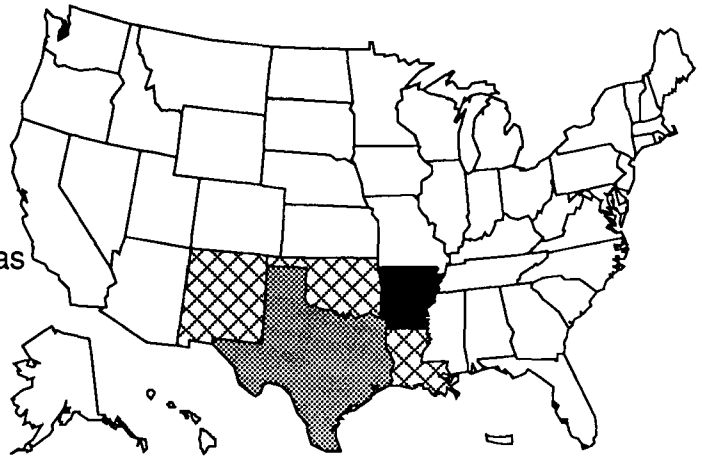
Major Accomplishments in 1988-1989:

- (1) High-Speed data link from Oklahoma City to EPA network installed.
- (2) Assessment of OSDH, OWRB and ODPC use of EPA information systems was conducted by EPA, Region VI and American Management Systems. Data management strengths and weaknesses were identified system-by-system and a proposed workplan was developed which would enable the Region and the State actions necessary to accomplish Phase 1 objectives.

Next Steps for Oklahoma in 1989:

- (1) Negotiation, in conjunction with State and Regional program counterparts, of a joint State/EPA workplan to address data management weaknesses.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region VI, Dallas

State: Louisiana

Program Phase: Phase 1

Key Regional Participants: Harless Benthul, Acting ARA for Management  
Jane Moore, Lynda Carroll, Julie Brown

State Contact: J. Dale Givens, Administrator, Municipal Facilities Division




Data Bases Involved: NEDS, AIRS-AQSS, CDS, PCS, STORET, GICS and HWDMS

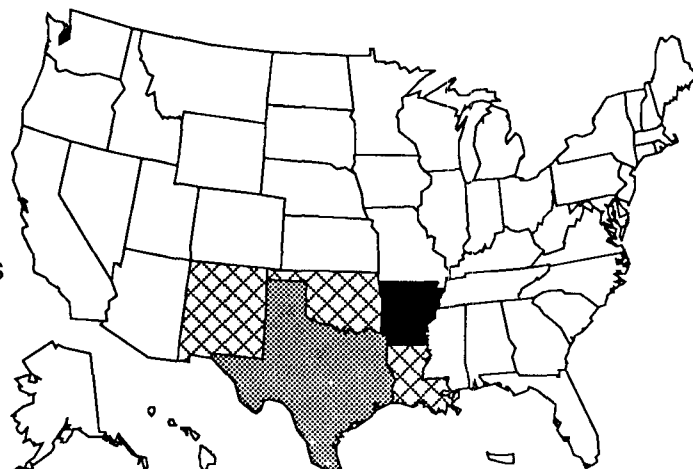
#### Major Accomplishments in 1988-1989:

- (1) High-Speed data link from Baton Rouge to EPA network installed.
- (2) Reviewed data bases, identified data management problem areas and prepared a proposed system-by-system workplan for Regional and State actions to accomplish Phase 1 objectives.
- (3) Independently, LDEQ had engaged a contractor to review all systems (not just the seven in this project) and propose a strategy for integration.

#### Next Steps for Louisiana in 1989:

- (1) Negotiation, in conjunction with State and Regional program counterparts, of a joint State/EPA workplan to address data management weaknesses.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region VI, Dallas

State: New Mexico

Program Phase: Phase 1

Key Regional Participants: Harless Benthul, Acting ARA for Management  
 Jane Moore, Lynda Carroll, Julie Brown

State Contact: Kirk Jones, Deputy Director, New Mexico Environment  
 Improvement Division (NMEIMD)




Data Bases Involved: NEDS, AIRS-AQSS, CDS, PCS, STORET, GICS and HWDMS

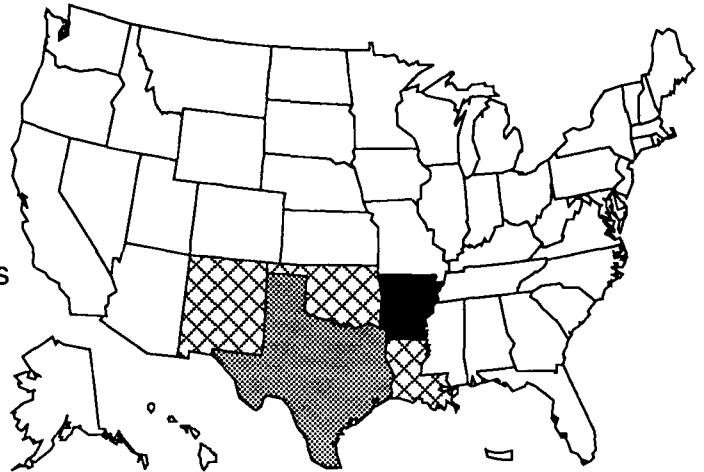
#### Major Accomplishments in 1989:

- (1) Preparations made for installation of high-speed data link from Santa Fe to EPA network.
- (2) Assessment of NMEID use of EPA information systems was conducted by Region VI and American Management Systems (AMS). Following identification of data management strengths and weaknesses for the seven study systems, a proposed workplan was developed which specified the Regional and State actions required to accomplish Phase I objectives.

#### Next Steps for New Mexico:

- (1) Negotiation, in conjunction with State and Regional program counterparts, of a joint State/EPA workplan to address data management opportunities.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region VI, Dallas

State: Arkansas

Program Phase: Phase 1




Key Regional Participants: Harless Benthul, Acting ARA for Management  
Jane Moore, Lynda Carroll, Julie Brown

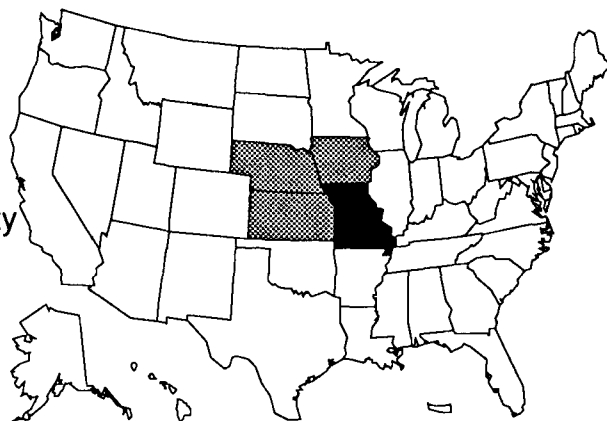
State Contact: Robert Gage, Systems Administrator, Arkansas Department of  
Pollution Control and Ecology

Data Bases Involved: NEDS, AIRS-AQSS, CDS, PCS, STORET, GICS and HWDMS

Major Accomplishments in 1988-1989:

- (1) Pilot project conducted in 1987.
- (2) High-speed data link from Little Rock to EPA network improved.
- (3) Technology and resources provided to enhance State's computing and telecommunications capabilities.
- (4) State program staff received training in EPA systems.
- (5) American Management System conducted interviews with ADPC&E to determine whether situation is materially different than in 1987.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region VII, Kansas City

State: Missouri

Program Phase: Phase 2

Key Regional Participants: Susan Gordon, ARA for Policy and Management  
Gene Ramsey, Dan Vallero, David Flora, Katie Biggs, Lynn Kring

State Contacts: Bill Ford, Director, Department of Environmental Quality,  
Stan Nessing

Data Bases Involved: NEDS, SAROAD, CDS, PCS, GICS, FRDS, STORET and  
HWDMS

#### Major Accomplishments in 1988-1989:




- (1) State/EPA internal/external relationships substantially enhanced.
- (2) Support State's own data bases: DUST, WQIS, PWS.
- (3) Quarterly State/EPA Information Resource Management meetings (including both IRM and programmatic topics, e.g., GIS, Expert Systems, Right-to-Know, Data Integration, Connectivity, National Systems Upgrades, user technical assistance.
- (4) Completed analysis and detailed data flows for State RCRIS and implemented microbased and other improvements.
- (5) Completed FRDS analysis and, as a result developed new State PWS system (mainframe and micros).
- (6) Provided cooperative on site technical assistance to MDNR providing complete menu of applications from NCC. Now State has NCC related capabilities and applications provided to all state locations.
- (7) Provided State technical assistance to transmit reports from Region to all on site MDNR printers.
- (8) Facilitated use of new technologies such as expert systems and GIS. Established Cooperative Agreement process to utilize GIS to assist in the development of well-head protection plans for the State.
- (9) Incorporated State/EPA Data Management Initiative into workplan and State/EPA Agreement process (total involvement of Regional and State media programs).

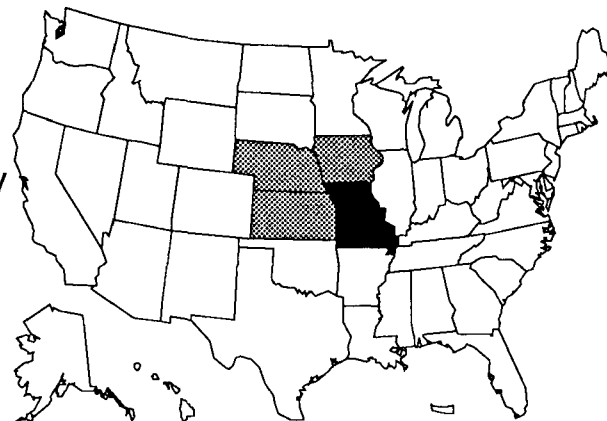
#### Next Steps for Missouri in 1989:

- (1) Continue to ensure timely, accurate and complete data, especially with national system upgrades.

#### Next Steps for Missouri in 1989 continued

- (2) Continue to coordinate IRM efforts across state and EPA organizational and media lines
- (3) Continue EPA on-going IRM support IRM Directives, Information Systems Inventories, On-site Technical Support visits, Quarterly IRM Meetings and Training.
- (4) Additional training for AIRS-AQS data entry.
- (5) Second round advanced data management (GIS) work in Missouri: Continue data integration improvements and explore advanced applications (GIS); initiate Cooperative Agreement to continue FY 1989 efforts and to provide assistance and apply the developed GIS system to specific environmental decision making processes.
- (6) Completed systems improvements to RCRIS and PWS reprogram plan devised from Phase II analysis.
- (7) Develop expert systems and implement geographic information systems.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region VII, Kansas City

State: Iowa

Program Phase: Completed Phase 1,  
entering Phase 2

Key Regional Participants: Susan Gordon, ARA for Policy and Management  
 Gene Ramsey, Dan Vallero, David Flora, Katie Biggs, Lynn Kring

State Contacts: Darrell MacAllister, Iowa Department of Air, Water and Waste

Data Bases Involved: NEDS, SAROAD, CDS, PCS, GICS, FRDS, STORET/WBS and  
 HWDMS/RCRIS

#### Major Accomplishments in 1988-1989:




- (1) State/EPA internal/external relationships substantially enhanced.
- (2) Transferred information gained from Missouri pilot to Iowa.
- (3) Achieved timely and accurate data.
- (4) Memorandum of Understanding for State data integrity in process.
- (5) Access to direct link within State for all systems.
- (6) State uses EPA systems for Air Programs, GICS and STORET.
- (7) Key State organizational units and personnel identified and committed to effort.
- (8) Incorporated State/EPA Data Management Initiative into workplan and State/EPA Agreement process (total involvement of Regional and State media programs).
- (9) Created environment for data integration. Established cooperative agreement to assist State environmental programs to integrate GIS capabilities into State-wide GIS plan.
- (10) Deputy Regional Administrator, Assistant Regional Administrator and Senior Program Managers visited Iowa to review projects and discuss next steps.

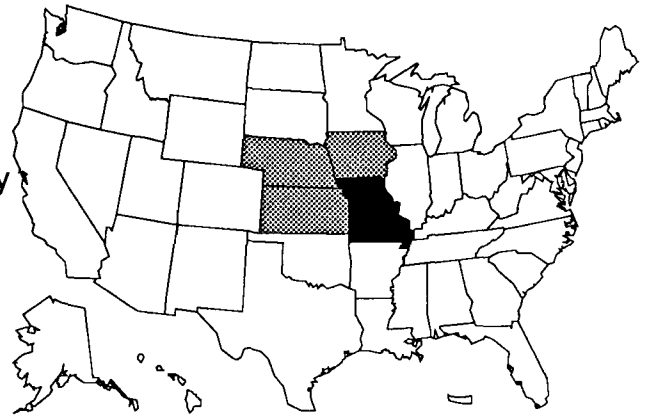
#### Next Steps for Iowa in 1989:

- (1) Finalize the Memorandum of Understanding for State data integrity.
- (2) Continue to ensure timely, accurate and complete data, especially with national system upgrades.

#### Next Steps for Iowa in 1989 continued

- (3) Continue EPA on-going IRM support IRM Directives, Information System Inventories, On-site Technical Support visits, Quarterly IRM Meetings and Training.
- (4) Continue to coordinate IRM efforts across state and EPA organizational and media lines.
- (5) Additional training for STORET, AIRS-AQS, GICS/SRF (State Revolving fund).
- (6) Second round advanced data management (GIS) work in Iowa: Continue data integration improvements and explore advanced applications (GIS); initiate Cooperative Agreement to continue FY 1989 efforts and to provide assistance and apply the developed GIS system to specific environmental decision making processes.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region VII, Kansas City

State: Kansas

Program Phase: Completed Phase I,  
entering Phase 2

Key Regional Participants: Susan Gordon, ARA for Policy and Management  
 Gene Ramsey, Dan Vallero, David Flora, Katie Biggs, Lynn Kring

State Contacts: Loren Phillips, Kansas Department of Health and Environment

Data Bases Involved: NEDS, SAROAD, CDS, PCS, GICS, FRDS, STORE, WBS,  
 and HWDMS/RCRIS

Major Accomplishments in 1988-1989:




- (1) State/EPA internal/external relationships substantially enhanced.
- (2) Transferred information gained from Missouri pilot to Kansas.
- (3) Achieved timely and accurate data.
- (4) Connected direct high speed data link.
- (4) Memorandum of Understanding for State data integrity near completion.
- (5) Access to direct link within State for STORET/BIOS.
- (6) State uses EPS systems for Air Programs and STORET.
- (7) Incorporated State/EPA Data Management Initiative into workplan and State/EPA Agreement process (total involvement of Regional and State media programs).
- (8) Created environment for data integration. Established cooperative agreement between EPA and two state agencies to complete pilot GIS project for assessment of non-point source impacts on water quality and provide information for development of a management plan to control sources.
- (9) Provided cooperative technical assistance to establish user support to allow state to enter HWDMS data through Region VII mainframe.

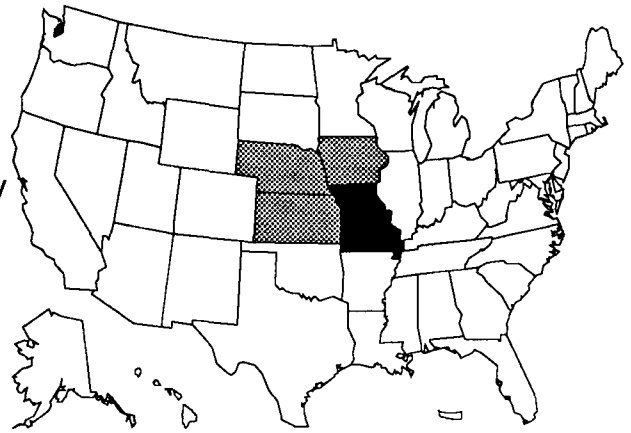
Next Steps for Kansas in 1989:

- (1) Finalize the Memorandum of Understanding for State data integrity.
- (2) Continue to ensure timely, accurate and complete data, especially with national system upgrades.

Next Steps for Kansas in 1989 continued

- (3) Continue EPA on-going IRM support (IRM) Update, IRM Directives, Information System Inventories, On-site Technical Support visits, Quarterly IRM Meetings and Training.
- (4) Continue to coordinate IRM efforts across state and EPA organizational and media lines.
- (5) Access to high speed data lines within the State.
- (6) Additional training on PCS and AIRS.
- (7) Second round advanced data management (GIS) work in Kansas: Continue data integrity improvements and explore advanced applications (GIS); initiate Cooperative Agreement with KDHE and U.S. Geographic Survey to incorporate GIS into county wide environmental planning.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region VII, Kansas City

State: Nebraska

Program Phase: Completed Phase 1,  
entering Phase 2

Key Regional Participants: Susan Gordon, ARA for Policy and Management  
Gene Ramsey, Dan Vallero, David Flora, Katie Biggs, Lynn Kring

State Contacts: Dennis Burling, Nebraska Department of Environmental Control

Data Bases Involved: NEDS, SAROAD, CDS, PCS, GICS, FRDS, STORETBIOS, WBS,  
and HWDMS/RCRIS

Major Accomplishments in 1988-1989:




- (1) State/EPA internal/external relationships substantially enhanced.
- (2) Transferred information gained from Missouri pilot to Nebraska.
- (3) Began Phase 1 in FY 1988.
- (4) Achieved timely and accurate data.
- (5) Connected direct high speed data link.
- (6) Memorandum of Understanding for State data integrity in process.
- (7) Access to direct link within State for all systems.
- (8) State uses EPS systems for Air Programs and STORET.
- (9) Incorporated State/EPA Data Management Initiative into workplan and State/EPA Agreement process (total involvement of Regional and State media programs).
- (10) Created environment for data integration. Established cooperative agreement with the University of Nebraska to utilize GIS to conduct a state wide groundwater threat evaluation.
- (11) Provided cooperative technical assistance to establish procedure to run, modify and produce reports more efficiently from HWDMS system.

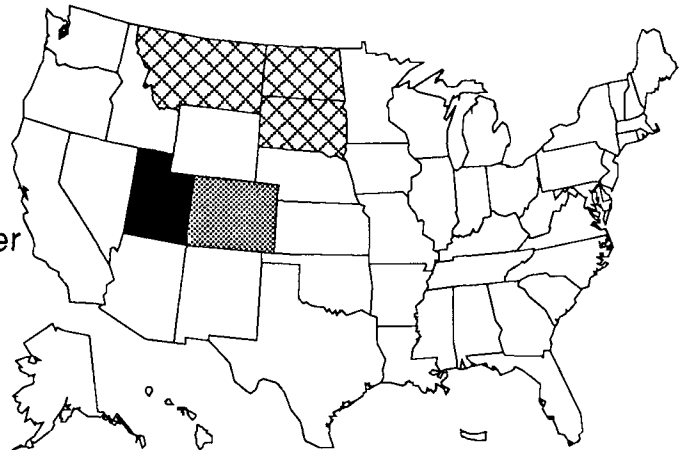
Next Steps for Nebraska in 1989:

- (1) Finalize the Memorandum of Understanding for State data integrity.
- (2) Continue to ensure timely, accurate and complete data, especially with national system upgrades.

Next Steps for Nebraska in 1989 continued

- (3) Continue EPA on-going IRM support (IRM) Update, IRM Directives, Information System Inventories, On-site Technical Support visits, Quarterly IRM Meetings and Training.
- (4) Continue to coordinate IRM efforts across state and EPA organizational and media lines
- (5) Access to high speed data lines within the State.
- (6) Additional training on PCS and AIRS, BIOS and WBS.
- (7) Second round advanced data management (GIS) work in Nebraska: Continue data integrity improvements and explore advanced applications (GIS); initiate Cooperative Agreement that will build on FY 1989 accomplishments to pilot development of a state strategy for surface and groundwater quality protection.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region VIII, Denver

State: Utah

Program Phase: Phase 2

Key Regional Participants: Kerrigan Clough, ARA for Policy and Management  
Marcella Osterholt, Program Manager for State/EPA Data Management

State Contacts: Robert Shipman, Data Sharing Coordinator




Data Bases Involved: NEDS, SAROAD, CDS, PCS, GICS, STORET, and HWDMS

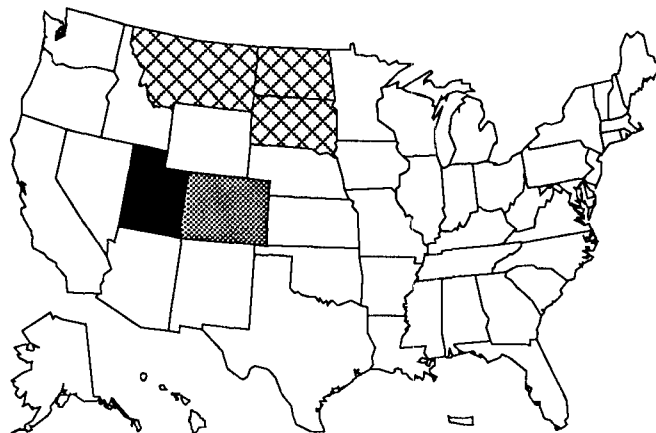
#### Major Accomplishments in 1988-1989:

- (1) Completion of Phase 1.
- (2) Developed data integrity policies and programs for each of the National data bases.
- (3) Developed user support and training program addressing the needs of each system.
- (4) The Integrated Information Management System (IIMS) software developed for Georgia was modified successfully for use in Utah.
- (5) The RCRA Information Management System (RIMS) software was developed for Utah.
- (6) Hosted the first Regional Data Management Conference.
- (7) Data Management systems for SARA Title III completed.

#### Next Steps for Utah in 1990:

- (1) Upgrade Prime 2655 to the 4000 series.
- (2) New systems to be developed include an Underground Injection Control, and an X-ray Program Tracking System.
- (3) Complete analysis of water pollution program data needs.
- (4) Development of new software and techniques to maximize data integration.
- (5) Conversion of NEDS and CDS to the AIRS Facility Subsystem.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region VIII, Denver

State: Colorado

Program Phase: Phase 1

Key Regional Participants: Kerrigan Clough, ARA for Policy and Management  
Marcella Osterholt, Program Manager for State/EPA Data Management

State Contacts: Gary Broetzman, Deputy Director Colorado Department of Health




Data Bases Involved: FRDS, ERNS, IRIS, CERCLIS, PCS, GICS, STORET, and HWDMS

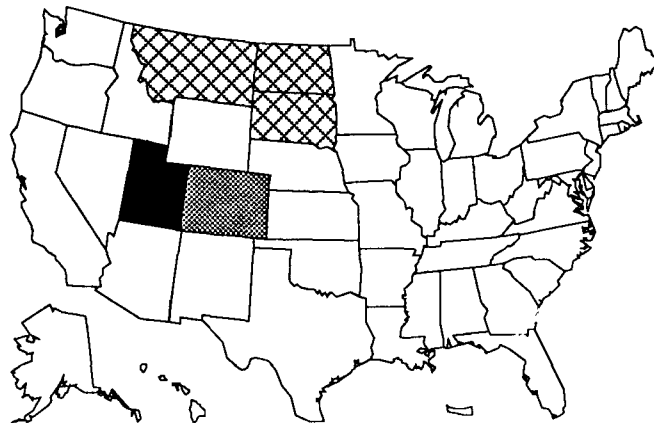
Major Accomplishments in 1988-1989:

- (1) Upgraded the high-speed data link which connects Denver to EPA network.
- (2) Region conducted partial data needs assessment.
- (3) Attended 1st Regional Data Management Conference, in Salt Lake City, Utah.
- (4) State conducted a further data needs assessment to evaluate the feasibility of a department wide ADABAS System which would incorporate Facilities, Permits, and Compliance files.

Next Steps for Colorado in 1990:

- (1) Conversion of NEDS and CDS to the AIRS Facility Subsystem.
- (2) An Option Analyses will be conducted which will identify system options to achieve SEDM goals, each option will include projected costs and benefits.
- (3) Based upon the selected options, an Implementation plan will be developed to identify necessary tasks, responsibilities, and milestones for completion of Phase 1 of the SEDM Program.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region VIII, Denver

State: North Dakota

Program Phase: Phase 1

Key Regional Participants: Kerrigan Clough, ARA for Policy and Management  
Marcella Osterholt, Program Manager for State/EPA Data Management

State Contacts: Charles Rydell, Env. Engineer, State Dept. of Health




Data Bases Involved: NEDS, AQDHS, CDS, PCS, GICS, STORET, AIRS and WBS

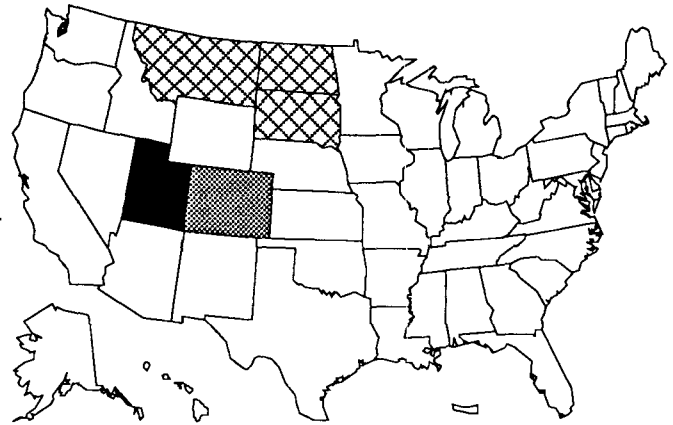
Major Accomplishments in 1988-1989:

- (1) Installed high speed data link to connect Bismark to EPA network.
- (2) Completely automated the Air Quality data submission and acquisition.
- (3) Region conducted a preliminary data needs assessment.
- (4) Region to conduct an in depth Data Management Needs Assessment which will include:
  - Project Work Plan
  - Background Report
  - Requirements Analyses
  - Option Analyses
  - Implementation Plan
- (5) Attended 1st Regional Data Management Conference in Salt Lake City, Utah.
- (6) Completed FRDS training, are now sending Public Water Data direct to NCC.

Next Steps for North Dakota in 1990:

- (1) Completion of Data Management Needs Assessment.
- (2) Conversion of NEDS and CDS to the AIRS Facility Subsystem.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region VIII, Denver

State: South Dakota

Program Phase: Phase 1

Key Regional Participants: Kerrigan Clough, ARA for Policy and Management  
Marcella Osterholt, Program Manager for State/EPA Data Management

State Contacts: Ron Woodburn, Natural Resource Scientist




Data Bases Involved: CDS, PCS, GICS, STORET, and AIRS

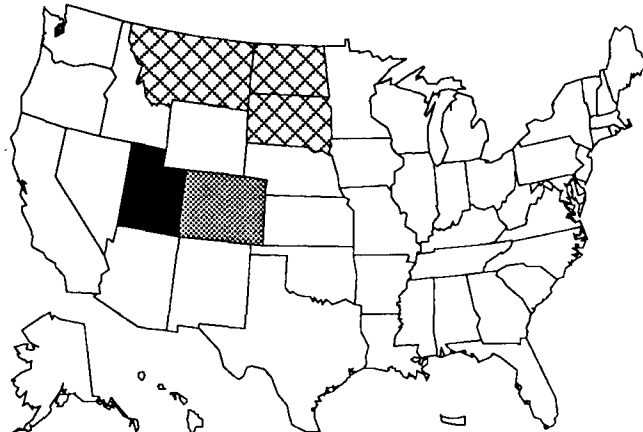
Major Accomplishments in 1988-1989:

- (1) GIS needs survey completed.
- (2) Region conducted a preliminary data needs assessment.
- (4) Region to conduct an in-depth Data Management needs assessment which will include:
  - Project Work Plan
  - Background Report
  - Requirements Analyses
  - Option Analyses
  - Implementation Plan
- (5) Attended 1st Regional Data Management Conference in Salt Lake City, Utah.
- (6) Explore the feasibility of implementing a statewide GIS.

Next Steps for South Dakota in 1990:

- (1) Completion of Data Management Needs Assessment.
- (2) Conversion of NEDS and CDS to the AIRS Facility Subsystem.
- (3) Install high-speed data link to connect Pierre to the EPA network.
- (4) Installation of a mini-computer.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region VIII, Denver

State: Wyoming

Program Phase: Phase 1

Key Regional Participants: Kerrigan Clough, ARA for Policy and Management  
Marcella Osterholt, Program Manager for State/EPA Data Management

State Contacts: Jim Uzzell, Admin. Service Manager, Department of Environmental Quality




Data Bases Involved: No direct input to NCC

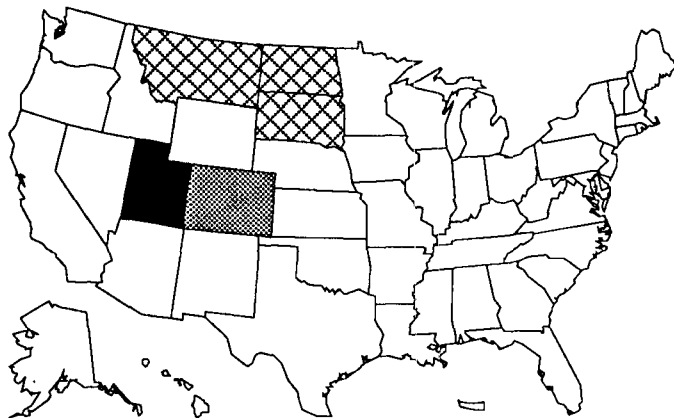
Major Accomplishments in 1988-1989:

- (1) Region to conduct an in depth Data Management Needs Assessment which will include:
  - Project Work Plan
  - Background Report
  - Requirements Analyses
  - Option Analyses
  - Implementation Plan
- (2) Attended 1st Regional Data Management Conference in Salt Lake City, Utah.

Next Steps for Wyoming in 1990:

- (1) Completion of Data Management Needs Assessment.
- (2) Conversion of NEDS and CDS to the AIRS Facility Subsystem.
- (3) Install a high-speed data link to connect Cheyenne to the EPA network.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region VIII, Denver

State: Montana

Program Phase: Phase 1

Key Regional Participants: Kerrigan Clough, ARA for Policy and Management  
Marcella Osterholt, Program Manager for State/EPA Data Management

State Contacts: Tom Reid, Env. Specialist, Department of Health and Env. Sciences




Data Bases Involved: NEEDS, NEDS, AQHS, PCS, GICS, STORET, and AIRS

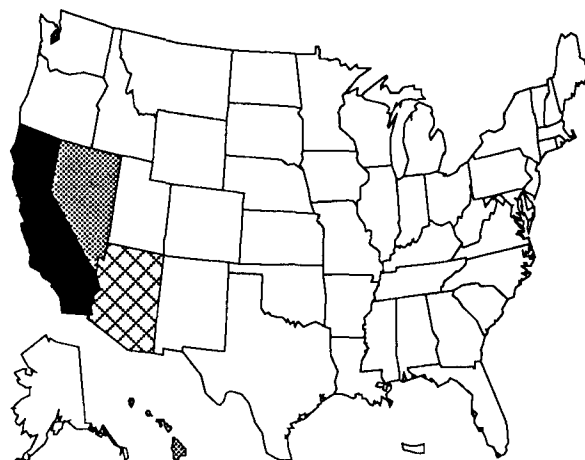
Major Accomplishments in 1988-1989:

- (1) Installed high-speed data link to connect Helena to EPA network.
- (2) Region conducted a preliminary data needs assessment.
- (4) Region to conduct an in depth Data Management Needs Assessment
- (5) Attended 1st Regional Data Management Conference in Salt Lake City, Utah.
- (6) Installed a Prime mini-computer in the State Library for the GIS Clark Fork River Superfund sites.

Next Steps for Montana in 1990:

- (1) Completion of Phase 1
- (2) Start of Phase 2
- (3) The facility Subsystem will replace NEDS and CDS.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region IX, San Francisco

State: California

Program Phase: Phase 1 and 2

Key Regional Participants: Nora McGee, ARA for Policy and Management  
(Vacant) Chief, Office of Policy and Management, IRM Branch  
Mark T. Hemry, IRM Specialist, IRM Branch

State Contacts: Phil Daniels and Don Anderson, State Water Resources Control  
Steve Hanna, Environmental Affairs  
Chuck Schulock, Director of Environmental Affairs  
Chuck Lieberman, Air Resource Control Board  
Jim Watson, Dept. of Health Services  
Elaine Limeberger, TEALE Data Center




Data Bases Involved: PCS, GICS, STORET, HWDMS (RCRIS), AIRS (NEDS,  
SAROAD and CDS)

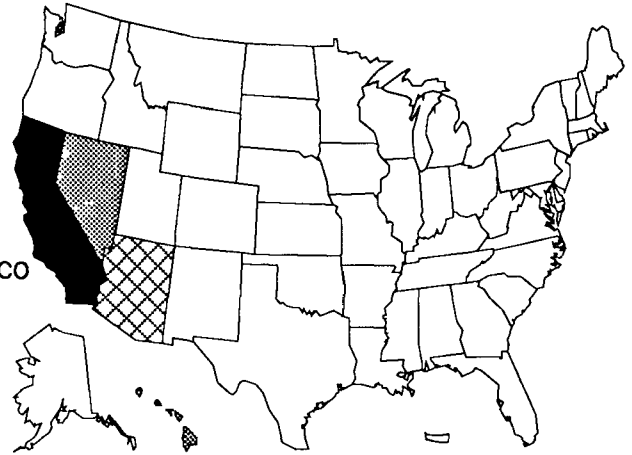
#### Major Accomplishments in 1988-1989:

- (1) Completed connection of all systems to the central Sacramento node.
- (2) Mapped the extensive California communication network to allow for remote access and printing of system reports.
- (3) Completed workplan actions to provide California Air Resources Control Board with AIRS retrieval.
- (4) Completed workplan actions to establish California as a pilot RCRIS site.
- (5) Develop workplans and objectives for SIRS development and facilitate state implementation of the system.
- (6) Develop workplans and objectives for RDRIS development and facilitate State implementation of the system.
- (7) Develop state contacts to facilitate the use of new technologies such as expert systems and geographic information systems within the state.
- (8) Prepared draft Memorandum of Understanding regarding integrity protocols for each data system.

Next Steps for California in 1989:

- (1) Define policy on major IRM issues which provides a framework for implementing Phase 2 (data integration).
- (2) Further development of FINDS to allow for greater data integration.
- (3) Monitor AIRS development and facilitate State implementation of the system.
- (4) Monitor RCRIS development and facilitate State implementation of the system.
- (5) Facilitate use of new technologies such as expert systems and geographic information systems.
- (6) Endorse Agreement on Memorandum of Understanding regarding data integrity and protocols for all data systems.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region IX, San Francisco

State: Arizona

Program Phase: Phase 1

Key Regional Participant: Nora McGee, ARA for Policy and Management  
 (Vacant) Chief, Office of Policy and Management, IRM Branch  
 Mark T. Hemry, IRM Specialist, IRM BRanch

State Contacts: Mike Doyle, Deputy Director, AZ Department of Environmental  
 Quality  
 Fran Gonzalo, Director, Office of Administration  
 Gerry Pater, Director, Office of Automation  
 Tom Messina, Office of Automation




Data Bases Involved: PCS, GICS, STORET, HWDMS (RCRIS), AIRS (NEDS,  
 SAROAD and CDS)

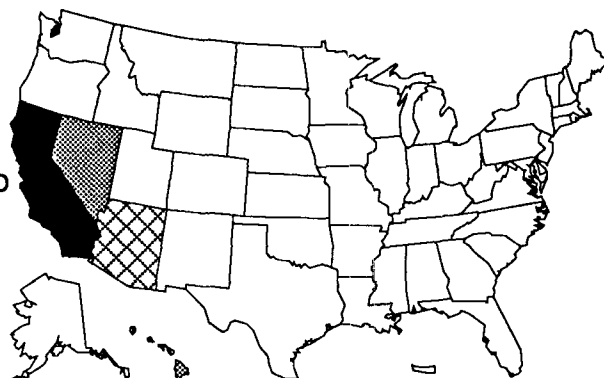
Major Accomplishments in 1988-1989:

- (1) Conducted preliminary requirements analysis of data communications and ADP equip-  
 ment needs to allow for direct, high-speed, on-line connectivity to individual program  
 operations.
- (2) Submitted a TSR to the NCC Telecommunications operations to establish the  
 required high-speed data link.
- (3) Established a high speed data link to Phoenix AZ DEQ Honeywell DPSD6  
 minicomputer and the EPA NCC IBM 3090.
- (4) Prepared draft Memorandum of Understanding regarding integrity protocols for  
 each data system.

Next Steps for Arizona in 1989:

- (1) Prepare and implement training plans to enhance the use of EPA systems in support  
 of program operations.
- (2) Identify data management problem areas and prepare a workplan for Regional and  
 State actions to complete Phase 1 objectives.
- (3) Resolve any impediments to timely and accurate data processing.
- (4) Endorse agreement on Memorandum of Understandings regarding data integrity and  
 protocols for all data systems.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region IX, San Francisco

State: Hawaii

Program Phase: Phase 1

Key Regional Participants: Nora McGee, ARA for Policy and Management  
 (Vacant) Chief, Office of Policy and Management, IRM Branch  
 Mark T. Hemry, IRM Specialist, IRM BRanch

State Contacts: Dr. Bruce Anderson, Deputy Director, HI Department of Health  
 Paul Aki

Data Bases Involved: PCS, GICS, STORET, HWDMS/RCRIS, AIRS, NEDS,  
 SAROAD and CDS

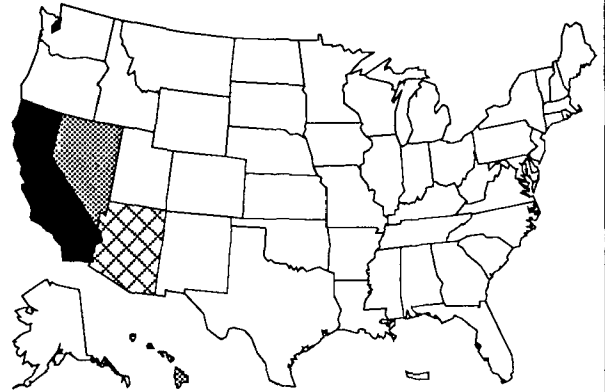
#### Major Accomplishments in 1988-1989:

- (1) Conducted preliminary requirements analysis of data communications and ADP equipment needs to allow for direct, high-speed, on-line connectivity to individual program operations.
- (2) Submitted a TSR to the NCC Telecommunications operations to establish the required high-speed data link.
- (3) Procuried necessary hardware and software to facilitate PC connectivity.
- (4) Prepared draft Memorandum of Understanding regarding integrity protocols for each data system.
- (5) Assisted in the development of ADP wiring plan for the Department of Health's upcoming move into new facilities.

#### Next Steps for Hawaii in 1989:

- (1) Prepare and implement training plans to enhance the use of EPA systems in support of program operations.
- (2) Identify data management problem areas and prepare a workplan for Regional and State actions to complete Phase I objectives.
- (3) Resolve any impediments to timely and accurate data processing.
- (4) Endorse agreement on Memorandum of Understandings regarding data integrity and protocols for all data systems.
- (5) Establish a high-speed data link from Honolulu DEQ to the EPA NCC IBM 3090.

LEGEND: 1987 Selected States [Solid Black]  
1988 Selected States [Cross-hatch]  
1989 Selected States [Diagonal Lines]



Region: Region IX, San Francisco

State: Nevada

Program Phase: Phase 1

Key Regional Participants: Nora McGee, ARA for Policy and Management  
(Vacant) Chief, Office of Policy and Management, IRM Branch  
Mark T. Hemry, IRM Specialist, IRM Branch

State Contacts: Lou Dodgion, Director NV Department of Environmental  
Protection  
Ralph Capurro




Data Bases Involved: PCS, GICS, STORET, HWDMS/RCRIS, AIRS, NEDS,  
SAROAD and CDS

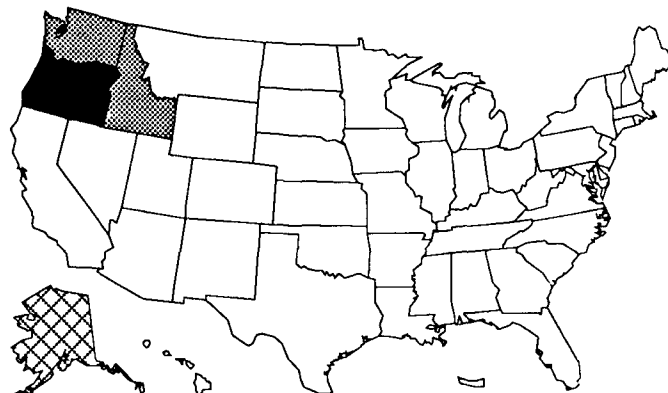
#### Major Accomplishments in 1988-1989:

- (1) Conducted preliminary requirements analysis of data communications and ADP equipment needs to allow for direct, high-speed, on-line connectivity to individual program operations.
- (2) Procured necessary hardware and software to facilitate PC connectivity.
- (3) Procured a TELEX Cluster Controller, PCOX boards, and software for PC connectivity.
- (4) Prepared draft Memorandum of Understanding regarding integrity protocols for each data system.
- (5) Established a high speed data link with the EPA NCC IBM 3090 via a cluster controller and PCOX boards.

#### Next Steps for Nevada in 1989:

- (1) Prepare and implement training plans to enhance the use of EPA systems in support of program operations.
- (2) Identify data management problem areas and prepare a workplan for Regional and State actions to complete Phase 1 objectives.
- (3) Resolve any impediments to timely and accurate data processing.
- (4) Endorse agreement on Memorandum of Understanding regarding data integrity and protocols for all data systems.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region X, Seattle

State: Oregon

Program Phase: Phase 1

Key Regional Participants: Clark Gaulding, Director, Management Division  
Jim Peterson, Chief, Information Mgmt Branch

State Contacts: Dennis Kirk  
Lydia Taylor




Data Bases Involved: CDS, PCS, GICS, STORET, AIRS (AQS and AFS) and RCRIS

#### Major Accomplishments in 1988-1989:

- (1) Senior Managers from DEQ and EPA-Region IX held a joint retreat. Data management issues were discussed as a major topics.
- (2) State conversion from Harris comptut to new Sequent minicomputer.
- (3) Training on STORET and GIS at EPA.
- (4) Pre-RCRIS training and coordination.
- (5) Training, and coordination on AIRS-AQS.
- (6) Assisting in communication set up for GIS access.

#### Next Steps for Oregon in 1990:

- (1) Training and installation of AIRS-AFS.
- (2) Implementation of RCRIS on LMF or PC, data clean-up, and support.
- (3) Implementation of GIS communication lines.
- (4) Transmitting between EPA/DEQ on CASE-developed strategy for cross-media state data management.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region X, Seattle

State: Washington

Program Phase: Phase 1

Key Regional Participants: Clark Gaulding, Director, Management Division  
Jim Peterson, Chief, Information Mgmt Branch

State Contacts: Jim Griffith




Data Bases Involved: CDS, PCS, GICS, STORET, AIRS (AQS and AFS), RCRIS, GIS, FRDS, TRI (SARA TITLE III) and UST/LUST

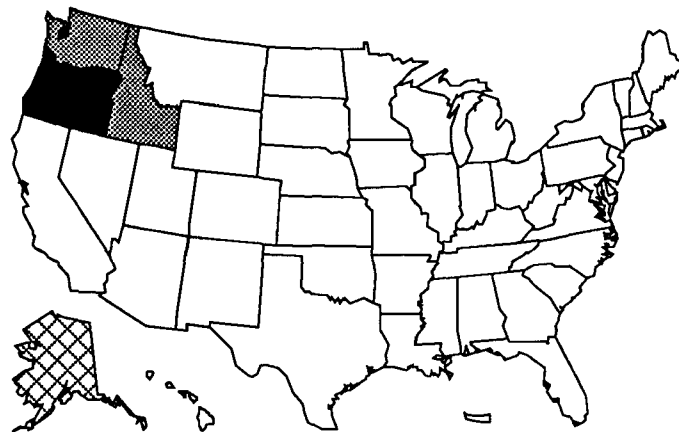
#### Major Accomplishments in 1988-1989:

- (1) Senior Managers from DOE and EPA-Region IX held a joint retreat. Data management issues were discussed as major topics.
- (2) Improvements to communications network allowing for diversified access and input/output capabilities.
- (3) Implementation of pre-RCRIS and coordination on hardware/software acquisition and policy decisions.
- (4) Increase in the use of STORET by various divisions in the state.
- (5) Training, and coordination on AIRS-AQS.
- (6) Assistance in access to SARA TITLE III data base.
- (7) Assistance in UST and LUST systems utilization.

#### Next Steps for Washington in 1990:

- (1) Researching communication methods for utilizing STORET graphics interface.
- (2) Implementation of RCRIS on LMF or PC, data clean-up, and support.
- (3) Implementation of direct AIRS-AQS and AIRS-AFS user.

LEGEND: 1987 Selected States   
 1988 Selected States   
 1989 Selected States 



Region: Region X, Seattle

State: Idaho

Program Phase: Phase 1

Key Regional Participants: Clark Gaulding, Director, Management Division  
 Jim Peterson, Chief, Information Management Branch

State Contacts: Steve Hill, Information Management  
 Chris Johnson, Air Quality  
 Mike Seals, Hazardous Material  
 Renae Hardy, Water Quality




Data Bases Involved: CDS, PCS, GICS, STORET, AIRS (AQS and AFS), RCRIS, FRDS

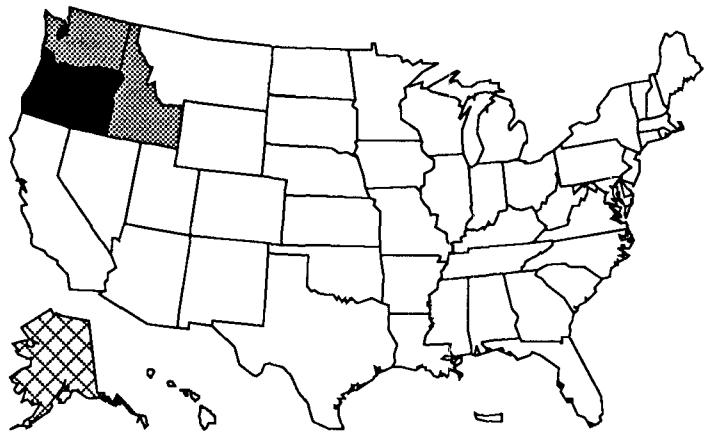
Major Accomplishments in 1988-1989:

- (1) Issued a grant to Air Quality for communication hardware/software.
- (2) Analysis of an overall DEQ Hardware/Software plan for EPA systems.
- (3) Analysis of relocation and short/long term communications needs.
- (4) Pre-RCRIS training and coordination.
- (5) Resolved data integrity issues, and cleaned up invalid data in FRDS.

Next Steps for Idaho in 1990:

- (1) High-speed link to Air Quality for accessing AIRS-AQS and AIRS-AFS.
- (2) Implementation of RCRIS on LMF or PC, data clean-up, and support.
- (3) Installation of LAN equipment and high speed access for Hazardous Material, Air Quality, and Water Quality.
- (4) Inter-connection of local EPA and State access.
- (5) Overall modification to communications strategy after proposed relocation.

LEGEND: 1987 Selected States   
1988 Selected States   
1989 Selected States 



Region: Region X, Seattle

State: Alaska

Program Phase: Phase 1

Key Regional Participants: Clark Gaulding, Director, Management Division  
Jim Peterson, Chief, Information Mgmt Branch

State Contacts: Steve Torok, EPA-Juneau office  
Susan Super, RCRA Manager

Data Bases Involved: PCS, GICS, STORET, AIRS (AQS and AFS), RCRIS and FRDS

Major Accomplishments in 1988-1989:

- (1) Pre-RCRIS training, coordination, and implementation guidelines.
- (2) Specialized training and support in specific areas.

Next Steps for Alaska in 1990:

- (1) Training in various areas to begin using EPA systems.
- (2) Implementation of RCRIS on PC, data clean-up, and support.
- (3) Installation of high-speed line for access to EPA systems.
- (4) Transmitting between EPA/DEQ on CASE-developed strategy for cross-media state data management.

### **III. DATA INTEGRATION**

An important step in the integration process at EPA continues to be the use of Geographic Information System (GIS) as a tool to support management decision-making related to environmental programs and concerns. To date most of the Agency's use of GIS has focused on identification and prioritization of environmental problems and trends. Through GIS, EPA and state programs can bring together information from various programs as well as from various media, to form a much more accurate and complete picture of a geographic area which previously would not have been possible. This cross-media/cross programmatic sharing of data provides a firmer foundation for current and future State/EPA programs. Examples of GIS use includes a Results/Risk Analysis System which utilizes GIS to target regulatory activities based on environmental risks and to determine if programs are having an impact on environmental quality. Additionally, GIS is being used to support the development of decision support tools such as prioritization applications to determine cleanup efforts now and in the future. This chapter describes in more detail EPA Region's GIS initiatives with State environmental agencies.

#### **DATA INTEGRATION PROGRAM**

The Data Integration Program has three components:

**Regional Data Integration** - The Agency is providing a standard "Geographic Information System" (GIS) to each EPA region to perform geo-based analysis. EPA's Headquarters, seven regional offices, three laboratories, and three other programs established GIS organizations. The balance of regional offices will be completed in the near future.

**Technology and Data Management** - The Office of Information Resources Management (OIRM), the National Data Processing Division (NDPD), and the Office of Research and Development (ORD) are supporting the implementation of GIS Technology, as well as developing standards, guidelines, and policies that will encourage the evolution of tools to provide data and multi-media integration between states and EPA programs.

**Technology Transfer**- OIRM, NDPD, and ORD are the main focal points in assisting regions, and through them, the states, in planning, training, staff development, and providing technology exchange, data exchange/data sharing as well as pursuing specific, indepth applications development in support of geo-based analysis.

The State/EPA Data Management Program continues to show that both EPA and States gain significant benefits in effectiveness and efficiency from cooperative, integrated data management. The experience to date makes it very clear for the need to be consistent and to enter into long term efforts that institutionalize the capabilities and relationships which are essential to effective State/EPA data management.

Region: Region I

Project: Cape Cod Aquifer Management Project (CCAMP),  
Massachusetts

Key Participants: Lee Steppacher, Ground Water Protection; Michael  
MacDougall, Information Management, Region I

State Contacts: George Zoto, Massachusetts Department of  
Environmental Quality

Data Bases: CERCLIS, HWDMS

Major Accomplishments:

1. Use of GIS to identify necessary data sets including those areas where additional data gathering was appropriate and collection of new data. Perform quality control/ quality assurance procedures on the acquired data sets for Cape Cod Aquifer Management Project (CCAMP). Base maps were generated from an assemblage of digital data including: primary transportation routes, town boundaries, well locations, aggregated land use (commercial, residential), water-table contours and groundwater flow lines.
2. GIS was used in CCAMP to determine new sites for public wells in the towns of Barnstable and Eastham; two possible well sites were identified.
3. GIS was used to help local officials predict which Underground Storage Tanks (UST) pose the greatest risk to public wells.
4. Use of GIS as a planning tool for the development of risk scenarios by the Cape Cod Planning and Economic Development Commission .
5. The GIS application demonstrated the utility of GIS in assisting officials to prioritize management of UST risks and potential hazards.
6. The assimilation of dispersed and non standardized environmental data from numerous agencies into a uniform readily, accessible current data base.

Next Steps:

1. Development of a data base including standards for an extensive quality assurance/ quality control program.
2. Demonstration of the utility of using GIS for developing Wellhead Protection plans for an increased understanding of relevant issues.

Region: Region III

Project: Ground Water Protection, New Castle County, Delaware

Key Participants: Ava Nelson Zandi, Stuart Kerzner, Ed Kratz, and  
David West, Region III

Data Bases: CERCLIS, HWDMS

Major Accomplishments:

1. Dramatically improved the productivity and capability of the Region for advanced GIS applications and their understanding and assessing the scope complexity and nature of environmental problems.
2. Assisted Delaware and New Castle County develop and implement Wellhead Protection Programs and satisfied a Strategic Planning and Management objective in the process.
3. Promoted a truly cross-programatic, multi-media coordination effort between Agencies, Regions, Programs and State and local government on environmental issues concerning ground water and its vulnerability.
4. Enabled EPA to provide and maintain a technical assistance vehicle for states/locals in a program where Federal resources are limited.
5. Successfully demonstrated GIS techniques and procedures which may be applied to other programs in the Region and State.

Next Steps:

1. Based upon the successful experience with these projects, other program offices are committing their resources to GIS projects for the next fiscal year.
2. Begin a series of Federal/State/local cooperative initiatives based on the cross-media analytical capabilities which GIS offers.

Region: Region III

Project: Chesapeake Bay Program (CBP)

Key Participants: Charles Spooner and Lowell Bahner, Chesapeake Bay Program.

Major Accomplishments:

1. In 1987 ARC/INFO replaced MOSS as the CBP's GIS software.
2. GIS has been incorporated as a useful tool in the CBP to support the following ongoing activities:
  - a. GIS will assist the CBP in assessment through watershed modeling. GIS has been examined in the CBP to see how it may be used to identify areas for best management practices (BMP's). As a demonstration project CBP has used GIS to map land use and stream segments in the Baltimore area from USGS land use/land cover files for BMP determination.
  - b. The distributions of water quality indicators and the habitats of living resources are mapped to identify the impacts of water quality on habitats for L.R. restoration purposes.
  - c. Water Quality Monitoring Data from the Bay and tributary monitoring programs are converted to a common format for analysis by the GIS and for documentation and quality control/ assurance activities.

Next Steps:

1. Use of GIS to combine output from water quality and land use models with other data layers, such as living resources to monitor the restoration progress.

Region: Region IV

Project: Environmental Priorities Initiative

State: Georgia

Key Participants: George Collins and Henry Strickland, Office of Integrated Environmental Analysis, Region IV

State Contacts: Ted Jackson, Georgia State Department of the Environment

Data Bases: CERCLIS, HWDMS, DRASTIC

Major Accomplishments:

1. Searching, collecting, coordinating, transferring, and reformatting several state and regional geographic based data formats into the GIS.
2. This project was instrumental in developing a Results/Risk Analysis and Management System (RAMS) to identify, prioritize, track, and evaluate environmental problems and risks.
3. The GIS allows Region IV to be proactive, not reactive to a state's queries in identifying and prioritizing environmental problems.
4. Supports the approach of coordinating region wide data bases and geographic information to assist states in managing environmental programs.

Next Steps:

1. Implement a quality assurance, quality control program for technology transfer between the State and Region.

Region: Region V

Key Projects:

The commitment to establish GIS in Region V was based in the following four proposals:

1. Ashtabula Harbor GIS:
2. Lower Green Bay Ground Water GIS Study
3. Region V Groundwater Study
4. Bottomland Hardwoods GIS

Key Participants: Noel Kohl, John Anagnost, Barry Bolka, Barry Manne, Barry Melville ,  
and John Schneider, Geographic Information Systems

Major Accomplishments:

1. Region V received GIS software and a platform in February, 1989.
2. Hardcopy map outputs representing Clean Water Act, Section 304 (I) were generated to support the Region's Water Program.

Next Steps:

1. Use of GIS as a tool to support the toxics mass balance study for the Lower Green Bay.
2. Use of GIS technology to support the Wetlands Advanced Identification (ADID) Program.

Region: Region VII

Project: Non-Point Source Pollution Analysis

State: Kansas

Key Participants: Walt Foster and Vickie Hale, Environmental Review Branch, Tom Lorez, Water Compliance Branch, Region VII. Bob Humell, U.S. Soil Conservation Service.

State Contacts: Vic Robbins, Kansas Department of Health and Environment and Tom Lowe, Kansas Water Board.

Major Accomplishments:

1. Demonstrate the ability of a Geographic Information System (GIS) to incorporate remote sensing for an analysis of non-point source (NPS) pollution for the 8000 acre Cedar Creek Watershed.
2. The use of a GIS to generate inputs to an agriculture NPS data model and to map model outputs.
3. GIS provided a rapid and repeatable means for generating various scenarios involving different land management practices to minimize NPS pollution

Next Steps:

1. Establish a quality assurance, quality control program for inputs to the non-point source data model.
2. Apply GIS non-point source data model process to the entire state.

Region: Region VIII

Project: Clark Fork River National Priority List Site, Montana

Key Participants: Mason Hewitt EMSL-Las Vegas and Bob Fox, Region VIII

State Contacts: Jim Hill, Montana Department of Health and Environmental Services.

Data Bases: CERCLIS

Major Accomplishments:

1. Educating and assisting the Montana State Office in Geographic Information Systems (GIS) technology and how it can be applied to a Superfund site evaluation.
2. Demonstrate the concept of multidisciplinary teams from Montana as well as the Region for a successful GIS project.
3. Combine GIS with remote sensing technology to assist with the characterization of the entire Clark Fork River Basin.
4. Provide quality assurance, quality control (QA/QC) procedures on the many data layers or maps being added by means of electronic transfer, digitizing, imagery analysis, and data entry.

Next Steps:

1. Show the use of GIS as a powerful tool to augment the remedial investigation feasibility study (RI/FS) process for Superfund Priority Sites.
2. Implement a training and user support program for the states using GIS.

Region: Region IX

Project: San Gabriel National Priority List Site, California

Key Participants: Mason Hewitt, EMSL-Las Vegas, Niel Ziemba and Heather Stone, Region IX

Data Bases: CERCLIS

Major Accomplishments:

1. Demonstrated the value of a Geographic Information System (GIS) to investigate, monitor, and regulate environmental problems at a large superfund site.
2. Prepared aquifer data for input to a groundwater flow model to determine flow pathline from contaminant sink to potential source.
3. Developed preliminary guidelines for quality assurance research for GIS.
4. Prepared technology transfer procedures between the site, state, and region.

Next Steps:

1. Design and implement a detailed database for three-dimensional groundwater modeling.
2. Use the GIS database with a management information system to track cleanup efforts at superfund sites.

Region: Region X

Project: Commencement Bay National Priority List (NPL) Site, Tacoma, Washington

Key Participants: Mason Hewitt and Richard Dulaney, EMSL-Las Vegas and Ray Peterson and Michael Stoner, Region X.

Data Bases: CERCLIS, Knowledgeman

Major Accomplishments:

1. Show that GIS technology can help Federal, State, and local Governments investigate, identify, and analyze environmental problems associated with NPL sites.
2. Demonstrate the use of GIS to determine potential sources of pollution from drainage flows.
3. Develop fundamental GIS techniques through interactive query and spatial overlays for analysis in a remedial investigation and feasibility study (RI/FS) of a Superfund site.

Next Steps:

1. Implement GIS technology over the entire life cycle of the cleanup operation.
2. Evaluate the use of an interactive GIS to benefit the site officer in analyzing the profusion of data to arrive at sound and informative decisions

Region: Region X

Project: Oregon Clean Water Strategy

Key Participants: Ray Peterson, Region X, Denis White ERL-Corvallis, Kim Devonald, OPPE/ERB

State Contacts: Neil Mullane, Andy Schaedel, and Nancy Lillquist, Oregon Department of Environmental Quality (DEQ), and Scott Smith, Oregon Department of Energy.

Data Bases Involved: STORET, PCS, FINDS, HWDMS, CERCLIS

Major Accomplishments:

1. Demonstrate the usefulness of Geographic Information Systems (GIS) as a tool in developing statewide water program planning and management.
2. Coordinating and collecting of relevant information to support a State's Clean Water Strategy.
3. Development of a methodology to prioritize water bodies for further investigation and subsequent action.

Next Steps:

1. Support connectivity between the regional office and Oregon DEQ.
2. Develop training and user support programs.
3. Implement a quality assurance, quality control program for data transfer.
4. Design and program an update procedure for the GIS and its databases.

#### **IV. NEXT STEPS**

During FY 1988 and 1989, the Agency committed to a long term program to institutionalize the State/EPA Data Management program. The Agency has implemented and expanded Phase II of the program. The key components of this phase are Regional Data Integration Capacity, Technology and Data Management, and Technology Transfer will continue to be supported by the Agency.

EPA will seek to improve training and technical assistance to assist States in addressing environmental problems through improved data sharing methods and create ways to share that experience.

The State/EPA Data Management Program will continue to provide support in coordinating the implementation of new information systems for State use including the RCRA Information System and Aerometric Information Retrieval System. As the agency meets the challenges of providing the public, state and local governments with new environmental data in computerized format, the State/EPA Data Management program provides the framework and support to ensure Agency-wide success.

The program has demonstrated that both EPA and States gain many benefits in a shared goal of improving environmental data management. Our biggest task are making tough choices to meet our goals of protecting human health and the environment. EPA is dedicated to meeting these challenges.