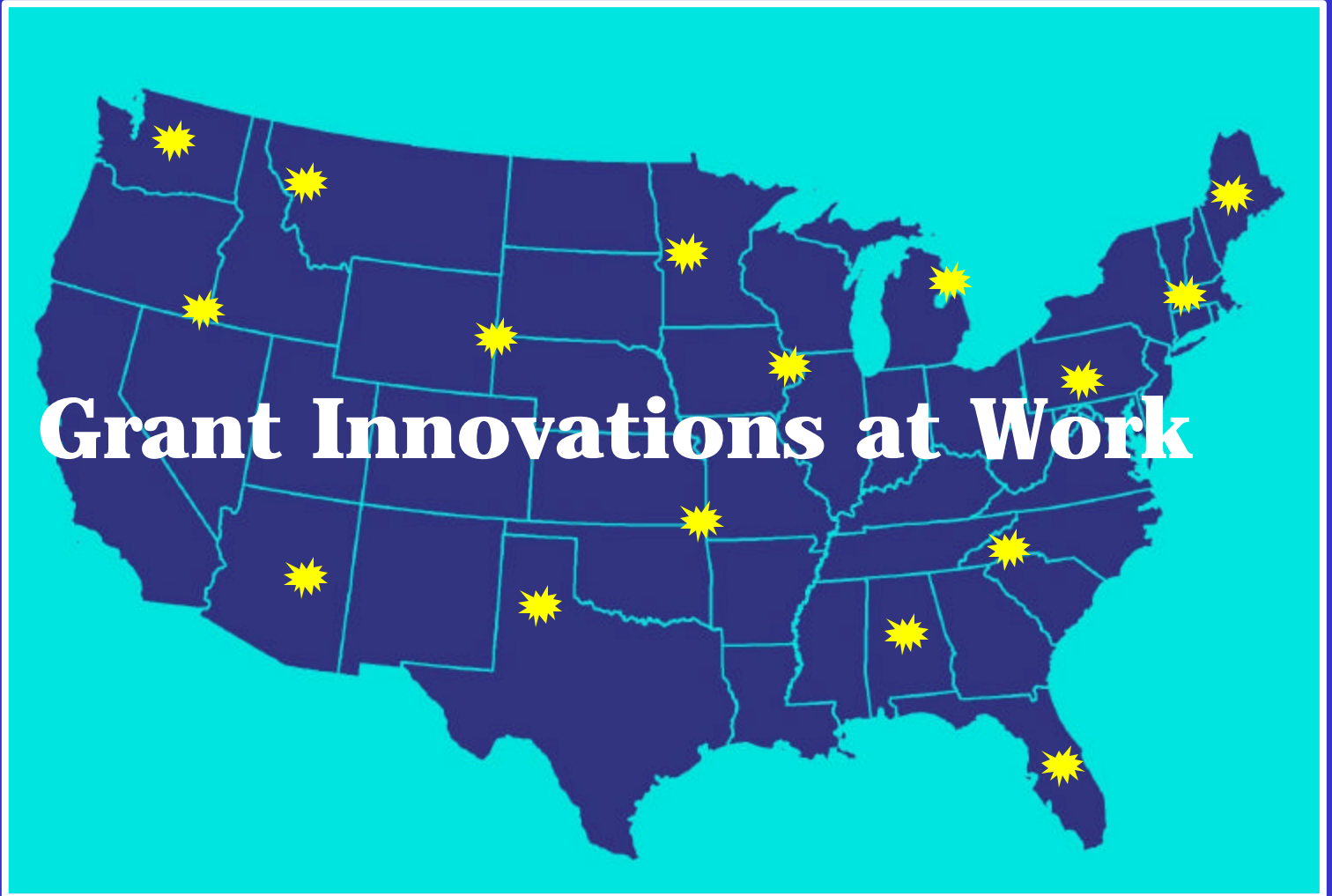




United States
Environmental Protection
Agency



Grant Innovations at Work

An Accomplishments Report
Highlighting the Successes of
State and Tribal Assistance Grants
(STAG)

Grant Innovations at Work: An Accomplishments Report Highlighting the Successes of State and Tribal Assistance Grants (STAG)

**OECA/Office of Compliance
U.S. Environmental Protection Agency
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The material in this document has been obtained from reports and interviews with grantee organizations. The information has been subject to Agency technical and policy review, and approved for publication as an EPA report. The views expressed by individual authors, however, are their own, and do not necessarily reflect those of the U.S. Environmental Protection Agency.

List of Acronyms

AFS	Air Facility System
AIRS	Aerometric Information Retrieval System
CAAP	Clean Air Assistance Program (Michigan)
CAFO	Concentrated Animal Feeding Operations
CDPHE	Colorado Department of Public Health and Environment
CEI	Compliance Evaluation Inspection
CEP	Center for Environmental Protection
CESQG	Conditionally Exempt Small Quantity Generator
CET	Consultation, Education, and Training (Michigan)
CMS	Compliance Monitoring Strategy
COMET	Comprehensive Measurement Tool (Colorado)
COMPASS	Environment Comprehensive Enforcement Compliance and Measurement System (Colorado)
CPE	Comprehensive Performance Evaluation
DEP	Department of Environmental Protection (Maine)
DEQ	Department of Environmental Quality
DES	Department of Environmental Services (New Hampshire)
DNR	Department of Natural Resources (Missouri)
ECOS	Environmental Council of the States
EJP2	Environmental Justice Through Pollution Prevention (South Carolina)
EMS	Environmental Management System
EPM	Enforcement Performance Measures (Missouri)
EPTDD	Enforcement, Planning, Targeting & Data Division (of EPA)
ESSD	Environmental Science and Services Division (of the Michigan Department of Environmental Quality)
ETS	Enforcement Tracking System (Missouri)
FOIA	Freedom of Information Act
FQG	Full Quantity Generator
GPRA	Government Performance and Results Act
HWTR	Hazardous Waste and Toxics Reduction
IDEM	Indiana Department of Environmental Management
IGC	Increased Generator Contact
IPM	Integrated Pest Management
KDWM	Kentucky Division of Waste Management
LCSTLF	Large Capacity Septic Tank/Leach Field
LQG	Large Quantity Generator
MADEP	Massachusetts Department of Environmental Protection
MDEQ	Michigan Department of Environmental Quality; Mississippi Department of Environmental Quality
MQG	Medium Quantity Generator
MRW	Moderate Risk Waste

NESCAUM	Northeast States for Coordinated Air Use Management
NEWMOA	Northeast Waste Management Officials Organization
NHADA	New Hampshire Auto Dealers Association
NHDES	New Hampshire Department of Environmental Services
NMED	New Mexico Environment Department
NPDES	National Pollutant Discharge Elimination System
NPMS	National Performance Measures Strategy
PACE-ME	Public Access to Compliance and Enforcement Milestone Events
P2	Pollution Prevention
PCS	Permit Compliance System
PDA	Personal Digital Assistant
PLF	Performance Limiting Factor
PPA	Performance Partnership Agreement
RCI	Regulatory Compliance Indicator
RCRA	Resource Conservation and Recovery Act
RCRAInfo	Resource Conservation and Recovery Act Information System (formerly called RCRIS)
SCDHEC	South Carolina Department of Health and Environmental Control
SDWA	Safe Drinking Water Act
SIC	Standard Industrial Classification
SME	Subject Matter Expert
SNC	Significant Noncomplier
SQG	Small Quantity Generator
STAG	State and Tribal Assistance Grants
UI	Universal Interface
UIC	Underground Injection Control
WPS	Worker Protection Standards
WQCD	Water Quality Control Division

Grant Innovations at Work: An Accomplishments Report Highlighting the Successes of State and Tribal Assistance Grants

I. Introduction

The U.S. Environmental Protection Agency's Office of Enforcement and Compliance Assurance (OECA) has a fundamental commitment to work cooperatively with states and federally recognized tribes to maintain or improve compliance with federal environmental laws and regulations. Reinforcing its commitment of cooperating with states and tribes, OECA makes grant funds available to regulatory partners to strengthen their ability to address environmental and public health threats, while furthering the art and science of environmental compliance.

The State and Tribal Assistance Grants (STAG) program funds projects developed by states, tribes, multistate organizations and intertribal consortia. Grants are competitively awarded, and individual projects are selected based on their potential to build capacity, demonstrate innovative compliance assurance techniques and assess program performance. The program has funded 69 projects, covering eight project areas, to date. Grant recipients include 34 states, one tribe, and seven multi-jurisdictional state agencies and organizations.

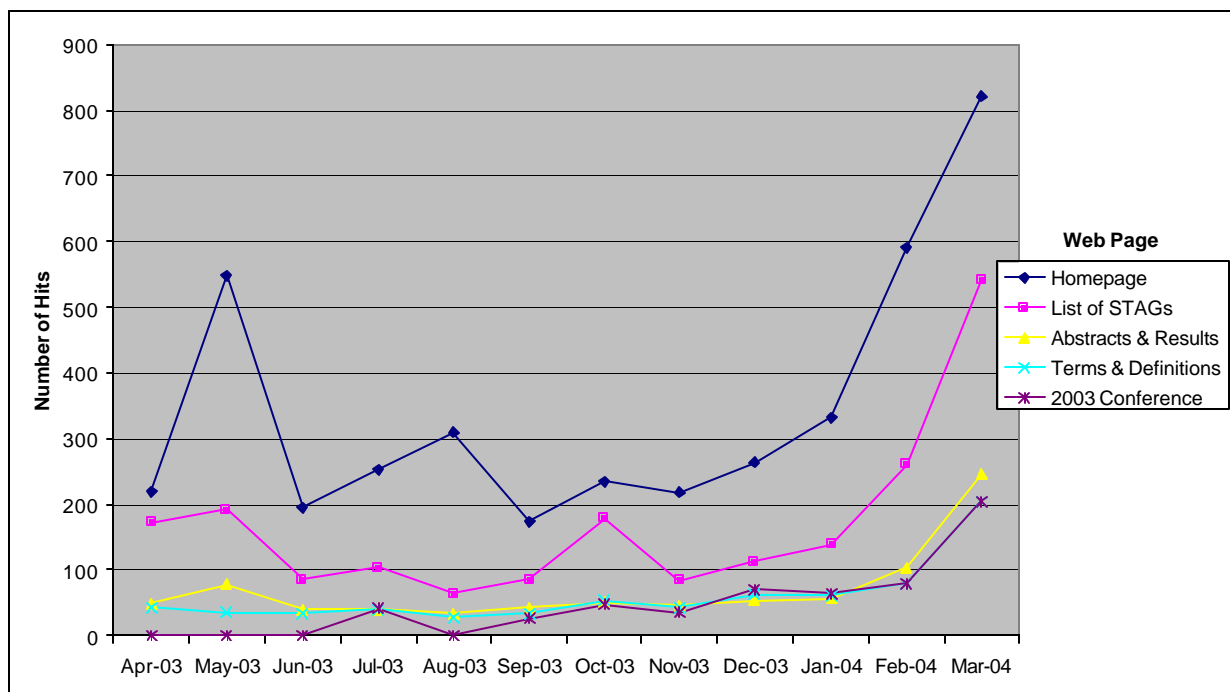
By helping environmental regulatory agencies determine which activities can achieve the best outcomes, the STAG program reinforces the strong performance results focus of EPA. This focus is reflected in a new EPA Order titled "Environmental Results Under EPA Assistance Agreements," which includes grants and cooperative agreements. EPA recognizes the importance of linking assistance agreements, cooperative agreements and grants to the Agency's performance goals and includes specific objectives to ensure that project grants, cooperative agreements, solicitations, work plans and decision memoranda discuss anticipated environmental results and how they will be measured.

To publicize the lessons learned from the STAG-funded activities, this report provides an abstract of each project to date, along with the results achieved from those that are further along in their grant cycle. The report specifically highlights projects with innovative results and potential transferability to other organizations, and projects that have created institutional change within the grantee's organization. These highlighted projects demonstrate how information sharing fostered by OECA can drive innovation. For those interested in more comprehensive information about all of OECA's STAG-funded projects, please visit <http://www.epa.gov/compliance/planning/state/grants/stag/index.html>. The Web site provides a "one-stop" portal for current grantees, prospective grantees and other interested parties to access grant-related information quickly and easily. The Web site displays the following information:

- List of all grant projects (69 projects to date)
- Abstracts and results for each project
- Current Federal Register Notice
- Commonly used STAG terms and definitions
- Grant Conference proceedings for 2003 and 2004
- STAG fact sheet and STAG schedule
- Tutorial on applying for a grant.

The following chart shows the number of “hits” on the various pages of the STAG Web site (i.e., the number of times each page has been accessed by a user). The trend shows a spike in usership in May 2003, after the site was launched and demonstrated at the 2003 Grant Conference, and again in March 2004 preceding the 2004 Conference.

Number of Hits to STAG Web site

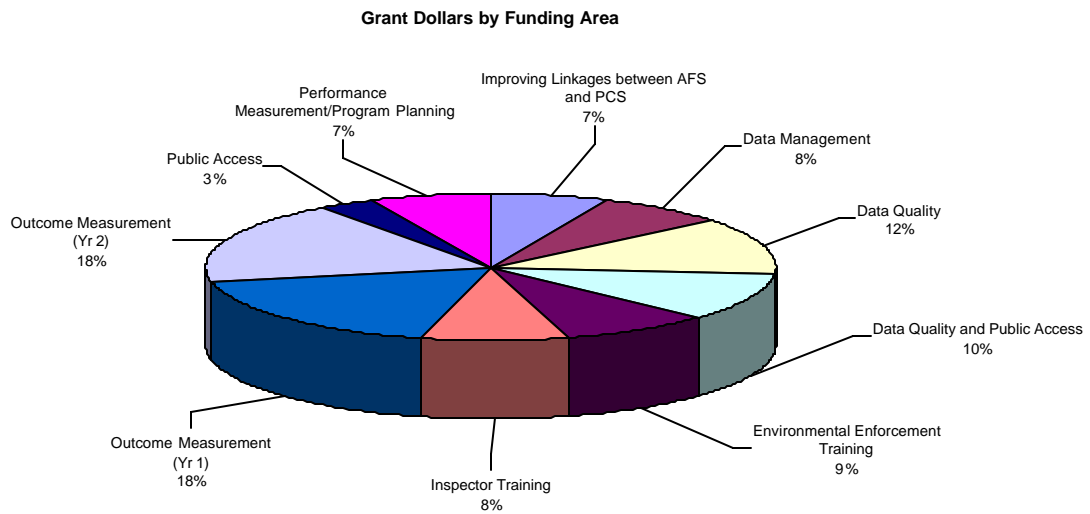


It is the express hope of those involved with the STAG program that these projects can serve as resources to help states and tribes experiment, evaluate and share results with each other as they work to protect public health and the environment by ensuring compliance.

II. Funding Areas

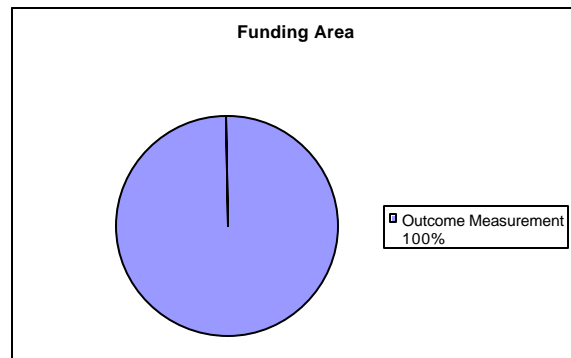
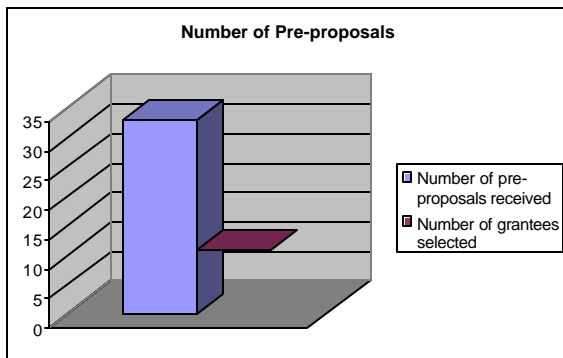
For each funding cycle, OECA regional and headquarter offices select focus area(s) defined as high-priority categories (e.g., Environmental Enforcement Training). The high-priority categories are identified by the regional offices and headquarters as a perceived need in the Enforcement and Compliance Program. The high-priority categories are also linked to the Agency's strategic plan.

The selection criteria are clearly defined in the Federal Register Notice. Potential grantees develop a pre-proposal or a proposal that addresses the focus area. The following chart shows the breakdown of grant dollars awarded by funding area.



Grant Period 1999–2000

The amount of funds awarded in 1999-2000 was \$1.6 million. The funding area for this grant cycle is described below.



Outcome Measurement

For many years, EPA and states have used enforcement outputs such as inspections conducted, cases settled, or penalties assessed as the primary performance measures for their enforcement and compliance assurance programs. While these output measures provide important information about the enforcement presence among regulated facilities and industries, they do not measure outcomes or results achieved. Specifically, traditional output measures do not characterize the state of compliance in regulated facilities, describe the environmental results achieved through enforcement and compliance assurance activities, assess the extent to which important objectives and problems are being addressed, or include other approaches to increasing compliance such as incentives for self-policing and programs to deliver compliance assistance.

Through its National Performance Measures Strategy (NPMS), OECA began in February 1997 to develop enhanced performance measures for the federal enforcement and compliance assurance program. These measures (see Box 1) were phased in over a three-year period (1996–1999), and they were used in the FY2000 Annual Performance Plan required by the Government Performance and Results Act (GPRA). OECA also worked with state environmental agencies to develop accountability measures for enforcement and compliance assurance programs. These measures were used in FY2000 Performance Partnership Agreements (PPAs) between states and EPA Regional Offices.

The measures being implemented as part of the OECA Strategy and those selected for the PPAs retain important output measures, but put increased emphasis on outcome measurement. Measurement of outcomes is generally very challenging due to the difficulty of defining final outcomes, lack of supporting data, and the complexity of developing measures that are valid and representative of populations being measured.

Projects were funded to facilitate the development and implementation of performance outcome

Output Measures

- Total number of inspections conducted at major facilities, and the percentage of the total universe of regulated sources inspected in negotiated priority areas (e.g., industry sectors, geographic areas).
- Enforcement activity (e.g., case referrals, orders, notices) undertaken, by medium.
- Number of facilities or entities reached through each type of compliance assistance activity.

Outcome Measures

- Environmental or public health benefits achieved through concluded enforcement activities (e.g., case settlements, injunctive relief).
- Rates of significant noncompliance for selected regulated populations.
- Percentage of significant noncompliers (SNCs) that have been returned to compliance or otherwise addressed.
- Results of using state alternative compliance approaches (e.g., audit laws or policies, small business compliance programs, Excellence in Leadership projects) and compliance assistance.

Box 1

measures in state enforcement and compliance programs. By funding these projects, EPA accomplished the following:

- Encouraged states to move toward outcome measurement for enforcement and compliance assurance programs.
- Shared with states the tools and lessons learned from OECA's efforts to develop outcome-based performance measures.
- Improved communication between OECA and the states about development and implementation of enhanced performance measures.

Preference was given to projects developing and implementing outcome measures included in the NPMS or the accountability measures developed by EPA and the Environmental Council of the States (ECOS) for the PPAs. Pre-proposals were evaluated based on whether suggested performance measures fulfilled the criteria specified in Box 2.

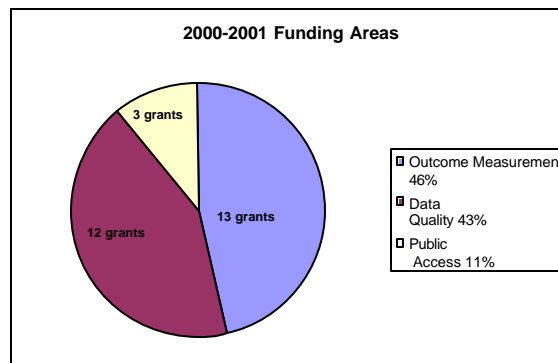
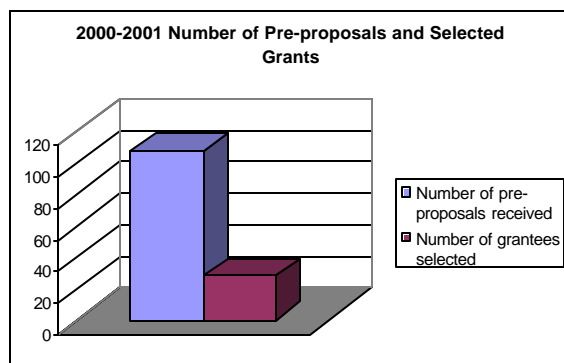
Criteria for Performance Measures Projects

1. Measures must have relevancy with regard to important goals and objectives of enforcement and compliance assurance programs.
2. Measures must be transparent and comprehensible to important users and audiences.
3. Measures must be credible and be based on accurate and timely supporting data.
4. Measures must be feasible to implement without costs disproportionate to their value.
5. Measures must be functional and promote good performance by regulated entities and agency personnel.

Box 2

Grant Period 2000–2001

In this cycle, OECA funded projects in three areas: data quality, public access and measurement of compliance assistance outcomes. The amount of funds awarded was \$3.82 million.



Data Quality

The goal of this funding area was to improve the data in the compliance and enforcement data systems of EPA and of state partners. States are responsible for more than 90 percent of the data that are entered or transferred to EPA's compliance and enforcement data systems. The information in the national data systems is only as good as the data that states input, and EPA is aware that funding constraints make it difficult for many states to implement system improvements and cure known problems. Consequently, OECA made these funds available to assist states in developing systems and approaches to managing data that will maximize the quality of the data provided to the national systems and minimize reporting burdens.

Projects were funded to improve the quality of environmental enforcement and compliance data and included the following tasks:

- Correcting erroneous data
- Ensuring completeness of data
- Adding new data to fill existing information gaps
- Developing state and EPA translators
- Providing universe identification for economic sectors and sub-sectors.

Criteria for Data Quality Projects

1. Projects must support a permanent solution to a data quality problem or lead to a permanent solution to identified data quality problems and not just a temporary or current year problem.
2. Projects must address problems or provide improvements to data used by the state and by EPA.

Box 3 describes the criteria used for approving projects in this funding area.

Box 3

Public Access

Providing access to compliance information ensures that the public can obtain information on the environmental health of their communities and neighborhoods. Increased public scrutiny of enforcement and compliance information also has the secondary effect of improving data quality, as the states and EPA increase their data quality efforts so that the public is accessing data that are timely and accurate. Box 4 describes the criteria used for approving projects in this funding area.

Criteria for Public Access Projects

1. Projects must provide a permanent enhancement *or* an innovative way to provide public access.
2. Projects must complement existing EPA public access efforts (e.g., Sector Facility Indexing Project).

Box 4

Measurement of Compliance Assistance Outcomes

In the 2000–2001 grant period, OECA continued its funding of projects to develop outcome measures. In this grant period the funding area differed from the previous year in that it focused on the development and implementation of outcome measures for state compliance assistance activities (see Box 5). Outcome measurement from compliance assistance presents unique challenges compared to other activities such as enforcement where the results are mandated and can be tracked more easily. Examples of compliance assistance measures are presented in Box 6. Criteria for approval in this funding area can be found in Box 7.

Types of Compliance Assistance Activities

- Site visits
- Workshops
- Mailed tools or outreach materials
- Hotlines
- Phone calls
- Meetings
- Training

Box 5

Examples of Outcome Measures from Compliance Assistance Areas

Changes in awareness or understanding of regulations or compliance:

- Number of facilities whose understanding of environmental regulations has improved as measured by pre- and post-tests at workshops.
- Number of facilities whose understanding of environmental regulations has improved as a result of the compliance assistance received, as indicated by verbal or written responses to surveys.

Behavioral changes (regulatory and nonregulatory environmental management changes):

- Number of facilities that have taken at least one action to comply with environmental regulations because of the compliance assistance received.
- Number of facilities that have improved the quality of self-reported information or begun reporting this information for the first time.
- Number of facilities adopting nonregulatory process changes or best management practices as a result of compliance assistance received.
- Number of facilities making environmental management changes (e.g., improved training, self-audits, development of an environmental management system) because of the compliance assistance received.
- Number of facilities demonstrating improved compliance rates, measured through direct observation.

Environmental or human health improvements:

- Number of facilities that reduce emissions or other pollutants.
- Amount of emissions, pollutants, or risk reduced.

Box 6

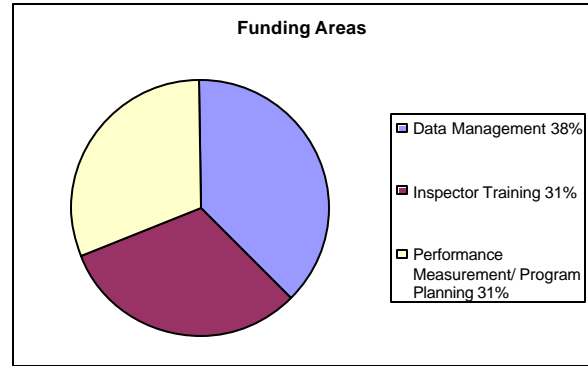
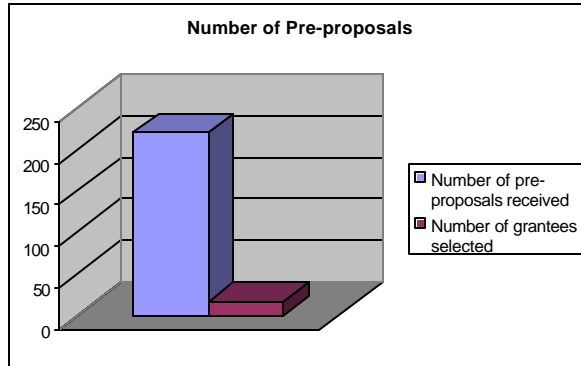
Criteria for Compliance Assistance Outcome Measurement Projects

1. Suggested performance measures must meet the criteria in Box 2.
2. Information and data must be relevant to, and shared with, other states and EPA.

Box 7

Grant Period FY2002

In FY2002, OECA continued the emphasis on data quality and performance measurement, and expanded funding areas to include inspector training and program planning. The three funding areas—tribal and state inspector training, program planning and performance measurement, and data management—are described below. The amount of funds awarded was \$2.1 million.



Tribal and State Inspector Training

The goal of this funding area was to build tribal and state inspector capability. EPA maintains discretionary authority to ask tribes and states to conduct civil inspections on behalf of the Agency under each federal environmental statute. It is essential that tribal and state inspectors are trained to safely and properly conduct federal civil inspections. In this grant cycle, OECA considered projects for basic inspector training, media-specific inspector training, and health and safety training courses.

Projects to build partnerships between states or tribes through regional inspector workshops were also solicited (see Box 8). Workshops could be designed for state, tribal or local inspectors within a region, and could cover a variety of topics designed to build inspector capability to conduct compliance monitoring inspections under federal authority. A requirement of the workshops was that selected host states or tribes would fund the travel, course materials and contractor costs through grant funds.

Criteria for Inspector Training Projects

1. Projects must demonstrate an explicit intent to collaborate and partner with other states and tribes within an EPA region to host or participate in an inspector workshop.
2. The course outline and content must be consistent with EPA federal guidelines and are supportive of an authorized program (e.g., training that provides information on federal inspection law and policy). Course content may also provide information on inspection issues that arise under state and tribal laws.

Box 8

Program Planning and Performance Measurement

In this funding area, EPA funded projects to develop or implement performance measurement outcomes or improved program planning, as described below.

Enhancing Results Through Improved Regional, State and Tribal Planning

Projects were funded to support state or tribal efforts to collaboratively carry out joint priority setting and work planning and included the following components:

- State or tribal plans to perform efficient enforcement and compliance work planning with EPA regional offices.
- A process to produce a surrogate, risk-based ranking of all identified enforcement and compliance assurance problems facing a state or tribe.

Outcome Measures for Enforcement and Compliance Assurance Initiatives

Projects were funded to help states and tribes develop and test outcome measures for compliance assurance and enforcement activities in FY2002.

In the FY2002 grant cycle, EPA clarified the scope of outcome measurement projects to quantify the environmental results from state compliance assistance efforts. This was intended to promote and further the regulated communities' understanding of their environmental obligations and to quantify the same efforts undertaken by compliance assistance providers. Whereas the compliance assistance outcome projects in FY2000/2001 sought to measure behavioral changes at regulated facilities, the FY2002 projects sought to measure the changes in environmental compliance rates as a result of the behavioral changes by regulated facilities.

Development of Performance Measures for Concentrated Animal Feeding Operations (CAFOs) and Worker Protection Standards (WPS)

Funding was available in this area for states and tribes to develop and field test outcome measures that would gauge the effectiveness of assistance, incentives, monitoring and enforcement on CAFO and WPS compliance. See Box 9 for examples of outcome measures for enforcement and compliance assurance initiatives.

Examples of Outcome Measures for Enforcement and Compliance Assurance Initiatives

Statistically valid noncompliance rates:

- Development or implementation of a methodology for statistically valid noncompliance rates.

Improvements resulting from enforcement actions and initiatives:

- Number or percentage of concluded enforcement actions identifying pollutant reductions.
- Amount of emissions, pollutants or risk reduced from enforcement actions.
- Number or percentage of enforcement actions that result in improvements in the use or handling of pollutants, such as changes in industrial processes or storage and disposal practices to achieve emission and discharge reduction.
- Number or percentage of enforcement actions that result in improvements in facility management practices and information.

Improvements resulting from compliance assistance activities and initiatives:

- See Box 5 for examples of compliance assistance activities.

Improvements resulting from integrated initiatives:

- Environmental or human health improvements or behavioral changes from initiatives that include more than one tool (e.g., enforcement and compliance assistance).

Improvements resulting from self-policing efforts and use of compliance incentive policies:

Compliance incentive policies encourage the regulated community to voluntarily discover, disclose, and correct violations before they are identified by regulatory agencies for enforcement investigation or response. Examples of outcome measures from enforcement activities are:

- Number or percentage of concluded self-disclosed actions identifying pollutant reductions.
- Amount of emissions, pollutants or risk reduced from self-disclosed actions.
- Number or percentage of self-disclosed actions that result in improvements in the use or handling of pollutants.
- Number or percentage of self-disclosed actions that result in improvements in facility management practices and information.

Box 9

Data Management

The goal of this funding area was to enhance states' and tribes' ability to provide better integration of data (e.g., on enforcement and compliance) and to improve state and tribal multimedia targeting, reporting and compliance assurance capabilities (see Box 10 for the selection criteria). It is critical that a state or tribal system be capable of reporting data to EPA that are consistent with EPA and state data standards, and in line with new requirements of modernized data systems (e.g., the Permit Compliance System [PCS]) or current requirements of legacy media systems. OECA is interested in maximizing the quality of the data provided to the national systems while minimizing reporting burdens, especially for states and tribes with numerous independent data systems. This funding area also supported projects to assist states and tribes with reporting of consistent, streamlined environmental and compliance data to EPA, including PCS Modernization and the Universal Interface of the Air Facility System (AFS-UI). Support was available to upgrade current state systems and incorporate the use of the AFS-UI software to improve system interfaces, data linkages and data cleanup.

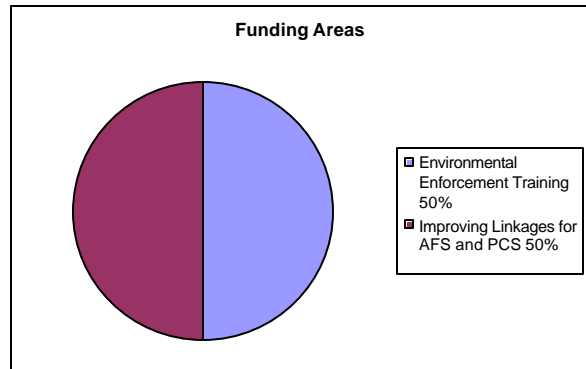
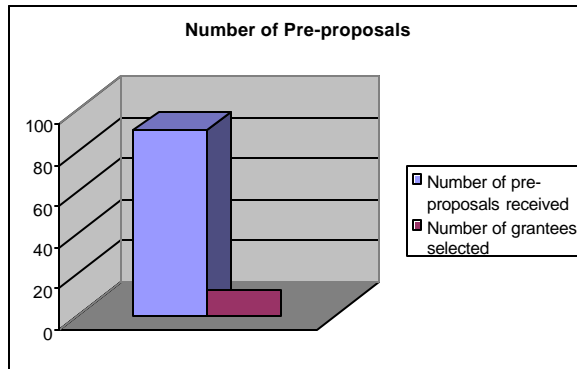
Criteria for Data Management Projects

- Projects must support or provide a solution to consistent, streamlined reporting of data across the various independent media systems or lead to identifying problems and issues associated with the reporting of environmental data to EPA, with recommendations for solving the problem.
- Projects must address problems and provide recommendations for improving data reporting to EPA by states and tribes.
- Projects must support implementation of EPA and state data standards, modernization efforts and data clean-up efforts that promote better integration of data across EPA systems.

Box 10

Grant Period FY2003

In FY2003, OECA solicited proposals in two areas: environmental enforcement training and improved linkages between EPA and state and tribal data systems. A points system was used to relate the relative importance of each funding area's selection criteria (which are outlined in Box 11 and Box 12). In addition, EPA looked at past performance of grantees under this grant program (e.g., timely and complete quarterly and semiannual reports, results and outcomes that are apparent during the project, timely and complete final reports). The amount of funds awarded was \$1.8 million.



Environmental Enforcement Training

The goal of this funding area was to continue funding projects to build capacity among state and tribal personnel in the area of environmental enforcement training. States, tribes or organizations were to host training workshops or sponsor state and tribal personnel attendance at existing training programs (e.g., for inspectors and case developers). Strengthening enforcement skills for states and tribes conducting inspections on behalf of the Agency is important. To ensure that these responsibilities are performed appropriately, OECA considered proposals to train:

- Inspectors with a focus on single-medium media inspections, multimedia inspections or criminal investigations.
- Law personnel with a focus on single-medium media and multimedia enforcement case development.

The selection criteria are outlined in Box 11.

Criteria for Environmental Enforcement Training Projects

- Projects must clearly identify the type of training to be conducted and the targeted audience.
- Projects must explicitly state and describe the training and verify that the training can accommodate the number of participants specified in the pre-proposal.
- Description of course outline and content must show consistency with EPA federal guidelines and be supportive of an authorized program (e.g., training provides information on federal inspection law and policy); course content may also provide information on inspection issues that arise under state and tribal laws.
- Projects that include development of new training must show evidence that existing course materials will be used (e.g., materials for the Basic Inspector Training Course of the EPA National Enforcement Training Institute–West); funding should be used to revise and adapt existing training as much as possible and not be used to duplicate training that is readily available from other sources.
- All training funding projects must include payment of full travel and lodging costs for state and tribal training participants.
- Projects must address sharing results: describe how you will share training materials and products (e.g., archive training materials on CD-ROM, make available on Web site, distribute training materials at conferences).
- Projects must identify output and outcome measures (i.e., identify number and type of personnel to be trained as well as describe how training will improve skillfulness or job performance); describe how success will be measured (e.g., use of questionnaires and surveys before and after training).

Box 11

Supporting Improved Linkages Between EPA and State and Tribal Data Systems

The goal of this funding area was to continue supporting projects to improve the data management capabilities of states and tribes (see Box 12 for the selection criteria). OECA funded projects to support the enhancement of quality data to EPA from states and tribes as well as projects that assist states and tribes with reporting of consistent, streamlined compliance data. Funding was available for PCS modernization and the AFS-UI. Funding was also provided to build state and tribal capability to implement Air Compliance Monitoring Strategy (CMS) data reporting. States and tribes need to make sure that their systems are compatible with EPA's systems and that they can accurately transmit data to EPA. The funds allowed states and tribes to procure the expertise they needed for this purpose.

Permit Compliance System Modernization

Grant funding would support state efforts to procure technical assistance and technical expertise for state system modifications to ensure the continued flow of nationally required National Pollutant Discharge Elimination System (NPDES) data from state systems to the PCS. Examples of covered state activities included:

- Enhancement or modification to existing state system interfaces or development of state system interfaces to the new modernized system format.
- Enhancement of state systems to incorporate new data requirements for new NPDES programs (e.g., CAFO, Storm Water).
- Data clean-up and data migration efforts.

Criteria for Projects Supporting Linkages Between EPA and State and Tribal Data Systems

- Projects must describe briefly the existing state and tribal system.
- Projects must describe briefly the technical aspects of how data are currently exchanged with EPA.
- Projects must clearly identify the states' and tribes' development efforts to allow for increased data integration and reporting linkages to meet EPA's modernized system(s) and new data requirements.

Air Facility System

Box 12

- **Universal Interface:** Grant funding assisted states and tribes with incorporating the AFS-UI software into their current systems to provide improved system interfaces, data linkages, and data cleanup.
- **Capability of state and tribal facility systems to implement Air CMS data reporting:** Grant funding assisted state and tribes with methods to modify their state systems to streamline the capture and transmission of nationally required air compliance and enforcement data with special emphasis on reporting of the following: stack tests and results; dates that compliance certification was due, received and reviewed; and information on compliance certification deviations and certification review results.

III. Results

This section summarizes the results (i.e., outputs, outcomes) of grants that were awarded in previous years based on grantees' final reports. All grants with final reports submitted before December 31, 2003, are included. The results information has been garnered from the following sources: (1) final reports, (2) grantee conference presentations, and (3) phone interviews with the grantee. Results information is characterized as outputs (e.g., compliance assistance materials) and as outcomes (e.g., behavior changes as a result of compliance assistance). In some instances, grantee results are neither outputs nor outcomes, but intermediate outcomes, which are expected to lead to the ends desired but are not themselves ends.

Business Needs Assessment and Measurement of Work Product Effectiveness

Michigan Department of Environmental Quality (MDEQ)

Grant period: 2000–2001

Funding area: Outcome Measurement

Grant amount: \$40,000

Objectives

This project gauged the usefulness of one of the products of Michigan's Clean Air Assistance Program (CAAP) for small businesses. Under this project Michigan sought to accomplish the following objectives:

- Query the compliance needs of statewide small and medium-sized businesses.
- Measure the effectiveness of the current level of technical assistance provided by focusing on the effectiveness of one type of program product (a multimedia guidebook) and one type of outreach effort (a compliance assistance workshop) for this particular guidebook.
- Better promote the services of the state's Small Business Technical and Ombudsman program within the business community.

The CAAP program product whose effectiveness Michigan sought to measure was the *Michigan Manufacturers' Guide to Environmental, Safety, and Health Regulations*.¹ In 2000, MDEQ developed this program product, its fourth industry-specific technical assistance guidebook that explains in plain English how to comply with the multitude of state and federal environmental, health, and safety regulations in the workplace. The guidebook was presented at a series of statewide workshops to more than 600 environmental, safety and health professionals. Never had such a comprehensive and coordinated effort been made by a multitude of state agencies to address the general environmental, safety and health needs of Michigan's manufacturing industry. Grant activities measured limited aspects of the CAAP by examining the effectiveness of the program's outreach efforts as a technical assistance

¹The guidebook is currently available at <http://www.michigan.gov/deq/0,1607,7-135--47596--,00.html>.

resource for the state's business and industry. Additional aspects of the grant provided ways in which the CAAP can improve its methods of outreach to better serve its customers.

Findings²

To accomplish the work product assessment, a consulting firm administered two surveys and two focus group sessions. The first survey was administered to 1,800 program customers who received a copy of the environmental, safety and health guide. The second survey was delivered to a random pool of 3,000 statewide noncustomers to determine what needs still existed within the environmental community and how the program could best meet those needs in the future.

The research findings from the surveys and focus group sessions effectively demonstrated the great value that the state's businesses have placed on the multimedia guidebook, the *Michigan Manufacturers' Guide to Environmental, Safety, and Health Regulations*. Most businesses found it to be a thorough, economical and useful resource for environmental, safety and health issues.

The research, which also measured the use of and need for other outreach services delivered by MDEQ, Environmental Science and Services Division (ESSD), and CAAP, showcased the important role that these services play in helping business and industry achieve and maintain environmental, safety, and health compliance. It also demonstrated the high satisfactory rating that businesses awarded to services currently rendered by MDEQ, ESSD and CAAP.

Although current work products and services received high marks under this project, some common themes emerged from the responses of the focus groups, customer survey, and noncustomer survey. These recommendations offered MDEQ, ESSD and CAAP some constructive models for change. MDEQ has an ongoing commitment to improve its compliance assistance efforts and will use this information to make enhancements to its environmental outreach programs.

One theme derived from the project's research focused on the improvement of promotional activities of MDEQ, ESSD and CAAP. Although CAAP and ESSD have existed since 1994, each still seems to suffer from a lack of name recognition and the underutilization of available services. One explanation could be the traditional approach to advertising and marketing MDEQ's products and services. MDEQ has made regulatory and compliance information available through its agency calendars, newsletters, mailings and Web site, leaving it up to business and industry to seek out the information in order to meet their compliance requirements. Consequently, research participants' responses showed some lack of awareness of the range of products and services offered by the ESSD or CAAP. Research participants encouraged MDEQ to more clearly distinguish its sponsorship and ownership of specific events and work products.

²A copy of the final report submitted to EPA upon completion of this grant's project can be downloaded at <http://www.epa.gov/compliance/resources/reports/stag/fy2001/stag01-mi-busneeds-final.pdf>.

Another theme revolved around ways in which MDEQ, ESSD and CAAP could improve their compliance assistance efforts. Respondents who have used work products such as the *Michigan Manufacturers' Guide to Environmental, Safety, and Health Regulations* seemed quite pleased overall with the content and format of the guidebook, and with the two state agencies' efforts to combine their program expertise to produce a multimedia work product. In fact, participants encouraged additional efforts to combine environmental media requirements such as merging various program reporting requirements into one form or report, and using more tables, checklists and flow diagrams to quickly outline compliance requirements.

Research participants also wanted to see MDEQ bridge the gap between what is expected during an inspection and the compliance assistance information that is provided through consultation or training sessions, so that the information provided is applied consistently from region to region and between headquarters and the district offices. The findings also pointed out businesses' need for industry-specific information that makes it clear what regulations are applicable, what resources are available, and which staff person to contact when questions arise.

Expanding the methods for the delivery of work products and services was another theme that arose from the research findings. This meant looking at new or easier ways to provide information to business and industry. Often mentioned was the use of electronic media such as the Web, delivery of environmental compliance information on CD-ROM, and the use of email service for updates. Even though MDEQ considers its Web site a convenient and nonthreatening method for information delivery, very few research participants seemed to use the site, making it an underused resource for compliance assistance. Most found the Web site difficult to navigate or had difficulty in downloading information.

Finally, the research found that those currently using the services of MDEQ, ESSD and CAAP usually sought help to clarify or interpret a regulation or requirement. Additionally, when asked, research participants overwhelmingly agreed that environmental regulations were important to Michigan's quality of life. Many respondents indicated their willingness to do the right thing when it came to environmental, safety, and health compliance, but were always seeking the most economical means to accomplish this mission. As MDEQ, ESSD and CAAP continue to evolve and develop new tools for business and industry to use, it will be important that the focus for outreach remain balanced among usefulness, need, cost and access to a specific work product or service. The research recommendations provided by this project are the starting point for MDEQ, ESSD and CAAP to begin the necessary, subtle programmatic changes that will continue to provide substance and value for future compliance assistance efforts.

Results

The following are work product and service enhancements that MDEQ, ESSD and CAAP are implementing as a result of these research findings:

Guidebook Improvement:

- Improve the Facility Assessment Survey located at the front of the guidebook.

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- Provide a direct hyperlink, in the electronic copy (CD-ROM version) of the guidebook, for Web site references.
 - Include more tables, checklists, flow diagrams and graphics.
 - Develop an environmental reporting Calendar of Events.

Workshop Improvement:

- Develop an annual schedule of standard workshops and training opportunities that MDEQ will offer during the fiscal year.

Service Improvement:

- Provide a greater awareness of, or establish a brand name for, products and services by expanding existing advertisement and marketing activities.

As a result of the two focus group sessions and two surveys, MDEQ has determined the following **intermediate outcomes** of this project:

1. The small business community should be able to prepare better and more complete permit applications. In the end, this will save time and resources for MDEQ.
2. MDEQ will revamp its multimedia workshops and offer sessions that specifically educate small businesses in answering the *how* and *what* of complying with federal regulations. The small business community is interested in understanding the regulations so that they can remain in compliance or get into compliance quickly.
3. For MDEQ and its internal customers, the improved workshops and training guides will enable MDEQ to deliver a better product that reaches a wider audience. MDEQ wants to deliver a product that is pertinent, interesting and readable to a wide audience.

Capacity Building Grants – Enforcement and Compliance Assurance

Mississippi Department of Environmental Quality (MDEQ)

Grant period: 2000–2001

Funding area: Data Quality

Grant amount: \$56,346

Objectives

The objectives of this grant project were to:

- Develop a methodology (based on a joint plan developed by MDEQ and EPA) to identify all incorrect, erroneous, duplicated and missing data contained in the Air Facility System (AFS), the Permit Compliance System (PCS) and RCRAInfo.
- Perform facility file and Federal database reviews to identify any missing or incorrect data as it pertains to compliance and enforcement activities.
- Enter all missing data, correct all erroneous data and delete any duplicate facility data as it applies to compliance and enforcement activities.
- Develop a comprehensive training document for transferring compliance and enforcement data to the appropriate database manager for entry into AFS, PCS and RCRAInfo on a timely and consistent basis.
- Provide EPA or other states with any processes and procedures used to identify erroneous or missing data to reconcile federal and state-specific databases.
- Review, correct and input locational data for the applicable federal and state-specific databases during the facility file review.

Findings³

MDEQ conducted a facility and database review of the state's AFS, PCS and RCRAInfo programs to identify erroneous and incomplete data. MDEQ rectified any incomplete, erroneous or missing compliance and enforcement data in the appropriate federal databases using the methodology developed with EPA. In addition, MDEQ performed a monthly reconciliation of the federal databases and their state-specific database, while noting discrepancies and correcting them on a timely basis.

MDEQ also developed a training program for its permitting, compliance and enforcement staff to ensure that future data would be complete and correct. MDEQ will schedule the training annually for

³A copy of the final report submitted to EPA upon completion of this grant's project can be downloaded at <http://www.epa.gov/compliance/resources/reports/stag/fy2001/stag01-ms-dataclean-final.pdf>.

the three federal databases and will provide additional training to staff as programmatic changes to the federal databases occur and as new staff members are hired.

Results

By performing a comprehensive facility file and database review and making the appropriate corrections, MDEQ can assure EPA, regulated facilities and the public that information contained in the federal and state-specific databases is both current and accurate.

The **intermediate outcomes** of this project are:

1. Having accurate and accessible compliance and enforcement data allows MDEQ and EPA to make informed decisions on the state of the environment.
2. Accurate and reliable data enable MDEQ and EPA to make inferences about environmental and human health improvements. Accurate data will enable MDEQ and EPA to measure the number of facilities that reduced emissions or other pollutants and quantifiable environmental improvements.

Measuring Performance from Enforcement and Compliance Assurance in Missouri

Missouri Department of Natural Resources (DNR)

Grant period: 1999–2000

Funding area: Outcome Measurement

Grant amount: \$37,500

Objectives

This project's goals included the following:

- Incorporate data processes into DNR's data systems to facilitate information sharing with EPA.
- Identify the business rules needed to collect environmental performance measures.
- Build on the concepts used in EPA's Case Conclusion Data Sheets.
- Require no more than five minutes of staff time to collect the additional information.
- Map the new environmental performance measures in the Enforcement Tracking System (ETS) to EPA's case conclusion data.
- Collect both quantitative and qualitative environmental performance data.
- Minimize the need for additional staff training on collecting the new performance measures.
- Update ETS to include data entry information, sample reports and coding tables.

The Environmental Performance Measures (EPM) subsystem of the Missouri DNR's ETS has been in service since March 1, 2002. A total of 1,307 resolved enforcement cases have been entered into the system to date from the Air Pollution Control Program, the Public Drinking Water Program, the Solid Waste Management Program, the Land Reclamation Program and the Hazardous Waste Program. Of those, performance measures have been entered for 739 cases (56 percent).

ETS operates in conjunction with the Permit Actions Management System and the Production Tracking System (inspections and complaints) as the only agencywide regulatory tracking database. There were some difficulties early on regarding duplicate facility records, response time, business process definitions and programming quirks. Lack of system confidence promoted continued use and expansion of local databases, undermining the correction and refinement of ETS. Aside from the lack of water pollution data and continuing refinement of facility and site records, ETS is now fully functional as originally designed. ETS will soon undergo further revisions to effectively couple it to the Production Tracking System dealing with inspections and complaints.

ETS is designed to allow flexibility to the central program offices in entering data. Data entry in ETS is easy and quick enough so that either the enforcement technical staff or the clerical staff can enter data.

With the addition of the EPM subsystem, the ETS users (those who access ETS on their computers) will find no change in methods to add data except that once a case is resolved, the system will require that the environmental data of the case be entered. Most of the background data required in EPA's Case Conclusion Data Sheet will have been entered prior to entering the performance measures. The EPM data add a significant amount of data entry to the overall ETS, even though a primary goal was to keep data development and entry to less than five minutes per resolved enforcement case.

ETS has always provided a data entry screen that lists and labels enforcement milestones date fields. In ETS/EPM, when the case resolved date on this screen is entered, the user is now asked whether there are environmental performance measures associated with the case. By selecting no, the user returns to the case record, requiring no further action on EPM. If the user selects yes, ETS/EPM shifts to a separate series of screens containing the EPM fields. The fields are:

- Pollutant name or category
- Medium (air, land, water, multimedia)
- Reduction actions required (direct, indirect)
- Environmental benefits
- Health concerns
- Counts or measures

Each screen must be completed before the user is returned to the case record. Most fields to be filled in provide a drop-down list of potential selections. New selections may be added by making a request to the system maintainer and obtaining approval by the enforcement committee. If the user does not have the required information, he or she is allowed to return to the case record without saving EPM data. In that case, the "case resolved date" field must be left blank to ensure that the user can return to the record to complete the EPM data.

A new ETS/EPM users' manual and a new data entry form have been developed to aid data entry. In addition, two training sessions have been provided to the programs on the EPM system. Individual programs have received program-specific training as well.

Findings⁴

Assessment of ETS

Goal: Incorporate features that facilitate information sharing with EPA.

Status: Data tables contain EPA crosswalk information to facilitate potential data transfers.

Goal: Identify the business rules needed to collect environmental performance measures.

Status: In place, but continuing to be refined.

Goal: Build on the concepts used in EPA's Case Conclusion Data Sheets.

Status: Finished.

Goal: Require no more than five minutes of

staff time to collect the additional ETS information.

Status: Staff experienced with ETS/EPM can approach this goal.

Goal: Map the new ETS environmental performance measures to EPA's case conclusion data.

Status: Data tables contain EPA crosswalk information to facilitate potential data transfers.

Goal: Collect both quantitative and qualitative environmental performance data.

Status: EPM collects qualitative and quantitative data.

Box 13

Because ETS/EPM serves seven offices in two divisions within Missouri DNR, identifying all meaningful data points and standardizing data parameters and definitions was difficult. As the revised system is still relatively new, problems with definitions or omitted fields continue to emerge. Of particular interest since the implementation of the module has been an issue associated with the Health Concern data field. Typically, health concerns are not specifically identified in enforcement cases. Evidence is almost always associated with illegal releases, which are much simpler to prove than harm to health or environment. Often, association of a violation or enforcement case with specific health issues goes beyond what the state has proved and should not be included.

Another concern has been the inability to enter environmental performance measures until the case is resolved. Often, a violation is corrected long before a case is resolved. In the ETS/EPM system, staff cannot enter the measures taken until all litigation, penalty payment, and Supplemental Environmental Project (used as part of or in lieu of a penalty dollar amount) work is carried out.

⁴A copy of the final report submitted to EPA upon completion of this grant's project can be downloaded at <http://www.epa.gov/compliance/resources/reports/stag/fy2000/stag00-mo-msrperf-final.pdf>.

Staff are working to allow EPM data entry at the Actions Complete milestone, a field that indicates the enforcement case work is almost complete and the remaining activities are left to the defendant or the Attorney General's Office.

And finally, the count of occurrence is a field that causes confusion among the users. It is a unitless count and difficult to explain to both user and public. It is possible that this field will need to be removed.

Results

Many of the goals set for the ETS/EPM system have been reached or are within reach. The **intermediate outcomes** of this project are:

1. Data collection has improved as the system has stabilized and people are trained in its use, and staff are preparing for a thorough evaluation of the EPM data to report results for FY2004.
2. The Missouri DNR is hopeful that the data collected will aid as an effective means to communicate enforcement and compliance assistance successes. As an agency, Missouri DNR is committed to providing meaningful environmental data about its enforcement activities to all who are interested, and will continue to use and refine the EPM system to help meet this commitment.

Development of a Universal Interface for the Aerometric Information Retrieval System Facility Subsystem

Northeast States for Coordinated Air Use Management (NESCAUM)⁵

Grant period: 2000–2001

Funding area: Data Quality

Grant amount: \$100,000

Objectives

The purpose of this project was to upgrade the existing Universal Interface (UI), which uploads air facility compliance and enforcement facility and activity data from state databases to the Aerometric Information Retrieval System Facility Subsystem (AIRS/AFS).⁶ The UI was developed in response to the need of state and local agencies with independent data systems to report mandatory compliance and enforcement requirements to EPA. Prior experience showed that development and maintenance of individual agency software could put an undue burden onto the state.

Before the undertaking of this project, the original UI software was failing consistently on new computers, and only two states (Oklahoma and Nebraska) were using the original UI. Therefore, EPA provided funds to NESCAUM to update the UI. The goal of this update was to:

1. Build an updated version of the UI that will take advantage of today's software technology.
2. Incorporate new data elements to further define data and increase accuracy.

Agencies Using the Upgraded UI

- Alaska
- Arizona
- Connecticut
- Hawaii
- Jefferson County, Kentucky
- Louisiana
- Maine
- Michigan
- Mississippi
- Nebraska
- New Hampshire
- North Dakota
- Oklahoma
- Puget Sound, Washington

Box 15

⁵NESCAUM is an interstate association of air quality control divisions in the Northeastern states. The eight member states are the six New England States (VT, NH, CN, ME, RI, MA), as well as New York and New Jersey. NESCAUM's purpose is to exchange technical information and to promote cooperation and coordination of technical and policy issues regarding air quality control among the member states. To accomplish this, NESCAUM sponsors air quality training programs, participates in national debates, assists in exchange of information and promotes research initiatives.

⁶AFS contains compliance and permit data for stationary sources regulated by EPA and state and local air pollution agencies. AFS was once a part of AIRS; hence, the historical use of that term may be incorporated within referenced documentation.

Findings⁷

The current UI user manual was updated to include all features developed by this project. In addition, the new UI has incorporated the user manual into the software so that the manual can be accessed by using the software.

The primary purpose in upgrading the UI was to increase its functionality. Benefits expressed by agencies using the new UI include:

- Reduction in the effort needed to report federally required data.
- Significant reduction in workloads due to the elimination of duplicate entry into data systems.
- Enhancement of data transfers done in batch jobs.
- Institution of a highly efficient quality assurance process that provides EPA with more complete and accurate data.
- Transfer of critical data elements to AFS.
- A graphical drag-and-drop interface that lets agencies quickly and easily connect new related state actions to high priority violations.
- Reduction in development and maintenance costs.
- Simpler transaction formats.
- Identification of weaknesses in the data stream.
- Immediate validation of data equivalent to that performed in AFS, shortcutting the need to transfer data to the EPA system and submit overnight reports.
- Timely identification and correction.
- Elimination of errors caused by manual entry.
- Easy-to-use browser that creates a familiar, user-friendly environment.

Results

Better compliance assistance data translate directly into accurate compliance rates for each of the eight member states—each of these states will be putting better data into their state systems. The **intermediate outcomes** of this project are:

1. Burden reduction for the eight member states: the project has helped the states with their data entry requirements and will help to prevent manual data entry errors. States will now be able to use resources more efficiently because duplicate entry into data systems has been eliminated.

⁷A copy of the final report submitted to EPA upon completion of this grant's project can be downloaded at <http://www.epa.gov/compliance/resources/reports/stag/fy2001/stag01-nescaum-afsui-final.pdf>.

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2. Improved data quality: AFS has the same information as the state systems.
 3. Improved timeliness of reporting for the member states.

Highlight

One of the project partners, the Maine Department of Environmental Protection (DEP), has calculated some of the initial benefits of implementing the upgraded UI. Prior to using the UI, Maine DEP was a direct user of AFS. Maine's nine compliance inspectors would spend a minimum of one hour each month entering data into AFS. In addition, the compliance manager would spend a minimum of four hours each month generating and reviewing AFS reports (equivalent to the time required to inspect 15 synthetic minor sources). This calculates to a minimum of 156 hours (20 days a year) spent solely on reporting data to AFS. This time was in addition to the time that Maine spent maintaining its own compliance data system. In addition, under the old system Maine DEP had no quality control built into its data reporting. This commonly led to the reporting of erroneous information to AFS, such as double entry of facilities, failure to enter Air Program Pollutant Compliance Status, and creative entries for Action Codes.

Upon implementing the UI, Maine DEP created a data system that is multifunctional. Inspection staff accomplish more than one task when entering data, including standardizing use of codes and quality control of data when input. Since use of the upgraded UI began, the nine compliance inspectors spend no time entering data into AFS. The compliance manager spends no more than four hours each month generating UI transactions and reviewing AFS reports. This translates into only 48 hours annually spent on providing data to AFS, a 70 percent reduction in the resources required to provide compliance and enforcement data to EPA. The compliance manager reports that while using the UI has reduced the reporting burden, the quality of Maine's data in AFS has increased significantly.

Box 17

Measuring the Effectiveness of Partial Inspections, Risk-Based Facility Targeting and Compliance Activities

New Hampshire Department of Environmental Services (NHDES)

Grant period: 1999–2000

Funding area: Outcome Measurement

Grant amount: Total EPA Grant Award to NHDES = \$185,000: \$100,000 for the Outcome Measurement component of the project, and \$85,000 subcontracted to NEWMOA for related work on a regional hazardous waste compliance measures project and continued development of the pollution prevention metrics database

Objectives

Historically, environmental regulatory agencies have relied on output (activity-based) measures to assess compliance. Such measures fail to capture the full range of an agency's compliance assurance activities and reflect little about the effectiveness of such efforts or rates of compliance in the regulated community. To address this problem, NHDES applied for a grant from EPA's Office of Enforcement and Compliance Assurance (OECA) to develop program-specific outcome measures that provide a more complete picture of compliance rates and agency performance.

The project that OECA funded for the outcome measurement component of the project had two phases. In Phase I, EPA Region I in Boston contracted with Tetra Tech EMI to review existing data in RCRIS (now called RCRAInfo) to determine whether it could be analyzed to develop compliance rates and trends. Also in Phase I, the results of education and outreach efforts associated with an automotive industry sector project were evaluated. It was determined that in both instances, the information gathered was not sufficiently specific or statistically valid to support compliance rate determinations or to determine the efficacy of outreach efforts. However, in Phase II, NHDES developed a compliance indicator survey for hazardous waste generators that would overcome the previously-identified data obstacles and allow NHDES to target actual inspections to facilities that were most likely to need full inspections. The survey has been implemented using summer interns to establish a baseline and will be repeated in future years to measure changes that result from specific NHDES interventions.

Findings⁸

The major findings based upon analysis of the data include the following:

- Eighteen percent of the generators in the NHDES database were inactive.
- Five percent of the New Hampshire small quantity generators (SQGs, equivalent to federal conditionally exempt SQGs) visited generated wastes at higher levels than notified.
- The overall compliance rate for the state is 65 percent.

⁸A copy of the final report submitted to EPA upon completion of this grant's project can be downloaded at <http://www.epa.gov/compliance/resources/reports/stag/fy2000/stag00-nh-rcrainsp-final.pdf>.

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- The highest compliance rates are for aisle space and waste characterization.
 - The lowest compliance rates are for training and emergency postings.
 - There were significant differences in behavior between New Hampshire full quantity generators (FQGs) and small quantity generators (SQGs).
 - Key measures include inspections, waste characterization and periodic assessments.

Other significant benefits of the project include:

- NHDES worked with the New Hampshire Auto Dealers Association (NHADA) to develop outreach targeted at automobile dealerships; NHADA realized the importance of environmental compliance and hired a full-time staff person to work with members.
- NHDES was able to identify facilities that needed a full CEI, thereby making more effective use of limited inspector resources.
- NHDES reached approximately 1,000 facilities in two years and delivered information to assist them with compliance. This is significantly more than the number of facilities reached in the prior 10 years.
- An automated system now exists to capture all inspection information, and NHDES is moving towards using personal digital assistants to facilitate data collection and processing.

Results

One of the most significant results of the effort to revamp the CEI checklists and develop the database is the increased efficiency in conducting inspections and preparing reports. Approximately 32.5 work-hours per inspection and 40 work-hours per program summary report will be saved due to the ability to pre-populate inspection forms, use only the applicable modules for an inspection, use personal digital assistants for container inventories and generate reports from the database using programmed violation tables. It is anticipated that because of the increased efficiency, NHDES staff will be able to inspect a larger percentage of the regulated universe. An additional benefit of the project is that data on generator behavior have been collected using a statistically-valid method. All future data collection will thus complement the existing database and will be able to support future statistical analyses.

NHDES considers this project to be a success, and has shared the results of the project with several states. As a result, Connecticut, Oregon and Maine are now interested in pursuing similar processes in their Resource Conservation and Recovery Act (RCRA) and underground storage tank programs. The goal is to use the same core questions (for the RCRA surveys), working out language that will be applicable to all states. Implementing the same compliance survey in many states will allow better analysis of compliance across states and will help identify comparative strengths; for example, if a state has a high compliance rate in one area, others can look at that state's approach as a model and apply it themselves. Some states are also interested in using the surveys to find facilities that have the most compliance issues for targeted full inspections, since most states currently have no reconnaissance or screening inspections to identify facilities that need full inspections.

So far, the survey approach has not been applied to other (non-RCRA) programs at NHDES. The survey approach works best for programs with a large number of facilities, a small staff, and objective criteria that can be applied in the form of a brief checklist - attributes not currently found in other NHDES programs.

Development of Enhanced Performance Measures for Enforcement and Compliance Assurance Programs

Texas Commission on Environmental Quality

Grant period: 1999–2000

Funding area: Outcome Measurement

Grant amount: \$75,000

Objectives

This program involved one-to-one personalized technical assistance for small businesses in Texas. For this assistance, an independent environmental consultant determined compliance with all applicable federal and state air, water and waste regulations by using a compliance checklist specific to that industry. The consultant also provided technical assistance in determining compliance and recommending solutions to identified environmental problems. In addition, the consultant identified opportunities for pollution prevention measures the businesses could implement to reduce waste and save money. A follow-up site visit provided compliance data to compare against baseline data and thus determine increases in compliance and changes in behavior.

Findings⁹

The contractor made 49 initial site visits to determine small business compliance and pollution prevention and 28 follow-up site visits at participating businesses where noncompliance with any state or federal regulation was documented. Data were collected and management of pollution prevention case studies was used to monitor and track the types of improvements resulting from the site visits.

The contractor noted and addressed several common issues during the technical assistance visits to small businesses. These common issues included:

- The site had not submitted applications for required air permits and was thus not in compliance with air permitting rules.
- The site had not conducted a waste assessment to determine which, if any, of their wastes were hazardous.
- The site did not keep required records related to waste generation rates or waste management (e.g., storage schedules).
- The site had not submitted proper forms to obtain a storm water permit.
- The site was releasing process wastewater into a local sewer system without properly notifying the system operator.

⁹A copy of the final report submitted to EPA upon completion of this grant's project can be downloaded at <http://www.epa.gov/compliance/resources/reports/stag/fy2000/stag00-tx-msroutcomes-final.pdf>.

Results

The EPA grant provided partial funding for the site visits conducted in 1999 and 2000. Through the site visit program, estimates of compliance rates before and after the consultant's visit were created based on how the site rated on a sector-specific checklist. Overall, compliance increased from approximately 50 percent before the visit to approximately 90 percent after the visit. In addition, during this period, 18 businesses corrected all compliance issues noted during the site visit and became eligible for the Compliance Commitment Partnership, a program that offers a one-year exemption from scheduled investigations for sites in full compliance with environmental rules.

Since the program's inception, its recognition has expanded. Along with the Texas Commission on Environmental Quality, EPA and numerous local environmental enforcement authorities in Texas recognize the one-year exemption from scheduled investigations at sites that demonstrate complete compliance via a site visit. Also, these enforcement authorities have informed the small business program which sectors are likely to be the subject of upcoming investigations so that those groups can be encouraged to achieve compliance via a site visit. These partnerships between the compliance assistance and enforcement units have resulted in significant improvements in compliance rates among small businesses and more efficient use of state resources.

The **outcomes** of this project are:

1. Compliance rates increased from approximately 50 percent before the visit to approximately 90 percent after the visit.
2. In addition, during this same period, 18 businesses corrected all compliance issues noted during the site visit and became eligible for the Compliance Commitment Partnership, a program that offers a one-year exemption from scheduled investigation for sites in full compliance with environmental rules.

Analysis of Change in Generator Compliance Using Regulatory Compliance Indicators (RCIs)

Washington State Department of Ecology

Grant period: 1999–2000

Funding area: Outcome Measurement

Grant amount: \$215,270

Objectives

The Washington Department of Ecology's Hazardous Waste and Toxics Reduction (HWTR) program developed a project with STAG funding to test the relationship between inspections and compliance over time. Given all the factors (e.g., cultural and economic) that influence how a company manages its hazardous wastes, HWTR wanted to test whether a correlation could be established between compliance inspections (and technical assistance visits) and regulatory compliance over time.

The following three project goals were designed to compare site inspections, both technical and compliance assistance, with generator regulatory compliance over time:

1. Establish a baseline quantitative measure of statewide environmental compliance supported by specific regulatory violation categories that best represent actual or potential environmental threats.
2. Determine if a relationship exists between formal compliance enforcement inspections and regulatory compliance by regulated facilities and, if so, how the relationship changes over time.
3. Determine if there is a relationship between technical assistance visits and good environmental management rates among small quantity generators (SQGs). This goal specifically focused on technical assistance visits in the form of increased generator contact (IGC) visits, conducted primarily at SQGs.

Findings¹⁰

Following is a summary of the major conclusions reached and suggestions for further action:

- There is a correlation between generator status and overall environmental compliance, with Large Quantity Generators (LQGs) showing poorer compliance than Medium Quantity Generators (MQGs). HWTR found that the strongest predictor of environmental compliance is generator status. Therefore, since LQGs have significantly more compliance problems than MQGs, the HWTR program should continue making frequent inspections and compliance follow-up of LQGs a priority, and EPA should continue to emphasize inspections of LQGs in its Performance Partnership Agreements (PPAs) with the states.

¹⁰A copy of the final report submitted to EPA upon completion of this grant's project can be downloaded at <http://www.epa.gov/compliance/resources/reports/stag/fy2000/stag00-wa-generator-final.pdf>.

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- For both the LQG and MQG universes, the category with the least violations was the Spills category. In fact, for LQGs there were no spill violations in the sampled facilities and only one violation among sampled MQGs. For both for LQGs and MQGs, the category having the most violations was the Designation category; Container Management violations were also significant for both LQGs and MQGs. Therefore, it is suggested that HWTR make an effort to pinpoint the aspects of designation that are causing the most problems for generators, and then focus educational efforts on those areas; Container Management also needs added attention.
 - Hazardous waste inspections of facilities positively affect compliance with hazardous waste regulations (and thus contribute to protecting the environment). The positive effects of compliance inspections tend to wear off over time, although the deterioration in compliance is minimal for the first few years after an inspection. After about five years, however, the deterioration in hazardous waste compliance becomes more pronounced. Therefore, as resources allow, HWTR should make an effort to reinspect both LQGs and MQGs every five or six years.
 - The best approach to deciding what baseline RCI index to use for any given analysis is to keep in mind the way different baseline indexes are created, and then decide which baseline index is best, given specific knowledge of the facilities to which it will be applied.
 - For all three summary RCI indexes (Yes/No, Categorical, and Absolute), the weighted baseline scores are better than for *any* of the time-stratified data. This seems to be an anomalous result, since the average date of last inspection for the weighted baseline universe is certainly substantially less recent than 1998; one would expect that the 1998 RCI indexes (and possibly the 1996/97 indexes) would be better than the baseline average. The most obvious explanation is that there is systematic bias in the time-stratified data, the bias being a tendency to target facilities that may have compliance problems. Such systematic bias means that the time-stratified data can be accurately compared between time-stratified groups, but that time-stratified data cannot be accurately compared to data groups not sharing the bias, such as the LQG and MQG baselines; the LQG, MQG, and weighted baselines can be used for comparison to data groups having no systematic bias.
 - For facilities generating relatively small amounts of hazardous waste, compliance technical assistance visits (specifically, Increased Generator Contact visits) appear to be as effective as formal compliance evaluation inspections in maintaining regulatory compliance. Therefore, for relatively small generators, HWTR should continue to put program resources into technical assistance visits for regulatory compliance. Technical assistance visits require fewer resources per visit, and at times, more results can be achieved with the same investment of resources (as compared to formal inspections).
 - Now that HWTR has established statewide baselines or average RCI indexes for regulated hazardous waste generators in the state, many different types of analyses of regulated facilities are possible as a way to target field inspections and enforcement resources more efficiently. For example, HWTR could compare facilities in different geographical regions of the state against the baseline indexes to determine if certain regions need proportionally more resources allocated to field work. Likewise, comparisons of certain types of industries (i.e., specific Standard Industrial

Classification codes or groups of codes) with the baseline indices might help focus resources on particular industries.

Results

The **intermediate outcomes** of this project are:

1. LQGs have more serious environmental compliance problems than MQGs or SQGs. This new knowledge will allow Washington State to better use its inspection resources by making LQG inspections a priority.
2. Inspection duration: project findings highlighted that approximately every five years is the right frequency for reinspections. This new knowledge will assist Washington State in making reinspection decisions on LQGs and MQGs and may help other states with their own inspection/reinspection resource issues and decisions.

IV. Institutional Change and Transferability of Results

The previous section of this report described the achievements of grants that have reached completion. Distinct from these achievements, certain grant projects have had far-reaching, systemic effects on the grantees' organization or have produced outputs that other organizations can use. This section of the report examines such effects on institutional change and transfers of outputs to others. Some of the projects highlighted in this section are not complete, but all have been identified by the appropriate subject matter experts and project officers as good examples of either institutional change or transferability of results (i.e., the projects' results or outcomes are likely to have an impact). The project impacts described in this section are based on telephone interviews with the grantees, as well as examination of written materials.

The projects are shown below in alphabetical order by grantee. Further details on completed projects can be found in the Results section of this report, and the full final report is available on the STAG Web site.

Comprehensive Enforcement Compliance and Measurement System Project

Colorado Department of Public Health and Environment (CDPHE)

Grant period: 1999–2000

Funding area: Outcome Measurement

Grant amount: \$522,940

Contact: Joe Schieffelin, (303) 692-3356, Phyllis Woodford, (303) 692-3477

CDPHE received STAG funding in 1999 for the Comprehensive Enforcement Compliance and Measurement System (COMPASS) project. The COMPASS project assesses the department's enforcement and compliance assistance activities and is comprised of six individual pilot projects being conducted across media. The pilot projects focus on different business and industrial sectors and measure the results of various approaches to compliance assurance. The goal of the COMPASS project is the statistically valid measurement of the results and effectiveness of each approach. Ultimately, the project will result in the creation of a database and a final report.

CDPHE originally developed this project as a multimedia experiment on various aspects of compliance assurance. The Air Division undertook asphalt and chrome sector projects, the Water Division completed a drinking water supply project, and the Hazardous Waste Division implemented a RCRA Small Quantity Generator (SQG) project and a data collection project. CDPHE also used the grant for the design of software that would query all media databases and generate reports that were activity-specific rather than facility-specific.

The most ambitious project was in the asphalt sector, where CDPHE's Air Division worked with the Colorado Asphalt Paving Association and set aside that sector from enforcement during the pilot. Forty companies with a total of more than 60 facilities participated. For this project, the Air Division carried out a preliminary multimedia compliance assessment, worked with the companies to attain compliance,

and performed a follow-up assessment a year later. This approach was resource-intensive, but highly successful.

For the SQG pilot, the Hazardous Waste Division used 60 facilities divided into three groups—one set to serve as a control, one set to receive notification that they would be inspected, and one set to receive guidance documents along with the notification of inspection. The Hazardous Waste Division perceived a small improvement in compliance between the control group and the group that was notified of an upcoming inspection. However, the Division saw no difference between the group that was notified of an upcoming inspection and the group that was notified and provided with compliance assistance materials. Therefore, the Division concluded that passive delivery of compliance assistance added no benefit to compliance rates compared to simply notifying a facility of an upcoming inspection. This finding is important because it will enable the Division to focus time and resources on other compliance assistance efforts that have better results.

For the water pilot, the Water Quality Control Division (WQCD) hired a contractor to conduct comprehensive performance evaluations (CPEs) at 28 surface water treatment plants to identify performance limiting factors (PLFs). PLFs are any direct or indirect aspects of a surface water treatment plant operation that can negatively affect the performance of the plant operation, and as a result, the treated water quality. For example, one PLF that the contractor found at several facilities was the lack of disinfection to handle the peak or design flow for the treatment plant. The result of the pilot was an analysis of the number and type of PLFs identified and the percentage of the facilities that took action to eliminate those PLFs based on compliance assistance efforts (e.g., telephone interviews with the facilities about two years after the CPE). WQCD plans to continue this pilot by visiting each of the surface water treatment plants to verify the information gathered in the follow-up telephone calls. The Division also plans to extend the pilot to 41 other surface water treatment plants in Colorado.

The other pilot in the Hazardous Waste Division (which is a possible example of institutional change) is the data collection pilot. The division staff had been gathering data on violations in seven categories that they needed to report each year to EPA, but they realized that those data were not very informative because the categories were too broad. The division staff have changed the way they categorize the same data and now collect data on approximately 50 groupings. Inspectors now check for violations on each specific requirement. The change in number of categories is permanent and works very well. The expanded data groupings provide more precise information about violations so that the division can now target compliance assistance more precisely.

Another example of institutional change is the asphalt pilot project. CDPHE is interested in replicating the concept to other sectors: focusing on a sector and trying to bring it into compliance through initial assessments and then ongoing monitoring. The format and concept can be applied to any regulated program and to any sector. The Water Division will try this concept next, and the CDPHE is considering it for agencywide use.

The other component of the COMPASS project is the development of a database query capability across media. Rather than being facility-based (i.e., designed to pull up information on a facility), this

cross-media query capability is activity-based (e.g., queries based on types of violations or number of inspections). Although CDPHE staff are still learning how to fully exploit this query capability, it already allows CDPHE to determine what the activities are and what their effects are. The query software's design is Internet-based and very transferrable, and is considered excellent. Other states will want to use the database query capability simply because it is a useful tool to pull cross-media data that can illustrate progress on environmental outputs, outcomes and conditions.

Prototype for Sector-based Outcome Measurement (Auto Salvage Facility Sector Project)

Indiana Department of Environmental Management (IDEM)

Grant period: 2000–2001

Funding area: Outcome Measurement

Grant amount: \$190,000

Contact: Pam O'Rourke, (317) 232-4464

IDEM received STAG funding to develop a sector-specific model for outcome-based performance measures. The auto salvage facility sector was selected for this project because this sector has considerable compliance issues.

The performance measurement tools used in this project include both output and outcome measures. The output measures are:

- Number of compliance assistance manuals distributed
- Number of workshops offered and number of people trained
- Number of "hits" on the project Web site
- Number of presentations made to external stakeholders and interested parties
- Number of on-site audits requested and number of multimedia inspections conducted
- Number of enforcement actions issued
- Number of facilities invoking use of IDEM's Self-Audit Policy
- Number of referrals made to other local, state, and federal agencies
- Number of criminal referrals made

Some of the outcome measures used for this project are:

- Behavioral changes (e.g., was the facility recycling certain materials prior to the workshop; if so, what were they recycling, and did they anticipate making changes to their recycling efforts?). To measure these changes and determine the effectiveness of the workshops, the results of pre- and post-workshop surveys will be compiled.
- The change in storm water compliance rates, determined by comparing the number of facilities submitting their Notice of Intent prior to the compliance assistance activities and after.
- The amount of contaminated soils remediated as a result of enforcement actions taken.

Department staff have gathered facility location information and entered it into a project database; created compliance assistance tools in the form of a multimedia inspection checklist, manual, workshops and Web site; and conducted 11 compliance assistance workshops throughout the state. At

the conclusion of the compliance assistance phase, IDEM conducted the inspection phase, consisting of a minimum of 50 multimedia targeted inspections. As the final stage, IDEM will take enforcement actions where appropriate.

IDEM expects that results of the project will be a marked increase in the compliance rates of the auto salvage facility sector, accomplished through the project's compliance assistance, inspection and enforcement efforts. Most, if not all, of the project results will be easily transferrable to other states, tribes, and EPA regional offices (depending upon available resources). The phased approach upon which the project is based (compliance assistance, compliance monitoring, and enforcement) is very transferrable because most states, tribes, and EPA regional offices include each of these components in their organizational structures. The multimedia approach used for this project can also be easily replicated, depending upon the statutory authorities available in tribes and states. The multimedia inspection checklist generated as part of this project is also transferrable, but would need revision to reflect specific tribal or state authorities and rule citations. The software packages used for development of the database, compliance assistance materials, and inspection targeting are widely available.

The comprehensive final report that IDEM will prepare at the conclusion of this grant will serve as a useful reference for states, tribes, and EPA regional offices in replicating this project. In the final report, IDEM will also discuss the efficacy of using the auto salvage facility sector as the prototype model to address compliance issues associated with other sectors.

Public Access to Compliance and Enforcement Milestone Events

Kentucky Division of Waste Management (KDWM)

Grant period: 2000–2001

Funding area: Public Access

Grant amount: \$200,000

Contact: Barbara Cornett, (502) 564-6716, barbara.cornett@ky.gov

KDWM received STAG funding to make RCRA information more accessible to the public and to states, regions and tribes. The RCRA Information System (RCRAInfo), operated and maintained by EPA, houses information on facilities and their compliance with the hazardous waste program. Currently, RCRAInfo has very few compliance and enforcement reports available for users; the reports that are available have limited selection functionality, making it impossible for a user to focus on a particular facility or company. In addition, RCRAInfo contains sensitive enforcement information. Reports developed for agency use are not suitable for distribution to the public under the Freedom of Information Act (FOIA); however, there is a need to provide valuable information that is currently maintained in the Compliance and Enforcement Module of RCRAInfo to the public in a format that protects confidentiality. The project was designed to provide valuable enforcement and compliance assurance information to the public.

The activities of the Public Access to Compliance and Enforcement Milestone Events (PACE-ME) project, were to:

- Identify data quality issues in the compliance and enforcement data by developing data assessment reports.
- Identify all significant noncompliers (SNCs) in the state and ensure that all data are accurately reported in RCRAInfo.
- Identify compliance and enforcement information stored in RCRAInfo that should be accessible to the public because it is not considered sensitive.
- Develop standard reports that can be used in any state, for any region or nationwide to report the compliance and enforcement history of either a specific hazardous waste generator, transporter, recycler, burner/blender or facility or all entities operating nationwide under a specific company name.
- Develop standard reports that can be used in any state, for any region or nationwide to report the compliance history of all facilities meeting the criteria selected.
- Make these reports available on the Internet.

The aim of PACE-ME is to share certain information with the public and to develop reports drawing information from RCRAInfo that could be used in any state, regional or national program. Under PACE-ME, KDWM staff will pull information from RCRAInfo every quarter and post it on Kentucky's Web site. This will allow the public to view compliance and enforcement data concerning

local facilities 24 hours a day, seven days a week. The reports from RCRAInfo give KDWM much-needed standard reporting capability and flexibility to pull compliance and enforcement information based on specific requests. As a result of PACE-ME, KDWM will be able to respond more promptly to requests for compliance and enforcement data that are stored in RCRAInfo. The public reports are the:

- Enforcement action report
- List of SNCs (without subsequent formal enforcement action)
- Violations and enforcement actions
- Violations out of compliance report
- Facilities not inspected report
- Compliance summary report
- Timely and appropriate report

The division also completed some data quality reports on the front end to ensure that the correct data are reported before extracting data for the public. These will be extremely useful for reviewing data within RCRAInfo to verify that what is posted for public viewing is accurate. These data quality reports are primarily for state purposes, but can also be used by other states, regions, tribes or EPA headquarters. The data quality reports are the:

- Violation of compliance schedule
- Potential recalcitrant violations
- Penalty/payment verification
- Violation data verification

KDWM will share the results of PACE-ME. The reports created by the project will be available within RCRAInfo for registered users of that database. The reports will be available to the public via an EPA public Web site. In May 2004, EPA posted the reports on RCRAInfo and the public Web site. RCRAInfo users will be able to locate the reports on the Shared Reports page of RCRAInfo. The selection criteria developed will enable states, regions, tribes and headquarters to generate reports that are specific to their needs. Due to the reports' flexibility, citizens across the nation will be able to access information about facilities in their area or nationwide to view specific compliance and enforcement data.

Development of a Universal Interface for the Aerometric Information Retrieval System Facility Subsystem

Northeast States for Coordinated Air Use Management (NESCAUM)

Grant period: 2000–2001

Funding area: Data Quality

Grant amount: \$100,000

Contact: Lisa Rector, (802) 899-5306

Final Report Available at <http://www.epa.gov/compliance/resources/reports/stag/fy2001/stag01-nescaum-afsui-final.pdf>

The goal of this project was to construct an easy-to-use data translator for the Air Facility System (AFS). This data translator, known as the Universal Interface (UI), allows for the seamless transfer of compliance and enforcement data from state systems to the federal database, AFS. Benefits of this system include the following: (1) eliminates the need to perform duplicate data entry; (2) reduces time and resources spent on the mainframe related to the AFS batch job cycle of upload, submit, review, correct; (3) increases quality and breadth of data reported; (4) allows timely identification and correction by the agency; (5) uses a browser as an interface, which provides a user-friendly environment and makes data sharing easy.

This project worked with the outdated UI that EPA had developed in 1996. NESCAUM converted the system into the Web-based, user-friendly, and more robust UI. The UI not only simplifies transfer of data coming from states to EPA systems, but also includes validation checks to ensure quality and makes the data easier to use. Although EPA still owns the database, NESCAUM is making continual upgrades to it and is receiving additional STAG funding to expand the UI's capabilities and support users. NESCAUM's software contractor supports the implementation of the system in states.

Benefits of this system are that it: (1) eliminates the need to perform duplicate data entry; (2) reduces time and resources spent on the mainframe related to the AFS batch job cycle of upload, submit, review, correct; (3) increases quality and breadth of data reported; (4) allows timely identification and correction by the agency; and (5) uses a browser as an interface, which is a user-friendly familiar environment and makes data sharing easy.

States are not required to use the UI, but it is to their benefit if they maintain their own data systems that need to feed into AFS. If they do not use the UI, state agencies need to re-enter data into the EPA's system. This duplicate data entry presents data quality issues, among other problems. States that use Tempo software are not currently able to use UI, but most others can. Louisiana is actively working toward integration with its Tempo system, and it is hoped that what Louisiana learns will be transferrable to other states that use Tempo. There are 200 local air pollution control programs that need to report into AFS.

The elimination of double data entry for the agencies that use the UI is an example of a major institutional change. These agencies re-examined how they managed their data and saved a significant

amount of resources. The benefits of using the UI are significant, but its use does require an up-front investment in time to ensure that the agency's data system has the minimum data required for federal reporting and that these data can be extracted as needed.

NESCAUM has shared the results of this project by making the UI available to all agencies that submit data to AFS. This project has increased the quality of data transferred from states to EPA, and has reduced the amount of time it takes states to get data to EPA.

Measuring the Effectiveness of Partial Inspection, Risk-Based Facility Targeting, and Compliance Activities

New Hampshire Department of Environmental Services (NHDES)

Grant period: 1999–2000

Funding area: Outcome Measurement

Grant amount: Total EPA Grant Award to NHDES = \$185,000: \$100,000 for the Outcome Measurement component of the project, and \$85,000 subcontracted to NEWMOA for related work on a regional hazardous waste compliance measures project and continued development of the pollution prevention metrics database

Contact: Gretchen Rule Hamel, (603) 271-3137

Final Report Available at <http://www.epa.gov/compliance/resources/reports/stag/fy2000/stag00-nh-rcraisp-final.pdf>

NHDES has made substantial progress in its Compliance Measures Project. (NHDES has contracted with NEWMOA to perform this grant.) In the current phase, NHDES is developing a compliance indicator survey that can be used to establish a baseline compliance rate for hazardous waste generators, and in future years to measure changes as a result of specific NHDES interventions. The compliance indicator survey is a set of ten questions covering compliance, pollution prevention and beyond-compliance areas. The compliance questions relate only to hazardous waste management, and were selected as indicators of compliance in the regulatory areas of waste determinations, inspections, labeling, container management, preparedness and prevention, and training. The collected data will be inputted into an Oracle® database that is being developed as part of the project. The database will allow the collected data to be analyzed based on a variety of parameters, such as generator size, generator location (by municipality, county and whether it is in a wellhead protection area), date of the facility's last Resource Conservation and Recovery Act (RCRA) inspection and responses to individual questions.

New Hampshire has shared the results of this project, and several states (Connecticut, Oregon and Maine) are now implementing similar processes in their RCRA programs. They will use the same core questions, working out language that will be applicable to all states. Implementing the same compliance survey in many states will allow better analysis of compliance across states and will help identify comparative strengths; for example, if a state has a high compliance rate in one area, others can look at that state's approach as a model and apply it themselves.

NHDES is currently using this survey to establish baseline compliance rates and trends resulting from new programs, but the survey also has potential for use as a screening tool. Most states have no reconnaissance or screening inspections to screen out facilities that do not need full inspections, and some states are interested in using the "scout with surveys" method to target full inspections to facilities that have the most compliance issues. Currently, the surveys do not result in any enforcement actions. These types of compliance evaluations (the "scout with surveys" method) can allow states to reach many more facilities than they otherwise would.

So far, the institutional change resulting from the survey approach has not permeated any other (non-RCRA) programs at NHDES. The survey approach only works well for sectors with a large number of facilities, programs with a small staff, and programs with a number of objective criteria that can be applied in the form of a brief checklist - attributes not currently found in other NHDES programs.

Class V Underground Injection Control – Compliance Assistance

New Mexico Environment Department (NMED), Ground Water Quality Bureau

Grant period: 2000–2001

Funding area: Outcome Measurement

Grant amount: \$145,364

Contact: Maura Hanning, (505) 827-2945, maura_hanning@nmenv.state.nm.us

NMED received STAG funding to perform compliance assistance and implement outcome measurements for large capacity septic tank/leach fields (LCSTLFs), which receive more than 2,000 gallons a day of domestic wastewater and are classified as Class V wells under the Safe Drinking Water Act's Underground Injection Control (UIC) program. Under the UIC program, a ground water protection permit is required for each Class V septic system. At the start of this project, there were approximately 130 permitted LCSTLFs, approximately 58 percent of which were out of compliance with respect to operational, monitoring or ground water standards required in their permits.

Even though the population of LCSTLFs is small, the data collected do support the premise that compliance assistance actions are successful in bringing sites into compliance. Over the period of the study, compliance activities taken by staff resulted in a 50 percent reduction of sites characterized as out of compliance. A single compliance assistance action in writing has been successful in bringing most permit holders into substantial compliance.

The action-specific performance measures that NMED is tracking for this grant project require significant manual counting and evaluation, which will not be feasible to undertake when measuring compliance assistance outcomes for the 805 ground water protection permits that NMED issues and oversees. In addition, compliance tracking of the facilities is difficult due to their tendency to go in and out of compliance even during a single calendar quarter.

The STAG-funded project has helped NMED manage resources more wisely by helping the agency make better permitting decisions. As a result, NMED will know when it can allow a septic tank leach field. Some of the compliance assistance outcome measures used were as follows:

Changes in awareness or understanding of regulations or compliance:

- Qualitative improvements such as improved owner cooperation and reduction in complaints from neighbors, determined by surveying NMED staff.

Behavioral changes:

- Number of facilities that have taken at least one action to comply with the regulations.
- Percentage increase of facilities in compliance with operating, monitoring and reporting requirements.
- Number of facilities added to the Class V UIC Inventory.

-
- Number of unpermitted facilities that receive ground water protection permits.
 - Decrease in the number of days needed to issue ground water protection permits to Class V septic systems.

Environmental or human health improvements:

- Number of facilities making system upgrades due to compliance assistance that result in a decrease of ground water contamination.
- Number of facilities where improved monitoring and reporting due to compliance assistance results in identification of ground water contamination.

NMED has made definite and permanent institutional changes as a result of this project. Although NMED has not yet tallied the data to determine which compliance methods seemed most and least successful, preliminary findings appear to indicate that writing compliance letters is more effective than making phone calls or discussing compliance face-to-face during inspections. As a result of the preliminary findings, NMED has taken many more written compliance actions for various site types that it regulates, not just the LCSTLFs. In addition, NMED has found that other factors, such as the type of violation, style of the reviewer, and economic or educational level of the permit holder, may be better indicators of the likelihood of success than the type of action taken.

NMED has also distributed educational outreach pamphlets that give permit holders step-by-step instructions for sampling monitoring wells. Permit holders for septic tank leach fields are now doing more sampling, and compliance with the sampling and monitoring requirements has noticeably improved. However, violations of permits and the regulations remain a concern at sites with septic tank leach fields. Also, the compliance rate for sites with ground water contamination has declined due to the increased identification of sites with known ground water contamination. Permit holders for such sites are required to take corrective action to prevent ongoing ground water contamination by connecting to municipal sewer systems or changing to on-site advanced treatment units.

To expand this approach to other sectors, NMED will add a public relations professional to its staff to find information that other states have developed for their ground water protection programs and to create some new outreach materials targeted to problem sectors. The UIC program staff feel that outreach and public relations efforts would be especially helpful to this program because they deal with many unsophisticated permit holders, who generally cannot afford to hire consultants.

Measurement of Effectiveness of On-Site Inspection with Nonregulatory Follow-up by Industry Sectors

South Carolina Industrial Ecology Program at the University of South Carolina, School of the Environment

Grant period: 2000–2001

Funding area: Public Access

Grant amount: \$74,729

Contact: LeAnn Herren (803) 777-9061, *herren@environ.sc.edu*

The University of South Carolina Center for Environmental Policy (CEP), through the Trident District Office of the South Carolina Department of Health and Environmental Control (SCDHEC), began the first sector-based, targeted compliance assistance program under a grant from the EPA regional office's Environmental Justice Through Pollution Prevention (EJP2) Program. Originally, the project only targeted small auto body shops located in the North Charleston area. The success of the original project led SCDHEC to expand the compliance assistance program to trucking companies and private transportation firms with STAG funding. This program consisted of five steps:

1. Trident SCDHEC employees performed an on-site compliance inspection of a facility.
2. Trident SCDHEC sent a letter of noncompliance status to the facility with referral to CEP's compliance assistance program. (In-compliance firms were referred to the state pollution prevention program for beyond-compliance work.)
3. CEP supplied free, nonregulatory assistance to noncompliant companies to help them attain compliance within the 45-day window for attainment.
4. Trident SCDHEC employees performed a follow-up compliance inspection.
5. Trident SCDHEC sent a letter of compliance or noncompliance to the facility. Early data indicate that of the 52 firms inspected, 32 were found to be out of compliance with SCDHEC regulations. At this time, approximately 90 percent of the firms have attained compliance, with work ongoing at the remaining firms.

Following on the Trident District's success, SCDHEC is reorganizing to create a statewide compliance assistance program that will include a telephone number that facilities can call for advice without confrontation. The state agency's pollution prevention (P2) unit used to be an entirely separate group, which only assisted facilities that were already in compliance. Now SCDHEC staff will receive cross-training in compliance issues and P2, as well as other media programs. The agency is also considering training all the regulatory staff on P2 as well. The P2 program is thus becoming a compliance assistance program, which is a significant positive development. Partly as a result of the STAG project, the state agency staff have learned that they can provide useful help to a facility that is not in compliance with P2 and other measures, and that it is therefore important to integrate these functions.

Analysis of Change in Generator Compliance Using Regulatory Compliance Indicators

Washington State Department of Ecology

Grant period: 1999–2000

Funding area: Outcome Measurement

Grant amount: \$215,270

Contact: Elliot Zimmerman, (425) 649-7072, ezim461@ecy.wa.gov

Final Report Available at <http://www.epa.gov/compliance/resources/reports/stag/fy2000/stag00-wa-generator-final.pdf>

This project compared technical assistance and compliance site inspections with regulatory compliance of generators by: (1) establishing a statewide measure of environmental compliance supported by specific regulatory violations that best represent actual or potential environmental threats; (2) determining if a relationship exists between formal Compliance Enforcement Inspections and regulatory compliance by regulated facilities and, if so, how the relationship changes over time; and (3) determining if there is a relationship between technical assistance visits and compliance visits and if so, its effect on the compliance rate of small quantity generators (SQGs).

The results of the project indicate that the Hazardous Waste and Toxics Reduction (HWTR) staff can use inspection and compliance data to measure industry performance over time and to target technical assistance and regulatory compliance efforts. The data presented show that reliable baseline quantitative measures of hazardous waste compliance have been established, and that a relationship appears to exist between compliance enforcement inspections and regulatory compliance (Project Goals One and Two). Specifically, data strongly suggest that noncompliance rates increase over time since the last inspection. As for Project Goal Three, the data show that SQGs appear to have a higher rate of compliance than medium or large generators of waste (MQG or LQG facilities). Though the SQG compliance rate is relatively high, a relationship of the effectiveness of the IGC visits compared to the effectiveness of compliance inspections has not been clearly shown. A number of factors, including different levels of involvement by Moderate Risk Waste (MRW) programs and their localized impact on SQG compliance rates, may need to be taken into consideration when evaluating the effectiveness of technical assistance compliance visits by the Washington State Department of Ecology. It is worthwhile to continue coordinating future SQG technical assistance efforts, including IGCs, with regional MRW programs.

The most substantial institutional change resulting from this STAG project is that the HWTR staff has begun to use five years as the benchmark for reinspection because after this time the data indicate a substantial falloff in compliance. Previously, there was no benchmark. The establishment of a benchmark is intended to target fieldwork and better allocate the HWTR program's resources. The project has also assisted HWTR in targeting resources by revealing that certain sectors have more violations; for example, LQGs are now known to present a more significant compliance problem than MQGs, which was not what HWTR staff had previously assumed. This finding has led them to continue allocating resources to LQGs, rather than focusing resources on MQGs.

HWTR also uses the more traditional regulatory compliance indicators to search for specific violations (spills, container management and two others) and reviews them periodically.

Appendix: Abstracts of All Funded Projects

Grant Innovations at Work

Capacity-building STAGs: 1999-2002

Funding Area: Data Management

Grantee Arizona Department of Environmental Quality

Grant Title Streamlined Enforcement and Compliance Reporting

Grant Cycle FY2002 *Grant Amount* \$150,000

Abstract

The Arizona Department of Environmental Quality (ADEQ) proposes to streamline its environmental enforcement and compliance reporting to the Permit Compliance System (PCS) and to the Air Facility System Universal Interface (AFS-UI). To accomplish this, ADEQ will enhance the agency's enterprise database, AZURITE, to output files that are compliant with PCS and AFS-UI file formats. Currently most of the information is entered twice into AZURITE and again into EPA's systems.

Grantee Hawaii Department of Health

Grant Title Establishing the Compliance Database and Air Facility Subsystem-Universal Interface (AFS-UI) for Hawaii

Grant Cycle FY2002 *Grant Amount* \$95,000

Abstract

The project goal is to establish an electronic data management system to assist the Hawaii Department of Health Clean Air Branch (CAB) in managing compliance and enforcement data and to fully integrate and utilize the Air Facility Subsystem (AFS) B Universal Interface (UI). This will allow CAB to efficiently manage the compliance and enforcement data in an electronic format, automatically upload the data to the Aerometric Information Retrieval System (AIRS) via the AFS-UI, and quickly locate and extract requested data.

Grantee Kansas Department of Health and the Environment

Grant Title Regular Transfer of Data from Kansas Department of Health and Environment Data Base to EPA's Permit Compliance System

Grant Cycle FY2002 *Grant Amount* \$92,500

Abstract

The Kansas Department of Health and Environment (KDHE) administers the National Pollutant Discharge Elimination System (NPDES) program in the state of Kansas. KDHE maintains a number of databases to manage this program. These databases contain the working files for KDHE and are updated daily to keep the information current. Because of limited manpower and the difficulties of communicating with the Permit Compliance System (PCS) database, only a small portion of the data in KDHE database is routinely uploaded to PCS. The project goal is to routinely upload new and changed data from the KDHE databases to the PCS database to keep it current. The primary project component will be a computer program which will query the KDHE databases and manipulate the data in such a way that it can be loaded into PCS.

Funding Area: Data Management

Grantee Montana Department of Environmental Quality

Grant Title Database Integration

Grant Cycle FY2002 *Grant Amount* \$175,000

Abstract

The Montana Department of Environmental Quality (MDEQ) database integration project is a continuation of MDEQ's efforts to integrate and develop the necessary databases to provide environmental information to decision makers and the public in a manner that allows a comprehensive view of environmental impacts, compliance status and regulatory actions across media lines. Beginning in 2000, MDEQ began developing an Oracle-based enterprise-wide database system to integrate the agency's existing disparate environmental data systems. The enterprise system is based on the EPA Facility Identification Template for States (FITS) data model which will be used to link permits, inspection reports, and enforcement actions between facilities and sites. This integration of multimedia compliance and enforcement data will improve MDEQ's multimedia targeting, reporting, and compliance assurance capabilities.

Grantee San Joaquin Valley Air Pollution Control District

Grant Title Compliance Data System Modernization Project

Grant Cycle FY2002 *Grant Amount* \$104,000

Abstract

The Compliance Data System Modernization Project will develop new compatible data management tools and software that will create standard AFS batch format data to upload data to AIRS. Region IX has provided samples of the batch format and will be serving as advisor for this part of the project. Additional data management capability will also be developed to track Title V deviations, reports of required monitoring, and annual compliance certifications. Facility level data is currently stored in PAS and will continue to be maintained in AIRS.

Grantee Virginia Department of Environmental Quality

Grant Title Transfer of Water Permit Data to EPA's Permit Compliance System

Grant Cycle FY2002 *Grant Amount* \$70,080

Abstract

Virginia Department of Environmental Quality's (VADEQ) goals are to achieve a reduction in the resources required to manage data while maintaining or improving the quality of the data transferred by: 1) Reducing common data entry errors; 2) Reducing manual overrides in PCS; 3) Reducing the time necessary to research and correct rejected data; 4) Generating as good or better data quality; 5) Increasing accuracy of reports; and 6) Increasing knowledge of PCS among regional staff.

Funding Area: Data Quality

Grantee Arizona Department of Environmental Quality

Grant Title Arizona Unified Repository for Informational Tracking of the Environment (AZURITE)

Grant Cycle 2000-2001 *Grant Amount* \$135,000

Abstract

The Arizona Department of Environmental Quality developed a compliance assistance module for the agency's integrated Inspections, Compliance and Enforcement Database. Furthermore, the agency also created an electronic reporting pilot aimed at transferring the discharge monitoring report data electronically from the State's Azurite Database to EPA's PCS Database.

Grantee Bay Area Air Quality Management District

Grant Title (Bay Area) Development of a Data Translator

Grant Cycle 2000-2001 *Grant Amount* \$50,000

Abstract

The objective of this project is to facilitate restoration of monthly/daily HPV data transfer to AIRS/AFS. This transfer was halted when the Bay Area Quality Management District realized Bay Area's unit-by-unit tracking needed to be converted to facility-based reporting with monthly-grouped HPVs for better national consistency in AIRS, IDEA, SFIP, RECAP and NPMS.

Bay Area HPV data will be loaded from diverse databases into a Microsoft Access model. The model will sort and group the data with dependency relationships based on date and plant information. The data will then be formatted for AIRS batch update and submitted to AIRS/AFS.

Grantee Louisiana Department of Environmental Quality

Grant Title Development of EPA/State Interfaces

Grant Cycle 2000-2001 *Grant Amount* \$200,000

Abstract

The Louisiana Department of Environmental Quality (LDEQ) is proposing to design and implement "Tools for Environmental Management and Protection Organizations" (TEMPO) software system. TEMPO is an integral part of the Integrated Data Management System (IDMS) being implemented at LDEQ.

This system is used to track facilities, people, and organizations of interest to the department, and to track tasks such as permitting, surveillance, and enforcement activities with LDEQ. This grant will be used to fund the AIRS state/EPA interface that will be directly transferable to any state that has TEMPO or a data system built along TEMPO's data structure. Lastly, by developing this interface, the department and EPA will be able to share "lessons learned" among all fifty states.

Funding Area: Data Quality

Grantee Maine Department of Environmental Protection, Bureau of Land and Water Quality

Grant Title Computerized Wastewater Discharge Data Collection and Analysis System (E-DMR)

Grant Cycle 2000-2001 *Grant Amount* \$180,000

Abstract

The operators of Maine's wastewater treatment facilities collect and report a complete set of data regarding the actual discharge of pollutants to state waters. Only a fraction of the data collected is actually stored in EPA's Permit Compliance System (PCS) database. In addition, the data entered into the PCS system are prone to errors. A single piece of data may be transferred between forms several times and then entered into a database system with no real-time error-trapping capability. The limited use of this data constrains day-to-day regulatory decision-making, the effectiveness of compliance monitoring, and the ability to perform program planning based on discharge trends or the efficacy of our regulatory programs. The Maine Department of Environmental Protection (MeDEP), with cooperation from the Maine Bureau of Information Services, is developing a web-based data entry system with an underlying database management system that will do the following: 1) Provide a user-friendly interface for the direct entry of discharge monitoring data by wastewater facility operators; 2) Provide a system that will increase data integrity by significantly automating Quality Assurance/Quality Control functions; 3) Provide regulators with a complete set of discharge parameter and facility process data; 4) Insure that data filed by the operators are complete or that the appropriate No Data Indicator (NODI) codes have been entered; and 5) Provide an automatic transfer of data from the MeDEP database to EPA's PCS database.

Grantee Mississippi Department of Environmental Quality

Grant Title Enforcement and Compliance Assurance Assistance Agreement

Grant Cycle 2000-2001 *Grant Amount* \$56,346

Abstract

The Mississippi Department of Environmental Quality (MDEQ) is proposing to perform a facility and database review of its systems and identify any erroneous or incomplete data. MDEQ will correct the compliance and enforcement data and input it into the appropriate federal database. MDEQ will synchronize the federal and state-specific databases on a monthly basis; discrepancies will be noted and corrected. Also, MDEQ will develop a training program for its Permitting and Compliance and Enforcement staff to ensure that future data is as complete and correct as possible. This training will be conducted on an annual basis.

Grantee Mississippi Department of Environmental Quality

Grant Title Exchange of Permit Compliance System Data from Mississippi's System to EPA

Grant Cycle 2000-2001 *Grant Amount* \$200,000

Abstract

It is the goal of MDEQ to share more accurate and more comprehensive enforcement and compliance data with EPA by providing information from its internal integrated information management system (enSite) to EPA for its regulatory program needs. In support of this, MDEQ proposes to develop necessary enhancements and modifications to support MDEQ's compliance assurance processes for its water program. In full support of IDEF, MDEQ will develop a state conversion program from MDEQ's enSite System to IDEF/PCS.

Funding Area: Data Quality

Grantee Missouri Department of Natural Resources

Grant Title Hazardous Waste Enforcement Data Quality Improvement Project

Grant Cycle 2000-2001 *Grant Amount* \$53,261

Abstract

The principal objective of this project is to improve the inspection and enforcement data in the computer systems used by the Hazardous Waste Enforcement Section of the Missouri Department of Natural Resources (i.e., RCRAInfo, Enforcement Tracking System, and the Hazardous Waste Program's Inspection and Enforcement database). We will document alterations made, identify areas for more efficient and accurate data entry and reporting, and produce a findings report to share with state and EPA enforcement staff and managers.

Grantee NESCAUM: Northeast States for Coordinated Air Use Management

Grant Title Development of a Universal AIRS/AFS Interface

Grant Cycle 2000-2001 *Grant Amount* \$100,000

Abstract

The goal of this project is to construct a modern, easy-to-use, data translator for the Aerometric Information System Facility Subsystem (AIRS/AFS). This data translator, known as the Universal Interface (UI) allows for the seamless transfer of compliance and enforcement data from state systems to the federal database AFS. Benefits of this system include the following: 1) Eliminates need to perform duplicate data entry; 2) Reduces time and resources spent on the mainframe related to AFS batch job cycle of upload, submit, review, correct; 3) Increases quality and breadth of data reported; 4) Allows timely identification and correction by the agency; 5) Uses a browser as an interface which is an user-friendly famili environment and makes data sharing very easy.

Grantee New Jersey Department of Environmental Protection

Grant Title Interim Data Exchange Format (IDEF) Translator

Grant Cycle 2000-2001 *Grant Amount* \$150,000

Abstract

USEPA and the state of New Jersey have agreed to participate in the joint development of an Interim Data Exchange Format (IDEF) through which the State could provide New Jersey Pollutant Discharge Elimination System (NJPDDES) permit and compliance data to the current federal wastewater Permit Compliance System (PCS) database. The money requested in this grant would be used to fund New Jersey portion of this project. Since New Jersey has developed a new permit and compliance information management system, the ability to export data to older EPA databases has been adversely impacted. New Jersey's old NJPDDES system had the ability to export data and related fields to the old PCS system but DEP's mainframe system will no longer be used once our new client sever system has been completed. EPA is also planning to modernize its PCS system. This further complicates the data exchange problem, as the designated format for exchange between the state and federal systems is a moving target until the modernization effort is complete. The purpose of IDEF is to enable states to submit their NPDES data to PCS without considering the idiosyncrasies in PCS's data and functional architectures and without making a large investment in an interface that may soon be obsolete. Once the format for IDEF is completed, states will develop programs to extract data from their databases and convert that data to the IDEF format. The EPA will then be able to pull the data out of IDEF and into the existing PCS. It is anticipated that with minor modifications the IDEF will work with the soon-to-be modernized PCS database as well.

Funding Area: Data Quality and Public Access

Grantee Colorado Department of Public Health and the Environment

Grant Title Electronic Reporting of Environmental Information Contained in the Discharge Monitoring Reports (DMRs)

Grant Cycle 2000-2001 *Grant Amount* \$123,600

Abstract

The goal of this project is to implement electronic reporting of data contained in the Discharge Monitoring Reports (DMRs) from entities permitted under the National Pollutant Discharge Elimination System (NPDES) to the Water Quality Control Division of the Colorado Department of Public Health and Environment. This will be accomplished by creating an electronic reporting repository to enable process water permittees and/or laboratories to submit data over the internet using a web form, or directly from their automated system using electronic data interchange.

Grantee Delaware Department of Natural Resources and Environmental Control

Grant Title Integrated Environmental Information System for Enforcement and Compliance Assurance Assistance Agreement for Data Quality and Public Access

Grant Cycle 2000-2001 *Grant Amount* \$215,000

Abstract

This grant was intended to accomplish the following tasks: (1) Verify manually the compliance, enforcement, and permit data in RCRIS (Resource Conservation and Recovery Act Information System) with paper records to clean up the existing data; (2) Create modules in the integrated Delaware Environmental Information System (EIS) for storing RCRA (Resource and Recovery Act) permit, compliance, and enforcement data; (3) Create modules for importing underground tank permits and enforcement and compliance data into EIS; and (4) Create a converter for the automatic export of data from EIS to the Permit Compliance System (PCS) and RCRIS. In addition, Delaware Department of Natural Resources and Environmental Control (DNREC) has already developed its integrated Environmental Management System (EMS), an Internet-based interactive Geographic Information Systems (GIS) application that allows the public to access information about most sites of interest to DNREC. Information in this website includes location, basic site description, monitoring activity summary, contact information, web links to related information, and ratings of each site's propensity to contaminate by media and contaminant class.

Grantee Kentucky Division of Waste Management

Grant Title Public Access to Compliance and Enforcement Milestone Events (PACE-ME)

Grant Cycle 2000-2001 *Grant Amount* \$200,000

Abstract

Currently the Resource Conservation and Recovery Act Information System (RCRAInfo) has very few compliance and enforcement reports available for users; the reports that are available have limited selection functionality. In addition, this database contains sensitive enforcement information; reports developed for agency use are not suitable for distribution to the public under the Freedom of Information Act (FOIA). However, there is a need to provide information that is currently maintained in the Compliance and Enforcement Module of RCRAInfo to the public in a format that protects confidentiality. The project goals are the following: (1) To identify data quality issues in the compliance and enforcement data by developing data assessment reports; (2) To identify all Significant Non-Compliers (SNCs) in the state and ensure that all data are accurately reported in RCRAInfo; (3) To identify compliance and enforcement information stored in the RCRAInfo repository that should be accessible to the public because it is not considered enforcement sensitive; (4) To develop standard reports that can be used in any state, for any region, or nationwide to report the compliance and enforcement history of either a specific hazardous waste generator, transporter, recycler, burner/blender or facility or all entities operating nationwide under a specific company name; and (5) To make these reports available on the Internet.

Funding Area: Data Quality and Public Access

Grantee Nebraska Department of Environmental Quality

Grant Title Improved Public Access to Compliance and Enforcement Milestone Events

Grant Cycle 2000-2001 *Grant Amount* \$150,000

Abstract

NDEQ has developed a system to manage and track Agency complaints and all notifications (i.e. fish kills, chemical spills, etc.) and to make NDEQ's enforcement information available on the web. This project will also enable NDEQ to characterize the state of compliance at regulated facilities, and develop a Standard Operating Procedure (SOP) for the Agency complaint process.

Grantee NESCAUM: Northeast States for Coordinated Air Use Management

Grant Title Air Compliance/Enforcement Data Quality Improvement Project

Grant Cycle 2000-2001 *Grant Amount* \$250,000

Abstract

Interest is extremely high in the states developing methods to assure completeness and accuracy of this data, to improve the efficiency of data transfer from state to national databases, and to expand the universe of data. NESCAUM is working on a multi-state effort to tackle these problems. The following items outline the major goals for this proposed project:

- 1) Assure that accurate and timely enforcement data for air programs are held in national and state data systems
- 2) Improve the efficiency of transferring state air data to national database systems
- 3) Simplify submission and tracking of HPV information to AFS through action linking
- 4) Maintain accurate facility level information
- 5) Increase public access to accurate and timely compliance/enforcement information
- 6) Measure compliance and enforcement activities against national performance measures.

The following is an overview of the major project components. Section III of the proposal contains details for each of these components:

- 1) Upgrade the UI for action linking and implement its use in a minimum of four states
- 2) Train state staff on effective data management techniques
- 3) Develop Quality Assurance Plans (QAPs) to create methods to assure data quality before entered into AFS and once entered into AFS - essentially a closed-loop system for assuring data quality
- 4) Create Internet-based tools for the public access to this information
- 5) Create tools that states can use to reconcile facility data

Funding Area: Environmental Enforcement Training

Grantee Florida Department of Environmental Protection

Grant Title Environmental Enforcement and Compliance Cross-Training in Priority Sectors

Grant Cycle FY2003 *Grant Amount* \$125,000

Abstract

Florida Department of Environmental Protection is looking to improve its ability to carry out its enforcement and compliance assurance responsibilities by enhancing the capabilities of its inspectors. The specific area for enhancement is training in new and emerging processes and technologies in priority sectors, with a cross- or multimedia emphasis.

Grantee Indiana Department of Environmental Management

Grant Title Environmental Sampling Training for Illegal Discharges

Grant Cycle FY2003 *Grant Amount* \$60,000

Abstract

One of the primary issues identified during the development of the Sampling Protocol was the necessity of cross-media staff, available after hours, who are trained in the collection and documentation of enforcement cases. Indiana Department of Environmental Management (IDEM) is proposing to expand existing sampling training to address coordination of sampling from industrial discharges, influent and effluent from Publicly Owned Treatment Works (POTWs), point and non-point sources, and the receiving stream.

Grantee Institute for Tribal Environmental Professionals at Northern Arizona University

Grant Title Tribal Environmental Compliance Inspector Training Program--Part II

Grant Cycle FY2003 *Grant Amount* \$160,000

Abstract

During FY2003, the Institute for Tribal Environmental Professionals (ITEP) proposes to continue the development and delivery of comprehensive training to tribal civil environmental compliance inspectors. The goal of this project is to expand and continue to provide the tribal environmental inspector training throughout Indian Country.

Grantee Metro 4, Inc.

Grant Title Training Fundamentals of Environmental Compliance and Enforcement

Grant Cycle FY2003 *Grant Amount* \$150,000

Abstract

Metro 4, Inc. proposes to train local and state air pollution control agencies in the southeast region of the United States. Training will target inspectors, enforcement specialists, and other compliance support personnel in the 24 agencies in this region. Two hundred and twenty (220) students will be trained during a 3 year period.

Funding Area: Environmental Enforcement Training

Grantee NAAG: National Association of Attorneys General

Grant Title Environmental Enforcement Training on Federal Environmental Statutes for the Offices of the State Attorneys General

Grant Cycle FY2003 *Grant Amount* \$150,000

Abstract

The National Association of Attorneys General (NAAG) proposes to hold two workshops, each targeted toward attorney case developers, utilizing the expertise of state and federal government environmental attorneys, inspectors, and program administrators as faculty. One course will be a basic course (2 days) covering three of the four major federal environmental statutes; a second more advanced workshop will focus on particularly challenging compliance and enforcement issues under RCRA, CERCLA, the CAA, and CWA. Training will enhance the attendees understanding of the underlying environmental statutes and improve their ability to identify issues and develop cases.

Grantee New Jersey Department of Environmental Protection

Grant Title Regulated Underground Storage Tank Facility Inspector Training

Grant Cycle FY2003 *Grant Amount* \$50,000

Abstract

New Jersey Department of Environmental Protection (NJDEP) is planning to establish a training program that will support three objectives: 1) The creation of a NJDEP-managed inspection force for regulated Underground Storage Tank (UST) facilities; 2) Provide initial and continuing training of county inspectors who are inspecting regulated UST facilities; and 3) Design and implement a continuing education element that will result in enhanced training on a quarterly basis for both state and county inspectors.

Funding Area: Improving Linkages between AFS and PCS

Grantee California Water Resources Board
Grant Title Integrated Data for Environmental Assessment
Grant Cycle FY2003 *Grant Amount* \$200,000

Abstract -----
This project will help make California Environmental Protection Agency (CalEPA) a National Environmental Information Exchange Network exchange partner and will play a significant role in rectifying one specific major data management issue between EPA and CalEPA – the State's provision of wastewater permit and discharge monitoring data in an electronic form that will ultimately be presented in EPA's data system, Permit Compliance System (PCS).

Grantee Michigan Department of Environmental Quality
Grant Title Electronic Tracking and Reporting of Michigan Air Compliance and Enforcement Data: Linking MACES to the Universal Interface (UI) with Direct Upload to AFS
Grant Cycle FY2003 *Grant Amount* \$180,000

Abstract -----
Michigan Department of Environmental Quality proposes to create a modern, centralized database and data entry system, accessible to all Air Quality Division staff, for all air and enforcement data. This database and supporting interface, Michigan Air Compliance and Enforcement System (MACES), will be designed to capture all of the required Compliance Monitoring Strategy (CMS) data and more, and link to the Universal Interface (UI) so that data can be directly uploaded into AFS.

Grantee Mississippi Department of Environmental Quality
Grant Title Develop Data Flow between Mississippi Department of Environmental Quality's Integrated "enSite" System and AFS Utilizing the AFS Universal Interface (UI)
Grant Cycle FY2003 *Grant Amount* \$170,000

Abstract -----
Mississippi Department of Environmental Quality (MDEQ) proposes to make the necessary modifications to the air module to support the AFS data and Compliance Monitoring Strategy (CMS) data reporting requirements. MDEQ will develop the data flow from enSite to AFS utilizing the AFS UI.

Grantee NESCAUM: Northeast States for Coordinated Air Use Management
Grant Title Universal Interface (UI) Improvement and Dissemination Project for NESCAUM
Grant Cycle FY2003 *Grant Amount* \$306,500

Abstract -----
This project will accomplish the following: (1) Update the UI data model and program specifications, while expanding UI capabilities to report permit, stack testing and Title V certification data; (2) Insure that data quality is maintained by simplifying the process of transmitting the data thus reducing errors; (3) Provide technical support and develop tools to assist states wishing to implement the UI; and (4) Create mechanisms to support UI users and coordinate UI activities.

Funding Area: Improving Linkages between AFS and PCS

Grantee New York State Department of Environmental Conservation

Grant Title Universal Interface (UI) Improvement and Dissemination Project in New York

Grant Cycle FY2003 *Grant Amount* \$73,500

Abstract

This project will accomplish the following: (1) Update the UI data model and program specifications, while expanding UI capabilities to report permit, stack testing and Title V certification data; (2) Insure that data quality is maintained by simplifying the process of transmitting the data thus reducing errors; (3) Provide technical support and develop tools to assist states wishing to implement the UI; and (4) Create mechanisms to support UI users and coordinate UI activities.

Grantee Oklahoma Department of Agriculture, Food, and Forestry

Grant Title Universal Interface (UI) Improvement and Dissemination Project for Oklahoma

Grant Cycle FY2003 *Grant Amount* \$35,000

Abstract

This project will accomplish the following: (1) Update the UI data model and program specifications, while expanding UI capabilities to report permit, stack testing and Title V certification data; (2) Insure that data quality is maintained by simplifying the process of transmitting the data thus reducing errors; (3) Provide technical support and develop tools to assist states wishing to implement the UI; and (4) Create mechanisms to support UI users and coordinate UI activities.

Funding Area: Inspector Training

Grantee Institute for Tribal Environmental Professionals at Northern Arizona University

Grant Title Tribal Environmental Compliance Inspector Training Program

Grant Cycle FY2002 *Grant Amount* \$198,338

Abstract

The goal of this project is to develop tribal environmental inspector training throughout Indian Country beginning in FY2002. These are the following objectives: 1) ITEP will assemble a training review committee consisting of representatives from USEPA, National Enforcement Training Institute (NETI), tribal and state experts, and ITEP staff. The committee will be responsible for reviewing training materials, identifying instructors and providing instruction for specific topics of the inspector training. 2) ITEP will expand and further develop Tribal Basic Inspector Training and offer the course at three locations in Oneida, NY; Kansas City, KS; and Seattle, WA. These locations optimize the opportunity of greater tribal participant nationwide. ITEP will collaborate with tribes in each training region to cosponsor the training courses. 3) ITEP will develop two mediaspecific inspector training courses that cover the Clean Water Act (CWA) and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). These courses will be offered in Mesa, AZ and Kansas City, KS. 4) ITEP will partner with tribes to develop inspector compliance resources through direct onsite training, mentoring, and professional exchanges.

Grantee New England Interstate Water Pollution Control Commission

Grant Title State Wetland Inspector Training

Grant Cycle FY2002 *Grant Amount* \$147,600

Abstract

The New England Interstate Water Pollution Control Commission (NEIWPCC) proposes to develop and provide training workshops for state wetlands inspectors in the New England region. The goal of this program is to train wetland inspectors in order to improve compliance with state and federal regulations, which will result in enhanced protection of wetlands. Specifically, the training is intended to: 1) increase inspectors' understanding of the various federal and state regulations related to wetlands protection, including (but not limited to) Sections 401 and 404 of the Clean Water Act and storm water permitting for construction sites; 2) increase inspectors' skill in applying the USACOE 1987 wetlands delineation manual, including delineation methods for challenging environments; and 3) increase inspectors' knowledge of compliance tools (including enforcement actions, management practices to recommend, etc.) and skill in choosing the right tool(s) for each situation.

Grantee Oklahoma Department of Agriculture, Food, and Forestry

Grant Title Concentrated Animal Feeding Operation (CAFO) Inspector Training in Region 6

Grant Cycle FY2002 *Grant Amount* \$50,000

Abstract

Working in conjunction with EPA, the Region 6 states of Oklahoma, Arkansas, Texas, Louisiana and New Mexico can more directly protect the environment by assisting inspectors through sharing state program ideas and understanding national and state environmental issues. As part of a multi-state outreach program, Oklahoma Department of Agriculture, Food, and Forestry (ODAFF) is taking an integral role in developing, sponsoring, and sharing resources for a Concentrated Animal Feeding Operation (CAFO) Regional Inspector workshop, to be held on an annual basis and rotating throughout the states within the region. The primary program objective is to provide training to CAFO inspectors by keeping them informed of new developments in the federal CAFO program, as well as providing information on the highlights of state inspection and enforcement issues on a regular, yearly basis. Since the new CAFO rules were finalized in December 2002, general knowledge of the rules by the regulated community may be limited. Facilities may face a change in financial, operational, and maintenance resources in order to comply with the new CAFO regulations. Inspectors can help ease the transition from the old CAFO rules to the newly approved rules through updating their education.

Funding Area: Inspector Training

Grantee Oregon Department of Environmental Quality

Grant Title Erosion and Sediment Control Inspector Training for Construction Activities Regulated by the National Pollution Discharge Elimination System (NPDES) Water Program

Grant Cycle FY2002 *Grant Amount* \$157,000

Abstract

This project is designed to develop inspector training materials and to conduct training that will support the implementation of the National Pollutant Discharge Elimination System (NPDES) Phase II storm water program in Oregon. Specifically, the project will accomplish the following: (1) Develop a statewide erosion prevention and sediment control manual for construction site operators; (2) Develop an inspector training manual and related materials; (3) Create guidance for local governments on storm water management program development; (4) Conduct five inspector training classes and five local government assistance workshops around the state, and (5) Train at least 200 tribal, state and local government employees

Grantee Suquamish Tribe

Grant Title Suquamish Tribal Environmental Inspector Training and Program Enhancement

Grant Cycle FY2002 *Grant Amount* \$197,341

Abstract

The Suquamish Tribe proposes to address the EPA's focus area of Tribal Inspector Training. Although tribes generally have the authority to regulate and enforce environmental issues on their respective reservations, education and training are needed before this can occur effectively. While many states and local agencies have long-standing environmental programs that involve enforcement, this aspect of governance is not yet fully customary for many tribes. Having the ability to participate in enforcement activities will help increase a tribe's knowledge of environmental issues and maintain tribal sovereignty. The overall goal of the project is to ensure that tribal participants have working knowledge of regulatory requirements, inspection methodology, and health and safety measures associated with environmental compliance inspections, in accordance with EPA Order 3500.01. This overall goal will aid participating Tribal Governments in the protection and assertion of Tribal rights, sovereignty, jurisdiction that impacts the livelihood and culture of Tribal lands and Tribal membership through the assertion of regulatory compliance.

Funding Area: Outcome Measurement (Year 1)

Grantee California Air Resources Board

Grant Title Air Toxics Compliance Monitoring

Grant Cycle 1999-2000 *Grant Amount* \$225,000

Abstract

The objective of this study is to develop and implement enhanced performance measures for state enforcement and compliance assurance programs. In addition, we want to elevate compliance of inspected facilities and determine the effect of assistance and outreach on compliance. This study focused on the chrome plating industry. All the inspected facilities are located in the South Coast Air Basin in California. The chrome plating industry was selected because their compliance rates have historically been lower than desired and their concentration in low-income areas are an environmental justice concern. Unless compliance rates are improved for this rule category, Low Income Communities situated near these toxic emitters may continue to be disproportionately impacted. This type of study is resource intensive, requires coordination, and is not suitable for source categories with very small populations. This model is well suited for area sources such as gasoline dispensing facilities and dry cleaners.

Grantee Colorado Department of Public Health and the Environment

Grant Title Comprehensive Enforcement and Compliance Measurement System: the COMPASS project

Grant Cycle 1999-2000 *Grant Amount* \$522,940

Abstract

Colorado's Comprehensive Enforcement Compliance and Measurement System (COMPASS) project is a department-wide effort to assess status of and trends related to compliance and environmental improvements resulting from the Department's enforcement and compliance assistance activities. The project includes six individual pilot projects being conducted across media. The pilot projects focus on different sectors and each measure the results of various approaches to compliance assurance. The goal of the project is the statistically valid measurement of the results and effectiveness of each approach. Ultimately, the COMPASS project will result in the creation of a database and a final report.

Grantee Connecticut Department of Environmental Protection

Grant Title Developing a Compliance Measurement and Management Strategy for Connecticut's General Permit Program

Grant Cycle 1999-2000 *Grant Amount* \$100,000

Abstract

With grant funding provided by EPA, the Department objectively assessed industry compliance with a number of its general permits. As part of its analysis, the Department determined a baseline compliance rate, identified root causes of noncompliance with the most significant terms and conditions of the general permits, and developed and employed compliance assistance and enforcement strategies designed to raise compliance rates. The first project focused on the general permit for the Discharge of Minor Tumbling or Cleaning of Parts Wastewater ("tumbling general permit"). All facilities covered under the tumbling or cleaning wastewater general permit were provided compliance assistance materials. The Department took enforcement action against the sixteen non-compliant companies. Fifteen registrants signed administrative consent orders with penalties totaling nearly \$103,000. The Department referred the sixteenth company to the Office of the Attorney General for the filing of a civil action. Phase II of the project focuses on the general permit for the Discharge of Minor Printing and Publishing Wastewater ("printing general permit"). The objective of Phase II is to increase registrations under the printing general permit. At the time this initiative began, the Department had record of less than 60 registrants. Current Department records indicate 180 registrants under the printing general permit with an additional 72 pending approval. The Department will conduct site inspections during 2003 for a portion of those printers that failed to register for the printing general permit during the correction period and enforcement action will be taken against sites found to be discharging printing and publishing wastewater without a permit. In the third phase of the project, a Department contractor conducted random audits of facilities registered under the Air Bureau's General Permit to Limit Potential to Emit (GPLPE). The audit results reflected high compliance with emission limits and lower compliance with respect to the general permit's record keeping requirements. Record keeping and reporting requirements were carefully assessed, and, where appropriate made less burdensome in a March 2001 revision to the general permit.

Funding Area: Outcome Measurement (Year 1)

Grantee Indiana Department of Environmental Management

Grant Title Prototype for Sector-based Outcome Measurement (Auto Salvage Facility Sector Project)

Grant Cycle 1999-2000 *Grant Amount* \$200,000

Abstract

The project is broken into four main components: (1) Startup (including gathering facility location information and developing a project database); (2) Compliance assistance (comprised of a manual and workshops); (3) Targeted inspections; and (4) Enforcement (where appropriate). Planned results are a marked increase in the compliance rates of this sector, accomplished through the compliance assistance, inspection and enforcement efforts that comprise the project. Outcomes include conducting a minimum of 10 compliance assistance workshops throughout the state, and conducting a minimum of 50 targeted inspections.

Grantee Missouri Department of Natural Resources

Grant Title Measuring Performance from Enforcement and Compliance Assurance in Missouri

Grant Cycle 1999-2000 *Grant Amount* \$37,500

Abstract

Missouri's Department of Natural Resources' (DNR) automated Enforcement Tracking System (ETS) dates back more than ten years. It has evolved from an extremely simple DOS based database to a more sophisticated one based on Microsoft's Access platform. Data is entered by six media enforcement or lab based offices in Jefferson City. No water pollution environmental performance measure (EPM) data is available yet in ETS. This project's goals are to do the following: (1) Incorporate features that facilitate information sharing with EPA; (2) Identify the business rules needed to collect EPMs; (3) Build upon the concepts used in EPA's Case Conclusion Data Sheets; (4) Require no more than five minutes of staff time to collect the additional ETS information; (5) Map the new ETS environmental performance measures to EPA's case conclusion data; (6) Collect both quantitative and qualitative environmental performance data; minimize the need for additional staff training in how to collect the new performance measures; and (7) Update ETS to include data entry information, sample reports, and coding tables.

Grantee New Hampshire Department of Environmental Services

Grant Title Measuring the Effectiveness of Partial RCRA Inspection, Risk-based Facility Targeting and Compliance Activities

Grant Cycle 1999-2000 *Grant Amount* \$45,000

Abstract

The New Hampshire Department of Environmental Services (NHDES) has made substantial progress in Phase II of its Compliance Measures Project. (NHDES has contracted with NEWMOA to perform this grant.) In Phase II, NHDES is developing a compliance indicator survey that can be used to establish a baseline compliance rate for hazardous waste generators, and in future years to measure changes as a result of specific NHDES interventions. The compliance indicator survey is a set of ten questions covering an array of compliance, pollution prevention, and beyond-compliance issues. The compliance questions relate only to hazardous waste management, and were selected as indicators of compliance in the regulatory areas of waste determinations, inspections, labeling, container management, preparedness and prevention, and training. The collected data will be inputted into an Oracle® database that is being developed as part of the project. The database will allow the collected data to be analyzed based on a variety of parameters, such as generator size, generator location (by municipality, county, and/or whether it is in a wellhead protection area), date of their last Resource Conservation and Recovery Act (RCRA) inspection, and responses to individual questions.

Funding Area: Outcome Measurement (Year 1)

Grantee NEWMOA: Northeast Waste Management Officials Organization

Grant Title Compliance Assistance Metrics Software

Grant Cycle 1999-2000 *Grant Amount* \$55,000

Abstract

Under contract to the New Hampshire Department of Environmental Services, NEWMOA is developing Pollution Prevention (P2) and Compliance Assistance Metrics Software to help state P2 and compliance assistance programs manage their data. NEWMOA facilitated the development of a menu of multi-state environmental assistance and pollution prevention metrics during FY1999. The menu includes both activity and outcome metrics. To facilitate the use of the menu and to effectively share data in the future, states need a common software program. NEWMOA has established a P2 and Compliance Assistance Metrics Workgroup to oversee the development of the Microsoft Access-based software that can be used to input data for program activities in five areas: client projects (including onsite assistance), workshops and conferences, production of educational material, grants for P2 projects, and responding to information requests. The database will also have areas to input data on the behavior and environmental outcomes of these activities.

Grantee NEWMOA: Northeast Waste Management Officials Organization

Grant Title Defining and Measuring Environmental and Regulatory Compliance in the NEWMOA States: RCRA "C" Prevention Strategies

Grant Cycle 1999-2000 *Grant Amount* \$30,000

Abstract

Under contract to the New Hampshire Department of Environmental Services, NEWMOA is undertaking a Resources Conservation and Recovery Act (RCRA) Performance Measures project to enhance the ability of state RCRA "C" programs to measure the effectiveness of their compliance and enforcement activities. The states recognize that RCRA performance and generator compliance rates help with the following: (1) Understanding where to focus their limited inspection and enforcement resources; (2) Determining the impacts of their compliance assistance and enforcement activities; (3) Assessing the program's impact on deterring potentially dangerous situations involving hazardous waste management; and (4) Communicating the value of the program in preventing environmental hazards. A RCRA Measures Workshop has been established. NEWMOA will identify critical elements of RCRA program performance. Available data from EPA and the states related to the workgroup's priority measures are being used to draft a report on hazardous waste generation and compliance and enforcement activities in the region.

Funding Area: Outcome Measurement (Year 1)

Grantee Oregon Department of Environmental Quality

Grant Title Measuring Deterrence Created through the Enforcement of Environmental Laws

Grant Cycle 1999-2000 *Grant Amount* \$119,060

Abstract

The EPA's National Performance Measures Strategy (NPMS) addresses current trends in government that obligate agencies to (1) Manage resources with results-based strategies and (2) Demonstrate that agency resources are used efficiently. The NPMS tracks outcomes of the various alternative regulatory "tools" and is to be used in deciding to which tools the agencies should allocate resources to achieve the best environmental return. However, by considering only the specific deterrence created at the target facility, without considering the general deterrence created in the regulated public as a whole, the NPMS undervalues enforcement and interferes with the two important reasons for using the NPMS: 1) It reduces the utility of the NPMS as a resource-management tool because we do not know whether the best environmental investment is in more enforcement or in assistance initiatives; and 2) It obscures the meaning of the performance measures in providing accountability because we cannot know if the newer assistance initiatives are more efficient than traditional enforcement in improving the environment. The primary objective of the study was to determine what aspects of inspections: penalties and other enforcement actions are most important in creating general deterrence. We accomplished the study through the use of two telephone surveys. In the first, questions were asked to assess the general public's knowledge about pollution management in Oregon (i.e., where they would go for environmental information, their beliefs and assessments of environmental enforcement in Oregon). The second survey was designed to measure perceptions of the regulated community and the public about penalties and inspections and determine whether enforcement actions are effective in stimulating compliance. A random selection of 450 companies, regulated by at least one of the major programs (air, water, hazardous waste) was targeted.

Grantee Texas Commission on Environmental Quality

Grant Title Measuring Outcomes from Compliance Assistance

Grant Cycle 1999-2000 *Grant Amount* \$75,000

Abstract

The Texas Commission on Environmental Quality funded forty-nine initial small business compliance/pollution prevention site visits and twenty-eight follow-up site visits. Follow-up visits were conducted at businesses where noncompliance with any state or federal regulation was documented. Data collection and management of pollution prevention case studies were used to monitor and track the types of improvements resulting from the site visits.

Grantee Washington State Department of Ecology

Grant Title Analysis of Change in Generator Compliance Using Ecology's Regulatory Indicator

Grant Cycle 1999-2000 *Grant Amount* \$215,270

Abstract

The following three project goals were designed to compare site inspections, both technical assistance and compliance, with generator regulatory compliance over time: 1) Establish a statewide baseline quantitative measure of environmental compliance supported by specific regulatory violation categories that best represent actual or potential environmental threats; 2) Determine if a relationship exists between formal Compliance Enforcement Inspections and regulatory compliance by regulated facilities and, if so, how it changes over time; 3) Determine if there is a relationship between technical assistance visits and compliance visits on the compliance rate of small quantity generators (SQGs). This goal specifically focused on technical assistance visits in the form of increased generator contact (IGC) visits, conducted primarily at SQGs.

Funding Area: Outcome Measurement (Year 2)

Grantee Colorado Department of Public Health and the Environment

Grant Title Development of Comprehensive Measurement Tool Template for the Asphalt Sector: the COMET project

Grant Cycle 2000-2001 *Grant Amount* \$75,000

Abstract

The main objective of this project is to support the activities of the Colorado Department of Public Health and Environment (CDPHE) in developing statistically valid outcome-based performance measures. Specifically, CDPHE will develop the Comprehensive Measurement Tool (COMET) template that will be used to measure performance-based outcome measures, pollution prevention measures, and environmental indicators for the asphalt sector. This measurement template will be developed and used for asphalt facilities throughout the United States. The work undertaken by this assistance agreement will complement the performance measurement work already being undertaken by CDPHE in other sectors in Colorado under the COMPASS Project. The performance measures developed under COMET will become part of the Performance Partnership Agreement with EPA Region 8.

Grantee Connecticut Department of Environmental Protection

Grant Title Developing Performance-based Measures

Grant Cycle 2000-2001 *Grant Amount* \$75,000

Abstract

The main objective of the project is to further improve the performance-based outcome measures on compliance rate analysis. Another project objective is to use a problem-solving approach to select an environmental problem to be resolved. Connecticut Department of Environmental Protection (CTDEP) will then develop and implement performance measures to measure the results. Moreover, CTDEP will incorporate this work on performance measures into the Performance Partnership Agreement (PPA) with EPA Region I.

Grantee Iowa Department of Natural Resources

Grant Title Pollution Prevention in the Food Processing Industry

Grant Cycle 2000-2001 *Grant Amount* \$100,000

Abstract

This project will promote Environmental Management System (EMS) awareness. Iowa Department of Natural Resources (IDNR) will assist facilities that choose to implement an EMS and help to identify pollution prevention opportunities. The objectives are to improve compliance and pollution prevention. The Department cosponsored an EMS workshop and follow up activities for meat processors which lead to 5 facilities implementing EMSs. Checklists, fact sheets and tools to help industry are also being developed. The second objective is to promote awareness of EMSs and develop a public policy workgroup of government, industry and public entities. The objective is to formulate a statewide EMS policy. The third objective is to develop an Iowa P2 Intern Program to provide facilities with qualified college attending interns who can conduct P2 or related projects during the summer.

Funding Area: Outcome Measurement (Year 2)

Grantee Maryland Department of Environment
Grant Title Consolidated Park Heights Performance Partnership Grant
Grant Cycle 2000-2001 *Grant Amount* \$211,000

Abstract -----
The project encourages automotive mechanical repair and auto body shops to review their environmental business practice with the help of a straightforward plain English workbook. Shops that wish to participate in the project are encouraged to complete a form that discloses how their business processes compare to environmental regulations. In exchange for their disclosure, shops that participate in the project will have a grace period during which the Maryland Department of the Environment (MDE) will provide them with compliance assistance rather than take enforcement actions. Shops needing help in meeting regulatory requirements are provided opportunities to seek financial assistance, if appropriate, as well as technical support and training. The project results will be carefully monitored to determine how effectively the compliance assistance approach affected the environmental impact of the auto body and repair shops within the neighborhood. Also, any practice that presents an imminent danger to public health, public welfare or the environment will be addressed. Shops that do not participate in the project or that fail to make a good faith effort to correct violations by the end of the project may be subject to enforcement actions.

Grantee Massachusetts Department of Environmental Protection
Grant Title EPA Cooperative Agreement for Massachusetts Department of Environmental Protection Environmental Results Program
Grant Cycle 2000-2001 *Grant Amount* \$131,000

Abstract -----
The main objective of this project is to further develop outcome measures of performance based on the Environmental Business Practice Indicators (EBPIs) under the Environmental Results Program (ERP) for three sectors: dry cleaners, photo processors, and printers. Other project objectives are to share data on program performance with the public and to assess the root cause of problems found by the EBPIs. Moreover, Massachusetts Department of Environmental Protection (MADEP) will leverage its work on ERP into the current State/Regional planning process and begin to make ERP and the performance measures (i.e., EBPIs) a part of the biennial Performance Partnership Agreement (PPA) with EPA Region I.

Grantee Massachusetts Department of Environmental Protection
Grant Title Municipal Environmental Compliance Stewardship and Measures of Success
Grant Cycle 2000-2001 *Grant Amount* \$200,000

Abstract -----
Under the direction of the Massachusetts Department of Environmental Protection (MADEP), the University of Massachusetts and GETF is conducting a series of workshops to train grant participants and mentors in using Environmental Management Systems (EMS) techniques to identify problematic issues and address, measure, and sustain performance improvement. A key component of the Municipal Environmental Stewardship Program is the incorporation of a mentor support system. The mentor will assist its grant participant to obtain the tools and information necessary to develop the EMS, but will not write the grant themselves. To facilitate the development of their respective EMS projects, each grant participant was requested to hold a "Kickoff Meeting" to bring their municipal EMS team together, identify and clarify their EMS "Fenceline," create an EMS Policy Statement, develop an EMS Strategy, and to select a "Core Team" of individuals responsible for the development of the EMS.

Funding Area: Outcome Measurement (Year 2)

Grantee Massachusetts Department of Food and Agriculture

Grant Title Development and Evaluation of Integrated Pest Management (IPM) in Schools, Daycare Centers and Childcare Programs

Grant Cycle 2000-2001 *Grant Amount* \$200,000

Abstract

This project supported compliance assistance and outreach programs to assure implementation of a major new Massachusetts state initiative entitled the "Act to Protect the Health of Children and Families from Harmful Pesticides". This Act affects all private and public schools, day care centers, and school age children child-care locales in Massachusetts. This Act is many faceted, and mandates Integrated Pest Management (IPM) be practiced as the sole pest management program employed within the schools, the development of IPM plans for schools, as well as a number of other requirements. The STAG grant supported: 1) development of a generic IPM plan for schools and daycare centers; 2) statewide training of school personnel and pest management professionals in the principles of school IPM and its legal status in Massachusetts; 3) and development of curricula and training materials to inform and instruct Massachusetts school personnel in the principals of IPM and the laws pertaining to the implementation of IPM in schools.

Grantee Michigan Department of Environmental Quality

Grant Title Business Needs Assessment and Measurement of Work Product Effectiveness

Grant Cycle 2000-2001 *Grant Amount* \$40,000

Abstract

In July of 2000, the (Small Business) Clean Air Assistance Program (CAAP), Environmental Science and Services Division of the Michigan Department of Environmental Quality received a multi-media State and Tribal Assistance Grant (STAG) from EPA's Office of Compliance and Enforcement Assurance (OECA). The grant project, entitled "Business Needs Assessment and Measure of Work Product Effectiveness," gauges the usefulness of a CAAP work product, the "Michigan Manufacturers' Guide to Environmental, Safety and Health." Grant activities are also expected to measure limited aspects of CAAP by examining the effectiveness of their outreach efforts as a technical assistance resource for the state's business and industry. Additional aspects of the grant will provide ways in which the CAAP can improve its methods of outreach in order to better serve a greater proportion of its customer base.

Grantee Missouri Department of Natural Resources with Bridging the Gap

Grant Title Small Business Mentoring for Compliance Assistance Outcome Measurement

Grant Cycle 2000-2001 *Grant Amount* \$190,642

Abstract

Through a detailed marketing plan, Bridging the Gap will recruit fifteen small businesses each year of the project and match their environmental needs to sources of assistance, either through existing local, state, and federal programs or through volunteer mentors. This project will provide both quantitative and qualitative results where resources are conserved, pollution is reduced, and small businesses are empowered to have proactive environmental management strategies.

Funding Area: Outcome Measurement (Year 2)

Grantee New Mexico Environment Department

Grant Title Class V Underground Injection Control (UIC) Compliance Assistance

Grant Cycle 2000-2001 *Grant Amount* \$145,364

Abstract

The New Mexico Environment Department (NMED) will perform compliance assistance and implement outcome measurements for large capacity septic tank/leach fields (LCSTLF) which are classified as Class V wells under the Safe Drinking Water Act (SDWA) Underground Injection Control (UIC) program. Under the UIC program, a ground water protection permit is required for each Class V septic system. At the start of this project, there were approximately 130 permitted LCSTLFs, approximately 58% of which were out of compliance with respect to operational, monitoring, or ground water standards requirements in their permits. Concurrent with implementation of this project, the NMED has been moving onto a new database which has complicated retrieval of performance measurement data. Despite tracking a smaller population of sites, the data collected does support the premise that compliance assistance actions are successful in bringing sites into compliance. A single written compliance assistance action is successful in bringing most permit holders into substantial compliance. Constantly changing compliance rates seem to present the greatest challenge to quantifying outcome measures because the specific outcome for a specific action at a specific site must be tracked. The action-specific performance measures we are tracking for this grant project require a lot of manual counting and evaluation that will not be realistic to apply when measuring compliance assistance outcomes for the 805 ground water protection permits NMED issues and oversees.

Grantee New York State Department of Environmental Conservation

Grant Title Measuring Compliance Assistance Outcomes in New York State

Grant Cycle 2000-2001 *Grant Amount* \$94,485

Abstract

The P2 Unit has designed and implemented output and outcome measures and a supporting information system for two P2 Unit activity areas: the Compliance Assistance/P2 Workshops and Manuals and the M2P2, or Multi-Media Pollution Prevention Program. With regards to the Compliance/P2 Technical Assistance Workshop and Manuals Analysis part of the project, output/outcome measures have been developed for the P2 Unit's compliance and technical assistance workshops. Between 15 and 20 workshops are conducted by the P2 unit each year to educate clients in selected industrial sectors and to distribute sector-specific compliance and technical assistance manuals that are developed by the P2 Unit. The P2 Unit provides workshop attendees with an Evaluation Form it has designed which has been filled at the end of a workshop and which asks the attendee questions about the workshop. Results have been tabulated, summarized, and analyzed. A 6-Month Followup Survey form and a 12-Month Followup Survey form (following the date of the workshop) have been designed and distributed to find out if the manual was useful, ask for Manual improvement suggestions, determine if any additional improvement initiatives have been identified, discover if any improvement initiatives are planned or being implemented, and obtain information on actual/ projected environmental or financial outcomes. With regards to the M2P2 Program Analysis part of the project, the Department's M2P2 Program is an integrated inspection program, in which teams of Department of Environmental Conservation (DEC) regional staff from different media programs work together at one point in time to conduct a comprehensive compliance and P2 assessment at a regulated facility. So far almost 200 facilities have participated in this program.

Funding Area: Outcome Measurement (Year 2)

Grantee NEWMOA: Northeast Waste Management Officials Organization

Grant Title Supporting the Northeast States Efforts to Implement Compliance Assistance and Pollution Prevention Software

Grant Cycle 2000-2001 *Grant Amount* \$87,000

Abstract -----

Under a previous grant, NEWMOA completed the first version of a Microsoft Access-based software program to provide a common system for the states to track their pollution prevention and compliance assistance activities and their outcomes. However, states need support to implement the software in their programs and on their computer systems. NEWMOA is developing a users' manual to accompany the database and implementing a training program for the states. NEWMOA is also subcontracting with the National Pollution Prevention Roundtable to provide a forum to discuss Pollution Prevention (P2) program measurement issues, and to share information about the database with states outside the NEWMOA region.

Grantee Ohio Environmental Protection Agency, Division of Air Pollution Control

Grant Title Risk Management Plan / Toxics Release Inventory (RMP/TRI) Data Quality Improvement and Regulatory Assistance

Grant Cycle 2000-2001 *Grant Amount* \$100,000

Abstract -----

Through this project Ohio EPA plans on increasing the awareness and understanding of the RMP and TRI program requirements among the regulated community. Ohio EPA will measure the existing compliance rate with the RMP and TRI programs. Following targeted outreach for specific industrial sectors, DAPC plans on again measuring the compliance rate. Ohio EPA intends to purchase the relevant Dun and Bradstreet information to identify Ohio facilities in industrial sectors that report under RMP and TRI. This information will allow Ohio to locate facilities that may be unaware of environmental regulations to which they may be subject. Ohio EPA will provide these facilities with compliance assistance. Ohio EPA plans on also using the Harris Industrial Directory to identify facilities. Through increased awareness and understanding resulting from targeted outreach, Ohio EPA hopes to bring about increased compliance rates.

Funding Area: Performance Measurement/Program Planning

Grantee Florida Department of Environmental Protection

Grant Title Joint Planning to Enhance Environmental Results

Grant Cycle FY2002 *Grant Amount* \$96,000

Abstract

Florida Department of Environmental Protection (FDEP) proposes to enhance its capacity to carry out its compliance assurance responsibilities through "joint planning to enhance environmental results" that involve the development and evaluation of tools and processes in order to accomplish the following: 1) Internally integrate and evaluate priorities and strategies FDEP has developed internally over the past six months; 2) Weigh various factors in determining inspection priorities; and 3) Promote understanding, respect, alignment, and leveraging of priorities and government resources with EPA. FDEP and EPA are interested in designing a process and tools to ensure that they are individually and, wherever possible, jointly addressing priority environmental problems to the greatest extent possible.

Grantee New Jersey Department of Environmental Protection

Grant Title Compliance and Enforcement Target and Measure Initiative

Grant Cycle FY2002 *Grant Amount* \$200,000

Abstract

Since 1999, The New Jersey Department of Environmental Protection (NJDEP) has been collecting multimedia inspection, violation and enforcement action data in a facility-based, department-wide integrated database, called the New Jersey Environmental Management System (NJEMS). This grant project focuses on results-based resource allocation and targeting. With this goal the project uses the NJEMS data to evaluate NJDEP resources and the results from this database. This information will be used to determine appropriate shifts in resources and priorities and develop new targeting strategies. This analysis will be conducted for the five media that have at least one year of data available in NJEMS: Air, Water Quality, Water Supply, Hazardous Waste, and Solid Waste. We are proposing to evaluate at least one full year of past inspection data, focusing primarily on inspection rate and compliance rate. This evaluation will be conducted by by completing a chart developed by the Environmental Compliance Consortium (ECC), collecting staff resource data to determine effectiveness and, developing appropriate targeting strategies. We will add to this chart, data relevant to each media, such as facility type, facility size, number of employees, SIC, and other information that will be used to evaluate NJDEP effectiveness. The inspection and compliance rate data will be used as a baseline for performance measurement. New targeting strategies will be developed based on this information and inspections will be performed based on the new strategies. NJDEP will then generate the same set of inspection and compliance rate data, post inspection, to determine targeting success.

This project will determine if this proposed approach produces effective targeting strategies and should be continued. If this method is effective, the lessons learned and the report development techniques will be used to determine appropriate targeting strategies for other media including Land Use, Pesticides, TCPA, DPCC, and RTK.

An integral part of this project will be obtaining and using new information to generate good targeting strategies. While NJDEP has been collecting information in our facility based system, NJEMS, basic facility information is missing that should be used to evaluate past effectiveness and determine new targeting strategies consistently and for all media. NJDEP will also identify facilities it doesn't know exists.

Funding Area: Performance Measurement/Program Planning

Grantee New Mexico Environment Department

Grant Title Improvements from Enhanced Enforcement and Compliance Assistance Initiatives for Sand and Gravel Crushing and Asphalt Plants in New Mexico

Grant Cycle FY2002 *Grant Amount* \$23,000

Abstract

The operators of aggregate operations and asphalt plants in New Mexico are frequently issued notices of violation for non-compliance with state and federal regulations, and air quality permit conditions. This industry sector is out of compliance on a frequent basis and there are numerous repeat violations. The New Source Performance Standards that apply to most of these facilities are not well understood by the operators. In addition, many operators do not understand the conditions of their permits or federal standards, and how these apply to their facilities. Operators often do not comply with permit requirements to reduce and eliminate dust from fugitive sources, resulting in complaints from communities and nearby residents. The resources required for responding to complaints, enforcement, and settlement actions for these facilities are taxing and time consuming for Air Quality Bureau personnel.

The goals of this project are to: 1) develop educational and outreach materials to assist these facilities in remaining in compliance with air quality regulations and standards, 2) create and establish a methodology for measuring improvement in compliance, and 3) reduce the percentage of non-compliance in this industry sector.

The components of this project will consist of developing compliance assistance tools and outreach, and enhancing enforcement for this sector by increasing the number of inspections to these facilities. While outreach is taking place, and for the following two years, the state will track the number of enforcement actions, the severity of violations, the number of repeat offenders, and improvements. The number of facilities making environmental management changes as a result of compliance assistance and/or enforcement actions will also be recorded.

Grantee North Carolina Department of Environmental and Natural Resources

Grant Title Compliance Improvements Resulting from Environmental Management System Implementation on Swine Operations

Grant Cycle FY2002 *Grant Amount* \$150,000

Abstract

Determining the most effective and efficient approaches to improving the overall compliance and environmental performance of swine operations has been a challenge in North Carolina for several years. In the past North Carolina Department of Environment and Natural Resources (DENR) has undertaken several studies and projects to address these issues. Specific measures have not been developed and tested to show the effectiveness of environmental management systems (EMS) in obtaining and exceeding compliance at swine operations. This project goal is to develop and field test output and outcome measures to determine effectiveness of EMS as a compliance assistance tool for swine operations.

Grantee South Carolina Department of Health and Environmental Control

Grant Title Predicting Future Compliance from Past Performance: A Methodology for Targeting Compliance Assurance and Enforcement Activities

Grant Cycle FY2002 *Grant Amount* \$150,213

Abstract

The project goals are to: 1) Develop and test a priority-setting methodology that will ultimately allow the agency to free up resources from areas that are currently being adequately controlled and to redirect those resources to address identified priorities; 2) Incorporate this methodology into a strategy for engaging in joint planning with EPA to set priorities and to ensure that they are consistent with and reflective of the agency's media program requirements, resources, and activities; 3) Share results with EPA and other states in Region 4 to cultivate a better understanding of state-specific and regional priorities, and 4) To jointly leverage federal and state resources to address them.

Funding Area: Public Access

Grantee Indiana Department of Environmental Management

Grant Title Drinking Water Watch Program

Grant Cycle 2000-2001 *Grant Amount* \$100,000

Abstract

Indiana Department of Environmental Management (IDEM) Drinking Water Watch Project will establish a user friendly public access (through the State Website) to drinking water compliance and enforcement information for Indiana's approximately 860 community public water systems, 670 non-transient non-community water systems and 2800 transient non-community water systems. It is projected the citizens of Indiana will use this information to gain a better understanding of their local water system and the efforts taken by their system and the state to produce and ensure safe drinking water. The user will be able to see what type of contaminants are present in their drinking water and a component of the site will explain in lay terms what these contaminants may mean for their family health or business. The user will be able to follow the efforts by the public water system and IDEM to resolve drinking water problems, including water quality and operation. This Web site information will compliment EPA's Envirofacts Web site. It is also anticipated that other public water system, state and local agencies, organizations, groups and institutions will also use the public water system information for research, information, and other compliance issues. The ability of the site to locate groups of public water system with specific contaminant problems or other issues related to compliance should be invaluable to their efforts and mandates.

Grantee University of South Carolina, School of the Environment

Grant Title Measurement of Effectiveness of On-site Inspection with Non-regulatory Follow-up by Industry Sectors

Grant Cycle 2000-2001 *Grant Amount* \$74,729

Abstract

Under a grant from the EPA Region IV Environmental Justice Through Pollution Prevention Program (EJP2), the University of South Carolina Center for Environmental Policy through the Trident District Office of the South Carolina Department of Health and Environmental Control (SCDHEC), began the first sector-based targeted compliance assistance program. Originally, the project only targeted a single sector of small auto body shops located in the North Charleston area. Success of the original project led to an expansion of the compliance assistance program into trucking companies and private transportation firms. The program consisted of five steps: (1) Site compliance inspection by Trident SCDHEC employees; (2) Letter of non-compliance status to facility with referral to the Center for Environmental Policy (CEP) Compliance Assistance Program (in-compliance firms referred to the state pollution prevention program for beyond compliance work); (3) Non-regulatory, free assistance supplied to non-compliant companies by CEP to attain compliance within the forty-five day window for attainment; (4) Follow-up compliance inspection by Trident SCDHEC employees; and (5) Letter of compliance/non-compliance to facility. Early data indicates that of the fifty-two firms inspected, thirty-two were found to be out of compliance with SCDHEC regulations. At this time, approximately 90% of the firms have now attained compliance, with work on-going at the remaining companies.

Grantee Washington State Department of Ecology

Grant Title Information Display Improvements

Grant Cycle 2000-2001 *Grant Amount* \$112,500

Abstract

IRIS for Hazardous Waste (IRIS) will be a simple and intuitive way for the public to retrieve information on RCRA hazardous waste generation, management, compliance, and enforcement data in a graphical display. It will show information in a pictorial format to make it more meaningful than in a traditional tabular format. IRIS will display images on a computer screen which will change in size and context in relation to the information retrieved. The goal of this project is to make the hazardous waste information and innovative viewing tool available to a wide audience. For this reason, the tool will be developed in such a way as to accomplish the following: (1) Create maximum flexibility for customizing the application; (2) Allow a variety of data types to be linked with graphical images in the application; (3) Operate on the Internet or on stand-alone computers; (4) Contain a user help system to provide instructions on how to setup and use the system.
