

**EVALUATION OF THE OECA/ECOS
STATE REVIEW FRAMEWORK
IN PILOT STATES**

Prepared for:

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EXECUTIVE SUMMARY

1.0 INTRODUCTION

Working with the Compliance Committee of the Environmental Council of States (ECOS) and representatives from authorized state agencies and EPA Regions, EPA's Office of Enforcement and Compliance Assurance (OECA) is developing and testing a tool to assess state enforcement performance. EPA Headquarters and Regions use the State Review Framework (or Framework) as a platform for analyzing enforcement data, reviewing enforcement files, and conducting a series of management discussions with states (see Attachment A for OECA's June 2004 Framework overview). Through use of the Framework, OECA aims to evaluate state performance to (a) provide a consistent level of environmental and public health protection across states; and (b) develop a consistent mechanism by which EPA Regions, working collaboratively with their states, can ensure that authorized state agencies meet agreed-upon performance levels.

The Framework draws from longstanding EPA compliance and enforcement policies and guidance. It is designed to foster dialogue on enforcement and compliance performance that will lead to improved program management and environmental results. OECA piloted the Framework to evaluate state performance in three federally-delegated programs [Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES), Clean Air Act (CAA) Stationary Source, and Resource Conservation and Recovery Act (RCRA) Subtitle C] against a set of 12 elements representing four categories of inquiry: reviews of state inspection implementation; reviews of state enforcement activity; reviews of state performance partnership agreements; and reviews of database integrity. In addition, the Framework includes a thirteenth optional element to ensure consideration of "non-core" enforcement activities that may contribute to the state's overall performance.

OECA piloted the Framework across all ten EPA Regions during 2004. Pilot states included Rhode Island (Region 1), New Jersey (Region 2), Maryland (Region 3), South Carolina (Region 4), Michigan (Region 5), Oklahoma (Region 6), Missouri (Region 7), Nebraska (Region 7), Colorado (Region 8), Arizona (Region 9), and Alaska (Region 10). For most Regions, all three media programs were piloted with one state. EPA Region 7 piloted the Framework with Missouri for the CAA Stationary Source and RCRA Subtitle C enforcement activities and Nebraska for the CWA NPDES activities. EPA Region 10, which administers Alaska's CWA

and RCRA programs, was reviewed by EPA Headquarters while Region 10 reviewed Alaska's CAA program.

This evaluation uses the results of the pilots as well as discussions with key stakeholders to support recommendations aimed at helping OECA improve the Framework before implementing it more broadly. IEC's analysis addresses the four overarching evaluation questions included in Table ES-1.

Table ES-1
Overarching Evaluation Questions
(1) <i>Sufficiency of Framework to Support Conclusions.</i> Are the elements, metrics, and other information sources prescribed by the Framework sufficient to support conclusions about state performance and compliance assurance and recommendations on enforcement program improvements?
(2) <i>Consistency of Framework Application.</i> Has the Framework been consistently applied across pilot states?
(3) <i>Outcomes of Pilot Projects.</i> Have Framework pilot projects achieved the desired short-term outcomes (e.g., stronger EPA-state relationships, recommended improvements included in Assistance Agreements and other planning documents)?
(4) <i>Areas for Improvement.</i> How can EPA and states improve the Framework (in terms of its elements, metrics, and procedures) before expanding its use to all 50 states?

In completing this evaluation, IEC collaborated with ECOS, EPA, the State and Territorial Air Pollution Program Administrators and Association of Local Air Pollution Control Officials (STAPPA/ALAPCO), Association of State and Interstate Water Pollution Control Administrators (ASIWPCA), and Association of State and Territorial Solid Waste Management Officials (ASTSWMO).

2.0 METHODOLOGY

IEC's analysis sought to determine whether the Framework provides an accurate assessment of state enforcement and compliance assurance activities; this report concludes with a set of findings and recommendations aimed at helping OECA improve the Framework before implementing it more broadly. IEC's evaluation methodology consists of two major components: discussions with program stakeholders including state agency staff, media associations such as ASIWPCA, ASTSWMO, and STAPPA/ALAPCO, ECOS compliance committee members, and EPA staff in Headquarters and the Regions and an analysis of the State Review Reports from pilot states.

3.0 FINDINGS

Overall, this evaluation demonstrates the Framework's effectiveness in providing a platform for evaluating state enforcement and compliance assurance programs on a nationwide basis and offers suggestions for improving the quality of available data and interpretations as to

performance. The findings include comments from Regions and states as well as observations gleaned from our analysis of State Review Reports from pilot states. The discussion of specific evaluation findings is organized in the body of the report by the four overarching evaluation questions, and in a manner that identifies (a) areas for improvement prior to the Framework's national rollout; as well as (b) lessons learned from the pilots that OECA may choose to address over the longer term. Attachment G provides a detailed summary of the findings.

3.1 Framework Implementation: Areas for Improvement

Methodological Enhancements: Improvements to methodologies for universe identification and file selection protocol, as well as strategies for reconciling national and state data and including a resource component, will enhance sufficiency of the Framework to support conclusions of the reviews.

- We found that universe identification presented a concern for respondents, and variations in approach were evident in the State Review Reports. Assessing performance with respect to an accurate universe of regulated entities is critical to ensuring a credible review.
- With respect to the file selection protocol, we found that states and Regions employed a variety of methods to select files. It will be important to refine the protocol to determine a consistent and representative method for selecting files, drawing conclusions from their content, and ensuring that the process is fair, transparent, and not overly burdensome to states and Regions.
- The Framework provided an opportunity for states and Regions to work together to reconcile differences in national and state databases. Although data reconciliation has long been a goal for EPA Headquarters, it appears that states and Regions are still exerting significant effort to address discrepancies. Initial national data pulls presented challenges to states and Regions. OECA worked to solve many of the issues arising from the data pulls, and anticipates working with its metrics workgroup to continue solving problems.
- A number of states and Regions also commented on the need to recognize resource constraints in the State Review Reports as a way of acknowledging efforts to do more with less, though they did not recommend using an efficiency measure.

Interpretation and Presentation of Results/Data Points: EPA and states had a number of conversations throughout the process as to how to interpret and then present the results of state performance. The national programmatic goals and averages were discussed and often noted in state review reports. At the same time, participants were unclear how to interpret the results. For example, in instances where a state was making significant strides in improving performance from previous years, but still fell short of the national average, certain Regions made a point of

acknowledging these efforts and providing a context, whereas other Regions simply reported the quantitative results.

Another important interpretive issue arose where a state's detection of significant violators falls below the national average, but the state believes that an aggressive field presence acts as an effective deterrent, rather than these data representing a deficiency on the state's part in accurately identifying such violations.

Valuing State Performance: States offered many suggestions for valuing state performance in meeting agreed-upon standards within the core program elements. These suggestions included a continuation and increase in federal funding, particularly to address reconciliation of state data with federal data; more flexibility in negotiated agreements and alternative strategies approved by Regional program staff; less frequent oversight reviews; preferential treatment in awarding state grants; and the ability of states to take the lead on high profile enforcement cases.

Valuing Element 13 Enforcement and Compliance Assurance Activities: Element 13 provided some states an opportunity to showcase the extent of their programs. Element 13 is an optional evaluation element in which states could include program areas such as compliance assistance efforts, pollution prevention, innovation, incentive or self-disclosure programs, outcome measures, environmental indicators, relationships with state Attorney General's offices, and other "non core" activities. For those States using Element 13, there was a clear interest in demonstrating the value of these program activities in protecting the environment and public health. OECA's Element 13 workgroup (convened May 2005) should provide an opportunity for EPA and the states to work together to provide additional guidance as to the kinds of activities, programs, and information to be included under Element 13. EPA should find a way to provide recognition and value to those state efforts.

3.2 Lessons Learned from State Reviews

Training Opportunities: Based on interviews with respondents, we identified a set of training needs which OECA may wish to consider for pilot states. Many states reported that the review process presented opportunities to better understand the national database systems and to improve their own data management. In addition, a number of states requested training regarding the calculation and documentation of penalties, as well as the accurate and appropriate documentation of inspections and identification of violations.

Capacity Building in State and Regional Enforcement and Compliance Assurance Programs: The State Review Reports in particular presented evidence of excellent collaborative relationships between states and Regions, and also evidence of the need to build more effective partnerships in some Regions. Many respondents noted that regular communication is the key to building capacity and working toward the same goals. OECA should look for opportunities to provide models to those states and Regions that need improvement.

4.0 DISCUSSION/RECOMMENDATIONS

Based on lessons learned from its review of the pilots and discussions with state and federal participants, IEC has identified several recommendations intended to improve the delivery of the State Review Framework to the remaining states. We have organized these recommendations according to the four areas addressed in the evaluation.

4.1 Sufficiency of Framework to Support Conclusions

Recommendation 1: *Provide Implementation Blueprint for Synthesizing Data and Information Sources into a Comprehensive Enforcement Picture with a Roadmap for Future Efforts*

The Framework requires a detailed review of twelve required elements that apply to the three core enforcement programs. In addition, Regions and states worked to synthesize data and information sources in the State Review Report and provide highlights and an overview of the state's enforcement program in the Executive Summary. OECA and ECOS may want to consider an implementation blueprint that provides a model synthesis of diverse data and information sources and includes a roadmap for how Regions and states will collaborate to improve performance in the future.

Recommendation 2: *Add Resource Considerations to Provide Context for Program Performance*

The resources available to a state to initiate and implement core enforcement and compliance assurance activities significantly affect the capacity of the state to meet quantitative and qualitative performance standards. We suggest that OECA and ECOS include a section in the Framework to address resource constraints that affect state performance, but do not recommend that this be an efficiency metric.

Recommendation 3: *Provide Additional Guidance Regarding Purpose of Element 13*

Element 13 provides states the opportunity to share the extent of their compliance and enforcement activities with the Region. Non-core enforcement, compliance assurance, and compliance assistance activities are important components of ensuring environmental protection and addressing specific environmental programs in diverse geographic areas across the nation. OECA and ECOS may wish to consider in their Element 13 workgroup how to value the Element 13 activities identified by Regions and states.

4.2 Consistency of Framework Application

Recommendation 4: *Provide Headquarters Resources and Support to Reconcile National Data with State Data at Outset of Review*

OECA may wish to consider providing specialized and dedicated Headquarters staff to assist Regions and states with the significant challenge of reconciling national and state data at

the outset of state reviews. This is an issue that was noted by many Regions and states and although Headquarters' support during the pilot process was appreciated, it appears that much work still needs to be done. From a systems perspective, New Jersey noted that EPA is presently assisting the state in its efforts to develop an interface between the state's comprehensive enforcement database system and the national data systems. Regions and states also need to reaffirm their commitments to routinely reconcile enforcement information in national and state databases.

Recommendation 5: *Continue to Clarify how Framework Intersects with Traditional and New Program Reviews*

OECA should continue to coordinate with national program reviews that include enforcement metrics so that EPA is speaking with one voice. Despite the expectation that information from the Permitting for Environmental Results would be used, several respondents noted that they had learned much from the NPDES Permitting for Environmental Results review and urged a greater coordination between EPA offices. Although the Implementation Guide encourages the Regional team and its state counterparts to identify any existing reviews that have been completed within the last two years and to include relevant information, OECA may want to consider additional guidance on this point.

Recommendation 6: *Clarify Role of Negotiated Commitments in Review*

EPA and states invest substantial management, programmatic, and enforcement resources in negotiating the terms of commitments that are included in negotiated agreements such as PPAs, PPGs, and categorical grant agreements. These agreements provide a template for how state resources are allocated over a one or two-year time period and what performance targets states must meet. While the Overview of the Framework states the intention to build the consideration of negotiated commitments into its metrics, EPA may wish to provide additional practical guidance and examples in its Implementation Guide.

Recommendation 7: *Provide More Interpretive Guidance Within Implementation Guide*

OECA may wish to consider providing additional examples in its implementation guide to assist Regions in interpreting the results of the state reviews. For example, the pilot reports appear to assess state performance against a variety of targets: the national goal, the national average, and commitments in planning/grant agreements. There needs to be greater clarity regarding the use of these targets in assessing a state's performance, and the conclusions drawn by the Region.

4.3 Outcomes of Pilot Projects

Recommendation 8: *Identify Menu of Incentives/Benefits Available to States with Adequate Core Enforcement Programs*

The practical application of differential oversight remains a challenge for Regions and states. OECA and ECOS may want to consider developing a menu of incentives or benefits that

might be available to states determined to have adequate core enforcement programs. States suggested that these incentives could include funding to improve data interfaces, recognition, and more flexibility for states to receive approval for alternative inspection or enforcement strategies.

Recommendation 9: *Provide Training Opportunities to Share Best Management Practices*

To foster continuous improvement, Framework results provide a series of opportunities to provide training opportunities to states. OECA may wish to consider providing training in proper data entry and data management procedures to states and their Regional counterparts. Results from the Framework pilots also indicated a need for training in documenting inspections and including sufficient information to accurately identify violations, and in determining gravity and economic benefit penalty calculations.

Recommendation 10: *Reinforce State/Regional Communications and Relationship Building by Identifying Shared Needs and Interests*

The communication and relationship-building benefits that accompany a collaborative review of enforcement and compliance assurance programs need to be reinforced and supported throughout the year. OECA and ECOS may want to share Regional and state models of collaboration that work particularly well to encourage a more effective partnership.

4.4 Areas for Improvement

Recommendation 11: *Develop Collaborative Process for Resolving Methodological Challenges Associated with Universe Identification and File Selection Process*

Based on the concerns expressed by respondents and the variations evident in the State Review Reports, OECA and ECOS need to resolve the methodological challenges associated with universe identification and file selection. Assessing performance with respect to an accurate universe of regulated entities is critical to ensuring a credible review. With respect to the file selection protocol, OECA may want to consider revising the protocol to accommodate statistical considerations while ensuring that the administrative burden is reasonable for states and Regions. Section 3.1.3 of this report describes IEC's full recommendations for improvements to the file selection protocol.

Recommendation 12: *Develop Model State Review Report*

The State Review Reports included a variety of approaches ranging from excellent quantitative records of the results to a more qualitative approach. While all reports followed the report template in terms of structure, the contents and tone of the reports were quite different. OECA and ECOS may wish to consider developing a model State Review Report that merges the best elements of all ten pilot reports.

Recommendation 13: *Determine how Framework will Assess Performance over Time*

OECA and ECOS may want to consider how to assess future state performance based on reviews against current state performance. It is important to develop systems that will readily permit, and track, comparisons within states over time. Such an approach will also provide an opportunity for determining whether training and other interventions have been effective in improving performance.

1.1 Background

Working with the Compliance Committee of the Environmental Council of States (ECOS) and representatives from authorized state agencies and EPA Regions, EPA's Office of Enforcement and Compliance Assurance (OECA) is developing and testing a tool to assess state enforcement performance. EPA Headquarters and Regions use the State Review Framework (or Framework) as a platform for analyzing enforcement data, reviewing enforcement files, and conducting a series of management discussions with states (see Attachment A for OECA's June 2004 Framework). Through use of the Framework, OECA aims to evaluate state performance to (a) provide a consistent level of environmental and public health protection across states; and (b) develop a consistent mechanism by which EPA Regions, working collaboratively with their states, can ensure that authorized state agencies meet agreed-upon performance levels.

The Framework draws from longstanding EPA compliance and enforcement policies and guidance. It is designed to foster dialogue on enforcement and compliance performance that will lead to improved program management and environmental results. OECA piloted the Framework in ten states, evaluating against the following set of 13 elements. The first 12 elements are applied to the three federally-delegated programs [Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES), Clean Air Act (CAA) Stationary Source, and Resource Conservation and Recovery Act (RCRA) Subtitle C], while optional element 13 is included to ensure consideration of "non-core" activities that may contribute to the state's overall enforcement performance.

- (1) The degree to which a state program has completed the universe of planned inspections (addressing core requirements and Federal, state, and regional priorities).
- (2) The degree to which inspection reports and compliance reviews document inspection findings, including accurate descriptions of what was observed to sufficiently identify the violation(s).
- (3) The degree to which inspection reports are completed in a timely manner, including timely identification of violations.

- (4) The degree to which significant violations (e.g., significant noncompliance and high-priority violations) and supporting information are accurately identified and reported to EPA's national databases in a timely manner.
- (5) The degree to which state enforcement actions include required corrective or complying actions (i.e., injunctive relief) that will return facilities to compliance in a specific time frame.
- (6) The degree to which a state takes timely and appropriate enforcement actions, in accordance with policy relating to specific media.
- (7) The degree to which a state includes both gravity and economic benefit calculations for all penalties, appropriately using the BEN model or similar state model (where in use and consistent with national policy).
- (8) The degree to which penalties in final enforcement actions collect appropriate economic benefit and gravity in accordance with applicable penalty procedures.
- (9) The degree to which enforcement commitments in the PPA/PPG/categorical grants (i.e., written agreements to deliver a product/project at a specified time), if they exist, are met and any products or projects are completed.
- (10) The degree to which the minimum data requirements are timely.
- (11) The degree to which the minimum data requirements are accurate.
- (12) The degree to which the minimum data requirements are complete, unless otherwise negotiated by the region and state or prescribed by a national initiative.
- (13) States may also designate an optional thirteenth element (pending negotiation with their EPA Region) to ensure that the Framework review takes measure of the full range of program activities and results.

The Framework review is a structured process that aims to create a streamlined picture of the enforcement and compliance assurance performance in a particular state. The review employs data available in EPA's On-line Targeting Information System (OTIS)¹ pulled from national media-specific databases; supplemental data from state information management systems; reviews of state enforcement files and negotiated commitments; and discussions with state management staff. The Framework is organized and implemented so that each media program receives a separate review. EPA's June 2004 Framework Implementation Guide describes the process by which the review is to be conducted (Attachment B). Based on the review of all available information and coordination with the state, the Region and state draft a

¹ OTIS is an online tracking information system that is designed to enable Tribal, state, and EPA staff to access data related to enforcement and compliance.

State Review Report. These reports provide the results of the individual media program reviews and an executive summary that attempts to synthesize findings across media areas into a picture of the state's enforcement and compliance assurance program.

OECA piloted the Framework on a pilot basis across all three media in all ten EPA Regions during 2004. Exhibit 1.1 displays the entities involved and media programs reviewed.

Table 1.1
FRAMEWORK PILOT PARTICIPANTS

EPA Region	State(s)	Media Program(s) Reviewed
1	Rhode Island	CAA, CWA, RCRA
2	New Jersey	CAA, CWA, RCRA
3	Maryland	CAA, CWA, RCRA
4	South Carolina	CAA, CWA, RCRA
5	Michigan	CAA, CWA, RCRA
6	Oklahoma	CAA, CWA, RCRA
7 ^A	Missouri	CAA, RCRA
	Nebraska	CWA
8	Colorado	CAA, CWA, RCRA
9	Arizona	CAA, CWA, RCRA
10 ^B	Alaska	CAA, CWA, RCRA

A. Region 7 piloted the Framework within Missouri (CAA, RCRA) and Nebraska (CWA only); the remaining Regions each piloted the Framework across media in one state.

B. Region 10, which administers Alaska's CWA and RCRA programs, was reviewed by EPA Headquarters; and Region 10 reviewed Alaska's CAA program.

1.2 Purpose of Evaluation

As part of its ongoing efforts to review the efficacy of its programs, EPA conducted this evaluation of the process and results of these reviews. The Agency hopes to determine whether the Framework provides an accurate assessment of state enforcement and compliance assurance activities. OECA received evaluation funding from EPA's Office of Planning, Analysis, and Accountability (OPAA) and Office of Policy, Economics, and Innovation (OPEI) through the "Improving Results Competition," an Agency-wide effort to competitively fund program evaluation grants. OPAA used competition funds to secure contractor support from Industrial Economics, Inc. (IEc) of Cambridge, Massachusetts.

This evaluation uses the results of the pilots as well as discussions with key stakeholders to support recommendations aimed at helping OECA improve the Framework before implementing it more broadly. IEc's analysis addresses four overarching evaluation questions:

- (1) ***Sufficiency of Framework to Support Conclusions.*** Are the elements, metrics, and other information sources prescribed by the Framework sufficient to support conclusions about state performance and compliance assurance and recommendations on enforcement program improvements?

- (2) **Consistency of Framework Application.** Has the Framework been consistently applied across pilot states?
- (3) **Outcomes of Pilot Projects.** Have Framework pilot projects achieved the desired short-term outcomes (e.g., stronger EPA-state relationships, recommended improvements included in Assistance Agreements and other planning documents)?
- (4) **Areas for Improvement.** How can EPA and states improve the Framework (in terms of its elements, metrics, and procedures) before expanding its use to all 50 states?

In completing this evaluation, IEc collaborated with ECOS, EPA, the State and Territorial Air Pollution Program Administrators and Association of Local Air Pollution Control Officials (STAPPA/ALAPCO), Association of State and Interstate Water Pollution Control Administrators (ASIWPCA), and Association of State and Territorial Solid Waste Management Officials (ASTSWMO).

1.3 **Logic Model: OECA/ECOS State Review Framework**

As a first step in conducting this evaluation, IEc reviewed relevant program information (as provided by the WAM) and worked with OECA staff and the media associations to develop a program logic model, intended to illustrate how the Framework is designed to function (see Exhibit 1.2). Key components of the model include the following:

- **Mission** defines the overarching aims of the Framework. It sets the broad principles that guide the rest of the logic model, and serves as the overarching criterion against which Framework accomplishments can be evaluated. Ideally, each component of the Framework should be consistent with the Mission.
- **Inputs** are the investments (e.g., in partnerships and baseline data) required to support the activities associated with Framework implementation.
- **Activities/Outputs** are the specific actions taken to achieve the Framework's mission and the immediate products that result. These products include the ten Framework pilot projects and the improvements stemming from this evaluation.
- **Customers** are the users of the outputs and products developed. They are the Framework's target audiences (e.g., EPA Offices and Regions; states; and oversight bodies such as the Office of Management and Budget).
- **Short-Term Outcomes** are changes in learning, attitudes, skills, knowledge, and/or awareness resulting from Framework outputs. In this

case, the Framework allows EPA to consistently review state enforcement and compliance assurance programs.

- **Intermediate Outcomes** are the changes in Agency behavior that are causally linked to program efforts. For example, the Framework will provide for appropriate EPA oversight and resource targeting at the Federal and state levels.
- **Long-Term Outcomes** parallel the overarching goals of the Framework, and are the broad national benefits that flow from the Framework and its associated behavioral changes.
- **Partners** include those entities administering, supporting, and participating in Framework development and implementation.
- **Contextual/External Variables** are factors, not directly controlled by partners that may affect the Framework. For example, the national political environment and EPA-state relationships.

IEc used the logic model to help identify the sorts of information to be collected as part of the evaluation. It is important to note that while the logic model outlines the whole program, IEc's analysis is limited to the ten Framework pilots. In addition, because the Framework is currently at the pilot stage, our evaluation focuses primarily on inputs, activities, and outputs within the logic model. IEc notes short-term, intermediate, and long-term outcomes to the extent that the Framework pilots have attained them.

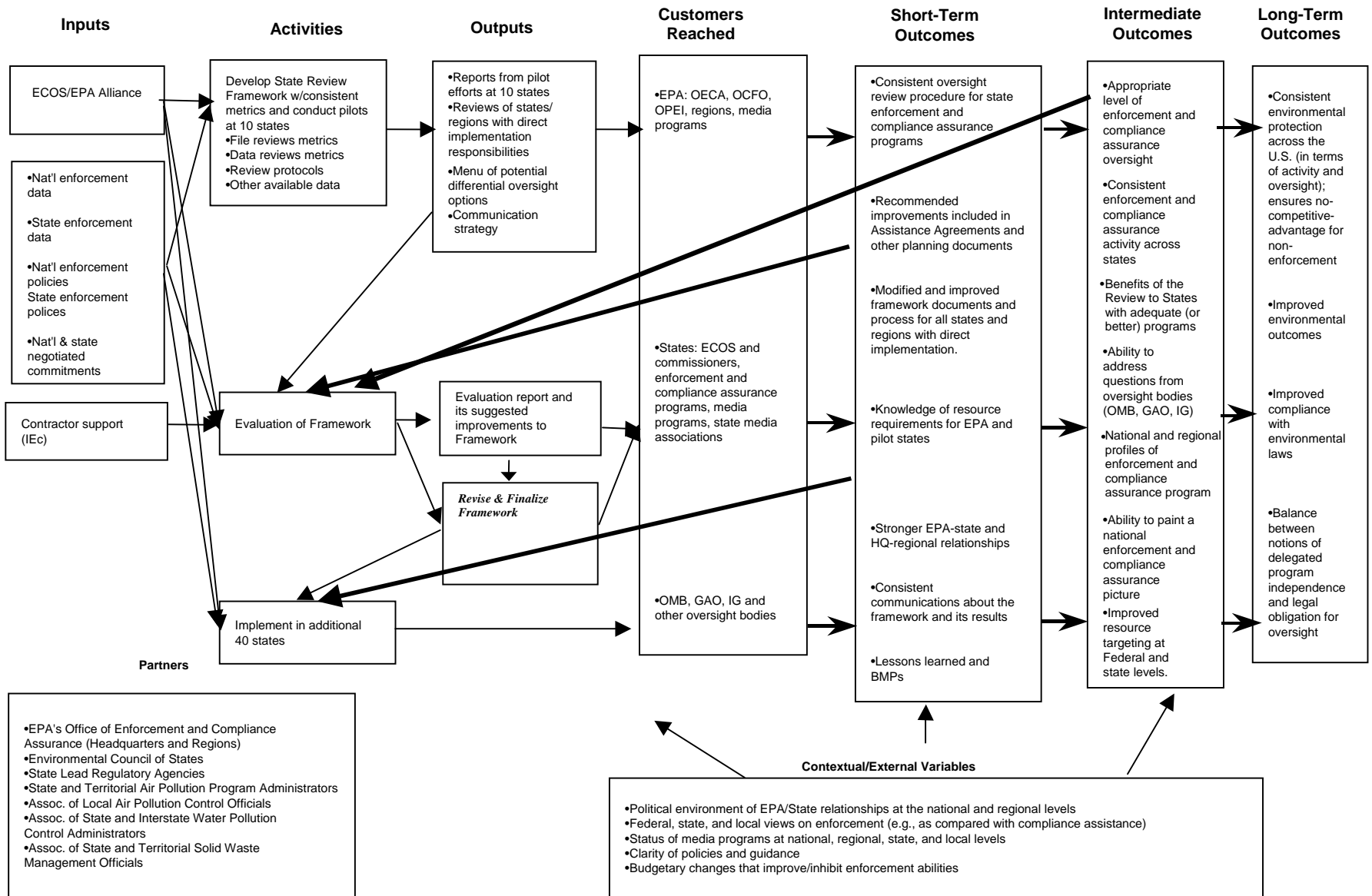
1.4 Structure of This Report

The remainder of this report is organized as follows:

- Chapter 2 presents the evaluation methodology, including discussions and reviews of State Review Reports. The chapter closes with a discussion of data limitations.
- Chapter 3 presents the evaluation findings organized by the four key evaluation questions described above.
- Chapter 4 presents our recommendations to OECA regarding changes that may be implemented to improve program performance.

FIGURE 1.1: LOGIC MODEL FOR OECA/ECOS STATE REVIEW FRAMEWORK

Mission: (1) Promote a fair and consistent level of core enforcement and compliance assurance across states to ensure consistent environmental protection and a level competitive playing field; (2) Improve Federal oversight of state enforcement and compliance assurance efforts; and (3) Refine a structured framework that can be applied across states to ensure adequate enforcement of Federal and state environmental laws.



2.0 METHODOLOGY

This chapter describes IEC's approach for evaluating the OECA/ECOS State Review Framework. IEC's analysis sought to determine whether the Framework provides an accurate assessment of state enforcement and compliance assurance activities. We used the logic model to frame-out the information to be collected as part of this evaluation and the methods that would be used to collect that information. IEC's evaluation methodology consists of two major components: discussions with program stakeholders and an analysis of the State Review Reports from pilot states. This chapter is structured accordingly.²

2.1 Discussions

This portion of the analysis relies primarily on telephone discussions conducted with program stakeholders. These discussions included three groups:

- **State Agency** staff from pilots were interviewed by their appropriate media association (i.e., ASIWPCA, ASTSWMO, or STAPPA/ALAPCO); IEC assumed a note-taking role on these calls and posed clarifying or follow-up questions as appropriate. ASIWPCA conducted a group discussion with pilot states and created an online survey to capture additional detail. ASTSWMO and STAPPA/ALAPCO each conducted individual calls with each pilot state.
- **ECOS Compliance Committee** members were interviewed as a group by ECOS staff; IEC assumed a note-taking role on this call and posed clarifying or follow-up questions as appropriate.
- **EPA** staff were interviewed by IEC. EPA stakeholders included Regional staff representing the three media programs and enforcement programs, where appropriate, as well as OECA Headquarters staff who managed the Framework pilots and conducted the Framework review for Region 10's administration of Alaska's water and waste programs. IEC conducted a single cross-media call with each Region (with the exception of Region

² Attachment C presents the Quality Assurance Plan developed in conjunction with the evaluation methodology.

10, for which we convened several media-specific calls). EPA Headquarters staff were interviewed as a group.

Attachment D lists the individuals who participated in the stakeholder discussions. With substantial input from OECA staff and the media associations, IEC developed a Discussion Guide and Framework Implementation Checklist to answer a common set of questions of all key stakeholders (Attachment E).

EPA made initial contact with the stakeholders through an introductory e-mail from OECA Deputy Assistant Administrator Phyllis Harris that explained the purpose of our effort and requested each respondent's assistance (Attachment F). A week after the initial correspondence, IEC began to coordinate the scheduling of discussions. ECOS and the media associations arranged their respective calls (with IEC on the line); IEC scheduled and conducted calls with EPA stakeholders. In most cases, respondents completed the Implementation Checklist independently and faxed the results to IEC.

IEC designed a Microsoft Access database to structure and organize discussion and checklist results. We made extensive use of Access queries and reports during data analysis to develop findings within and across stakeholder groups.

2.2 Review of State Review Reports

IEC supplemented our discussions with a review of each pilot state's Review Report. This analysis used IEC's overarching evaluation questions and the Framework's 13 specific elements as a backdrop against which to assess the reports' utility in providing information that allows OECA to consistently and adequately measure state performance. As part of this analysis, IEC developed and used a standardized analysis template to answer a common set of questions across media in each state.

This portion of IEC's analysis also focused on potential improvements to OECA's file selection protocol, which governs the number and type of files reviewed by Regions during the Framework site visit. Using the methods described in State Review Reports as a baseline, IEC leveraged in-house statistical expertise to develop an improved sampling model that will yield representative file reviews across states. Our model will prove especially important in providing a representative picture of enforcement and compliance assurance across states with varying levels of enforcement activity.

2.3 Data Limitations

In interpreting the results of the stakeholder interviews, IEC kept several data limitations in mind:

- Responses from state media program staff may have been affected by the presence of the media association members on these conference calls.

- ASIWPCA conducted interviews with state water program staff as a group. As a result, these discussions may not be as independent as other evaluation discussions that were conducted individually. However, ASIWPCA's online discussion guide provided respondents with an opportunity to modify or clarify responses after the call.
- Based on our general evaluation experience, the findings of the evaluation are only as accurate as the information provided by respondents. It is possible, although we are not aware of specific instances with respect to this evaluation, interviewees may have misinterpreted questions or inadvertently reported inaccurate quantitative or qualitative information.

3.0 FINDINGS

Overall, the evaluation demonstrates that the Framework provides an effective platform for assessing state enforcement and compliance assurance programs nationwide. The discussion of specific evaluation findings is organized by the four overarching evaluation questions outlined in Chapter 1.

1. ***Sufficiency of Framework to Support Conclusions:*** Are the elements, metrics, and other information sources prescribed by the Framework sufficient to support conclusions about state performance and recommendations on enforcement and compliance assurance program improvements?
2. ***Consistency of Framework Application:*** Has the Framework been consistently applied across pilot states?
3. ***Outcomes of Pilot Projects:*** Have Framework pilot projects achieved the desired outcomes?
4. ***Areas for Improvement:*** How can EPA and states improve the Framework (in terms of elements, metrics, and procedures) before expanding its use to all 50 states?

This chapter includes comments from EPA and states as well as observations gleaned from our analysis of State Review Reports. In addition to addressing the questions posed above, we also discuss possible modifications to the Framework over the short- and long-term. Attachment G serves as a detailed findings summary, covering the responses of Regional and state respondents during discussions. The chapter closes with an overall assessment of the Framework's effectiveness against the program logic model presented in Chapter 1.

3.1 **Sufficiency of Framework to Support Conclusions**

The Framework provides a platform for collecting the information necessary to support conclusions about state performance. States and Regions acknowledged the importance of supplementing national data and file reviews with state data sources, negotiated commitments, and in-depth discussions with state inspectors, permitting staff, and management. The following discussion examines the sufficiency of the Framework with respect to the elements, metrics, and

other information sources prescribed. In addition, we discuss whether pilot users believe the Framework yields an accurate assessment of a state's enforcement and compliance assurance activities.

3.1.1 Sufficiency of Elements to Support Conclusions

The Framework defines twelve elements that apply to the three federally-delegated enforcement programs.³ These elements represent four categories of inquiry: review of state inspection implementation; review of state enforcement activity; review of state performance partnership agreements; and review of database integrity. In addition, the Framework includes a thirteenth optional element to ensure inclusion of "non-core" activities which may support the state's overall enforcement performance. As described in the State Review Framework, states may use Element 13 to incorporate program areas not otherwise addressed by the Framework (e.g., compliance assistance, pollution prevention, innovation, incentive or self-disclosure programs, outcome measures, environmental indicators, relationships with State Attorneys General).

Almost all interview respondents reported that the Framework elements capture the essence of a core enforcement program. To analyze how these elements work, we prepared a table for each of the three media programs summarizing results drawn from the State Review Reports for the following four elements:

- Element 2: The degree to which inspection reports and compliance reviews document inspection findings, including accurate descriptions of what was observed to sufficiently identify violation.

- Element 4: The degree to which significant violations (e.g., significant noncompliance and high priority violations) and supporting information are accurately identified and reported to EPA national databases in a timely manner.

- Element 6: The degree to which a state takes timely and appropriate enforcement actions, in accordance with policy relating to specific media.

- Element 7: The degree to which a state includes both gravity and economic benefit calculations for all penalties, appropriately using the BEN model or similar state model (where in use and consistent with national policy).

In these three media tables (see Attachments I through K), we include results from all state programs included in the reports, as well as Headquarters' review of Region 10's administration of the RCRA and CWA programs in Alaska.

These tables provide a snapshot of a states' performance with respect to the four identified elements and allow for the identification of transferable approaches across states. For example, Alaska's air program comprehensively documents the results of inspections and

³ Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES), Clean Air Act (CAA) Stationary Source, and Resource Conservation and Recovery Act (RCRA) Subtitle C.

accurately identifies violations of all magnitudes, from High Priority Violations (HPVs) to deviations from permit conditions. Alaska addressed all HPV enforcement cases appropriately, but only met timeliness guidelines in 50 percent of its cases. However, the Report provided reasons why this had occurred, including changes in administration and attorneys assigned to the case; time needed to gather more information; a change in an applicability determination; a lengthy negotiation; inadequate resources; and competing priorities. This information provided the Region with the basis for concluding that Alaska's air enforcement program is sound and at the same time created an opportunity for the Region to assist Alaska in meeting timeliness goals. This collaborative approach may prove beneficial in other states working to enhance the sufficiency, completeness, and/or timeliness of their inspection and enforcement programs.

In addition to the specific results of each Framework element as analyzed within and across states, the evaluation asked respondents how the Agency synthesized element-specific findings into an overall statewide enforcement picture. Regions varied in the ease or difficulty with which they accomplished the synthesis. Several Regions found it difficult to synthesize the different elements and Headquarters respondents noted the importance of achieving an appropriate balance between file review metrics and data metrics. Certain states highlighted the Framework's focus on output and productivity measures and advocated for a more comprehensive picture of a state's enforcement and compliance assurance program. Suggestions included paying more attention to Element 13 issues, accounting for resource constraints, and customizing the review to address states' environmental priorities.

Element 13 was utilized in six of the pilot reports (RI, NJ, SC, OK, AZ, and AK). States viewed Element 13 as an opportunity to describe a variety of activities other than the core enforcement program activities. The reports that described activities under Element 13 provide examples of how to make this a useful component of the Framework. The types of activities described include: (1) innovative environmental programs; (2) compliance assistance and outreach activities; (3) resource issues; (4) the use of outcome and output measures; and (5) descriptions of detailed interviews with state program/enforcement managers about enforcement activities, policy issues, and performance. One state identified Element 13 as the most critical element since it "starts a dialog to identify how the Framework really matters." States used Element 13 to demonstrate the value of alternative tools and approaches used in their enforcement and compliance programs that contribute to ensuring performance improvements. Headquarters personnel emphasize that Element 13 is not meant to substitute for the established core enforcement activities described in Elements 1 through 12. In order to make Element 13 a meaningful part of the Framework, it will be important to develop guidance on how to value the activities identified by Regions and states. This effort to describe the type of activities to be covered under Element 13, and ways of valuing those activities, will help to make these non-core activities an important and substantial part of the Framework.

3.1.2 Sufficiency of Data Metrics to Support Conclusions

Assessment of state performance for many elements is predicated on the input of data into national databases. For example, an evaluation of the state's completion of NPDES inspections is based on inspections entered into the PCS database. To begin the Framework process, Regions and pilot states were provided with national data pulls. These national data

pulls presented considerable challenges including: the difficulty of reviewing national data pulls that contained incomplete supporting data; the inability in many instances for Regions and states to access the data independently; perceived inconsistencies between national media databases; and the time required to reconcile state data with national databases. One state pointed out the disconnect in comparing a file review of 2003 activities to a "real time" data pull that can not match the historical parameters of the file review. This feature of the AFS/AIRs dynamic database, for example, results in the potential for the percentage of CAA major sources receiving Full Compliance Evaluations (FCE) in 2002 by either the Region or state to be calculated based on a 2004 inventory of major sources. To address this issue, Region 6 and Oklahoma agreed to use historical data on the number of title V sources rather than the AFS/AIRs data. Ongoing and continuing efforts to modernize EPA's legacy databases, funding for states to develop interfaces between state and national enforcement databases, and a commitment by Regions and states to routinely reconcile enforcement information will over the long term address some of these concerns.

3.1.3 Sufficiency of File Selection Protocol to Support Conclusions

IEc used ideas gathered during discussions as well as our reviews of State Review Reports to (a) identify key issues with the Framework's file selection protocol; and (b) make a series of recommendations to OECA on how best to improve the protocol moving forward. We first present the file selection protocol used by the Regions with pilot states and describe variations in its application. We then present several approaches that use statistical methods and describe the practical implications (i.e., increased sample sizes) of increased precision. Finally, we recommend modifications to the file selection protocol for consideration by EPA and the states.

3.1.3.1 Current File Selection Protocol and its Application in Pilots

OECA provided states and Regions with a File Selection Protocol (Attachment H) to use during the Framework pilots. This protocol includes the following parameters:

- Select between 10 and 30 files from each media (CAA, CWA, RCRA) for review. CAA samples should include Major Sources, SM-80s, and Synthetic Minors. CWA samples should include Majors and Minors and may include sources not currently tracked in PCS, e.g., CAFOs. RCRA Sources should include TSDs, LQG, and SQGs. Additional files from each media should be selected if the Region and state believe that is necessary to ensure the validity of the review. Where applicable, files for general permit facilities may be included. The number of files selected should be sufficient to assess the work of the state program. The exact number of files should be discussed and agreed to between the Region and the state agency.
- Most of the files (about two-thirds) should be enforcement case files to assess how an inspection or evaluation led to discovering violations to addressing the problem. It may be necessary to have the inspection file

available if it is not included in the enforcement file. The case files should not go back further than 2002. Some inspection files from 2003 (about one-third) should be included in the selection of files to review for accuracy of assessing compliance at sources. Where a state program is relatively new and where there are only a few enforcement actions, recent inspection files may constitute the predominant number of files for review.

- In states with field or regional offices, enough files should be selected to ensure that a reasonable sample from those offices or regions are included in the review.

IEc's analysis of State Review Reports revealed that reviewing agencies used the protocol as a guide for understanding the file review and made procedural modifications in practice. For example, Maryland's RCRA review included files for state-identified SNCs; files in which the state had taken enforcement action; files for facilities receiving multiple inspections during the fiscal year; and files in which the state had issued a penalty. Region 3 (Maryland's reviewing agency) included all 20 of these files within the Framework review along with six files randomly selected from Maryland's inspection/enforcement case files. During Region 10's review of Alaska's CAA program, the review team randomly selected five files from each of three groups: major sources on the HPV list; non-HPV major sources; and synthetic minor sources. Alaska's RCRA and NPDES reviews--conducted by EPA Headquarters--proceeded differently. Rather than randomly selecting files, Headquarters selected a sample to provide a distribution of file types and a cross-section of inspection and enforcement cases.

In addition to highlighting the methodological differences noted above, IEc's evaluation discussions also revealed key issues related to the equity and "representativeness" of file selection. One state contends that by prescribing the selection of an absolute (as opposed to relative) number of files from each state (e.g., "select between 10 and 30 files" versus "select x percent of the regulated universe"), EPA examines a much larger proportion of files in states with smaller regulated communities relative to states with larger regulated communities. Other state representatives felt, intuitively, that the files reviewed were simply too few to yield a representative view of their state's core enforcement performance.

3.1.3.2 *Statistical Approaches*

In order to determine the most desirable means of modifying the protocol, we present several statistical approaches within the context of the State Review Framework. The first approach allows us to make precise, quantitative statements about the level of precision of our estimates using *margin of error* and *confidence level* tools (**Approach 1**), while the second approach shows how we might obtain approximately the same level of precision across states with different "universe" sizes (**Approach 2**). We also present some of the practical considerations resulting from these statistical approaches that merit discussion by EPA, ECOS, and the states.

Within the Framework, OECA uses file reviews to help draw inferences about a state's overall enforcement performance by collecting and analyzing data from a state's

inspection/enforcement case files. Statistical methods can inform OECA regarding file selection and recommended sample sizes based on the population, or universe of regulated entities.⁴ These considerations are best illustrated by example. We select Framework Element 3, as applied to the RCRA program, to provide our example. Element 3 seeks to determine the percentage (or, the proportion) of inspection reports completed by a state in a timely manner. For the RCRA program in Michigan, we are concerned with two regulated universes (i.e., TSDs and LQGs) or population sizes. According to the Region 5 report, there are 23 TSDs and 749 LQGs in Michigan. By comparison, Arizona's regulated TSD universe equals 12 permitted facilities and 238 LQGs. We first explain each approach, and then use the Michigan and Arizona regulated universes of TSDs and LQGs to determine the file selection size associated with each approach for review.

Approach 1: If EPA and the states are seeking to make precise, quantitative statements about the level of our estimates, they might use statistical tools for determining the *margin of error* and *confidence level*. The *margin of error* for an estimate defines the range of values in which the true population proportion is likely to fall; statisticians express the margin of error as an interval above and below the proportion estimated using sample data (e.g., timely completion in 83% of files, +/- 5%). The *confidence level* is a measure of the confidence with which EPA can say that the true population proportion (i.e., that which OECA could determine by examining all of a state's files) falls within the interval described by the margin of error. For example, “EPA can say with 95% confidence that between 78% and 88% (i.e., 83% +/- 5% margin of error) of a state's LQG inspection reports are completed in a timely manner.” This means that, were EPA to take 100 separate samples of this state's files, approximately 95 of these samples would demonstrate “timely completion” rates of between 78 and 88 percent. It also means that approximately 5 of these samples would demonstrate “timely completion” rates outside of this range. In short, EPA can never know the true population proportion of timely LQG inspection report completion without investing the substantial resources required to review all of a state's files. EPA can, however, draw inferences on the true proportion using a random sample, so long as it carefully expresses the uncertainty inherent to its findings using the sample's margin of error and confidence level.

The uncertainty of EPA and the states' inference—as measured by the sample's margin of error and confidence level—is affected substantially by the size of the sample used to make that inference. In general, a larger sample allows for a more precise estimate (i.e., a smaller margin of error) and/or a higher level of confidence. Therefore, once EPA and the states determine the level of uncertainty they are comfortable with (again, in terms of margin of error and confidence level), statistics allows the Agency and the states to determine the sample size required to meet those parameters. Table 3.1 displays the sample size required to fulfill a 10 percent margin of error using a 95 percent confidence level for a range of enforcement universe sizes. In addition, we calculate the number of Michigan and Arizona TSD and LQG files that would be required using this statistical approach. The table below demonstrates that 11 of Arizona's TSD files and 19 of Michigan's TSD files would need to be reviewed; while 69 of Arizona's LQG files and 86 of Michigan's LQG files would need to be reviewed. Let us now

⁴ The importance of accurate universe identification is pointed out by the Region 6 and Oklahoma example in the previous section 3.1.2. In that case, the Region and state worked together to resolve data discrepancies in the number of CAA major sources.

assume for hypothetical purposes that the file review demonstrates that 73 out of the 86 Michigan LQG file samples were completed in a timely manner. This represents 85% of Michigan's LQG sample size. By following Approach 1, we can say with 95% confidence that between 80% and 90% (i.e., 85% +/- 5% margin of error) of Michigan's LQG inspection reports are completed in a timely manner. This means that we can infer, with 95% confidence, that between 599 (i.e., 80%) and 674 (i.e., 90%) inspection reports for Michigan's LQGs would have been inspected in a timely fashion if all 749 of Michigan's LQGs are inspected within the relevant time period. While we can make precise, quantitative statements about the level of our estimates using the *margin of error* and *confidence level* tools, the administrative burden associated with file selection is significant. Larger sample sizes are required to achieve this level of precision and as such, may be unreasonable from a resource perspective.

Table 3.1 <u>Approach 1: Sample Sizes Required for 10% Margin of Error</u> Using a 95% Confidence Level		
Population Size of Regulated Universe (e.g., number of TSDs or LQGs in State)	Sample Size	Michigan and Arizona Sample Sizes
10,000	96	
1,000	88	
<i>749 Michigan LQGs</i>		<i>86 Michigan LQG files</i>
500	81	
<i>238 Arizona LQGs</i>		<i>69 Arizona LQG files</i>
200	66	
100	50	
50	34	
40	29	
30	24	
<i>23 Michigan TSDs</i>		<i>19 Michigan TSD files</i>
20	17	
<i>12 Arizona TSDs</i>		<i>11 Arizona TSD files</i>

Approach 2: This second approach allows EPA and the states to obtain approximately the same level of precision across states with different "universe" sizes in estimating the timeliness of inspection reports for TSDs and LQGs. Although we are unable to make precise, quantitative statements about the level of precision of our estimates as we did in Approach 1, the sample sizes required for reviews are smaller and therefore result in a smaller administrative burden for EPA and the states. Table 3.2 below illustrates the proportional relationship of Approach 2 in which the required sample size decreases with the size of the population, or regulated universe. Table 3.2 shows combinations of sample sizes and populations sizes that provide approximately the same level of precision when estimating the population proportion.

Table 3.2		
Approach 2: Sample Sizes Resulting in Similar Levels of Precision for the Estimated Population Proportion		
Population Size of Regulated Universe (e.g., number of TSDs or LQGs in State)	Sample Size	Michigan and Arizona Sample Sizes
10000	15	
1000	15	
<i>749 Michigan LQGs</i>		<i>15 Michigan LQG files</i>
500	15	
<i>238 Arizona LQGs</i>		<i>14 Arizona LQG files</i>
200	14	
100	13	
50	12	
40	11	
30	10	
<i>23 Michigan TSDs</i>		<i>9 Michigan TSD files</i>
20	9	
<i>12 Arizona TSDs</i>		<i>7 Arizona TSD files</i>
10	6	
5	4	

Therefore, if we are to use the same Arizona and Michigan RCRA examples applied to Approach 1, Approach 2 demonstrates that if Region 5 selected 9 inspection files for the TSD review, it would need to select 15 inspection files for the LQG review to obtain estimates with similar levels of precision. Region 9, by comparison, would need to select 7 inspection files to review Arizona's TSD population size of 12 permitted facilities, and 14 inspection files to review Arizona's LQG population size of 238 LQGs. Although the statistical method applied in Approach 2 is not as precise as that used in Approach 1, Approach 2 clearly results in less administrative burden in terms of file review for EPA and the States.

The above table demonstrates that as long as the sample size is small relative to the size of the population (e.g., if the sample is 5 percent of the population or smaller), then the precision of the results will vary very little with the population size. In other words, the precision of EPA and the states' estimate will be very similar whether it is sampling 15 inspection files out of 500 or 15 inspection files out of 10,000. In our example, even though Michigan has 749 LQGs and Arizona has only 238 LQGs, Michigan has a sample size of 15 files while Arizona's sample size is 14 files. However, if the sample size is large relative to the size of the population, then the precision of the results will vary with the population size. In other words, the precision will differ when sampling 15 inspection files out of 20 versus 15 out of 100. When population sizes are extremely small (e.g., 10 or fewer), the precision of the results will increase dramatically as the sample size increases. As a result, we believe it would be cost effective in such cases to review the entire universe of files.

3.1.3.3 *Recommended Modifications to the File Selection Protocol*

IEc recommends that OECA and ECOS revise and clarify the file selection protocol to ensure a fair and representative sample in each state that provides approximately the same level of precision across states with different "universe" sizes as illustrated in Approach 2 above. While greater levels of precision of estimates are possible with the *margin of error* and *confidence level* tools used in Approach 1, this degree of statistical sophistication also requires much larger sample sizes. We believe that the approach outlined below will result in more consistency in interpretation of Framework results, while not imposing an unreasonable administrative burden on Regions and states.

Step 1: Separate files into regulated entity categories. We suggest that the Agency direct Regions and states to take the files and break them into the different categories of regulated entity. For example, the categories for review of the air program would include major sources on the HPV list, non-HPV major sources, and synthetic minor sources. In some instances, case files may be eligible for more than one of these program categories.

Step 2: Determine universe of regulated entity category within state. The Regions and states must work together to reach agreement on the number of regulated entities within each category, or the "universe" of regulated entity.

Step 3: Select the element under review. The Regions and states then need to consider each element individually, since different elements are answering different questions. For example, Element 3 is asking what percentage of air major source inspection reports are completed in a timely manner; whereas Element 8 is asking what percentage of final enforcement actions involving air major sources collect appropriate economic benefit and gravity in accordance with applicable penalty procedures.

Step 4: Selection of files. In selecting inspection/enforcement files, it is important to select files that relate to the element under review. For example, determining what proportion of final enforcement actions collect appropriate economic benefit and gravity requires a sample from the final enforcement case files, not the inspection files. Conversely, in determining what percentage of air major source inspection reports have been completed in a timely manner, it is important to select *all* inspection files, not just those that have resulted in enforcement. Otherwise, there may be a potential bias that can distort the results.

Step 5: Determine the statistical approach. We suggest that the Agency adopt the statistical approach that would approximate the same level of precision across states with different "universe" sizes. This is the second approach detailed above and includes Table 3.2. As we demonstrated in our RCRA example, this would require that Region 5 and Michigan select 9 inspection files for the TSD review (based on 23 TSD universe) and 15 inspection files for the LQG review (based on

749 LQG universe) to make an Element 3 determination as to the percentage of inspection reports completed by Michigan in a timely manner.

Step 6: Randomly select appropriate number of files. The state and Region should then randomly choose the appropriate number of files dictated by the statistical approach for each element of each regulated entity category. This selection process will ensure that each of the key categories is represented in the review and that the files have been selected with as little bias as possible.

3.1.4 Extent to which Other Information Sources Help Support Conclusions

In addition to information gathered during the review process from file and data sources, the evaluation asked respondents to describe the role played by negotiated commitments and management discussions. The Regions were evenly split in attributing a significant or moderate role to negotiated commitments in the review process. Of the states who responded to the question, more state waste programs attributed a significant role, whereas more state air programs attributed a moderate role. Seven state media programs (five air programs; two water programs) also indicated that negotiated commitments played an insignificant role in the review process. One state in particular stressed how important these negotiated commitments are and the need to integrate better these commitments into existing program metrics. In assessing the role negotiated commitments play in Framework implementation, it is important to determine first whether the commitments are intended to be comparable to program thresholds for meeting enforcement and compliance assurance goals. For example, if EPA approves, as part of a negotiated commitment process, an alternative inspection strategy advanced by a state to conduct less than 100% of its NPDES majors (as referenced in the Data and File Review Metrics for Clean Water Act/NPDES), then the Region would be authorized to assess state performance in light of this approved alternative inspection strategy.

Management discussions were viewed to play a moderate role by six Regions and a significant role by four Regions in the review. Management discussions helped to supply the "story behind the numbers," a resolution of certain factual issues, identification of important issues such as how to interpret national averages and national targets against state performance, working through a key penalty calculation issue, and a high level discussion about the enforcement process and philosophy.

Regions and states also identified other sources of information important to their review including: state data and interviews with media-specific staff, delegation agreements and statutory authority to understand barriers to assessing penalties, determinations of the completeness of the source universe, resource constraints faced by state programs, data conversions that affect a state's ability to meet timeliness standards, and how to account for the re-deployment of inspection resources away from LQG to SQG sources, for example, in instances where the environmental need is demonstrated to be greater.

3.1.5 Accurate Assessment of State Programs

The majority of Regions and states reported that the Framework implementation yields an accurate assessment of a state's enforcement and compliance assurance activities. See Table 3.3. At the same time, Regions and states offered suggestions for improving the assessment opportunities provided by the Framework. These suggestions include the need to assess state staffing resources, the importance of Element 13 for getting a complete picture of state efforts, and the desire to include CAFO and wet weather cases in the water assessment. Several Regions and states had concerns regarding data quality, the "representativeness" of the file review, and the narrow focus of the endeavor.

Table 3.3
Respondents' Views: Does the Framework Yield an Accurate Assessment of
a State's Enforcement and Compliance Assurance Activities?

EPA/State	Yes	No	No Answer	Comments
Headquarters	x			Limited, but accurate.
Region 1	x			Important to assess staffing resources.
Rhode Island	x air, waste		x water	Air: congenial and collaborative.
Region 2		x		Recommends expansion of files reviewed and only those containing violations. Air: needed to address issues with mgt. Waste: inclusion of Element 13 allows Region to see where state is headed. Water: results may be misleading with inaccurate or false data in PCS.
New Jersey	x air, waste	x water		
Region 3	x			Needed to supplement with state data.
Maryland	x air, waste			Waste: mostly accurate assessment, need to ; in-the-field viewpoint not fully taken into account.
Region 4	x			Provides overall picture during discrete time period, but not detailed enough for specifics.
South Carolina	x waste		x air, water	Air: not accurate assessment of enforcement.
Region 5	x			Doesn't include CAFOs and wet weather.
Michigan	x air		x waste	Air: appreciated positive feedback. Waste: many opinions not in report.
Region 6		x		Difficult to get information, especially penalty calculations.
Oklahoma	x air, waste, water			Waste: good for what it was intended. Water: all relevant data considered.
Region 7	x			File reviews key, data not always accurate.
Missouri	x waste		x air	Waste: except that resource availability not taken into account.
Nebraska	Answer not available.			
Region 8	x			Lacks wet weather cases.
Colorado	x waste	x air		Air: look at data not entered into AFS. Waste: good overview.
Region 9		x		Quantitative nature of assessment might not capture complexities.
Arizona	x waste	x air		Air: not a representative selection of files. Waste: accurate depiction.
Region 10	x air	x water	x	General: Element 13 provides more accuracy and completeness; exceedingly quantitative as presently structured.

EPA/State	Yes	No	No Answer	Comments
				Air: focused too narrowly on majors and synthetic minors. Water: difficult to use one-year to assess.
Alaska	x air			Good objective look at strengths and weaknesses.

Note: Not all states had all three media programs represented during discussions. See Attachment D for a complete list of participating stakeholders.

3.1.6 Summary

While the Framework provides a platform for collecting the information necessary to support conclusions about state performance, OECA and ECOS should make continual improvements to the elements and metrics to ensure that reviewing agencies are, in fact, getting a "complete picture." Additional data sources (e.g., negotiated commitments) and "non-core" elements are critical in this respect.

3.2 Consistency of Framework Application

OECA intends for the Framework to serve as a consistent mechanism by which EPA Regions, working collaboratively with their states, can ensure that authorized state agencies meet agreed-upon performance levels. IEc assessed the consistency of Framework application during the pilots with respect to four important areas of concern: the degree to which the Framework facilitated objective analysis; the impact of OECA's implementation guide; the most important challenges affecting consistent program assessment; and the application of the Framework across media.

3.2.1 Degree to which Framework Facilitated Objective Analysis

Most respondents rated the Framework "good" or "fair" in providing an objective analysis of states' enforcement performance. In particular, respondents noted that the Framework's overall approach (i.e., reviewing states according to standardized criteria) lends itself to objective analysis (though not always accurate analysis; see Section 3.1.4 above). Still, both state and Regional respondents identified several opportunities to improve upon the Framework's level of objectivity moving forward. For example, respondents emphasized the importance of differences in Regional enforcement philosophies and existing state-Regional relationships (collaborative or otherwise); each of these has the potential to affect the Review Report's tone and emphasis on success versus areas for improvement. OECA could address this by developing more prescriptive guidance to advise reviewers' determinations during the Framework review (e.g., whether states are taking "appropriate" enforcement actions).

3.2.2 Impact of Implementation Guide

EPA developed an implementation guide describing in detail the specific steps comprising the Framework review; Regions generally followed this guidance. To a limited extent, respondents also noted instances where Regions did not fully implement the implementation guide. For example, several states questioned whether their Region had identified all relevant existing reviews to prevent duplication of effort. In particular, this would include data available from the Permitting for Environmental Results profiles prepared for the Office of Water. Respondents were also unclear as to whether Regional review teams assessed all relevant documents, including state enforcement policies and MOAs. Finally, several respondents noted that, despite collaboration with the Region, state comments had not been fully addressed within the Region's final report. While the Region is responsible for the final content of the report, the Implementation Guide provides for the final report to include any state comments on the draft and final reports. The Implementation Guide specifies that the "EPA review team should approach the state as a partner, with a clear understanding of the goals of the review, which are to achieve better mutual understanding of the state's and Region's enforcement and compliance assurance programs and to identify areas of successful state performance as well as areas for improvement." Better training and communications are needed to ensure the effectiveness of the guide and consistency of its implementation.

3.2.3 Most Important Challenges

Most Respondents cited the reconciliation of national data metrics with state data as the Framework's most important challenge. For example:

- Several Regions highlighted the complexities associated with interpreting the data reports sent by EPA HQ. In many cases, Regions addressed this challenge by supplementing these data pulls with state data.
- States echoed Regional descriptions of the challenges associated with rectifying national and state data, adding more specifically that national data pulls lacked accurate source universes and did not contain up-to-date information on inspections and enforcement.

IEC's discussions also revealed several challenges less frequently mentioned:

- Regions cited the lack of structure with respect to Element 13 as an important challenge. They seek guidance on how to integrate states' descriptions of "non-core" activities into a Framework review which concerns itself primarily with the core elements of state enforcement programs.
- Regions described challenges associated with moving away from existing (i.e., familiar) review processes and towards the new Framework process.

- States emphasized the important challenge of developing a consistent, representative methodology for selecting files during the onsite review.

Regions and states agreed that EPA and ECOS will face additional challenges when they roll-out the Framework in states that have not volunteered to participate in the pilot exercise. In such cases, it will be especially important to gain state buy-in. States suggested that the Framework's collaborative nature (i.e., "we're all on the same team") should be emphasized and its potential benefits delineated.

3.2.4 Application of Framework across Media

Respondents generally felt that the Framework's elements ensured consistency while accommodating differences through its media-specific metrics. However several respondents also offered suggestions on how the Framework can be more media-specific. For example, the water metrics fail to acknowledge CAFOs and "wet-weather" cases, as well as some of the self-reporting aspects of water enforcement (e.g., DMRs). Moreover, as air enforcement also moves more toward self-reporting, it will be especially important for the Framework and relevant data systems to accommodate the identification of self-reported violations.

3.2.5 Summary

Respondents felt that the pilots made progress toward allowing for consistent oversight over time. Respondents remarked that the Framework facilitated an objective analysis of enforcement programs in the pilot states. States and Regions followed the structure of the Implementation Guide to a great degree, though the level of state input on the Report varied. Respondents overwhelmingly identified data reconciliation as the most important challenge of the Framework, and Regions adopted a similar approach in rectifying national data pulls with state data. With limited exceptions in the water metrics, respondents felt that the Framework successfully accommodated differences across media programs.

3.3 Outcomes of Pilot Projects

This section addresses the extent to which the Framework pilots attained (or made progress toward attaining) some of the outcomes listed in the program logic model. These include consistent oversight across states and Regions; lessons learned and best practices; knowledge of the resources required to implement the Framework; a menu of potential incentives for states with effective enforcement programs; improved relationships between states and Regions; and consistent communications.

3.3.1 Consistent Oversight

Many respondents felt that while the pilots have not yet achieved the goal of consistent oversight, the Framework has the potential to produce this result over time. Respondents indicated that the structured format of the Framework is the primary reason for this. Several respondents noted the subjectivity inherent in each Region's interpretation of the Framework (though it may be fairly objective within a Region). For example, two Regions can define

"adequate" differently or give varying weight to activities described under Element 13. In one case, state media managers commented that the Framework works well toward the goal of consistent oversight because it measures states against the same metrics, rather than evaluating states on a ranking system.

3.3.2 Lessons Learned and Best Management Practices

States generally learned more through the Framework implementation than did Regions. Regions noted that implementation in the pilot states has resulted in a better understanding of the Framework for future roll out to other states. Lessons learned and best management practices are described in the two sub-sections included below.

3.3.2.1. Data Entry and Data Management Procedures

State respondents indicated that the Framework review reinforced the value of proper data entry and data management procedures. Managers of state media programs learned that states need to (a) review carefully the data in the national data systems to ensure accuracy and (b) follow established data entry protocols for national data systems to ensure completeness. In some states, the Framework highlighted the need to fully implement an interface that transfers data from the state system to the national system. The Framework revealed that certain states were under-reporting SNCs due to inconsistent documentation of these actions in the data system. States also noted the need to include penalty calculations in enforcement files. Most state respondents remarked that the lessons learned from the Framework review will lead directly to improvements in the areas identified in the report.

3.3.2.2. Program Improvements Coming As a Result of Framework Reviews

In most cases, it is too early for program improvements to have been included in grant agreements. Many states feel that recommended improvements are currently "implementable" and therefore will not need to be included in future agreements. Respondents reported a variety of mechanisms that are currently being utilized to track accountability for commitments. States noted that grant agreements are tracked through regular EPA reviews; quarterly or annual reports; and monthly conference calls. One Region suggested that OECA should provide for the tracking of Framework follow-up within the Online Commitment System.

3.3.3 Knowledge of Resource Requirements

The Framework generally required less of states than it did of Regions. The vast majority of respondents invested what they considered to be a reasonable level of effort in Framework implementation.

State participation was most extensive during the onsite review, when state staff participated in entrance and exit conferences, as well as negotiated and "pulled" the files included in the review. Most states estimated that the framework required, in aggregate, a small

fraction of an FTE to complete.⁵ Several states estimated negligible increases in effort relative to existing review functions.⁶ One state praised its Region for "taking on the lion's share" of the review burden; another state noted its Region's efforts to minimize state resources required for the review; another still described the Framework review as much less burdensome than previous such reviews.

Regions generally had a higher investment than states, but still considered the Framework to be reasonable in its requirements. Regional efforts were most extensive during onsite reviews and while drafting and finalizing Review Reports. Like states, lower-bound estimates described "negligible" increases over current approaches; however unlike states, upper-bound Regional estimates approached one FTE in magnitude. It is worth noting again that these higher estimates may derive from Regions calculating burden against a "zero" baseline as opposed to calculating incremental burden relative to existing review functions. EPA's upcoming Information Collection Request (ICR) for the Framework's national rollout will provide more formal burden estimates for Regions and states.

3.3.4 Incentives/Benefits in Participation

The evaluation also focused on the potential for incentives to states meeting agreed-upon performance standards. Suggestions from respondents included:

- A continuation and increase in funding resources, particularly to address reconciliation of state data with Federal data.
- More flexibility in negotiated agreements to pursue changing environmental priorities such as shifting inspection resources away from LQs toward SQGs.
- Less frequent oversight reviews.
- Preferential treatment in awarding state grants (i.e., innovation or exchange grants).
- The ability for authorized state agencies to "take the lead" on high-profile CSO/SSO enforcement cases.

Many participants indicated that differential oversight presently happens on an informal basis and that it is premature to identify any changes that have occurred as a result of the pilot process.

Based on the experience of Regions and states, it also appears that the Framework will equip regulatory agencies to better address questions from oversight bodies. Seven Regions and

⁵ For purposes of this analysis, one FTE is defined as one full-time employee (or aggregate equivalent) over the course of one standard work year.

⁶ Not all states made estimates relative to their existing (baseline) review functions; some offered absolute estimates of their investment against a "zero" baseline. No state provided a formal burden calculation.

at least one media program in nine states agreed that formal, written documentation provides substantiation of state efforts and has the potential to assure management, the state legislature, and the public of adequate enforcement (or, in the case of Regions, enforcement oversight). One state indicated that the Framework report equipped states to better address questions from local organizations and governments. On the other hand, respondents cautioned that reports could be used unconstructively by the press, and that they already had a good sense of program achievements and shortcomings.

3.3.5 Stronger Relationships

All Regions and many states participated in developing the Framework as part of the EPA/ECOS workgroup or working with media associations. Some states were involved in each step of the process, whereas other states contributed by concentrating on developing the metrics and procedures that would be used during implementation. Every Region and pilot state was, of course, involved in implementation of the Framework and played various roles according to the needs and interests of the Region and state. Overall, states reported good collaboration with EPA and the effective assistance of ECOS and trade associations in contributing to constructive relationships. Regions varied in their assessment of their working relationship with Headquarters. Some Regions applauded OECA for its effective interaction and working through ECOS to facilitate the process with states. Other Regions struggled in working through data issues and some believed that their input was not sufficiently respected.

Several states reported that Framework implementation reinforced an existing relationship built on good communication and effective work practices. Many states noted that Framework implementation did not affect an already good relationship. Five state air programs, two state waste programs, and a state water program indicated that the Framework strengthened their relationship with the Region and provided an excellent opportunity for enhanced communication. Unfortunately, in one state, there were reports from both the state and Region that Framework implementation may have made their relationship worse due to disagreement over data quality issues.

3.3.6 Consistent Communications

With the exception of one state's water program, states uniformly agreed that Framework-related communications from EPA were consistent in tone and message. States urged EPA to provide more concrete feedback, to support conclusions in the report with methodologically correct quantitative analyses, where available, and to reinforce consistency among the Regions. One state reported that the Framework compels the Region and state to reconcile Federal and state data and file issues. Another state suggested a greater familiarity at the outset of the process with the state's data system, while noting that communications were both consistent and effective, thereby expediting the resolution of issues.

Regional response to whether communications from Headquarters were consistent were varied. Three Regions reported that communications were great, three other Regions believed communications to be unclear, and four Regions did not respond to the question. Certain Regions expressed concerns regarding the internal consistency of various Framework

documents, the variety of interpretations possible in reviewing state performance, and the role of the Region versus the Headquarters office. One Region noted that the flexibility inherent in a pilot project needs greater definition during the scale-up phase.

3.4 Areas for Improvement

Respondents also described several opportunities for improvement within the Framework. These issues range from "big picture" methodological considerations to smaller-scale recommendations related to, for example, onsite review materials.

3.4.1 Improvements to Framework Approach and Methodology

Earlier sections of this chapter have described in greater detail the three methodological issues most critical for OECA to address prior to the Framework's national rollout:

- *Data Metrics.* Many states noted the difficulty of reviewing national data pulls that contained incomplete supporting data, and the challenge of reconciling national data metrics with state databases. This is a long-standing issue that needs additional attention to improve communication between certain Regions and states. Several respondents also suggested that the Framework should include a metric that addresses state resource availability (i.e., what a state has done relative to what it could have done given budget constraints).
- *Universe Identification.* Assessing performance with respect to an accurate universe of regulated entities is critical to ensuring a credible review. OECA may want to consider standardizing the methodology for universe identification to more accurately assess performance and improve consistency across states.
- *File Selection Protocol.* Determine a consistent and representative method for selecting files and drawing conclusions from their content.

OECA has already formed workgroups to explore potential solutions to these issues. Prior to scale-up of the Framework to other states, it is important that these issues be addressed.

3.4.2 Improvements to State Review Reports

IEC's analysis confirmed OECA's concerns about variation among State Review Reports; such variation often took the form of differences in emphasis. For example, one Region focused nearly exclusively on quantitative metrics in order to maintain a high level of objectivity. This stands in contrast to another Region which placed greater weight on descriptive evidence. Regions also varied in their treatment of Element 13: one Region comprehensively described its state's entire enforcement program, including resource constraints that may have served to explain specific performance issues; while other Regions highlighted Element 13 to a lesser extent.

Respondents suggested that EPA could create (and share) a model State Review Report that combines the best aspects of the ten pilot reports. In addition to illustrating preferred structure, the model report could demonstrate a balanced emphasis on data versus description and the proper use of Element 13.

3.4.3 Consideration of Alternate Framework Timeframe

While acknowledging the benefits of the standardized "snapshot" approach currently employed by the Framework, respondents also described advantages of assessing enforcement trends over time. The most important of these advantages is the ability to view current enforcement data in light of previous efforts. Unlike the snapshot view, trend analyses may reveal backslides, improvements, or static conditions warranting a renewed commitment to a particular media program. OECA may want to explore a methodology for presenting individual, and aggregated, state data over an extended period. The Framework's consistent implementation over time will facilitate this task.

3.4.4 Improved Guidance on Interpretation of Results

Many respondents spoke of the need for guidance that more explicitly describes the proper interpretation of the Framework's results. Interpretation issues exist at three distinct (but related) levels. First, Regions evaluated states against a variety of targets, including the national goal, national average, and commitments made in planning/grant agreements. Second, states noted that non-attainment of a target may not always indicate a deficiency. For example, one Region faulted its state for having an HPV detection rate below the national average of 10 percent. However the state asserts that its field presence actually improved compliance, thereby resulting in less violations. Third, Regions differ as to how they interpreted a state's overall attainment of targets (i.e., across media and elements). Additional guidance is needed for Regions in interpreting performance results and drawing conclusions regarding a state's successes and its areas for improvement.

3.4.5 Other Specific Areas for Improvement

Respondents also named two more specific areas for Framework improvements:

- *Expansion of File Review Worksheets.* While the Framework itself is multi-media, respondents suggested that file review worksheets should include a greater degree of media-specific detail. For example, respondents noted that the Clean Water Act employs self-reporting (i.e., though daily monitoring reports (DMRs)) as an important means of detecting violations. A more detailed media-specific file review worksheet might provide for the inclusion of DMRs.. Headquarters personnel note that this would require a revision to the CWA metrics and inclusion of a self-reporting element to capture this information.
- *Define Role of Element 13.* OECA has already initiated a workgroup to further define the role of Element 13. It is anticipated that the results of the Framework pilots will contribute to a description of Element 13

activities and guidance on how to value the activities identified by Regions and states.

3.4.7 Summary

The Framework pilots were effective in revealing a series of feasible opportunities for improvement. Within Chapter 4 (Recommendations), IEC uses these (and other) recommendations to lay out potential short- and long-term priorities for OECA's consideration.

3.5 Overall Effectiveness: Logic Model

Implementation of the Framework has led to considerable progress in attaining outcomes identified in the logic model presented in Chapter 1. The following sub-sections address the Framework's progress to date within the context of the logic model's specific components.

3.5.1 Inputs and Activities

OECA partnered with ECOS to develop the Framework through a comprehensive stakeholder involvement process that leveraged experience and input from state commissioners as well as media program managers from states, Regions, and EPA Headquarters. The pilot Framework included data metrics (from national and state enforcement data), file review metrics, and a draft file selection protocol. EPA Headquarters managed a series of pilots across all three media in all ten EPA Regions; Regions and states contributed extensively. EPA hired IEC to conduct an evaluation of the Framework pilots and make recommendations for improvement.

3.5.2 Outputs

Reviewing agencies (i.e., Regions and EPA HQ for Region 10) produced State Review Reports which summarize enforcement program performance and recommend improvements where appropriate. IEC, under contract to OECA, developed this evaluation report to help EPA identify potential Framework improvements before a nationwide scale-up in 2005.

3.5.3 Outcomes

Though the Framework is too early in its development to have achieved many intermediate and long-term outcomes (e.g., ability to paint a national enforcement picture, consistent environmental protection across all states), the pilots made substantial progress towards attaining some of the short-term outcomes listed in the logic model. For example, the Framework -- with limited revisions (see Chapter 4) -- will serve as a useful platform for ensuring consistent oversight of enforcement and compliance assurance activities across states and Regions. The pilots also resulted in a variety of state-specific recommendations for program improvement, many of which states plan to address over the short term. In addition, the Framework served to reinforce positive state-Regional relationships in several cases.

3.6 General Summary of Findings

Sections 3.1 through 3.4 summarize IEC's findings according to the evaluation's four overarching questions. Section 3.5 describes the program's effectiveness as measured against the logic model presented in Chapter 1. We close this chapter by summarizing the findings according to areas for improvement that OECA should consider addressing prior to the Framework's national rollout, and lessons learned that will support EPA and state efforts to improve performance over the longer term.

3.6.3.1 *Framework Implementation: Areas for Improvement*

Methodological Enhancements. Improvements to methodologies for universe identification and file selection protocol, as well as strategies for reconciling national and state data and including a resource component, will enhance sufficiency of the Framework to support conclusions of the reviews.

- We found that universe identification presented a concern for respondents, and variations in approach were evident in the State Review Reports. Assessing performance with respect to an accurate universe of regulated entities is critical to ensuring a credible review.
- With respect to the file selection protocol, we found that states and Regions employed a variety of methods to select files. It will be important to refine the protocol to determine a consistent and representative method for selecting files, drawing conclusions from their content, and ensuring that the process is fair, transparent, and not overly burdensome to states and Regions.
- The Framework provided an opportunity for states and Regions to work together to reconcile differences in national and state databases. Although data reconciliation has long been a goal for EPA Headquarters, it appears that states and Regions are still exerting significant effort to address discrepancies. Initial national data pulls presented challenges to states and Regions. OECA worked to solve many of the issues arising from the data pulls, and anticipates working with its metrics workgroup to continue solving problems.
- A number of states and Regions also commented on the need to recognize resource constraints in the State Review Reports as a way of acknowledging efforts to do more with less. States and EPA did not advise that this be an efficiency measure, since that would divert critical resources away from enforcement and compliance assurance activities.

Interpretation and Presentation of Results/Data Points. EPA and states had a number of conversations throughout the process as to how to interpret and then present the results of state performance. The national programmatic goals and averages were discussed and often noted in

state review reports. At the same time, participants were unclear how to interpret the results. For example, in instances where a state was making significant strides in improving performance from previous years, but still fell short of the national average, certain Regions made a point of acknowledging these efforts and providing a context, whereas other Regions appeared constrained to simply report the quantitative results.

Another important interpretive issue arose where a state's detection of significant violators falls below the national average, but the state believes that an aggressive field presence acts as an effective deterrent, rather than these data representing a deficiency on the state's part in accurately identifying such violations.

Valuing State Performance. States offered many suggestions for valuing state performance in meeting agreed-upon standards within the core program elements. These suggestions included a continuation and increase in federal funding, particularly to address reconciliation of state data with federal data; more flexibility in negotiated agreements and alternative strategies approved by Regional program staff; less frequent oversight reviews; preferential treatment in awarding state grants; and the ability of states to take the lead on high profile enforcement cases.

Valuing Element 13 Enforcement and Compliance Assurance Activities. Element 13 provided some states an opportunity to showcase the extent of their programs. Element 13 is an optional evaluation element in which states could include program areas such as compliance assistance efforts, pollution prevention, innovation, incentive or self-disclosure programs, outcome measures, environmental indicators, relationships with state Attorney General's offices, and other "non core" activities. For those States using Element 13, there was a clear interest in demonstrating the value of these program activities in protecting the environment and public health. The Element 13 workgroup (convened May 2005) should provide an opportunity for EPA and the states to work together to provide additional guidance as to the kinds of activities, programs, and information to be included under Element 13. EPA should find a way to provide recognition and value to those state efforts.

3.6.3.2 Lessons Learned from State Reviews

Training Opportunities. Based on interviews with respondents, we identified a set of training needs which OECA may wish to consider for pilot states. Many states reported that the review process presented opportunities to better understand the national database systems and to improve their own data management. In addition, a number of states requested training regarding the calculation and documentation of penalties, as well as the accurate and appropriate documentation of inspections and identification of violations.

Capacity Building in State and Regional Enforcement and Compliance Assurance Programs. The State Review Reports in particular presented evidence of excellent collaborative relationships between states and Regions, and also evidence of the need to build more effective partnerships in some Regions. Many respondents noted that regular communication is the key to building capacity and working toward the same goals. OECA and ECOS should look for opportunities to provide models to those states and Regions that need improvement.

4.0 DISCUSSION/RECOMMENDATIONS

Through use of this State Review Framework, OECA's challenge is to assess state performance for three federally-delegated enforcement programs. Overall, the ten pilot assessments demonstrated the utility of the Framework in providing a consistent mechanism for states and Regions to engage in a detailed review of enforcement and compliance assurance activities. The pilots also identified a series of changes for EPA to consider prior to implementing the Framework nationally and a number of opportunities to improve performance in pilot states, provided that constrained resources and tight schedules permit.

Based on lessons learned from its review of the pilots and discussions with state and federal participants, IEc has identified several recommendations intended to improve the delivery of the State Review Framework to the remaining states. These recommendations include the need for enhanced methodologies, greater clarity regarding the interpretation of results, an understanding of the benefits available to states and Regions for performance advancements, and a reinforcement and refinement of the Framework's purpose. We have organized these recommendations according to the four areas addressed in the evaluation.

4.1 Sufficiency of Framework to Support Conclusions

Recommendation 1: *Provide Implementation Blueprint for Synthesizing Data and Information Sources into a Comprehensive Enforcement Picture with a Roadmap for Future Efforts*

The Framework requires a detailed review of twelve required elements that apply to the three federally-delegated enforcement programs. In addition, Regions and states worked to synthesize data and information sources in the State Review Report and provide highlights and an overview of the state's enforcement program in the Executive Summary. Some respondents reported that the synthesis of diverse data and information sources was difficult, and the State Review Reports were more or less successful in providing a comprehensive picture. OECA and ECOS may want to consider an implementation blueprint that provides a model synthesis of diverse data and information sources and includes a roadmap for how Regions and states will collaborate to improve performance in the future.

Recommendation 2: *Add a Resource Component to Provide Context for Program Performance*

The resources available to a state to initiate and implement core enforcement and compliance assurance activities significantly affect the capacity of the state to meet quantitative and qualitative performance standards. A number of states and Regions proposed that a resource metric be added to the Framework to provide context for programs facing challenges in meeting timeliness objectives or other minimum performance goals. For example, a program with sufficient inspection resources, but insufficient legal resources, will struggle to initiate enforcement cases within the requisite time frames. We do not recommend that this be an efficiency metric.

Recommendation 3: *Provide Additional Guidance Regarding Purpose of Element 13*

Element 13 provides states with an opportunity to share the extent of their enforcement programs with the Region. Non-core enforcement, compliance assurance, and compliance assistance activities are important components of ensuring environmental protection and addressing specific environmental programs in diverse geographic areas across the nation. One state described Element 13 as the most critical element in initiating a dialog about the purpose of the Framework. OECA and ECOS may wish to consider in their Element 13 workgroup how to value the Element 13 activities identified by Regions and states.

4.2 Consistency of Framework Application

Recommendation 4: *Provide Headquarters Resources and Support to Reconcile National Data with State Data at Outset of Review*

OECA may wish to consider providing specialized and dedicated Headquarters staff to assist Regions and states with the significant challenge of reconciling national and state data at the outset of state reviews. To the extent feasible, OECA headquarters personnel did work to assist the pilot states with these concerns in implementing the pilots. This is an issue that was noted by many Regions and states, and despite past efforts by EPA to encourage ongoing attention to data reconciliation, it appears that much work still needs to be done. The interviews revealed that the majority of respondents worked hard to accomplish this task, but needed additional support. From a systems perspective, New Jersey noted that EPA is presently assisting the state in its efforts to develop an interface between the state's comprehensive enforcement database system and the national data systems. At the same time, Regions and states need to commit to routinely reconcile enforcement information in national and state databases rather than waiting until a state review to address the issue.

Recommendation 5: *Continue to Clarify how the Framework Intersects with Traditional and New Program Reviews*

OECA should continue to coordinate with national program reviews that include enforcement metrics so that EPA is speaking with one voice. Several respondents noted that they had learned much from the NPDES Permitting for Environmental Results review and urged

a greater coordination between EPA offices. Although the Implementation Guide encourages the Regional team and its state counterparts to identify any existing reviews that have been completed within the last two years and to include relevant information, OECA may want to consider additional guidance on this point.

Recommendation 6: *Clarify Role of Negotiated Commitments in Review*

EPA and states invest substantial management, programmatic, and enforcement resources in negotiating the terms of commitments that are included in negotiated agreements such as PPAs, PPGs, and categorical grant agreements. These agreements provide a template for how state resources are allocated over a one or two-year time period and what performance targets states must meet. While the Overview of the Framework states the intention to build the consideration of negotiated commitments into its metrics, EPA may wish to provide additional practical guidance and examples in its Implementation Guide.

Recommendation 7: *Implementation Guide Should Provide More Interpretive Guidance*

OECA may wish to consider providing additional examples in its implementation guide to assist Regions in interpreting the results of the state reviews. For example, the pilot reports appear to assess state performance against a variety of targets: the national goal, the national average, and commitments in planning/grant agreements. There needs to be greater clarity regarding the use of these targets in assessing a state's performance, and the conclusions drawn by the Region. In addition, states note the methodological concern in how to interpret a low HPV identification rate in the context of an inspection record that exceeds the national average per facilities inspected and per the number of major sources.

4.3 Outcomes of Pilot Projects

Recommendation 8: *Identify Menu of Incentives/Benefits Available to States with Adequate Core Enforcement Programs*

The practical application of differential oversight remains a challenge for Regions and states. OECA and ECOS may want to consider developing a menu of incentives or benefits that might be available to states determined to have adequate core enforcement programs. States suggested that these incentives could include funding to improve data interfaces, recognition, and more flexibility for states to receive approval for alternative inspection or enforcement strategies.

Recommendation 9: *Provide Training Opportunities to Share Best Management Practices*

To foster continuous improvement, Framework results provide a series of opportunities to provide training opportunities to states. Proper data entry and data management procedures appear to be an area ripe for hands-on training. OECA may wish to consider providing training in proper data entry and data management procedures to states and their Regional counterparts. Generic training may not produce the desired result of increasing state capacity and ownership for entering data into the national databases. In addition to data management training, results

from the Framework pilots also indicated a need for training in documenting inspections and including sufficient information to accurately identify violations, and in determining gravity and economic benefit penalty calculations.

Recommendation 10: *Reinforce State/Regional Communications and Relationship Building by Identifying Shared Needs and Interests*

The communication and relationship-building benefits that accompany a collaborative review of enforcement and compliance assurance programs need to be reinforced and supported throughout the year. Encouraging regular contact and sharing of strategies and problems can result in more confidence in the partnership. OECA and ECOS may want to share Regional and state models of collaboration that work particularly well to encourage a more effective partnership.

4.4 Areas for Improvement

Recommendation 11: *Develop Collaborative Process for Resolving Methodological Challenges Associated with Universe Identification and File Selection Process*

Based on the concerns expressed by respondents and the variations evident in the State Review Reports, OECA and ECOS may want to consider developing a collaborative process for resolving the methodological challenges associated with universe identification and file selection. Assessing performance with respect to an accurate universe of regulated entities is critical to ensuring a credible review. To address this issue, one Region and state agreed to use historical data on the number of title V major sources rather than the number of major air sources identified in the dynamic AFS/AIRs database. Approaches for each of the media programs should be considered. With respect to the file selection process, OECA may want to consider revising the protocol to accommodate statistical considerations while ensuring that the administrative burden is reasonable for states and Regions. Section 3.1.3 of this report describes IEC's full recommendations for improvements to the file selection protocol.

Recommendation 12: *Develop Model State Review Report*

The State Review Reports produced during the pilot process contained a wide range of variation. Some reports provided excellent quantitative records of the results of the review, other reports adopted a more qualitative approach. While all reports followed the report template in terms of structure, the contents and tone of the reports were quite different. Certain reports were encouraging and highlighted priority areas for immediate attention and other areas for longer-term progress. OECA and ECOS may wish to consider developing a model State Review Report that merges the best elements of all ten pilot reports.

Recommendation 13: *Determine how Framework will Assess Performance over Time*

In anticipation of many years of Framework use, OECA and ECOS may want to consider how to assess future performance against current performance. It is important to develop systems that will readily permit, and track, comparisons within states over time. Such an

approach will also provide an opportunity for determining whether training and other interventions have been effective in improving performance.