Next Generation Compliance: Strategic Plan 2014 – 2017

U.S. Environmental Protection Agency
Office of Enforcement and Compliance Assurance
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I Vision

Protecting clean air and water, and ensuring our communities are safe from pollution, is more complex today than ever. Whether it's pollution that's not apparent to the naked eye or large numbers of small sources that collectively have a big impact on the environment, new challenges require us to innovate and improve.

As a regulatory agency, EPA's primary way to achieve its mission is by creating and implementing effective regulations. Achieving the health and environmental benefits of these rules depends on widespread compliance with federal, tribal and state regulations and permits. Today's challenges require a modern approach to compliance with new tools and approaches while strengthening vigorous enforcement as the backbone of environmental protection.

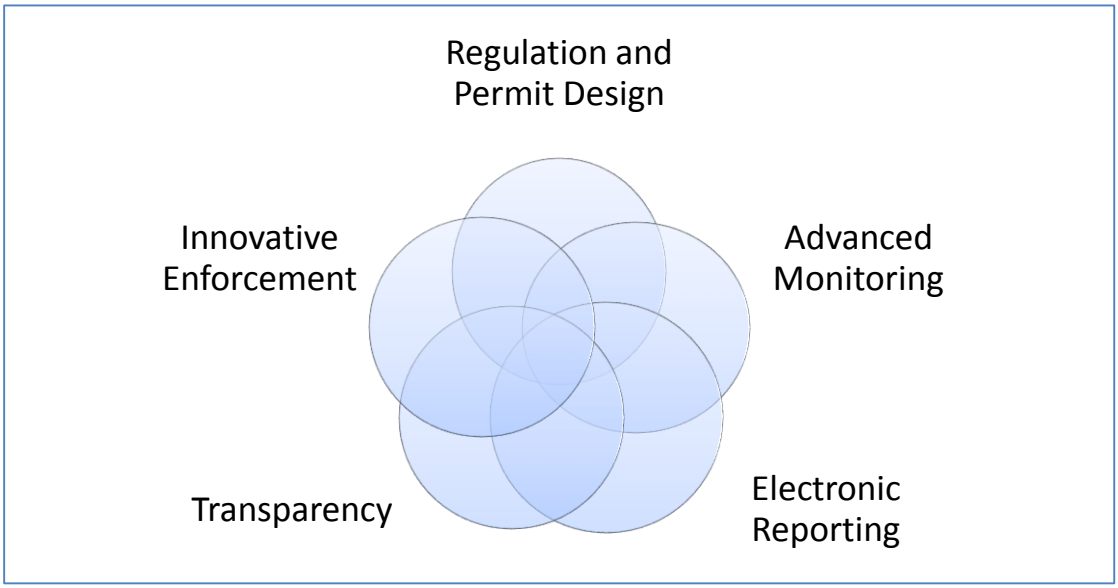
Next Generation Compliance is an integrated strategy, designed to bring together the best thinking from inside and outside EPA on how to structure regulations and permits combined with new monitoring and information technology, expanded transparency, and innovative enforcement. It will enable us to do our job better in the 21st Century. It will better motivate the regulated community to comply with environmental laws and inform the public about their performance. And, most importantly, it will help ensure that all Americans are protected from significant risks to human health and the environment and have access to information that allows them to more fully engage in environment protection efforts.

II. Background

Led by EPA's Office of Enforcement and Compliance Assurance (OECA), Next Generation Compliance builds on several innovative efforts like the Clean Water Act Action Plan. Using what we have learned about what drives better performance, EPA can write regulations and permits with compliance "built in" so we can get better results with less investment of scarce government resources. Using existing and emerging monitoring and information technologies, EPA and states, and the regulated facilities themselves, will be better able to find and fix pollution problems. The increased transparency and real time information that electronic reporting and advanced monitoring makes possible will also allow us to experiment with innovative approaches that provide opportunities for better results. Next Generation Compliance will assist the EPA, states, and tribes to better address large regulated universes with approaches that go beyond traditional single facility inspections and enforcement. All of these approaches combined help us to better protect public health and the environment, assure a level playing field for businesses that play by the rules, engage communities, and reduce regulatory burdens. Budget uncertainties and constrained resources only reinforce the imperative to move forward with Next Generation Compliance.

As shown in Figure 1 below, Next Generation Compliance consists of five interconnected components, each designed to improve the effectiveness of our compliance program.

Figure 1: Next Generation Compliance Components



Many offices across EPA are implementing Next Generation Compliance ideas today. OECA has the lead for many of these activities, and is working across the Agency to help assure coordinated implementation. This Plan focuses on OECA-led activities, with the understanding that the success of Next Generation Compliance depends on the critical roles played by others in EPA and in states and tribes.

Next Generation Compliance is completely consistent with and complements the Agency's E-Enterprise for the Environment Initiative. E-Enterprise is a joint initiative of states and EPA to

improve environmental outcomes and dramatically enhance service to the regulated community and the public by maximizing the use of advanced monitoring and information technologies, optimizing operations, and increasing transparency. There is significant overlap between E-Enterprise and Next Generation Compliance, particularly in expanding electronic reporting, advanced monitoring, and transparency. These two efforts will work together on these key goals.

This Plan sets the strategic direction for OECA's work on Next Generation Compliance. Since this is a Strategic Plan, the details for how we will implement this Plan with specific activities and available resources will be set forth elsewhere.

III. Goals and Objectives of Next Generation Compliance

Next Generation Compliance is organized around the five interconnected components. We will coordinate closely among the goals as we implement this Plan.

More Effective Regulations and Permits: *Design more effective regulations and permits with Next Generation Compliance principles and tools so we reduce pollution and achieve higher compliance.*

More Effective Regulations and Permits Objectives:
1: Provide EPA staff with knowledge and tools to make regulations and permits more effective, achieve higher compliance, and realize the expected benefits.
2: Improve understanding of Next Generation Compliance's value with regulatory offices and partners.
3: Identify opportunities to apply Next Generation Compliance in specific regulations and permits.

More Effective Regulations and Permits will incorporate what we have learned about what encourages better compliance. Regulations and permits that are clear, as easy to implement as possible, and that contain self reinforcing drivers for better performance help to move us toward improved compliance as the "default" option. For example, regulated facilities can take steps to monitor their own performance to prevent violations. New technology can help companies find pollution that was "invisible" and monitors can transmit warnings to facility managers so they can fix a problem before a violation occurs. Real time information to communities and/or market incentives can help inspire facilities to improve compliance. We can build these features into our regulations to improve implementation.

One way we will accomplish this is to educate EPA staff who write regulations and permits about Next Generation Compliance tools that can help them ensure rules and permits achieve their intended purpose. We will train staff and managers on the principles and tools they need, offer regulation design consultations, and organize "communities of practice" where staff can share ideas and work on specific regulations. We also expect to offer training to states and tribes.

OECA will identify where we can apply Next Generation Compliance features in regulations and permits, work to improve the focus on compliance in the regulation development process, and develop best practices for using Next Generation Compliance principles and tools.

OECA will work with EPA's program offices, the Office of Policy, and Office of General Counsel to achieve this goal and to incorporate Next Generation Compliance principles and tools into EPA's regulations.

Advanced Monitoring: *Make better use of existing pollution monitoring technologies and investigate new ones to help government, industry, and the public identify pollution problems and help solve them.*

Advanced Monitoring Objectives:

1: Identify advanced monitoring technologies EPA already has and connect them with the people who can best use them.

2: Collaborate with internal and external groups to identify and develop new advanced monitoring opportunities.

3: Equip EPA to use the most promising new advanced monitoring technologies.

4: Promote emerging technologies.

Advanced emissions/pollutant detection technology can help regulated entities, the government, and the public more easily find pollutant discharges, environmental conditions, and noncompliance. By making the invisible visible, we can bring more attention to important pollution problems. EPA and others are starting to use new monitoring equipment that allows air pollution leaks to be seen and reported, water quality data to be sent using cellphone technology, and near real time data to be posted on the internet. For example, EPA is now using infrared cameras in inspections to find emissions leaks that would otherwise be very difficult to detect. EPA has deployed solar-powered buoys to collect and transmit water quality data every 15 minutes in the Charles River and Mystic Watershed. Advanced monitoring technologies, especially when linked to information technology systems, can more easily identify—and allow faster fixes—to pollution and help communities avoid exposures. EPA is exploring specific new technologies and user training to help us monitor compliance with current and new regulations.

OECA will look at what technology is currently being used by EPA and others, the best practices for using this technology, and how to expand its use. We will establish communications to ensure these technologies are used effectively and determine how we will manage and use data from advanced monitoring work.

Collaboration will be key to ensuring we use advanced monitoring technology most effectively. OECA will work with other EPA offices, e.g., the Office of Research and Development, Office of Air and Radiation, and Office of Water, to develop short-and long-term projects to test and implement advanced monitoring. As OECA develops expertise in using advanced monitoring technologies, we will share what we learn with relevant EPA staff to be integrated into their work. Outside groups also will be an important part of this effort, both to help us understand more about these technologies and to help communities and others understand how to use the information these technologies can provide.

As OECA moves to using advanced monitoring technologies, we need to identify our most important needs—those that will help improve regulation and enforcement effectiveness—and set priorities for what equipment we should purchase. We need to identify any technical issues, plan for data management, and train staff. As with regulation development, we believe "communities of practice" will be an important way to help increase our proficiency with advanced monitoring

technologies. Over time, we will continue to explore new technologies and evaluate them for their potential in improving environmental programs.

Electronic Reporting*: Shift to electronic reporting in regulations and permits so that we have more accurate, complete, and timely information on pollution sources, pollution, and compliance, enhance communication with regulated entities, and move our programs into the 21st century.*

Electronic Reporting is part of an agency wide shift away from outdated paper toward electronic reporting that is easier, more efficient, and costs less for the facility and for regulatory agencies. Electronic systems are used in the modern era for almost every kind of transaction. For the user, these systems offer speed, convenience, expanded information choices and filing capabilities. For government, they offer the ability to increase transparency and an opportunity to improve our ability to spot pollution and compliance issues and respond quickly to emerging problems. EPA policy now states that e-reporting is the default assumption for new regulations. E-reporting is not just converting paper to electronic; it is a system that guides the user through the reporting process with integrated compliance assistance and data quality checks. From a compliance perspective, e-reporting will allow regulated entities, government agencies and the public to more quickly identify violations, and then more quickly address them. For example, Ohio's wastewater program mandated electronic reporting for discharge monitoring reports (DMRs) and has found that this has significantly reduced violations, reduced data errors, and reduced the staff needed to run the program. OECA has proposed a rule to make electronic DMR reporting the norm nationwide, thus expanding these benefits across the country. As another example, EPA's eNEPA system allows federal agencies to submit Environmental Impact Statements electronically and the public can search and review them on a centralized website, saving time and money while improving transparency. Overall, e-reporting will streamline the reporting process for regulated entities, improve the ability of government agencies to use the data to reduce pollution, and allow EPA, states, and tribes to manage our nation's environmental programs as a more unified environmental protection enterprise.

Electronic Reporting Objectives:

1: Work with partners to develop shared e-reporting tools and systems to make e-reporting possible.

2: Support states and tribes in building e-reporting capacity.

3: Expand e-reporting in EPA programs.

As part of the E-Enterprise Initiative, OECA will help the Agency design and develop the smart tools needed to implement e-reporting. This includes designing the user interface to help the facility understand its regulatory requirements and streamline the reporting process, and then develop the tools and policies for how the government will respond to electronically submitted information in a timely manner.

EPA's regulatory partners—states and tribes—are critical to the success of e-reporting, so OECA will work with them to develop their e-reporting capacity. This may include technical support, grants, or sharing resources to build e-reporting systems more economically.

OECA will be working with EPA's program offices on e-reporting for specific programs. This includes helping them write regulations to require e-reporting for each program.

Expanded Transparency: *Make the information we have today more accessible, and make new information obtained from advanced monitoring and electronic reporting publicly available.*

Transparency Objectives:

1: Make meaningful information on facility compliance easier to access and use.

2: Create new tools to make pollution and compliance information more relevant and useful.

3: Make information on enforcement and compliance available to the public through more usable data formats.

Transparency is closely linked to the e-reporting and advanced monitoring goals. By expanding transparency we can provide facilities and the public with better information on pollution releases, pollution sources, environmental conditions, and the performance of regulated sources and the government. Transparency improves compliance by helping facilities understand their environmental impact and allowing the community to better understand and act on this information to hold facilities accountable and advance environmental justice. Most facilities want to be good neighbors, and data on facility performance can be used by facilities to address community concerns and by community members, neighboring facilities, and other agencies to assess impacts. Data tied to geographic information can also provide insights to ambient environmental conditions and significant pollutant loadings, sometimes allowing access to this data in real time. For example, an EPA settlement requires a water utility to display a warning light near its outfall that goes on whenever a sewer overflows into the local river, allowing people to avoid water contact when pollution levels are higher. And EPA is testing the Village Green, a solar-powered air pollution and meteorological monitoring station integrated into a neighborhood park bench, which provides ambient air quality information online and via mobile app. There is powerful evidence that well designed transparency programs change behavior and improve results. As part of our transparency work, we will promote transparency solutions in regulations and permits.

OECA has been a leader in transparency by operating EPA's Enforcement and Compliance History Online (ECHO) website to provide information about facility performance. Under Next Generation Compliance, OECA will enhance ECHO to make it easier to use, more understandable, and improve viewing on mobile devices. OECA will provide more information and display it on state of the art dashboards.

OECA will develop new tools to integrate, analyze, and display data. OECA will work toward making data easier to obtain and use, making more data fields available to researchers, and allowing anyone to develop applications that use OECA data.

Another aspect of transparency is to let the public know how facilities are doing in complying with the requirements of enforcement settlements. This could include making facility environmental performance information and real-time monitoring data available on ECHO or a mobile app, or at a critical place in the community.

Innovative Enforcement: *Use Next Generation Compliance principles and tools in our enforcement planning and cases.*

Innovative Enforcement uses Next Generation Compliance principles to strengthen enforcement. By combining the lessons learned in implementing Next Generation Compliance with new capabilities in analyzing larger data sets, we will be able to better identify serious violators, ensure the integrity of electronic reporting, and more effectively and efficiently track compliance with settlements, while supporting new approaches to improve compliance.

Innovative Enforcement Objectives:

1: Use new data analysis tools to better identify serious threats to human health and the environment.

2: Develop innovative enforcement strategies to reduce pollution and improve compliance.

3: Expand the use of Next Generation Compliance approaches in enforcement settlements and plea agreements.

Today's innovative technology and analytical tools are important for identifying both serious pollution and violations. Combined with better information from advanced monitoring and electronic reporting, these tools will help us focus our civil and criminal monitoring and enforcement work where we can make the most difference. Data analysis is also an important part of ensuring the integrity of the information on which our environmental programs rely.

Next Generation Compliance principles will be used to develop innovative enforcement approaches that improve compliance. The potential for two-way communication via electronic reporting makes new compliance approaches possible. For example, regulatory agencies may be able to electronically provide targeted compliance assistance based on information a facility provides in its electronic reports. Better information on compliance opens the door to new tactics in enforcement and increases the power of individual cases to inspire improvements at other facilities. If we have information on compliance through electronic reporting, we are more able to experiment with approaches that will improve compliance at facilities beyond just those that receive enforcement attention. Transparency strategies, such as innovative ways to inform the public of serious violations, can also improve compliance when thoughtfully applied to the right problems. As the importance of self-reported data from regulated entities increases, we will use new tools, such as data analysis, and enhance existing tools, such as criminal enforcement, to provide strong incentives for accurate reporting. Next Generation Compliance provides opportunities to be more strategic, so our enforcement dollar goes further and more people are better protected from harmful pollution.

The lessons of Next Generation Compliance are being used now in enforcement cases. Advanced monitoring, electronic reporting, and transparency are being incorporated into civil and criminal case resolutions, making it easier to know if facilities are complying and the public is protected, and providing more information to the communities affected. For example, a recent EPA settlement requires the company to operate fence line monitors to report air pollution data in near real time and make it available to the public. Other settlements have required third-party verification of compliance status. These tools used in case settlements and plea agreements can make us more efficient and more effective, so we can accomplish more with existing resources, and we will be using them more in the coming years. Enforcement cases can also provide opportunities to test new technology and approaches that can provide better protection and, in some cases, save money for complying facilities.

IV. Measures for Goals and Objectives

OECA will develop milestones to meet the Agency level measures for Next Generation Compliance as presented in the FY 2014–2018 EPA Strategic Plan.[1] In addition to these Agency level measures, OECA expects to develop an annual work plan with specific activities to implement this Next Generation Compliance Strategic Plan.

V. Research

EPA looked at research, best practices, and data to develop Next Generation Compliance. We will continue research on theories, policies, technology, and best practices to help us refine and improve Next Generation Compliance. This includes research on factors that affect environmental compliance, the experience of EPA, states, other countries, and other regulatory agencies on ways to improve regulation effectiveness, how advances in information and monitoring technology will change environmental programs, and how to measure improvements in compliance. In particular, EPA will reach out to state and tribal environmental agencies to learn about any Next Generation Compliance approaches they have already implemented in their programs and explore how we can work together to develop and pilot new approaches.

VI. Management and Communications

EPA and OECA senior managers will provide strategic direction, both within the Agency and with external stakeholders, to ensure the success of Next Generation Compliance. This will include: 1) establishing direction and expectations in annual Program Manager Guidance;[2] 2) requesting an appropriate level of resources in the Agency budget; and 3) including goals and measures for implementation of Next Generation Compliance in the 2014-2018 EPA Strategic Plan under Goals 4 and 5 and as a central component of creating a high-performing organization.[3]

OECA will work with headquarters offices and regions to ensure that staff and managers are fully engaged in implementing this Strategic Plan. In addition, as appropriate, OECA will conduct outreach or training with stakeholder groups and co-regulators, including state, tribal, and local government partners, interest groups, the media, and the general public. EPA and some states have started to implement Next Generation Compliance approaches. Working collaboratively with these partners will help us identify the best approaches and implement more effective environmental programs with limited resources, so we can better protect public health and environment. Concurrently, OECA will seek to improve internal and public understanding of the effort, communicating the many benefits, and encouraging support and adoption of Next Generation Compliance practices.[4]

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[1] See FY 2014–2018 EPA Strategic Plan, April 10, 2014, page 71, at http://www2.epa.gov/planandbudget/fy-2014-2018-strategic-plan.
[2] See FY 2014 Office of Enforcement and Compliance Assurance National Program Manager Guidance, pages 2 and 10-12, at http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100H18X.txt.
[3] Ibid. 1, pages 41, 47-51, 64-5, 69-71, and 92.
[4] For example, communications such as Cynthia Giles' recent article in the September/October 2013 issue of *The Environmental Forum*.