

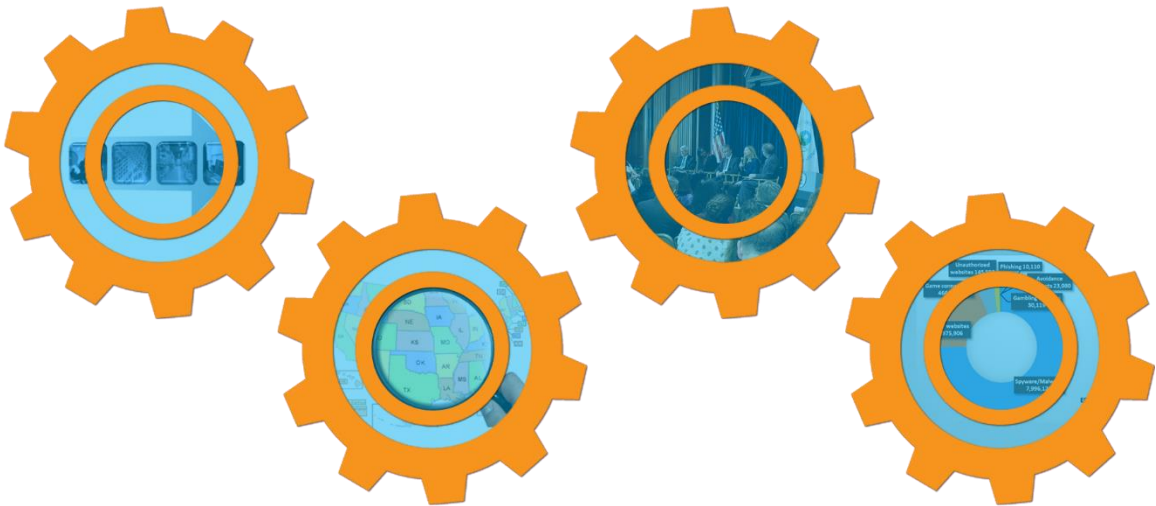


U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF INSPECTOR GENERAL



# FY 2016 EPA Management Challenges



## Abbreviations

DWSRF	Drinking Water State Revolving Fund
EPA	U.S. Environmental Protection Agency
FY	Fiscal Year
GAO	U.S. Government Accountability Office
OIG	Office of Inspector General

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# At a Glance

## What Are Management Challenges?

According to the Government Performance and Results Act Modernization Act of 2010, major management challenges are programs or management functions, within or across agencies, that have greater vulnerability to waste, fraud, abuse and mismanagement, where a failure to perform well could seriously affect the ability of an agency or the federal government to achieve its mission or goals.

As required by the Reports Consolidation Act of 2000, we are providing issues we consider as the U.S. Environmental Protection Agency's (EPA's) major management challenges for fiscal year 2016.

This report addresses all of the EPA's strategic goals and cross-agency strategies.

Send all inquiries to our public affairs office at (202) 566-2391 or visit [www.epa.gov/oig](http://www.epa.gov/oig).

[Listing of OIG reports.](#)

## EPA's Fiscal Year 2016 Management Challenges

Attention to agency management challenges could result in stronger results and protection for the public and increased confidence in management integrity and accountability.

### *The EPA Needs to Improve Oversight of States, Territories and Tribes Authorized to Accomplish Environmental Goals:*

- We found the absence of robust oversight of entities authorized to implement environmental programs. Oversight requires establishing and maintaining consistent national baselines and monitoring programs to determine whether they meet federal standards. While the EPA has made changes in response to some of our recommendations, corrective actions to which the agency has agreed remain pending in various areas (e.g., permits, inspections).

### *The EPA Needs to Improve Its Workload Analysis to Accomplish Its Mission Efficiently and Effectively:*

- The EPA's offices have not conducted a systematic workload analysis or identified workforce needs for budget justification purposes; such analysis is critically important to mission accomplishment. The EPA currently plans to apply workload analysis tools to task-driven agency functions, such as grants and contracts. While we understand the difficulty in applying such tools to the EPA's highly variable and non-linear activities, the EPA still needs to more broadly quantify what its full workload entails, so that it can more effectively prioritize and allocate limited resources to accomplish agency work.

### *The EPA Needs to Enhance Information Technology Security to Combat Cyber Threats:*

- The EPA faces information security challenges of long-standing program weaknesses, lack of corrective actions by management, lack of follow-up on remediation actions taken, and emerging challenges in managing contractors. We acknowledge that the EPA has initiated actions to further strengthen or improve its information security program. However, our audit work from the past 5 years continues to highlight actions that remain for the EPA to address cybersecurity challenges (e.g., weaknesses within the EPA's information security program, and managing contractors that provide key support in operating or managing systems on behalf of the agency).

### *The EPA Continues to Need Improved Management Oversight to Combat Waste, Fraud and Abuse:*

- We identified agency inaction among some supervisors regarding time and attendance controls, segregation of duties for key financial transactions, real property management, and employee travel. The agency's size necessitates effective communication, oversight and management. While the EPA has taken many corrective actions to address prior audits, improvements are still needed. Issues recently identified demonstrate continued deficiencies in the commitment by personnel to management policies and internal control.



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

THE INSPECTOR GENERAL

June 16, 2016

**MEMORANDUM**

**SUBJECT:** EPA's Fiscal Year 2016 Management Challenges  
Report No. 16-N-0206

**FROM:** Arthur A. Elkins Jr.

A handwritten signature in black ink, appearing to read "Arthur A. Elkins Jr.", is written over the name in the "FROM:" field.

**TO:** Gina McCarthy, Administrator

We are pleased to provide you with a list of areas the Office of Inspector General (OIG) considers as key management challenges confronting the U.S. Environmental Protection Agency (EPA). The project number for this report was OPE-FY16-0010. According to the Government Performance and Results Act Modernization Act of 2010, major management challenges are programs or management functions, within or across agencies, that have greater vulnerability to waste, fraud, abuse and mismanagement, where a failure to perform well could seriously affect the ability of an agency or the federal government to achieve its mission or goals.

The OIG shares with the agency itself a core goal: delivering good governance to the American people. Specifically, the Inspector General Act of 1978 directs Inspectors General to provide leadership to the agency through audits, evaluations and investigations, as well as additional analysis of agency operations. The enclosed management challenges reflect findings and themes resulting from many such efforts. Drawing high-level agency attention to these key issues is an essential component of the OIG's good governance mission.

The Reports Consolidation Act of 2000 requires our office to report what we consider the most serious management and performance challenges facing the agency. Additional challenges may exist in areas that we have not yet reviewed, and other significant findings could result from additional work. We provide detailed summaries of each challenge in the attachment.

Challenge	Page
The EPA Needs to Improve Oversight of States, Territories and Tribes Authorized to Accomplish Environmental Goals	1
The EPA Needs to Improve Its Workload Analysis to Accomplish Its Mission Efficiently and Effectively	7
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Just as the U.S. Government Accountability Office does with its High Risk List, each year we assess the agency's efforts against the following five criteria to justify removing a management challenge from the prior year's list:

1. Demonstrated top leadership commitment.
2. Capacity – people and resources to reduce risks, and processes for reporting and accountability.
3. Corrective action plan – analysis identifying root causes, targeted plans to address root causes, and solutions.
4. Monitoring – established performance measures and data collection/analysis.
5. Demonstrated progress – evidence of implemented corrective actions and appropriate adjustments to action plans based on data.

Due to the agency's progress, we deleted two challenges from last year's list ("Limited Controls Hamper the Safe Reuse of Contaminated Sites" and "The EPA Faces Challenges in Managing Chemical Risks"). We retained the remaining four management challenges from last year's list due to persistent issues. We welcome the opportunity to discuss our list of challenges and any comments you might have.

Attachment

## **CHALLENGE: The EPA Needs to Improve Oversight of States, Territories and Tribes Authorized to Accomplish Environmental Goals**

### **CHALLENGE FOR THE AGENCY**

In recent years, our work has identified the absence of robust oversight by the U.S. Environmental Protection Agency (EPA) of states, territories and tribes authorized to implement environmental programs under several statutes. The EPA has made important progress, but recent and ongoing EPA Office of Inspector General (OIG) and U.S. Government Accountability Office (GAO) work continues to support this as an agency management challenge.



### **BACKGROUND**

To accomplish its mission, the EPA develops regulations and establishes programs that implement environmental laws. Many federal environmental laws establish state, territorial and tribal regulatory programs that give states, territories and tribes the opportunity to enact and enforce laws. The EPA may authorize states, territories and tribes to implement environmental laws when they request authorization and the EPA determines a state, territory or tribe capable of operating the program consistent with federal standards. The EPA performs oversight of state, territorial and tribal programs to provide reasonable assurance that they achieve national goals to protect human health and the environment. Oversight of state, territorial and tribal activities requires that the EPA establish and maintain consistent national baselines that state, territorial and tribal programs must meet; monitor state, territorial and tribal programs to determine whether they meet federal standards; and ensure that federal dollars expended help achieve oversight objectives.

The EPA relies heavily on authorized states, territories and tribes to obtain environmental program performance data and implement compliance and enforcement programs. For example:

- Forty-nine states, six territories and one tribe administer the Public Water Supply Supervision Program under the Safe Drinking Water Act.
- Forty-eight states and one territory are authorized to administer the Resource Conservation and Recovery Act hazardous waste program.
- Forty-six states and one territory administer point source programs (National Pollutant Discharge Elimination System) under the Clean Water Act.
- Every state and territory, as well as one tribe, administer Title V of the Clean Air Act, designed to regulate the largest sources of air pollution.

These states, territories and tribes perform a critical role in supporting the EPA's duty to execute and enforce environmental laws. However, the EPA has the authority and responsibility to enforce environmental laws when states, territories and tribes do not. Many EPA programs implement a variety of formal and informal oversight processes that are not always consistent across EPA regions and the states, territories and tribes.

## THE AGENCY'S PROGRESS

We have identified EPA oversight of authorized state, territorial and tribal programs as an agency management challenge since fiscal year (FY) 2008. The EPA has made progress in reviewing and measuring inconsistencies in its oversight of state, territorial and tribal programs; using EPA authority when states, territories and tribes have failed to use their delegated authority; and revising EPA policies to improve consistency in oversight.

Since 2008, the EPA has made state oversight an agency priority. In 2013, the EPA developed the new key performance indicator, referred to as *Oversight of State Delegations Key Performance Indicator*. The EPA included oversight in the EPA's FYs 2012–2015 Action Plans for Strengthening State, Tribal, and International Partnerships. The EPA formed a senior-level workgroup that noted additional recommendations on state oversight, including improving consistency for identifying regional and state roles during EPA program review, and developing an initial set of common principles. The EPA also adopted a cross-agency strategy on "Launching a New Era of State, Tribal, Local, and International Partnerships" in its FYs 2014–2018 Strategic Plan, and revised its planning and commitment-setting process beginning in FYs 2016–2017 to provide "earlier and more meaningful engagement with states and tribes." According to the agency, it continues to improve its state oversight practices to ensure consistency by, for example, establishing the State Program Health and Integrity Workgroup. This interagency workgroup is composed of the EPA's national program offices for air, enforcement, and water; it gathers and analyzes information on oversight of state practices, identifies gaps, and develops solutions.

The EPA has made changes in response to recommendations in our reports. For example:

- The EPA recently completed all corrective actions to address recommendations from a July 2014 report where we found that the EPA Region 10 effectively administered cooperative agreements and monitored project progress to determine whether proposed outputs and outcomes were achieved. However, we noted in that report that improvements should be made in both the administration and monitoring of recipient activities. The corrective actions, such as revising the sub-award policy, should help address issues found during the audit.
- In our September 2015 early warning report, we found that the Hawaii Department of Health has not made adequate progress in implementing the corrective action plan in response to the 30 items identified in a Notice of Non-Compliance issued by EPA Region 9. In particular, we noted that Hawaii has not provided an acceptable Intended Use Plan; has executed only 87 percent of the targeted loan commitments of \$56 million, resulting in a shortage of \$7.4 million; and disbursed only 80 percent of the targeted disbursements of \$60 million, leaving \$11.8 million in undisbursed funds. We recommended that EPA Region 9 exercise fiduciary responsibility and withhold FY 2015 funds of \$8,787,000 for the Hawaii Drinking Water State Revolving Fund (DWSRF) capitalization grant until the region is satisfied with corrective action plan implementation progress. After being briefed on our report, EPA Region 9 initiated an enforcement action against the Hawaii Department of Health for not meeting its loan commitment and disbursement targets. EPA Region 9 advised Hawaii that the FY 2015 DWSRF capitalization grant would be withheld and the region may withhold further awards.

- At the time of the 2012 EPA OIG evaluation on Underground Storage Tank regulations, the agency was in the process of revising the regulations. The EPA published the final revised Underground Storage Tank regulations in July 2015. The final regulations provide states with State Program Approvals 3 years from the rule's effective date to submit their applications for a reinstatement of their State Program Approvals.
- In 2009, we found that High Priority Violations under the Clean Air Act were not being addressed in a timely manner because regions and states did not follow policy, EPA headquarters did not oversee regional and state High Priority Violations performance, and EPA regions did not oversee state High Priority Violations performance. We recommended that the EPA revise the High Priority Violations policy to improve the EPA's ability to oversee High Priority Violation cases and clarify the roles and responsibilities of EPA headquarters and regions, the states, and local agencies. The EPA issued its revised policy in August 2014.
- In December 2014, we reported that the EPA does not obtain all required DWSRF project data from states, despite grants that require states to input key project information into EPA databases. The EPA also does not always use annual reviews of state DWSRF programs to assess project outcomes. We recommended that the EPA enforce grant requirements that states input all necessary data in the project-level tracking database and review data completeness as part of the EPA's annual review of state performance. We also recommended that the EPA enhance coordination between DWSRF and Public Water System Supervision programs and periodically evaluate program results. The EPA completed corrective actions to address each recommendation.

## **WHAT REMAINS TO BE DONE**

We continue to conduct reviews of the EPA's oversight of authorized programs:

- In a May 2016 report, we found that Region 9 needed improved internal controls for oversight of Guam's consolidated cooperative agreements. We noted that Region 9 project files were not readily available to third parties, and Region 9 did not ensure reliability of Guam Environmental Protection Agency Safe Drinking Water Information System data. We found that, without adequate internal controls and oversight, more than \$67 million in consolidated cooperative agreement funds may not be administered efficiently and effectively, thus reducing the impact those funds could have on protecting human health and the environment. The agency agreed with our recommendations, and corrective actions are pending.
- In a July 2015 report, we found that the EPA needs to improve oversight of permit issuance for hydraulic fracturing using diesel fuels, and address any related compliance issues. Evidence shows that companies have used diesel fuels during hydraulic fracturing without EPA or primacy state underground injection control Class II permits. The EPA has also not determined whether primacy states and tribes are following the agency's interpretive memorandum for issuing permits for hydraulic fracturing using diesel fuels. Enhanced EPA oversight can increase assurance that risks associated with diesel fuel hydraulic fracturing are being adequately addressed. The agency agreed with our recommendations or proposed actions that met the intent of our recommendations. The corrective actions are pending.



- In a May 2015 report, we found that EPA regions did not consistently document or retain evidence of the quality of state-performed Federal Insecticide, Fungicide, and Rodenticide Act Worker Protection Standard and certification inspections. It was difficult to analyze EPA project officer oversight reviews for adequacy because of an overall lack of records and transparency on how issues associated with state inspections are addressed. The agency agreed with our recommendations, and corrective actions are pending.
- In an April 2015 report, we found that the U.S. Virgin Islands did not meet program requirements for numerous activities related to implementing Clean Air Act, Clean Water Act, Safe Drinking Water Act, and Underground Storage Tank/Leaking Underground Storage Tank programs. Region 2 oversight had not identified program deficiencies uncovered by our review, or implemented procedures to ensure that deficiencies identified by Region 2 were corrected. Moreover, we found deficiencies continued in the U.S. Virgin Islands despite EPA Region 2 oversight uncovering them in prior years. Since the EPA retains responsibility for programs implemented on its behalf—such as those in the U.S. Virgin Islands—we concluded that the agency needs to act to ensure that the public and environment are protected. We made 19 recommendations, ranging from withdrawing the U.S. Virgin Islands’ authority to implement EPA programs, to providing additional EPA oversight. The EPA agreed, and has committed to taking appropriate corrective actions. Eight recommendations with agreed-to corrective actions remain pending. Among the corrective actions remaining, the EPA must: make a determination of whether to initiate withdrawal of approval of the U.S. Virgin Islands’ National Pollutant Discharge Elimination System program; make a determination as to whether the U.S. Virgin Islands is adequately administering or enforcing its Title V operating permit program; establish an updated Underground Storage Tank/Leaking Underground Storage Tank Memorandum of Agreement with the U.S. Virgin Islands; and assist the U.S. Virgin Islands in implementing procedures to identify Energy Planning and Community Right-to-Know Act Tier II non-filers.
- In a February 2015 report, we found that EPA Region 8 was not conducting inspections at establishments in North Dakota that produce pesticides. Also, since 2011, Region 8 has failed to conduct inspections of pesticides imported into North Dakota. This failure increases the risk that pesticides are not in compliance with federal law, which could result in potential risks from toxics being undetected and adverse human health and environmental impacts occurring. The EPA has committed to taking appropriate corrective actions. Recommendations with agreed-to corrective actions remain pending. The EPA agreed to review Region 8’s FY 2015 North Dakota End-of-Year report and confirm that Federal Insecticide, Fungicide and Rodenticide Act producer establishment and import inspections in North Dakota have been initiated, and compile a list in Region 8’s North Dakota End-of-Year report of the number of producer establishment and import inspections that are conducted in the state annually.
- In October 2014, we reported weaknesses in EPA oversight of state and local Title V programs’ fee revenue practices. Title V permitting requirements are designed to reduce violations and improve enforcement of air pollution laws for the largest sources of air pollution, such as petroleum refineries and chemical production plants. We found that Title V program expenses often exceeded revenue, even though the Clean Air Act requires these programs to be solely funded by permit fees. We recommended that the EPA assess, update and re-issue its 1993

Title V fee guidance as appropriate; establish a fee oversight strategy to ensure consistent and timely actions to identify and address violations; emphasize and require periodic reviews of Title V fee revenue and accounting practices; address shortfalls in staff expertise as regions update their workforce plans; and pursue corrective actions as necessary. The EPA has committed to taking appropriate corrective actions, and completion of actions is pending.

- In September 2014, we issued a report on how effectively the EPA and states administer the Clean Water Act’s “pretreatment” and permit programs. We found the EPA is not adequately overseeing significant portions of most states’ programs. EPA Region 9 is the only region that ensures that the states they oversee issue discharge permits to sewage treatment plants that include provisions for broad monitoring of hazardous chemicals from industrial users. Without this monitoring, sewage treatment plants may be unaware of hazardous chemicals discharged to them, and have little knowledge of required hazardous waste discharge notifications. In addition, exceedances of chemical limits in permits and toxicity tests do not trigger notification to enforcement programs. As a result, the EPA may not be ensuring that states are using permits to minimize potentially harmful contamination of water resources. The EPA has committed to taking appropriate corrective actions, and completion of actions is pending.
- In July 2014, we reported that the EPA and the states we reviewed took many actions to reduce DWSRF unliquidated balances. However, those actions have not reduced DWSRF unliquidated balances to below 13 percent of the cumulative federal capitalization grants awarded, which the Office of Water states is the focus of its efforts. For the period we examined, the five states reviewed—California, Connecticut, Hawaii, Missouri and New Mexico—executed small numbers of loans each year and did not maximize the use of all DWSRF resources, including capitalization grant awards. State programs reviewed were not adequately projecting the DWSRF resources that would be available in the future to enable states to anticipate the amount of projects needed to be ready for loan execution in a given year. As a result, \$231 million of capitalization grant funds remained idle, loans were not issued, and communities did not implement needed drinking water improvements. We also noted that states’ fundable lists did not reflect projects that would be funded in the current year, and overestimated the number of projects that will receive funding. We recommended that the EPA require states with unliquidated obligations that exceed the Office of Water’s 13-percent-cutoff goal to project future cash flows to ensure funds are expended as efficiently as possible. We also recommended that the EPA develop guidance for states on what projects are to be included on the fundable lists; and require regions, when reviewing capitalization grant applications, to ensure states comply with the guidance. The EPA has committed to taking appropriate corrective actions, and completion of actions is pending.
- In our March 2014 report, we found that the EPA lacks documented procedures that reflect current operations of the Cross-Media Electronic Reporting Regulation program. While program applications require approval from designated officials, the EPA lacks processes to ensure such approvals. The EPA has neither implemented monitoring activities to verify a system’s functionality before and after approval nor implemented processes to ensure applications are completed, reviewed and approved within required time frames. The EPA had not made it a priority to keep procedures current for implementing program business practices. Without

current documented business practices, the EPA increases its risks that program applications may not be processed according to prescribed requirements and meet the high level of integrity needed for enforcement activities. The EPA has committed to taking appropriate corrective actions, and the completion of the remaining corrective action is pending.

- In a February 2012 report, we found that EPA regions have management controls to verify the quality of state Underground Storage Tank inspections. All three regions where we conducted our review had annually reviewed Underground Storage Tank inspection programs to verify compliance with requirements. Further, two of the three regions we reviewed conducted more extensive annual reviews and made recommendations to improve state inspection programs. While we did not find any major deficiencies in the administration of the state Underground Storage Tank inspection programs or regional oversight activities, the memoranda of agreement between regions and the state Underground Storage Tank programs either do not exist or do not reflect changes resulting from the Energy Policy Act of 2005. The EPA has committed to taking appropriate corrective actions, and the completion of actions is pending.

GAO has also conducted reviews of the EPA's oversight of states, territories and tribes, and made recommendations to address identified deficiencies. For example, in 2015, GAO found that financial indicators collected by the EPA as part of its oversight responsibilities do not show states' abilities to sustain their State Revolving Funds. GAO recommended that the EPA update its financial indicator guidance to include measures for identifying the growth of the states' funds. GAO also recommended that, during the reviews, the EPA develop projections of state programs by predicting the future lending capacity.

In another example, GAO reported in 2014 that the EPA is not consistently conducting two key oversight and enforcement activities for Underground Injection Control class II programs. GAO found that the EPA does not follow 1983 guidance to routinely do annual on-site state program evaluations, and has not reviewed this guidance to determine which oversight activities are necessary and effective. Further, the EPA has not incorporated all state program requirements and changes into federal regulations through rulemaking. The EPA also has not explored alternatives for incorporating state program requirements and changes into federal regulations. GAO recommended the EPA review emerging risks and related program safeguards; improve data entry, reporting and review; conduct a rulemaking to incorporate state program requirements and changes into federal regulations; evaluate and consider alternative processes to incorporate future changes to state program requirements and changes into federal regulations without a rulemaking; and evaluate and revise, as needed, program guidance on effective oversight.

While important progress has been made, our work continues to identify challenges throughout agency programs and locations, and many of our recommendations remain to be fully implemented. We continue to perform work in this area, and will continue to monitor the agency's progress in addressing this challenge.

# CHALLENGE: The EPA Needs to Improve Its Workload Analysis to Accomplish Its Mission Efficiently and Effectively

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## CHALLENGE FOR THE AGENCY

The EPA has not fully implemented controls and a methodology to determine workforce levels based upon analysis of the agency's workload. The EPA's program and regional offices have not conducted a systematic workload analysis or identified workforce needs for budget

justification purposes. The EPA's ability to assess its workload—and subsequently estimate workforce levels necessary to carry out that workload—is critically important to mission accomplishment. Due to the broad implications for accomplishing the EPA's mission, we have included this as an agency management challenge since 2013.



## BACKGROUND

In 2010, we reported that the EPA did not have policies and procedures requiring that workforce levels be determined based upon workload analysis. In 2011, we reported that the EPA does not require program offices to collect and maintain workload data. Without such data, program offices are limited in their ability to analyze their workload and justify resource needs. The GAO also reported in October 2011 that the EPA's process for budgeting and allocating resources does not fully consider the agency's current workload. In March 2010, the GAO reported that it had brought this issue to the attention of EPA officials through reports in 2001, 2005, 2008 and 2009.

Since 2005, EPA offices have studied workload issues at least six different times, spending nearly \$3 million for various contractors to study the issues. However, for the most part, the EPA has not used the findings resulting from these studies. According to the EPA, the results and recommendations from the completed studies were generally not feasible to implement.

Over the past decade, the EPA's workforce levels have declined, with significant reductions in FYs 2012 through 2015, when levels declined by over 2,100 positions. Without a clear understanding of its workload, it is unclear whether this decline jeopardizes the EPA's ability to meet its statutory requirements and overall mission to protect human health and the environment, or if the decline represents a natural and justifiable progression, because the EPA has promulgated major regulations implementing environmental statutes and states have assumed primacy over most media programs.

## THE AGENCY'S PROGRESS

In response to the OIG and GAO reports, the EPA stated that it recognized the need to improve its ability to understand and quantify the workload of its component organizations and to make resource allocation decisions based on those assessments. The EPA said that it was committed to improving its analytical capabilities and examining workload measures to support the resource allocation process.

In 2013, we conducted a follow-up review of actions the EPA has taken to address previous OIG recommendations. We found that the EPA:

- Initiated pilot projects in Regions 1 and 6 to analyze the workload for air State Implementation Plans and permits, as well as water grants and permits.
- Surveyed numerous front-line agency managers on the functions performed, thereby creating an inventory of common functions among program offices.
- Through the Office of the Chief Financial Officer, consulted with 23 other federal agencies about their workload methodologies. As a result of that analysis, the EPA selected an approach referred to as the “Table Top” method used by the U.S. Coast Guard. The method is designed to use subject matter experts and actual data to provide estimates of workload. The Table Top approach provides flexibility in implementation, which allows for differences in organizational functions and workloads rather than attempting to fit all regions and programs into a one-size-fits-all approach. The EPA has conducted limited testing on this approach within two program areas—grants and Superfund Cost Recovery. According to EPA officials, while the methodology appears promising for grants, it became overly complicated for Superfund Cost Recovery.

During 2014, the EPA continued to test the workload model in other areas, including:

- Working with Grant Project Officers to evaluate and try to balance uneven workloads.
- Developing a Project Officer Estimator Tool for organizations to examine Project Officer workloads.
- Working with Grants Specialists to refine the Interagency & Grants Estimator Tool.
- Submitting a Draft Funds Control Manual to the U.S. Office of Management and Budget, and receiving and incorporating the Office of Management and Budget’s comments.

In January 2016, the EPA issued a draft Funds Control Manual. The manual is intended to fulfill the EPA’s corrective actions for several unimplemented recommendations from prior OIG reports on workload analysis. The draft manual highlights several tools the EPA has developed to help programs examine and understand connections between hours of work (or full-time equivalents) and specific tasks, products, results or outcomes. The EPA says that the tools are designed to complement existing financial, budget and program information that organizations already track and use.

The manual highlights four major types of workload analysis tools that the EPA has used: surveys, benchmarking, existing data and analytical tools (such as the U.S. Coast Guard’s Table Top analytical framework). In response to many stakeholders’ requests (including OIG’s) to explain how the EPA’s work hours tie to specific results produced, the manual says it is important to stress that it is extremely difficult to demonstrate this tie for many agency activities (such as research or regulatory development), so workload analyses generally should be targeted at task-driven areas, such as grants or contract awards.

In the latest response to this management challenge, the EPA stated that it does not now believe the primary goal of workload analysis is to allocate resources or develop workforce need, but to better

understand work and processes and estimate the critical tasks that take up the most time. In other words, the EPA will focus on how to use the resources it has more efficiently, rather than estimating its total workload and the resources needed to complete that workload.

### **WHAT REMAINS TO BE DONE**

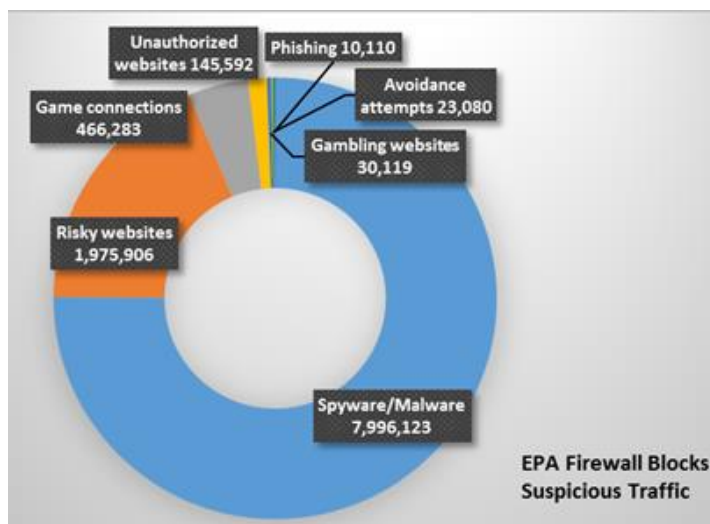
The EPA currently plans to apply workload analysis tools to task-driven agency functions, such as grants and contracts. While we understand the difficulty in applying workload analysis tools to the EPA's highly variable and non-linear activities, the EPA still needs to more broadly quantify what its full workload entails, so that it can more effectively prioritize and allocate limited resources to accomplish agency work. In an era of declining resources, the EPA should consider using its current flexibility to move resources to the areas that will mitigate the most environmental risk to the greatest number of people.

The EPA's ability to assess its workload and estimate workforce levels necessary to carry out that workload is critically important to mission accomplishment. As such, we are maintaining workload analysis as a management challenge for FY 2016, and recently initiated additional work in this area. In February 2016, we announced the start of preliminary research on the EPA's Superfund workload allocation. The evaluation objective is to determine whether the EPA's distribution of Superfund resources among EPA regions supports the current regional workload. We will continue to monitor agency progress through this and other ongoing work.

## CHALLENGE: The EPA Needs to Enhance Information Technology Security to Combat Cyber Threats

### CHALLENGE FOR THE AGENCY

The EPA's information security challenges stem from long-standing weaknesses within the information security program, the lack of corrective actions taken by management to resolve audit findings designed to improve the effectiveness and efficiency of the agency's computer network operations, and emerging challenges the agency faces in managing contractors that provide critical support for systems on behalf of the agency. Moreover, the high rate of unreliable data in the agency's Management Audit Tracking System associated with information technology recommendations, and a lack of management follow-through to verify that corrective actions address weaknesses, raise significant doubts and questions about the effectiveness of the EPA's information security program. Results of our audits continue to support that executive management emphasis over audit follow-up is needed, and that the agency needs to take further steps to fully address concerns raised in our reports.



EPA image depicting attacks blocked by the agency's firewall for one month during FY 2015.

### BACKGROUND

We have reported information security as a management challenge for the EPA since FY 2001. Over these years, the agency has made strides to strengthen its policy framework and processes, and made marked improvements in securing the EPA's network infrastructure and systems. However, during this same period, cyber threats have become increasingly sophisticated, which continues to underscore the need to proactively manage and bolster the agency's cybersecurity capabilities. Cyber attacks could have a devastating impact on the EPA's computer systems and network, thereby potentially disrupting agency operations, as well as the lives and operations of employees and businesses who entrust the agency with their most sensitive personal or confidential business information. According to a September 2015 GAO report, federal agencies have reported:

- An increase in the number of incidents that have placed sensitive information at risk.
- An increase of 1,121 percent in the number of cyber incidents reported to the U.S. Computer Emergency Readiness Team from 2006 to 2014.

The recent compromise of personally identifiable information at the Office of Personnel Management, and losses of sensitive information at giant retailers like Target and Home Depot, further highlight that a cybersecurity breach is an ever-present threat faced by any entity that relies on technology. As such,

management vigilance and commitment is paramount if the EPA is to realize a fully implemented information security program or have effective processes to identify, respond to and correct security vulnerabilities that place agency data and systems at risk.

## **THE AGENCY'S PROGRESS**

In response to our FY 2015 management challenges, the EPA indicated that it has taken steps to ensure its information technology and cybersecurity practices are fully integrated throughout the agency. The EPA noted the following planned or taken actions to address our growing concerns:

- Establish methods to ensure all accounts are proactively managed, beginning with inactive accounts and accounts with elevated privileges.
- Conduct an inventory of all accounts to consolidate, refine and standardize processes for assigning and removing inactive accounts.
- Improve the integration of personnel actions (e.g., hiring, transfer, termination) with account management.
- Refine established procedures for communicating, disseminating and resolving corrective actions to improve audit follow-up practices.
- Provide security practitioners with the necessary guidance, tools and oversight to address vulnerabilities effectively and in a timeframe consistent with the associated risk impacts.
- Initiate a review of the vulnerability management processes to develop a vulnerability management concept of operations document that will strengthen the agency's processes and procedures in remediating weaknesses.
- Implement the approved training framework whereas the agency will provide each defined security position with role-based training the employee must obtain or maintain to keep their positions.

We acknowledge that the EPA continues to initiate actions to further strengthen or improve its information security program. However, our audit work from the past 5 years continues to highlight that the EPA faces challenges in addressing outstanding weaknesses within its information security program, and in managing contractors that provide key support in operating or managing systems on behalf of the agency. The EPA's Office of Environmental Information is primarily responsible for information technology management.

### *Addressing Outstanding Weaknesses*

Our FY 2016 report on the agency's progress in completing corrective actions associated with information technology security recommendations made in FYs 2010–2012 found that the agency did not ensure that agreed-to corrective actions were:

- Fully implemented.
- Carried out timely.
- Recorded accurately or managed effectively in the Management Audit Tracking System.



- Verified to have actually fixed the identified weakness even though the corrective actions were recorded as completed in the Management Audit Tracking System.

As noted below, the EPA achieved 11 percent (four of 36) compliance for six attributes outlined in its audit management procedures.

#### Analysis of the EPA's actions taken to address information security audit recommendations

OIG report and recommendation reviewed	Agency completed agreed-to corrective action(s)?	Corrective action(s) timely completed as agreed to?	Completion date accurately recorded in Management Audit Tracking System?	Documentation maintained to support actions taken readily available?	Agency verified action(s) taken actually fixed the deficiency?	Agency continued to implement the action(s)?
Report 10-P-0058 Recommendation 2-1	No	No	No	No	No	No
Report 11-P-0159 Recommendation 2	No	No	No	No	No	No
Report 11-P-0277 Recommendation 2	No	No	No	No	No	No
Report 12-P-0836 Recommendation 12	No	No	No	No	No	No
Report 12-P-0899 Recommendation 8	No	No	No	No	No	No
Report 13-P-0257 Recommendation 5	Yes	Yes	No	No	Yes	Yes
Overall compliance percent	11%					

Source: OIG analysis.

#### Managing Contractors

Increased management oversight is needed to ensure agency contractors comply with mandated information system security requirements for systems they operate on behalf of the agency.

- In our FY 2015 report on EPA contract systems, we noted that personnel with oversight responsibilities for contractor systems were not aware of the requirements outlined in EPA information security procedures. As a result, EPA contractors did not conduct the required annual security assessments, did not provide security assessment results to the agency for review, and did not establish the required incident response capability. Without the required security controls, data breaches costing from \$1.4 million to over \$12 million could have occurred for the systems included in our review if compromised.
- Our FY 2015 audit of the EPA's administration of cloud services disclosed that the EPA is not fully aware of the extent of its use of cloud services, and thereby is missing an opportunity to help make the most efficient use of its limited resources regarding cloud-based acquisitions. We found that inadequate oversight of a cloud service provider resulted in the agency placing an EPA system within the vendor's network that (1) did not comply with federal security requirements, and (2) contained vendor terms of service that were not compliant with the Federal Risk and Authorization Management Program.
- Our FY 2016 annual audit of the EPA's information security program disclosed that agency management of contractor systems require significant management attention to correct deficiencies noted in this area. We found that although the EPA has guidance in place for

oversight of contractor systems, significant improvements are needed to (1) ensure contractors comply with required security controls, (2) maintain an accurate inventory of contractor systems, and (3) identify contractor systems that interface with EPA systems.

## **WHAT REMAINS TO BE DONE**

The EPA has taken steps to address many of our audit recommendations. However, the following actions remain to address cybersecurity challenges:

1. Verify that the Audit Follow-Up Coordinator function in the Office of Environmental Information has sufficient staffing to be effective and ensure managers and staff understand the process for this function and report concerns with workload.
2. Develop and implement a process that:
  - a) Strengthens internal controls for monitoring and completing corrective actions on all open audits.
  - b) Maintains appropriate documentation to support completion of corrective actions; if delegated to sub-offices, the process should include regular inspections by the Office of Environmental Information's Audit Follow-Up Coordinator.
  - c) Specifies when sub-offices must complete corrective actions as completed.
  - d) Requires verification that corrective actions fixed the issue(s) that led to the recommendation.
  - e) Requires sub-offices to continue to use the improved processes.
  - f) Requires Office of Environmental Information managers to update the office's Audit Follow-Up Coordinator on the status of upcoming corrective actions.
3. Establish a policy that sets and enforces an EPA standard for the maximum number of days that an account can remain inactive before the system automatically disables the account.
4. Implement the recommendation of the EPA's Information Security Task Force to manage annual security assessments, and include steps to oversee assessments to be conducted under a centralized contract or interagency agreement
5. Implement the recommendation of the EPA's Information Security Task Force to manage the vulnerability management program.

## CHALLENGE: The EPA Continues to Need Improved Management Oversight to Combat Waste, Fraud and Abuse

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### CHALLENGE FOR THE AGENCY

For the past several years, our audit reports have identified agency actions or inactions that indicate a “culture of complacency” among some supervisors at the EPA regarding such areas as time and attendance, segregation of duties for key financial transactions, employee travel, and management of real property.

As stewards of taxpayer dollars, EPA managers must emphasize and reemphasize the importance of compliance and ethical conduct throughout the agency, and ensure it is embraced at every level of the organization.



### BACKGROUND

The EPA employs over 15,000 people at its headquarters, 10 regional offices, and numerous laboratories and other locations. The agency’s size necessitates effective communication, oversight and management. While the agency has taken many corrective actions to address prior audits, improvements are still needed. Issues we recently identified demonstrate continued deficiencies in the commitment by personnel to management policies and internal control at the EPA.

- Based on work in response to fraud committed over more than a dozen years by an EPA Senior Policy Advisor, we initiated several audits to determine whether internal control deficiencies exist agencywide. We recently completed assignments on overtime policies, administrative leave, travel, bonuses and employee vetting. We found, for example, that:
  - a. The EPA did not always comply with EPA policies requiring the advance authorization and approval of overtime. Managers did not always use EPA Form 2560-7 to approve overtime in advance, and its use was not consistent across the agency. Some offices used verbal or other written documents to approve an overtime request. Others did not always retain the request forms as required.
  - b. The EPA has a multi-step hiring process and written procedures to ensure quality in the hiring process, and performs some verification of an applicant’s assertions during the pre-employment process. However, the EPA does not have policies and procedures to confirm applicants’ assertions of prior employment or verify awards/professional certifications claimed during the pre-employment phase. Also, the EPA does verify academic credentials for jobs with education requirements.
- Our review of EPA travel vouchers disclosed significant issues related to the travel of a former Region 9 Administrator, as well as other weaknesses agencywide. These weaknesses included travel occurring that may not have been appropriate, inadequate justification for lodging costs above per diem rates, lack of trip reports for international travel, and travel vouchers not being

submitted timely. The insufficient implementation of travel policies and controls result in EPA travel dollars being vulnerable to fraud, waste and misuse.

- The need for management to strengthen internal controls to prevent fraud is particularly pressing in the EPA's implementation of an automated control to enforce segregation of duties for key financial transactions. In our annual reports on the agency's financial statements dating back to 2009, we found the lack of internal controls surrounding the user accounts within the EPA's core financial management system resulted in system users being able to:
  - Process financial transactions and redirect funds to unauthorized bank accounts.
  - Receive access to perform functions not authorized by management.
  - Access the accounting system even after they departed the EPA or no longer needed access to the system.

While the EPA had agreed with the findings and recommendations in our 2009 report and indicated that it planned to have corrective actions completed by December 30, 2010, these issues still have not been addressed. Management inaction in this area places the EPA's financial transaction processing environment at a high risk that fraud could occur without detection.

- The EPA established policies and procedures for use of administrative leave in connection with employee conduct and disciplinary actions. However, the policies can be improved to provide better guidance for documenting administrative leave, and establish parameters for how much administrative leave should be approved. Our analysis shows the EPA's use of administrative leave is disproportionate when compared to Office of Personnel Management guidance. While administrative leave should be limited to brief absences, our analysis found several employees who had been on administrative leave for 4 months or more without proper justification. The lack of adequate documentation and justification for the extended use of administrative leave results in excessive payroll costs and can lead others to second-guess agency decisions.
- During a hotline complaint review, we found that the Office of the Chief Financial Officer made two individual cash awards of \$4,500 to the same new hire within 3 months of her start date. The \$9,000 in awards represented approximately 25 percent of the employee's 3-month salary and, according to the Office of the Chief Financial Officer, was an unprecedented amount for such a short period of time after being hired. Although the awards were compliant with federal regulations and EPA award policies, the amounts, justifications and timing raise questions about the reasonableness of the awards and how the Office of the Chief Financial Officer used the awards process.
- The OIG received a hotline complaint that alleged possible time and attendance irregularities related to overtime pay and the use of administrative leave for an employee within the Office of Air and Radiation's Immediate Office. We found the allegation of the misuse of overtime to be unsubstantiated; however, we found that the employee and supervisor signed, in advance, blank requests for overtime authorization forms without identifying the dates and hours of overtime or the reason for overtime. Further, we found the allegation concerning the employee improperly charging administrative leave to attend a funeral to be valid; once this matter was brought to the attention of the agency, the mischarging was corrected.

- The EPA's main authoritative manual for printing operations is over 20 years old and outdated. As a result, the manual does not provide effective guidance for accountability or oversight. The agency's current mindset allows for the storing of large quantities of printed material, leading to the belief that it is cheaper to print in bulk and store materials for years. This matter was brought to the agency's attention, and it agreed to implement corrective actions. However, the agency has extended its deadlines for corrective actions more than once, and still has not established realistic milestones to implement all corrective actions.

## **THE AGENCY'S PROGRESS**

### *Travel and Time and Attendance*

- The agency agreed with all recommendations related to time and attendance. The latest corrective action, involving the employee hiring process, was due February 2016, but this milestone has been delayed.

### *Segregation of Duties for Key Financial Transactions*

- In FY 2012, the EPA created a new agency policy that formally defines the incompatible functions associated with financial management processes, and retired its legacy financial management system.

### *Management of Real Property*

- The agency issued policy guidance for warehouses that required the tracking of non-accountable property, the accounting of all electronics-type property and all accountable and sensitive property, and the recording of all property in warehouses in the agency's asset management system.
- The agency issued guidance requiring EPA Senior Resource Officials to (1) assess annually the operations of warehouses, to efficiently and effectively manage them and make contract adjustments as necessary; (2) assess annually used and unused square feet, to consolidate warehouse space and the storage of personal property located within the same metropolitan area; (3) annually assess the warehouses and the need to store the property items, to find costs savings and efficiencies in operations; (4) conduct periodic unannounced visits to warehouses, to guard against unauthorized use of government resources; and (5) perform an annual certification of non-accountable property in those warehouses.
- The agency indicated it would implement a new mandated property management system and provide guidance on incorporating emerging technologies, along with best practices, to generate efficiencies and enhanced internal controls. The agency's corrective action status on this action has been delayed with no revised date.
- The agency indicated it developed and disseminated best practices for inventory and storage on December 2, 2015, to warehouse managers at Landover, Research Triangle Park and Cincinnati, and to property management officers.

### Management of Employee Travel

- The agency agreed with recommendations in our report regarding the need for better management controls for approval of employee travel, and has completed corrective actions for all recommendations.

### **WHAT REMAINS TO BE DONE**

While the EPA is making progress, the agency needs to continue to confront this “culture of complacency.” Failure to do so could seriously affect agency resources, impacting the ability of the agency to achieve its mission and goals. Commitment is not demonstrated by a one-time memo and a new policy. The agency should take affirmative measures to communicate its commitment to internal controls, communicating the message repeatedly throughout the organization by many means, both formal and informal, to reinforce a strong “tone at the top.”

### Segregation of Duties for Key Financial Transactions

- Although the EPA created a new agency policy in FY 2012 that formally defines the incompatible functions associated with financial management processes, in FY 2012, the EPA replaced the Integrated Financial Management System with a new system—Compass Financials. However, the agency had not taken steps to ensure the new system contains an automated control to ensure personnel could not process financial transactions inconsistent with the agency’s policy. In response to the EPA’s audit resolution process, in January 2016, the agency stated it would take an additional 2 years—until December 2017—to develop an internal control process to prevent the inadvertent processing of financial transactions. This is 8 years after this significant internal control deficiency was brought to management’s attention.
- Our current audit work continues to highlight the EPA’s challenges in managing user access to its financial applications. With only 39 percent of the EPA financial systems meeting mandated federal requirements for access controls for account management, emphasis is needed to eliminate the possibility that unauthorized access could be used to commit fraud that could go undetected for a significant amount of time.

### New Mindsets Toward Printing

- The agency needs to update its main authoritative guidance for printing operations (Printing Management Manual) to include authorization for decentralized operations within the regions.
- The agency needs to issue guidance to EPA regions and program offices to reiterate roles and responsibilities, to help reinforce the authorities and change behaviors. Guidance should specifically include procedures to facilitate the most efficient and economical methods for printing and inventory management.
- The agency needs to establish achievable milestones in the Management Audit Tracking System and complete corrective action to address the following recommendation identified in an August 2014 OIG report on strategic sourcing: “Complete the establishment and collaboration of the Print Commodity Team, and issue an agencywide memorandum requiring reduced printing, reduced color printing, double-sided printing, and less desktop printing.”