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EPD Enforcement - Selected Water Programs

Opportunities exist to continue to improve or enhance compliance and enforcement activities

Why we did this review

The Environmental Protection Division (EPD) of the Department of Natural Resources monitors and enforces compliance with environmental laws and regulations to control or prevent the release of contaminants into the state's air, land, and water resources. This performance audit examines EPD's compliance and enforcement activities for select water resource and protection programs.

We examined EPD's efforts in permitting regulated entities; monitoring compliance through reporting, inspections, and complaint investigations; and initiating formal and informal enforcement actions. We also reviewed management controls in place to assist in these efforts.

This report covers activities from January 2016 to May 2018, with updates to reflect any changes and improvements that have occurred since our original analysis.

About EPD Enforcement

EPD's regulatory framework consists of permitting, compliance monitoring, and enforcement activities. EPD staff in the central office and six districts conduct these activities to ensure regulated entities follow standards. Regulated entities include publicly and privately-owned facilities, such as power plants, wastewater treatment plants, storm sewer systems, and dams. Currently, EPD regulates approximately 500 high hazard dams, 2,400 public water systems, 1,400 wastewater facilities, and 2,400 stormwater systems.

What we found

EPD has taken steps to address many of the recommendations in our report. EPD reports that it has increased compliance with reporting requirements, updated penalty guidance, and implemented additional data quality controls. Improvements can continue to be made to evaluate risks associated with its current inspection practices, produce useful and reliable management information, and update and centralize policies, procedures, and other guidance materials to ensure greater consistency across the enterprise. In addition, legislative action would help reduce risks associated with unpermitted dams and would allow EPD to assess permit fees for some additional water programs to help offset the cost of its regulatory efforts.

Permitting

At the time of our review, 40% of 522 Category I (high hazard) dams had not been permitted as required by law. In addition, 44% of 3,900 Category II dams had not been reassessed every five years as required to determine if they should be reclassified as Category I structures and permitted. As of April 2019, the total number of dams on the to-be-studied list had decreased to 486. According to EPD, it has prioritized its efforts to ensure Category I dams are studied and permitted as required by law. In addition, the General Assembly appropriated bond funds in fiscal year 2019 to address the portion of the to-be-studied backlog related to state-owned dams.

Compliance Monitoring

At the time of our review, some dam owners and industrial stormwater permittees had not submitted reports that EPD uses as part of the process of determining if permit conditions are being met as required. More than half (270) of Category I dam owners had not submitted Emergency Action Plans (EAPs) by the deadline (a new requirement at the time of our review). As of March 2020, submittal rates had improved to nearly 75% of Category I dams with an EAP as dam owners become more familiar with requirements. In addition, 20% of approximately 2,400 industrial stormwater permittees had not submitted annual reports; of those submitted, some were submitted late or were incomplete. Since then, EPD indicated that its utilization of compliance assistance efforts and escalated enforcement processes has resulted in increased compliance with reporting requirements.

We also found that EPD's owner-responsible inspection program for safe dams is not the preferred model outlined in the National Dam Safety Program's (NDSP) *Model State Dam Safety Program* guidance document, though NDSP acknowledges that states have resorted to this approach due to budget cuts and privatization trends. EPD's owner-responsible inspections also occur less frequently than recommended by NDSP. In addition, of 170 municipal stormwater programs, 11% (18) had never been inspected at the time of our review, though EPD met or exceeded state-specific metrics for its municipal stormwater system inspections included in its annual workplan agreement with the U.S. Environmental Protection Agency (EPA). As of March 2020, nine municipal stormwater programs (including two programs permitted since our review) had not been inspected by EPD.

Enforcement Actions

We were unable to determine whether informal or formal enforcement actions were taken for all violations in the drinking water, wastewater, and stormwater programs. In addition, the effectiveness of any enforcement actions taken could not be assessed due to data system limitations and limited guidance material. EPD's primary data systems did not always reflect what enforcement actions were taken or whether entities ultimately returned to compliance. In addition, because EPD had not developed guidance outlining reasonable time periods for taking enforcement action, timeliness of enforcement actions taken could not be determined.

At the time of our review, we also found that EPD had not developed penalty assessment procedures for safe dams, and calculation methodologies for some other programs were either missing key components suggested by the EPA (e.g., economic benefit of noncompliance) or had not been recently updated. Since then, EPD has developed penalty procedures for the Safe Dams Program, as well as updated penalty procedures in other program areas to include key attributes recommended by EPA.

Management Areas

Improvements in data management and additional outcome metrics would enhance EPD's ability to evaluate the effectiveness of compliance and enforcement efforts across various EPD units around the state. In addition, offering more specific, up-to-date guidance material for staff would help ensure consistency across the enterprise.

Most other southeastern states assess permit fees for various water programs. While EPD collects permit fees for construction stormwater activities as required by law, it does not collect permit fees for municipal and industrial wastewater, municipal and industrial stormwater, and drinking water programs.

What we recommend

To address permitting issues, we recommend EPD continue ongoing efforts to ensure Category I dams are permitted and assess and document the risk of delaying re-assessment of Category II dams. The General Assembly may wish to consider authorizing a fund source (e.g., grants or low-interest loans) to assist

private dam owners cover the high cost of engineer studies as well as repairs necessary to meet permitting requirements, as has been done in other states.

EPD should continue to improve its efforts to address noncompliance with reporting requirements. Given limited staff resources, EPD should assess and document the risks of its owner-led dam safety inspection program and its approach to inspections of municipal stormwater facilities. EPD should also improve its monitoring of compliance activities and controls over enforcement data to ensure enforcement actions taken are appropriate, timely, and result in a return to compliance. The General Assembly should consider authorizing the collection of additional permit fees to support compliance and enforcement activities in the municipal and industrial wastewater, municipal and industrial stormwater, and drinking water programs.

Refer readers to Appendix A for a detailed listing of recommendations.

Agency Response: *In its response, EPD said that the report "does not reflect ongoing changes and improvements to EPD's business practices" between the end of our fieldwork and report publication. Specifically, EPD noted that that the period covered by the performance audit was also subject to the U.S. Environmental Protection Agency's (EPA) "routine review of EPD's Clean Water Act (CWA) compliance and enforcement programs for Federal Fiscal Year 2017," which was finalized in September 2019 and included some similar findings and recommendations that EPD has addressed. EPD also indicated that it believes that the report disproportionately covers the Safe Dams Program.*

Auditor's Response: *Following the completion of our fieldwork, there was a delay in the writing and finalization of our performance audit report. While our report finalization overlapped EPA's review, we had already shared many of our findings with EPD in April 2019.*

As we drafted and finalized our report, we took into consideration any changes made by EPD in the intervening time. This included removing several initial findings that had been fully addressed and incorporating new information reported by EPD. As a result, we believe the final report accurately reflects the issues and risks that remain (most notably in the Safe Dams Program), even after EPD improvements.

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Purpose of the Audit

This report examines the Environmental Protection Division's enforcement of selected water resource and protection programs. The primary objectives of the audit are to determine whether: 1) permitting processes ensure regulated entities have up-to-date permits and permit fees offset the cost of enforcement, 2) compliance assistance, monitoring, inspections, and complaint investigation activities are conducted in a timely, thorough, and strategic manner, 3) enforcement actions and penalty assessments are appropriate to ensure entities return to compliance, and 4) management oversight processes are adequate to ensure compliance and enforcement activities are appropriate, consistent, timely, and effective.

This report covers data and processes in place from January 2016 to May 2018, with updates to reflect current status. Due to the need to divert staff to other legislative directives, there was a delay in writing and finalizing our report. During this time, EPD began taking steps to address some of the issues identified. A draft of the report was provided to the Environmental Protection Division for its review, and pertinent responses were incorporated into the report. A detailed description of the objectives, scope, and methodology used in this review is included in Appendix B.

Background

Authority for Environmental Protection

The Environmental Protection Division (EPD), within the Department of Natural Resources (DNR), is the regulatory body responsible for protecting and managing the state's air, land, and water resources through regulatory mechanisms mandated by federal and state laws. These laws specify requirements that must be met by public and private entities (regulated entities) that are sources of air pollution, water pollution, solid and hazardous waste, and various other environmental issues to reduce risks to human health and the environment. Though federal laws designate the U.S. Environmental Protection Agency (EPA) as the entity with primary responsibility for establishing regulation and conducting oversight and enforcement of compliance with federal laws, EPA transferred primary responsibility for implementing and enforcing some or all aspects of federal environmental laws and regulations in Georgia to EPD. Given this "delegated authority," EPD promulgated rules to satisfy national standards, as well as state-specific requirements.

Regulated entities include:

- *Private industrial facilities - power plants, pulp and paper mills, pharmaceuticals, etc.*
- *Public facilities - municipal wastewater treatment plants, storm sewer systems, etc.*
- *Construction industry – private contractors, Georgia Department of Transportation, etc.*
- *Individuals - dam owners, etc.*

Enforcement of Water Resource and Protection Programs

This review focuses on EPD's efforts to protect and manage the state's water resources through the National Pollution Discharge Elimination System (NPDES), Safe Drinking Water Act (SDWA), and Safe Dams related compliance and enforcement activities. As shown in **Exhibit 1**, EPD operates under the authority of federal and/or state laws to control discharges of point- and non-point sources of water pollution to surface waterbodies, ensure safe drinking water supplies, and reduce the risk of failure of certain dams in Georgia. (See **Appendix C** for a more detailed discussion of federal and state laws governing EPD's efforts.)

Exhibit 1
EPD Regulatory Authority Over Water Resource and Protection Programs Established in Both Federal and State Laws

Program Areas	Key Federal Legislation	Key State Legislation
Wastewater	Clean Water Act	Georgia Water Quality Control Act *(OCGA 12-5-20)*
Stormwater (Construction Stormwater/ Erosion and Sedimentation)	Clean Water Act	Georgia Water QualityControl Act *(OCGA 12-5-20)* Georgia Erosion and Sedimentation Act *(OCGA 12-7-1)*
Stormwater (Industrial and Municipal)	Clean Water Act	Georgia Water Quality Control Act *(OCGA 12-5-20)*
Drinking Water	Safe Drinking Water Act	Georgia Safe Drinking Water Act *(OCGA 12-5-170)*
Safe Dams	NA	Georgia Safe Dams Act of 1978 *(OCGA 12-5-370)*

Source: EPD documents and PAD review of state and federal laws

EPD issues permits, which include monitoring and other requirements, to ensure that water quality of receiving waters is protected. EPD is authorized to take enforcement action against regulated entities determined to be out of compliance with their state-issued permits and the Water Quality Control Act. EPD's compliance, and enforcement activities are discussed in more detail below.

Permitting

EPD issues permits to owners and operators of wastewater facilities, stormwater systems, drinking water facilities, and dams. Permits are the foundation for enforcement and EPD is authorized to issue and enforce them pursuant to state environmental law and delegated federal environmental law. They specify or prohibit certain activities with the goal of protecting human health and the environment.

- **Safe Dams** – Dam failures can pose a significant risk to property and safety, and in some cases the loss of life. For example, inadequate hydraulic capacity could cause water to go over the top of the dam during heavy rains and lead to significant flooding. EPD permits high hazard dams (defined as Category 1). Dams are categorized as high hazard because failure would result in the probable loss of human life. Category 2 dams are essentially unregulated.,[1] Of approximately 4,500 dams, approximately 500 are Category 1 dams and 4,000 are Category II dams.,[2]
- **Drinking Water** – Drinking water is vulnerable to a wide range of contaminants from agricultural, industrial, urban, and residential land uses, as well as natural causes. To regulate the quality of drinking water in the state, EPD permits public water systems. Public water systems vary in size and are

[1] Per statute, Category 2 dams are to be re-inventoried every 5 years to determine if any should be re-categorized as Category 1 dams or remain as Category 2 dams.

[2] EPD estimates that approximately 40% of Category I dams are owned by the state, 20% are owned by local governments, and 40% are owned by the private entities.

classified as one of three types: community; non-transient, non-community; and transient, non-community.[3] In addition, requirements vary by type of system. Currently, Georgia has approximately 2,400 public water systems serving over 9 million citizens. Approximately 90% of these systems are small, with each serving less than 3,300 citizens. Most of the remaining systems serve between 3,300 to 10,000 citizens, but there are 18 systems that serve over 100,000 citizens. In addition to the public systems, private water wells provide drinking water to approximately 2 million citizens; however, private drinking water wells are not regulated by EPD.

*The **NPDES** permit program was created by the Clean Water Act. The program regulates point sources (e.g., pipes, ditches, channels) that discharge into waters of the state.*

- **Municipal and Industrial Wastewater** – EPD regulates discharges of wastewater into waters of the State through the issuance of permits to municipal and industrial wastewater treatment facilities. Common wastewater permit types include National Pollutant Discharge Elimination System (NPDES) permits, land application system (LAS) permits, and general permits.
- **Municipal and Industrial Stormwater** – Stormwater runoff is generated from rain and snowmelt that flows over land and does not soak into the ground. The runoff picks up pollutants and can deposit those pollutants into waters of the State. EPD issues NPDES permits to municipalities, counties, water authorities, GDOT, and DOD facilities with separate storm sewer systems (MS4s) through which stormwater runoff is transported and then discharged into local water bodies. Stormwater discharges associated with specific categories of industrial activity are also required to be covered under a NPDES permit.

EPD may certify county and municipal governments as local issuing authorities (LIAs), which authorizes them to issue and enforce permits.

- **Construction Stormwater/Erosion and Sedimentation** – As stormwater flows over construction sites, it can pick up pollutants like sediment, debris, and chemicals and transport them to storm sewer systems or directly into nearby waterbodies. Three general permits regulate stormwater discharges associated with construction activities. To obtain coverage under one of the three permits, facility representatives file a notice of intent (NOI) with EPD at least 14 days prior to beginning construction. [4]

Compliance Monitoring

EPD monitors implementation of permit conditions through routine reporting (e.g., water sampling data) and annual reports submitted by regulated entities. EPD also conducts routine on-site inspections and investigates any reported complaints. These activities are described below.

- **Reporting** – EPD monitors entities through routine self-reporting of data. For example, facilities that discharge wastewater are required to collect and analyze samples and then electronically submit discharge monitoring reports on a periodic basis. EPD compares the reported data to the current limits

[3] Water systems are classified as 1) community water systems which serve the same residences year-round; 2) non-transient non-community water systems such as schools or factories that have their own water supply and serve the same individuals for more than six-months but not year-round; and 3) transient non-community water systems such as campgrounds and gas stations, which provide their own water.

[4] EPD can require applicants to submit individual NPDES permits or an alternative general NPDES permit upon written notification to the applicant.

contained in the permits to determine compliance. EPD also reviews annual reports, spill reports, and emergency action plans (for dams).

- **Inspections** – EPD inspects facilities to determine compliance with environmental laws. Inspections can be either routine or complaint-driven, and frequency varies by permit type. Inspections generally involve meeting with officials, reviewing on-site records, recording observations, taking photographs, conducting field tests, and taking samples if needed.
- **Complaint investigations** – EPD receives complaints from the general public that cover a range of water-related issues including fish kills, runoff from neighbors' land, raw sewage spills, and discolored drinking water. When a complaint is received, it is logged into EPD's complaint tracking system and then assigned to staff based on the type of issue and location. Staff then investigates the complaint, which could entail interviews and/or site visits. EPD indicated that the investigative process can vary widely based on the nature of the complaint.

Enforcement Actions

State law (§12-2-2(b)(1), O.C.G.A) grants EPD specific authority to enforce the environmental protection laws of Georgia.

Enforcement occurs when EPD detects violations with permit conditions or unpermitted activity through its compliance efforts. The primary goal of enforcement actions is to bring entities back into compliance. As described below and shown in **Exhibit 2**, EPD utilizes an escalated enforcement process that encourages staff to take more cooperative and conciliatory approaches (as required by law) before taking unilateral action, depending on the nature of the violation. For example, violations of a more serious nature may proceed directly to consent order, which may carry monetary penalties.

- **Email or Phone Call** – EPD may initiate the escalated enforcement process with an email or phone call to the facility if a reporting or submittal violation has occurred, such as a late annual report or a late permit application,
- **Letter of Noncompliance** – A letter of noncompliance is an informal enforcement action that allows the facility the opportunity to return to compliance without formal enforcement.
- **Notice of Violation** – A notice of violation documents a violation and stipulates the corrective action required for an entity to return to compliance. Though an informal enforcement action, it can serve as the first step in initiating formal enforcement actions.
- **Consent Order/Expedited Enforcement Compliance Order** – A consent order is a formal enforcement document that lists specific actions to be taken by the violating entity in order to return to compliance. The parties may negotiate the specific terms, which may include a monetary penalty.
- **Administrative Order** – If a consent order cannot be negotiated, then EPD may take unilateral action by executing an administrative order. Administrative orders require corrective action, but do not contain any monetary penalties.

- Order of the Court proceeding – If a respondent does not comply with a Consent Order or an Administrative Order, EPD may make that Consent Order or Administrative Order an Order of the appropriate Superior Court and seek further enforcement through contempt proceedings.
- Petition for Civil Penalties – EPD may file a petition in the Office of State Administrative Hearings seeking civil penalties for violations.

In addition to these enforcement actions, egregious violations can result in criminal prosecution; however, EPD management indicated that criminal prosecution is very rare.

Exhibit 2
Enforcement Actions Range from Informal to Formal

Email or Phone Call	Letter of Noncompliance	Notice of Violation	Expedited Enforcement Compliance Order	Consent Order	Administrative Order	Order of the Court	Petition for Civil Penalties
Informal tool used to reach out to respondents in an attempt to have them return to compliance swiftly	Informal action that acknowledges a violation was observed and, in most cases, corrected immediately	Informal action that documents a violation and requires some action on the part of the respondent to return to compliance	Form of consent order used to resolve less serious violations quickly, which may offer a reduced penalty	A negotiated document that alleges specific violations, requires specific action, and may include a monetary penalty	Unilateral order executed by EPD that serves as a finding of violation and requires specific action	EPD may have a Consent Order or an Administrative Order made an Order of the Superior Court and seek further enforcement through a contempt action	EPD may file a petition in the Office of State Administrative Hearings seeking civil penalties for violations

Source: EPD Documents

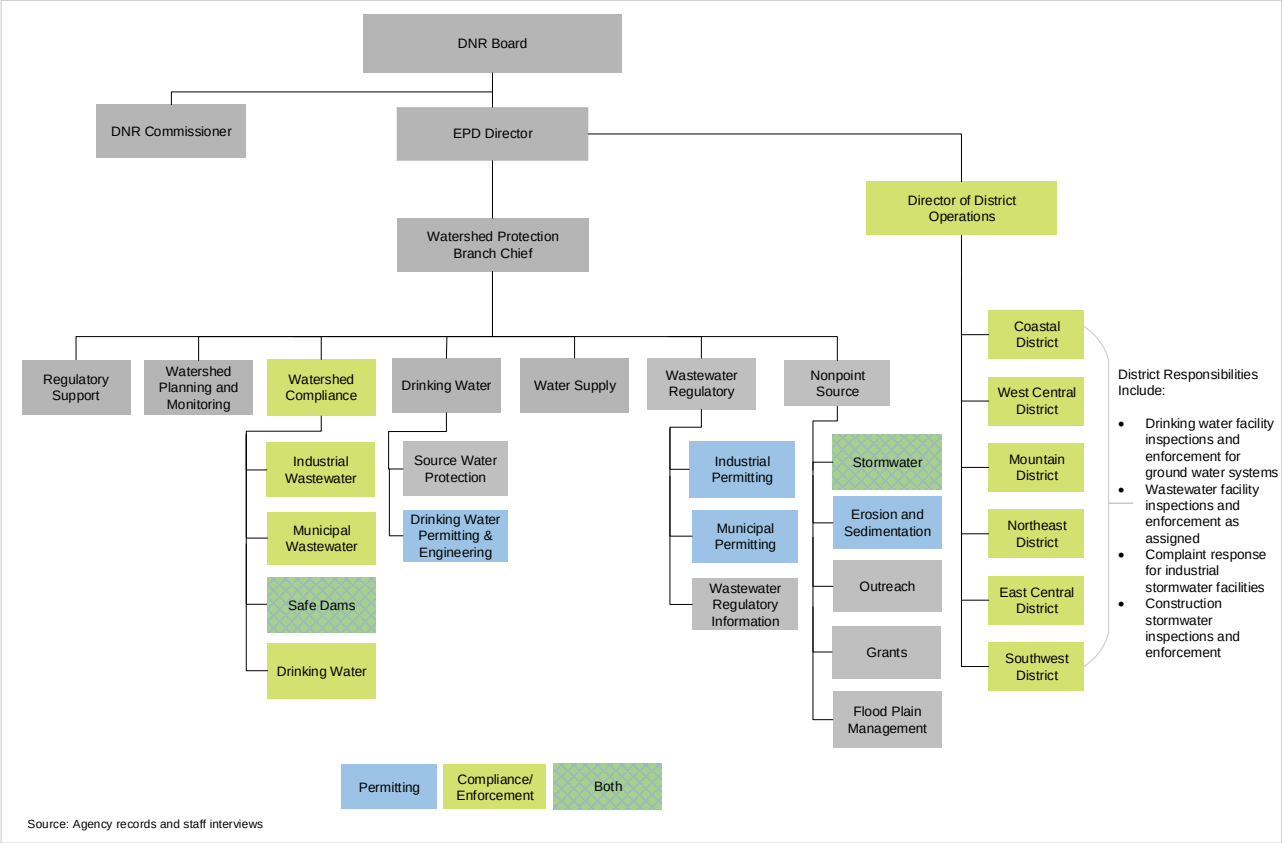
Organization and Staffing

As shown in **Exhibit 3**, EPD divides responsibility for its water-related enforcement functions (including permitting and compliance monitoring) between the Watershed Protection Branch ("branch") office located in Atlanta and six districts with offices located in Albany, Athens, Atlanta, Augusta, Brunswick, Cartersville, and Macon.[5] At the branch level, four separate units (Watershed Compliance, Drinking Water, Wastewater Regulatory, and Nonpoint Source) have responsibility for compliance and/or enforcement. The district offices ensure compliance with permits and take informal and formal enforcement actions as necessary. District staff perform this work across one or more media types covered by EPD – air, land, and water.

Approximately 300 total employees are assigned to the Watershed Protection Branch and district offices. However, due to the way responsibilities are divided, the total number of full-time resources dedicated to enforcement of water resource and protection programs in our review (safe dams, drinking water, wastewater, stormwater) could not be determined. As noted above, district staff may be assigned to one or more media types.

[5] The Mountain District has two offices (Atlanta and Cartersville).

Exhibit 3
Permitting, Compliance Monitoring, and Enforcement in Water Resource and Protection Programs Carried out Across Several EPD Organizational Units



Source: Agency records and staff interviews

Funding for Enforcement

EPD's permitting. compliance monitoring, and enforcement functions are funded with state and federal funds. The exact cost of these functions, however, cannot be isolated because they are included as part of the operating budgets for the Water Protection, Water Resources Management, and Environmental Compliance Support subprograms within EPD's budget. As shown in **Exhibit 4**, EPD expended approximately $54 million in these subprograms in fiscal year 2019. A portion of these expenditures covered compliance and enforcement activities related to drinking water, stormwater, wastewater, and dams, but also covered other water-related regulatory activities (e.g., wetlands protection and water withdrawal) as well as compliance and enforcement activities for air and land.

Exhibit 4
EPD's Expenditures for Permitting, Compliance Monitoring, and Enforcement Cannot be Isolated, Fiscal Years 2017-2019

	FY 2017	FY 2018	FY 2019
Expenditures by Fund Source			
State	$25,434,684	$25,126,703	$25,982,807
Federal	$22,578,190	$22,825,582	$19,991,725
Other	$5,655,655	$4,400,125	$7,777,685
	$53,668,529	**$52,352,410**	**$53,752,216**
Expenditures			
Water Protection	$14,807,969	$15,967,852	$13,178,712
Water Resources Management	$22,952,093	$20,412,679	$24,036,416
Environmental Compliance Support	$15,908,468	$15,971,879	$16,537,088
	$53,668,529	**$52,352,410**	**$53,752,216**

Source: Teamworks

Findings and Recommendations

Permitting

Finding 1: Despite staffing increases and shifting some responsibilities to dam owners since our 2000 performance audit, some dams have not been inventoried, studied, or permitted as required.

In general, inventory, classification, and permitting processes ensure the most dangerous dams (Category I) are identified and regulated to reduce the risk of dam failure and possible loss of life.

Since our 2000 performance audit of the Safe Dams Program, EPD made changes to reduce backlogs and delays associated with inventorying Category II dams, conducting dam breach analyses on potentially dangerous Category II dams, and permitting newly reclassified Category I dams. [6] Between 2013 and 2015, EPD increased the number of staff from four to 11 classifier and engineer positions.[7,8] In addition, EPD's 2014 Sustainability Plan for Safe Dams and resulting rule changes in 2016 placed responsibility for certain visual inspections on dam owners and their engineers.

However, despite these changes, backlogs and unpermitted dams have continued. As of April 2018, the program was behind the five-year inventory schedule for more than a thousand Category II dams, and some had not been inventoried in more than 10 years. Another 500 Category II dams were waiting to be studied to determine if they should be reclassified to Category I and permitted. As discussed below, bond funding appropriated by the General Assembly in fiscal year 2019 should continue to help address the backlog of state-owned dams to be studied.

In addition, EPD's 2014 Sustainability Plan for Safe Dams and resulting rule changes in 2016 placed responsibility for certain visual inspections on dam owners and their engineers. According to EPD, approximately 200 Category I dams were unpermitted because some dam owners failed to submit complete permit applications to EPD and paying the high cost of engineer studies as well as repairs necessary to meet permitting requirements is more difficult for private dam owners. These issues and current efforts to address them are described in more detail below.

As we noted in our 2000 review, periodic reassessments of dams are particularly necessary for rapidly developing areas where a growing population increases the likelihood for people living downstream of a dam.

- **Inventory of Category II Dams** – State law requires EPD to inventory Category II dams every five years to identify any hazards. This process involves EPD examining the flood plain of each dam to identify any development downstream that may warrant classifying the structure as a high-hazard dam. As of April 2018, the program was behind its inventory schedule on approximately 1,700 (44%) of 3,900 Category II dams (including nearly 600 dams that had not been inventoried in over 10 years), as shown in **Exhibit 5**.[9] According to EPD, it has prioritized addressing the backlog of dam break studies and unpermitted dams over clearing the inventory backlog.

[6] Performance Audit, Department of Natural Resources Safe Dams Program, September 2000.

[7] At the time of the 2000 performance audit, the program had six staff.

[8] The classifiers work with Category II dams and the engineering staff are responsible for modeling, plan reviews, and inspections.

[9] The Safe Dams Program tracks the inventory backlog by county. As of April 2018, dams in 38 of 159 counties had not been inventoried.

The 2000 audit indicated that, historically, most dams identified for study were eventually reclassified as Category I structures.

- **Study and Reclassification of Category II Dams** - If a hazard is identified through the inventory process, the affected dam is added to the "to-be-studied" list for further evaluation, which involves a dam break analysis conducted by an engineer (at an estimated cost of $10,000 each) to determine if the dam should be re-classified as Category I. [10] As shown in **Exhibit 5**, there were 522 Category II dams backlogged on the "to-be-studied" list in April 2018, which included approximately 100 state-owned dams. Of the 522 dams to be studied, 342 (66%) had been on the list for over 10 years.

  To address state-owned dams, the General Assembly directed EPD to develop a three-year plan "to complete assessment reports and dam break routings" in the fiscal year 2018 Appropriations Act. For fiscal year 2019, the General Assembly approved a $1.2 million bond package to pay for dam break analyses for state-owned dams. According to EPD, the number of dams on the to-be-studied list had decreased to 486 as of April 2019. With the help of the bond funding, the number of state-owned dams on the list should decrease.

- **Permitting of Newly Classified Category I Dams** – State law requires that dam owners apply for permits within 180 days of being notified that their dam has been classified as (or upgraded to) Category I. [11] As of April 2018, 478 dams had been identified and designated as Category I, but 221 (46%) of them (including about 120 state-owned dams) had not been permitted as required. (See **Exhibit 5.**) As previously noted, EPD indicated that it has prioritized its efforts to ensure Category I dams are permitted.

  Before a dam can be permitted, dam owners must hire an engineer to:

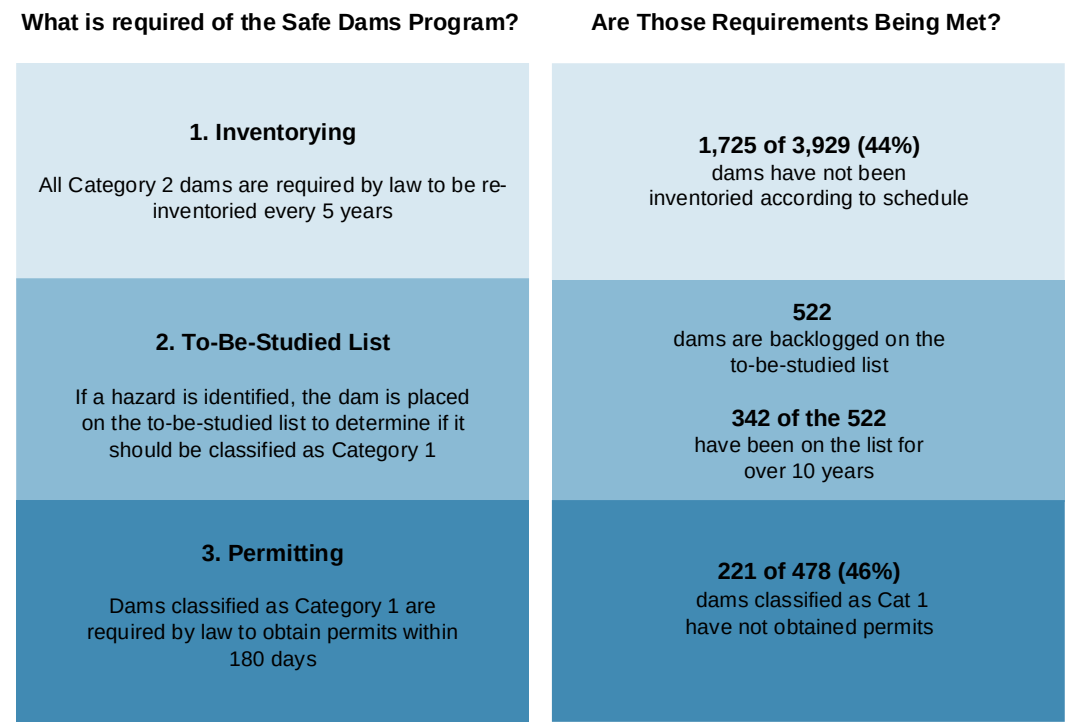
  - conduct a visual inspection (which were primarily done by EPD staff prior to 2014) that assesses whether the dam was designed and constructed according to regulations and identifies signs of distress, such as seepage, surface cracks, or erosion and
  - prepare design plans to address deficiencies identified in the inspection report to ensure the dam complies with construction standards for Category I dams.

  However, owners of 54 of the approximately 220 unpermitted Category I dams had not obtained visual inspections as of April 2018. Additionally, while the remaining 166 unpermitted Category I dams were documented as having had inspections, dam owners had not taken action to address identified deficiencies to obtain a permit.

[10] Dam breach analysis involves the use of software modeling to assess the potential for a breach to result in the probable loss of human life.

[11] Dams constructed after 1978 are required to obtain permits prior to construction.

Exhibit 5
Dam Inventory, Study, and Permitting Backlogs Need to be Addressed to Ensure Dams Meet Requirements, as of April 2018



Source: State law and agency documents

At the time of our review, EPD had not taken enforcement action against dam owners who had not submitted complete permit applications, which include visual inspection reports and design plans. EPD has since initiated enforcement action for incomplete permit applications against owners of 66 privately owned dams. According to EPD, the cost of engineering studies and needed dam upgrades is a significant barrier to compliance. While funding has been made available to address non-compliant state-owned dams, we did not identify state financial assistance available to help private dam owners pay for visual inspections and needed repairs. However, according to the American Society of Civil Engineers, nearly half of all states have a grant or low-interest revolving loan program that provides financial assistance to dam owners.

These programs vary among states in their eligibility requirements and fund sources (state appropriations, application/inspection fees, etc.). For example, Arizona's Dam Repair Fund provides funds for the Department of Water Resources to 1) initiate emergency actions associated with an imminent dam failure; and 2) offer loans and/or grants to owners for repairing or removing dams classified as being in an unsafe, non-emergency condition. Dam application and inspection fees as well as funds appropriated by the legislature are deposited into the state's Dam Repair Fund.

RECOMMENDATIONS

1. EPD should evaluate and document the risk associated with exceeding the five-year timeframe for re-inventorying Category II dams as required by law.
    a. If the risk is low, EPD should consider pursuing a change to §12-5-375(b) to include a timeframe that more accurately approximates the risk.
    b. If the risk is not low, EPD should evaluate its priorities to ensure all dams affected are classified as required by law.
2. Given the priority placed on permitting Category 1 dams and ongoing concerns about owners' ability to pay for engineering studies and dam repairs necessary to meet standards, consideration should be given to available alternatives to limit public safety risks.
    a. Option 1: The General Assembly could consider authorizing a fund source for the purpose of providing financial assistance (e.g., grants or low-interest loans) to private dam owners for engineering studies and dam repairs and other costly activities required for compliance.
    b. Option 2: The General Assembly could require EPD to re-assess the current model and examine the feasibility of transferring responsibility for visual inspections back to EPD. The assessment should include any estimated increases in resources necessary to carry out this function either by EPD staff or consultants. In addition, consideration should be given to allowing EPD to assess a fee to dam owners to help offset the cost of these activities.

Agency Response:

Recommendation 1*: EPD noted that it "continues to believe that the 5-year timeframe established in state law is appropriate for re-inventorying Category II or low hazard dams and has been steadily reducing the backlog." EPD stated that since April 2018, the backlog has been reduced to 32%. According to EPD, "the initial inventory of dams was completed in 1983, and all dams in the state have been re-inventoried multiple times since then." EPD also notes that "though the program has prioritized the permitting of Category I or high hazard dams and reducing the number of dams on the to be studied list, the agency currently has the staffing levels to allow the re-inventorying of approximately 900 low hazard dams each year. Based upon the current number of Category II dams, that would result in EPD approaching its statutory requirement and re-inventorying each low hazard dam every five years going forward. It is also important to acknowledge other mechanisms in state law that attempt to limit occupied structures from being built below dams, thus attempting to prevent low hazard dams from becoming high hazard dams."*

As added clarification, EPD noted that "unpermitted dams are largely a function of the investment needed to bring dam[s] up to regulatory requirements. These high costs also limit suitable enforcement options; for example, imposing penalties makes little sense when a dam owner cannot bring a dam into compliance due to lack of funding, and requiring the owner to drain the impoundment to remove it from Category I status may not be a practical alternative. Given these constraints, EPD has addressed these issues by finding a viable path forward for unpermitted dam owners to get into compliance using methods such as compliance schedules and agreements to seek appropriations rather than seeking penalties from the dam owner for not being able to obtain a permit."

Compliance Monitoring

Finding 2: Inspection and reporting practices have limited EPD's opportunities to detect dam and stormwater violations.

Inspection and reporting requirements are in place to ensure that regulated entities are complying with permit conditions. However, our review found that EPD's inspection program for Safe Dams was not consistent with best practices and reporting activities by dam owners were not occurring as required by EPD regulations. In addition, though EPD met or exceeded inspection and reporting requirements for its stormwater programs in its annual workplan agreement with the EPA, more frequent inspections and reports increase EPD's opportunity to identify potential issues before they become more serious. Issues we identified are summarized in **Exhibit 6** and described in more detail below.

Exhibit 6
Gaps Exist in EPD's Inspection and Reporting Practices

	Inspections	Reporting
Safe Dams	Inspections occur every two years versus annually as recommended	Some dam owners had not submitted Emergency Action Plans
	No criteria/guidelines for evaluating and verifying Inspections	Few dam owners had submitted quarterly visual inspection reports by the deadline
Industrial and Municipal Stormwater	Some municipal stormwater programs had never been inspected	Some industrial facilities had not submitted annual reports and some of those submitted were late and/or incomplete
Construction Stormwater	EPD inspections conducted on complaint basis without consideration of other risk factors	

Source: PAD review and analysis of agency documents

Safe Dams

Inspections – Dam safety rule changes in 2016 require Category I dam owners to perform quarterly inspections. In addition, Category I dam owners must hire an engineer to conduct an inspection ***every two years***; however, dams less than 50 feet tall can obtain a waiver that reduces the frequency to ***every four years*** if they have conducted at least four consecutive quarterly inspections at the time of the waiver request.

However, according to the National Dam Safety Program's (NDSP) *Model State Dam Safety Program* guidance document, high hazard dams (as defined by NDSP) should be inspected annually. In addition, though states have resorted to this approach due to budget cuts and privatization trends, NDSP indicates that "owner-responsible" inspections are not considered the preferred model because there is less independence and greater risk for bias.[12] To mitigate risks associated with an "owner-responsible" inspection process, the NDSP recommends that states have enforceable regulations and a quality assurance protocol that includes a prompt review of all submitted

[12] Owner-responsible inspections refer to inspections conducted by private consulting engineers hired and paid for by the dam owner.

reports and periodic field inspections to verify the findings of the owners' inspections. At the time of our review, EPD had not established criteria for evaluating or verifying inspections, nor had EPD established specific enforcement procedures for dam owners who failed to conduct inspections as required.

*An **Emergency Action Plan (EAP)** is a formal plan that identifies potential emergency conditions at a dam and outlines the procedures for the owner of the dam to follow to minimize property damage and loss of life and possibly save the dam.*

Reporting –At the time of our review, Category I dam owners were not meeting all reporting requirements. The rules require the following:

- Effective October 2017, dam owners were required to annually report the results of the prior year's quarterly visual inspections. The first reports were due by April 2018; however, of approximately 500 Category I dams, only 13% (67) had an annual report documented in EPD's data system by the deadline. According to EPD, with continued outreach to ensure the regulated community is aware of and understands the requirements, 35% of Category I dams had at least one inspection report on file as of April 2019.

- Dam owners must submit an emergency action plan (EAP) by July 2017 (for permitted dams) or as part of a permit application. At the time of our review, 230 dams (46%) had an EAP on file. Information obtained from EPD in April 2019 revealed that compliance had increased to 68% of EAPs on file and to nearly 75% by March 2020. In addition, EPD reported that it had issued 74 violation notices for noncompliance with EAP requirements.

Industrial and Municipal Stormwater

Inspections – EPD staff inspect municipal separate stormwater systems (MS4s) to evaluate implementation of permit requirements and stormwater management plans. Of 170 phase I and phase II MS4s at the time of our review[13], 51 (30%) had not been inspected by EPD between federal fiscal years 2013 and 2017, including 18 MS4s that had never been inspected by EPD, based on our review of EPD records as of May 2018. However, EPD still met or exceeded state-specific metrics for its municipal stormwater system inspections included in its annual workplan agreement with the EPA. EPD indicated that it prioritizes municipal stormwater programs that have never been inspected within the past five years when developing its inspection list for the year. As of March 2020, nine municipal stormwater programs (including two programs permitted since our review) had not been inspected by EPD.

Reporting – At the time of our review, not all industrial stormwater facilities were complying with reporting requirements. Facilities are required to submit annual reports with monitoring information and sampling data that shows the pollutant concentrations in runoff. In 2017, while the majority (60%) were submitted on time, 20% (478) of approximately 2,366 permittees had not submitted annual reports; another 20% (457) had submitted a report that was over a month late and/or significantly incomplete (e.g., missing sampling data). As of April 2019, EPD reported that compliance rates have increased due to its expanded compliance assistance and escalated enforcement efforts. EPD noted that the majority of facilities deemed out of

[13] The 170 permitted facilities include 57 Phase 1 permits (large and medium municipalities with greater than 100,000 people) and 113 Phase II permits (urbanized areas or small municipalities in urbanized areas of 10,000 or more people).

compliance in 2017 had submitted reports for the 2018 reporting year, suggesting increased awareness of reporting requirements and timelines.

Construction Stormwater/Erosion and Sedimentation

Inspections – EPD inspects regulated construction sites based on complaints, rather than on a routine or risk-based inspection schedule. While this approach allowed EPD to meet its annual inspection goal of 10% (800) of regulated sites at the time of our review, it did not ensure inspections were focused in high risk areas or areas of greatest activity. We found that inspection activity varied across EPD's district offices—one district conducted 11 inspections while other districts conducted over 75 inspections. According to EPD, the variation could be due to the presence of more local issuing authorities (LIAs) in some districts, which allows EPD to focus its efforts elsewhere (e.g., other media types) in those areas. In addition, EPD acknowledged that staffing issues also limit what they can do. As of April 2019, EPD had two new district staff positions, which may allow them to redistribute inspection coverage.

RECOMMENDATIONS

1. EPD should continue to use available compliance assistance strategies and enforcement processes (and escalate as appropriate) to ensure dam owners and industrial stormwater facilities comply with reporting requirements.

2. As a preventive measure, EPD should consider implementing automated methods (e.g., automatic dialers, robo calls) to remind regulated entities to submit required reports, similar to other states.

3. EPD should assess and document the risks of owner-led dam safety inspections and implement controls to mitigate the risks.

4. Similarly, EPD should assess and document the risk associated with municipal stormwater programs that have never been inspected by EPD.

5. Given its limited resources, EPD should consider the feasibility of using a risk-based approach to inspections for municipal stormwater and construction stormwater. In addition, EPD should assess and document the need for additional resources to carry out its inspection responsibilities.

Agency Response:

Recommendation 1: *EPD re-emphasized the role of compliance assistance strategies and escalating enforcement processes in ensuring compliance across all programs. EPD noted that "In addition to compliance assistance being a good practice, EPD is required by US EPA to implement compliance assistance strategies and enforcement processes, with appropriate escalation for [Clean Water Act and Safe Drinking Water Act] programs" and "requires states to address nonpoint source issues, such as dams." EPD indicated that it meets EPA requirements by providing "compliance assistance programs for some state programs, such as dam owner workshops. All these activities are reported to US EPA annually. Escalating enforcement is both the best way to achieve EPD's goals of environmental protection and is mandated by state law, which requires that EPD attempt by conference, conciliation, or persuasion to convince entities to return to compliance." EPD also points*

out that "the report indicates that in 2017/2018, EPD experienced lower rates of reporting by stormwater and dam permittees. At the time of the audit, EPD was transitioning to electronic reporting for stormwater permittees and the quarterly visual inspections reports/EAP documentation for safe dams were new requirements. It is not uncommon for new procedures or new reporting requirements to initially result in lower compliance rates. As the report indicates, compliance rates with these reporting requirements have since increased significantly."

Recommendation 2: *EPD indicated that it uses a combination of measures to effectively ensure report submission compliance. These include sending automated email communications to permittees, and non-automated methods such as presenting at industry conferences, conducting stakeholder meetings on pertinent topics, and contacting permittees by phone or email on a one-on one, as needed basis.*

Recommendation 3: *EPD notes that "the rule change modifying responsibility for regular dam inspections was proposed by the agency as part of its carefully considered Safe Dams Program sustainability plan, adopted by the DNR Board in 2016, and is consistent with National Dam Safety Program recommendations." According to EPD, "the National Dam Safety Program's Model State Dam Safety Program guidance document identifies an owner-responsible dam safety inspection program as an appropriate method for implementing dam safety inspections. EPD uses this method and provides compliance assistance and oversight to ensure that owners can conduct these inspections effectively. Since the Rule change to owner-led inspections, EPD has provided two dam-owner workshops per year and has developed inspection forms and instructional materials for owners to conduct inspections. EPD reviews all inspections submitted by owners and performs quality assurance (QA) inspections on about 25% of dams each year. To further address the concerns expressed in this audit, EPD has developed a written protocol for QA assessment of owner led inspections."*

Auditor's Response: *As clarification, the National Dam Safety Program's guidance document states that "shrinking state budgets and the trend toward privatization have led some states to depend more heavily on inspections conducted by private consulting engineers hired and paid for by the dam owner." The guidance also notes that whereas "inspections conducted by the state provide an independent and unbiased review of the dam and are the preferred model", owner-responsible inspections have "more emphasis on the owner and/or their consultants as the primary source of review and inspection." As a result, owner-responsible inspections are the weaker control. When the dam owners fail to comply with these requirements, the risk associated with this model increases.*

Recommendation 4: *EPD noted that in the early 2010s it focused its efforts on "writing clear, concise, and measurable permits to meet new US EPA guidance and implementing compliance assistance and enforcement through annual report review." And, in 2014 it worked closely with EPA on a national initiative to address all Phase I MS4s. EPD added that it "has been shifting resources to more on-the-ground inspections. Since Federal Fiscal Year (FFY) 2018, EPD has conducted inspections on 20% of all MS4s each year, which fully meets US EPA's workplan requirements for MS4 inspections."*

Recommendation 5: *EPD indicated that it "has consistently met all US EPA state-specific workplan requirements and nationwide US EPA inspection goals for its stormwater programs" and "agrees that prioritizing inspections, even when meeting US EPA requirements, is a good practice to ensure effective use of resources." EPD indicated that it "uses a risk-based approach to prioritize inspections for all programs." As an example, EPD noted that "for construction stormwater*

inspections, EPD works with the Georgia Soil and Water Conservation Commission to track Local Issuing Authority (LIA) inspections." EPD explained that "LIAs did a combined 80,982 inspections, significantly more than the total number of construction stormwater permittees. Given that LIAs frequently inspect many construction sites on a routine basis, EPD concentrates on complaints first and prioritizes sites located outside of LIA jurisdictions to minimize duplication of effort."

***Auditor's Response**: For construction stormwater, we understand that EPD prioritizes its limited inspection resources to respond to complaints in jurisdictions not covered by LIAs. However, from a risk perspective, it was unclear how EPD's complaint-based inspection process allows it to address other problem sites that are not the source of a complaint or how it aligns with high risk areas or areas of greatest activity.*

Enforcement

Finding 3: Data entry and system limitations prevent a full evaluation of the effectiveness of EPD's enforcement efforts.

According to O.C.G.A. §12-2-2, whenever the Division determines that a violation has occurred, "the Division shall be required to attempt by conference, conciliation, or persuasion to convince the violator to cease such violation."

EPD's general approach to enforcement is to attempt to return regulated entities to compliance using cooperative and conciliatory methods (e.g., phone calls, emails) when violations are found before escalating enforcement activities using the steps shown in **Exhibit 7**. In addition, EPD's *Compliance and Enforcement Reference Manual* sets broad expectations for how enforcement should be carried out, stating that enforcement should be "fair, focused, visible, and timely." Other program-specific guidance also emphasizes timely, effective, and consistent enforcement action. However, our review of violations recorded in 2016 and 2017 and enforcement actions taken in response found that systems in place for tracking and monitoring drinking water, municipal and industrial stormwater, and wastewater violations prevented a consistent means for ensuring informal and formal enforcement methods were: 1) occurring consistently, 2) occurring in a timely manner, and 3) effective in returning entities to compliance or appropriately escalated. As a result, the effectiveness of enforcement efforts administered by EPD's Watershed Protection Branch and Compliance Unit—encompassing multiple water programs administered by the branch office and offices in six districts—cannot be fully evaluated.

Exhibit 7
Enforcement Actions Range from Informal to Formal

Informal			Formal				
Email or Phone Call	**Letter of Noncompliance**	**Notice of Violation**	**Expedited Enforcement Compliance Order**	**Consent Order**	**Administrative Order**	**Order of the Court**	**Petition for Civil Penalties**
Informal tool used to reach out to respondents in an attempt to have them return to compliance swiftly	Informal action that acknowledges a violation was observed and, in most cases, corrected immediately	Informal action that documents a violation and requires some action on the part of the respondent to return to compliance	Form of consent order used to resolve less serious violations quickly, which may offer a reduced penalty	A negotiated document that alleges specific violations, requires specific action, and may include a monetary penalty	Unilateral order executed by EPD that serves as a finding of violation and requires specific action	EPD may have a Consent Order or an Administrative Order made an Order of the Superior Court and seek further enforcement through a contempt action	EPD may file a petition in the Office of State Administrative Hearings seeking civil penalties for violations

Source: EPD Documents

Drinking water

Our review of drinking water violations recorded in 2016 and 2017 identified approximately 2,500 unique violations across approximately 700 public water systems.[14,15] Violations were primarily issued for monitoring and reporting violations, with a smaller number of violations associated with exceedances of maximum contaminant levels. Enforcement actions for drinking water violations are dictated by the EPA's Enforcement Response Policy Targeting Tool (ETT) that assigns each violation incurred by a system a point value which, added together, form the ETT

[14] Certain violations related to the Total Coliform Rule (TCR) were removed due to a federal rule change in April 2016.

[15] Includes only violations that were validated as actual violations.

score. The expected response for systems with point values of 11 or more is a formal enforcement action (e.g., consent order, administrative order, expedited enforcement consent order).[16] Public notice requirements and a violation/reminder notice are added enforcement steps for drinking water violations. However, in some instances, we could not determine whether enforcement actions were taken, the timeliness of actions taken, and entities return to compliance status due to gaps or inconsistencies in violation and enforcement data as discussed below.

- **Enforcement actions taken** – Of the 2,579 violations, our review found that most (89%) had a corresponding enforcement action, but 11% of violations had no enforcement action documented in the data. According to EPD staff, any violation determined to be valid would result in an enforcement action. In addition, when systems had been requested to issue public notices in response to violations, we found that public notification receipt was documented for more than half (600) of the 1,100 violations that had a request.
- **Timeliness of enforcement actions** – When enforcement actions were recorded, we identified some instances in which enforcement action or compliance achieved dates preceded the date violations had been confirmed through EPD's validation process. This was particularly the case for two common rules—Consumer Confidence and Radionuclides. For example, of approximately 500 Consumer Confidence Rule violations in our review period, more than 400 had date issues. According to EPD staff, this is related to the time lag for determining a violation's validity, during which time an enforcement activity may occur (such as a request for public notification) and a system may comply (submit the notification).
- **Return to Compliance** – Although the drinking water data system, SDWIS, captures systems' return to compliance, only 46% (approximately 1,200) of the 2,579 violations had a documented compliance achieved status. [17] According to EPD management, this may have resulted from significant turnover in the Drinking Water Compliance Unit and new staff getting up to speed. As of April 2019, EPD indicated that drinking water specialists had been trained on the importance of completing the return to compliance data field.

  EPD staff also indicated that Total Coliform Rule (TCR) violations[18], which comprised approximately 670 of total violations, do not always have a documented compliance achieved status because this is a monthly test and there is an "implicit return to compliance" if the results of the next test shows the problem was resolved. When TCR violations are excluded, 61% of violations are documented as compliance achieved. EPD staff also indicated that it may take longer for systems to achieve compliance in some cases, particularly because some drinking water rules may require periodic monitoring over longer periods of time

[16] The purpose of the enforcement targeting tool is to prioritize public water systems for enforcement response. EPD is given an ETT list each quarter from EPA, if a water system has achieved more than 11 points without a resolving enforcement action then it is on the list and EPA works with EPD to ensure they are taking appropriate action (an order). The branch is responsible for managing the ETT list and communicating to the district offices the facilities they are responsible for on the list.

[17] The Safe Drinking Water Information System (SDWIS) is a reporting system that allows states to report information about public drinking water systems to EPA.

[18] The Total Coliform Rule is a regulation that requires all public drinking water systems to monitor for the presence of total coliforms in the distribution system at a frequency proportional to the number of people served.

(sometimes years) before systems can be deemed as having returned to compliance.

Wastewater

Our review identified approximately 3,000 unique wastewater violations in 2016 and 2017 that included effluent limit exceedances, inadequate management practices (e.g., operating without a permit, best management practice deficiencies, improper operation and maintenance, failure to maintain records), and reporting and monitoring violations. Our review found that enforcement actions taken for identified violations ranged from informal to formal, and were issued by both branch and district offices. However, similar to drinking water violations, we could not determine whether enforcement actions were taken, the timeliness of actions taken, and whether entities had returned to compliance.

- **Enforcement actions taken** – Management's ability to monitor enforcement actions was limited due to functionality issues in GAPDES, the tracking tool for wastewater, stormwater, and safe dams.[19] At the time of our review, violations and enforcement actions were not linked in GAPDES in a manner that facilitates a comprehensive review. For example, of approximately 3,000 wastewater violations reviewed, 600 (20%) had no corresponding enforcement action in the database. However, when viewed individually, enforcement actions were found for some. Of 159 reporting violations (DMR-limited numeric) in 2017 with no associated enforcement action in the data (as of May 2018), a review of individual records and comments provided determined that there was likely enforcement action taken for 42 of the violations.
- **Timeliness of enforcement actions** – When enforcement actions were taken, we found that the number of days between violation date and enforcement varied (for the same type of enforcement). For example, approximately 1,000 notices of noncompliance (generally the first step in the enforcement process) were issued a median of 19 days after the violation date; though, approximately 190 notices were issued six months or longer post-violation. We also identified approximately 370 expedited orders (which are intended to quickly resolve a violation) that were issued a median of 87 days post violation, and 114 of them took six months or longer. We could not determine the reasonableness of these timeframes because EPD had not specified a time period for an enforcement response in its guidance documents. According to EPD, timeframes for taking next steps vary depending on the situation and cannot be predetermined. We also identified instances in which enforcement action dates preceded violation dates, which were due to no enforcement date entered into the system and data entry errors. The need for additional guidance is discussed further in the finding on **page 28**.
- **Return to Compliance** – Return to compliance was not documented for any wastewater violations because there is no corresponding data field in GAPDES. Because facilities' return to compliance is not tracked, we could not determine the extent to which violations had been resolved or if enforcement had been escalated to the next step.

[19] The Georgia Pollution Discharge Elimination System (GAPDES) contains information on permitted facilities, including permit limits, inspection reports, violations, and enforcement actions.

Stormwater (Municipal and Industrial)

At the time of our review, the stormwater program had only recently begun to use GAPDES and take enforcement actions for certain violations. As a result, our review found that approximately 150 unique municipal and industrial violations in GAPDES in 2016 and 2017 had been entered into the system which were primarily issued for failure to monitor, but also included effluent limit exceedances, inadequate management practices (e.g., improper operation and maintenance), and other permit violations. Approximately one-third of these violations were issued by the branch office. The Enforcement Management Strategy (EMS) for Municipal and Industrial Stormwater indicates that enforcement actions include technical assistance, letters, conferences, directives, and other more formal actions outlined earlier. Enforcement activity documented in GAPDES indicate that the notice of noncompliance was the most common action taken (145 notices issued), with a small number of expedited orders and notices of violation. However, due to the limitations of the data, we could not determine the extent to which enforcement actions were taken, the timeliness of actions taken, and entities' return to compliance status as discussed below.

- **Enforcement actions taken** – All stormwater violations included in the GAPDES data had an associated enforcement action, though the data may not be complete for the time period reviewed. At the time of our review, staff were tracking enforcement actions on separate spreadsheets. In addition, enforcement actions had generally not been taken for certain violations (e.g., failure to submit annual reports).
- **Timeliness of enforcement actions** – Our review of the 151 enforcement actions that had been documented in GAPDES at the time of our review found that notices of noncompliance were issued a median of 200 days from the date of the violation to the date the notice was issued, with a significant percentage (77%) issued more than six months from the violation date. Expedited orders issued for four violations took 14 to 235 days from violation date to issuance. As previously noted, EPD had not established expectations regarding timeliness of enforcement responses to assess the reasonableness of the results of our analyses.
- **Return to Compliance** – Similar to wastewater, our review found return to compliance was not documented for any violations because there is no data field in the data system to track this information.

RECOMMENDATIONS

1. EPD should consider establishing additional controls to ensure enforcement actions are appropriate, consistent, and timely. These controls could include:
    a. establishing more specific guidelines (including enforcement response timeframes) for taking and documenting enforcement action (see **page 27** for additional discussion); and
    b. conducting additional management review of violation and enforcement action data to ensure staff entries are timely, accurate, and complete.

2. As discussed in the finding on **page 28**, EPD should review information systems used to track violations and enforcement activity to ensure data is complete and accurate.

3. EPD should assess the feasibility of amending the GAPDES data system to include a data field to capture return to compliance for each violation.

Agency Response:

Recommendation 1: *EPD indicated that it "has established additional controls to ensure enforcement actions are more appropriate, consistent, and timely." EPD provided examples of the types of additional controls being used, including "developing inspection report templates; initiating regular team meetings to review complex inspections and discuss compliance and enforcement options; adding a line for a manager's signature; and updating guidance documents and data entry SOPs."*

Recommendation 2: *EPD noted that while both the DOAA audit and EPA's review were taking place, it "was transitioning to electronic reporting systems." "As a result, both the DOAA audit and [EPA] review identified issues that EPD has since addressed." EPD indicated that it "has taken numerous measures to ensure that compliance and enforcement data is complete and accurate in state and Federal databases", such as by "hiring a data manager, regular reviews of entered data, and updates to data entry SOPs."*

Recommendation 3: *EPD stated that "Each violation, apart from automatically generated violations that are generated in error, is connected to an enforcement action." EPD further explained that "enforcement actions have a 'closed date' field," which is "updated with the date of return to compliance for each enforcement action." "Through the implementation of electronic reporting, staff have been trained on entering data in that field and routine data review processes have been implemented by the data management unit manager to ensure that staff are entering complete and accurate information."*

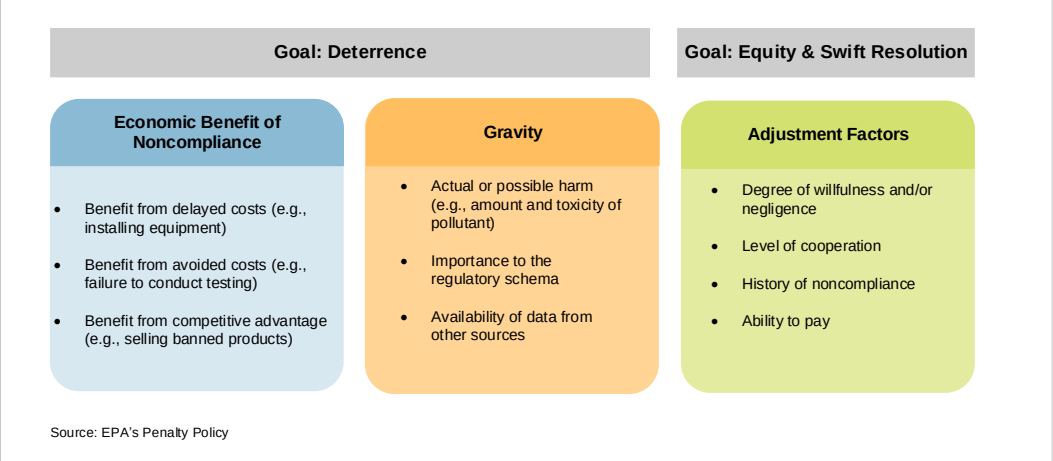
Auditor's Response: *As clarification, at the time of our review, the "closed date" data field was not a reliable source for determining entities' return to compliance due to varying interpretations by district managers of how the data field is used. However, the additional training and data review procedures referenced by EPD and additional monitoring of data integrity should help address the issue.*

Finding 4: While most water programs reviewed have documented methods for assessing settlements or penalties for noncompliance, improvements are needed to ensure methods are established for all program areas, incorporate key attributes, and are up-to-date.

*EPD defines monetary **settlements** as "simply one of the conditions agreed to by the parties to settle the dispute." **Penalties**, on the other hand, are viewed as more punitive measures and come about when regulated entities have committed serious or egregious violations and when EPD and a regulated entity cannot agree on a resolution to a problem in a timely manner.*

EPD has established methods for determining settlements/penalties for all but one (Safe Dams) of the water programs we reviewed. The Construction Stormwater Program has a calculation methodology that is closely aligned with EPA's penalty framework, though the methodology has not been recently updated. The framework considers certain attributes that, together, form a policy intended to serve as a deterrent to non-compliance, promote fair and equitable treatment of the regulated community, and bring about swift resolution of environmental problems (see **Exhibit 8**). Improvements are needed to ensure a policy is established for safe dams; methods used by the remaining program areas (drinking water, municipal stormwater, wastewater, and construction stormwater) possess attributes to achieve these goals; and all programs have up-to-date methods.

Exhibit 8
EPA's Penalty Policy Includes Three Key Attributes to Achieve Goals



Source: EPA's Penalty Policy

In general, monetary settlements or penalties are imposed through consent orders and expedited orders. As discussed below and summarized in **Exhibit 9**, our review found that EPD has five different penalty calculation methods for four of the water-related programs we reviewed. The Safe Dams Program did not have a documented penalty calculation method at the time of our review. The Drinking Water branch office applied a different calculation method for facilities it monitored than the method applied by the district offices. In addition, some methods were updated more recently than others, but the oldest methods have not been updated in 15 to 17 years.

- **Safe Dams** – According to EPD, there is no penalty calculation method for Safe Dams because penalties are not assessed to dam owners, many of whom are private owners who already have difficulty paying for costly repairs necessary to achieve compliance. As previously discussed, EPD had historically not taken enforcement action against dam owners. At the time of our review, however, it had begun to issue notices of violation. In addition, EPD officials indicated it would issue consent orders (which include

penalties) if deemed necessary, though none had been issued at the time of our review.

- **Drinking Water** – At the time of our review EPD used two different methods for determining penalty/settlement amounts associated with drinking water system violations, which addressed EPA's penalty framework to varying degrees. For systems monitored by Drinking Water Program staff located at the branch office in Atlanta, the policy (updated in 2015) was a flat $250 for failure to monitor violations and $500 for failure to submit a corrective action plan for exceeding maximum contaminant level (MCL) violations, but it did not address any of the factors in EPA's recommended guidance.

  Last updated in 2010, penalties for systems monitored by the districts were based on a formula that included two of three components in EPA's framework. Penalties included a base penalty amount, which could be adjusted upwards based on factors such as system size and type[20], violation type, significance of the deficiency, and history of noncompliance.

- **Wastewater (Municipal and Industrial)** – For wastewater, EPD established separate calculation methods for different violation types. As the exhibit shows, these methods include one of three components (gravity of the violation), but do not consider economic benefit of noncompliance or adjustments based on certain factors. For example, similar to other program areas, base penalty amounts vary depending on violation type (e.g., permit effluent limit violations and spills) and permit type (e.g., municipal, industrial). Penalties for spills are based on factors including gallons spilled, duration of the spill, and environmental impact, while penalties for exceeding permit effluent limits are based on the type of pollutant, the magnitude of exceedance, whether impaired waters were impacted, and whether or not the violation was preventable. For municipal permittees, the formulas use the municipalities' population as a basis for estimating ability to pay. EPD has also established penalty ranges for other types of permit violations, including failure to renew a permit in a timely manner and failure to submit discharge monitoring reports. We also found that the amounts built into the calculation formulas were established in 2002 and have not been updated in over 15 years.

- **Stormwater (Municipal and Industrial)** – To promote consistency in the application of settlement/penalty amounts for expedited orders and consent orders, EPD established a set of proposed settlement amounts for common municipal and industrial stormwater violation types in 2013. Though the penalty structure varies slightly depending on the permit type (e.g., municipal, industrial), the guidance includes only one of three components of EPA's framework. The amounts do consider gravity of the violation, but do not take into account factors beyond violation type, such as compliance history or ability to pay. Though the policy exists, EPD indicated that penalties generally were not applied in response to stormwater violations at the time of our review.

[20] Public drinking water system types include: Transient Non-Community; Non-Transient, Non-Community; and Community Water System.

- **Stormwater (Construction)** – Of the five penalty methods identified, EPD's construction stormwater penalty calculation method is most in line with the EPA's penalty framework, as shown in the exhibit. This method first establishes a baseline penalty according to environmental harm. Factors related to the site (e.g., proximity to state waters) and the violator (e.g., prior violations and knowledge/experience level) are also taken into account. The economic benefit of noncompliance is then estimated and added to the calculation.

  While the calculation methodology is more thorough, the General Assembly has not increased the penalty amounts that may be assessed and the amounts used to estimate the economic benefit of noncompliance have been updated since the methodology was developed in 2004.[21] EPD management we spoke with at the time of the review recognized that estimates used to calculate the benefit of noncompliance were not in line with current costs. For example, a sediment basin (a stormwater best management practice) that was estimated at approximately $8,100 in 2004 may cost $13,000 to $17,000 in 2018, according to EPD.

Exhibit 9
Settlement/Penalty Methodologies Are Outdated and/or Missing Key Components

Regulatory Program	Procedures/Methodology	Year Amounts Last Updated	Are specific components included for: Economic Benefit of Noncompliance	Gravity of the Violation	Adjustments for compliance history, recalcitrance, ability to pay, etc.
Drinking Water - Branch	$250 for failure to monitor violation $500 for failure to submit CAP for MCL violation	2015	NO	NO	NO
Drinking Water - District	Formula based on the system size and type, violation type, significance of the deficiency, history of noncompliance, etc.	2010	NO	YES	YES
Municipal & Industrial Stormwater	Set amounts based on violation type	2013	NO	YES	NO
Municipal & Industrial Wastewater	Formulas for spills and permit exceedances based on environmental impact, magnitude, impaired water, preventative actions, etc.	2002	NO	YES	NO
Construction Stormwater	Formula based on environmental harm, site facotrs, violator factors, and economic benefit of noncompliance	2004	YES	YES	YES

Source: Agency documents

It should be noted that EPD does not document its rationale for final settlement/penalty amounts, though the practice is recommended by the EPA. Documenting its rationale for adjusting settlement amounts resulting from the calculation methods discussed above would help ensure consistency in EPD's decisions over time. In addition, while EPD management indicated that both economic benefit of noncompliance and compliance history are generally considered in

[21] EPD management indicated that a change was made in 2011 to adjust for respondent type (e.g., homeowner versus developer).

determining settlement amounts, we could not confirm this due to the lack of documentation.

RECOMMENDATIONS

1. EPD should establish settlement/penalty procedures and amounts for the Safe Dams Program.

2. EPD should periodically review and update settlement/penalty amounts and calculation methodologies. As part of this review, EPD should consider formally incorporating key components, including economic benefit of noncompliance, ability to pay, and violation history into all of its calculation methods.

3. EPD should consider implementing additional controls to ensure factors considered in the decisions are applied consistently. Documenting the calculation and rationale for any adjustments made during the negotiation process would be one such control.

Agency Response:

Recommendation 1: *EPD stated that it "has now developed penalty guidelines for Safe Dams." EPD points out that dams owned by individuals or Home Owners' Associations "are most likely to have compliance problems" and "are least likely to have the financial ability to repair deficiencies." According to EPD, "Spending money to get the dams into compliance is a far higher priority than paying penalties, which is accounted for in EPD's penalty guidelines."*

Auditor's Response: *We agree that it would be preferable for private dam owners to devote money to making repairs rather than paying fines. However, if private dam owners are not making improvements to the dams as part of the permitting process and EPD is not in favor of imposing penalties on private owners, then the safety risks remain. Our recommendations to the General Assembly on page 11 discuss options used in other states to help these dam owners make needed repairs.*

Recommendation 2: *EPD indicated that it has "reviewed all of the penalty amounts and elected to update the penalties for stormwater." In addition, EPD stated that "the penalty calculation forms were updated for all wastewater and stormwater permits to explicitly include the benefit of noncompliance, ability to pay, and violation history."*

As added clarification for Drinking Water penalty policies, EPD noted that the "two methods reflect differences in the type of systems and violations that the Branch and District Offices handle." EPD explained that the "Branch's Drinking Water Compliance Unit enforces the contaminant and reporting rules for all drinking water facilities, and its penalty rationale relates only to those violations: failure to monitor (or report) violations, and MCL (or health based) violations. The District Offices enforce rules related to bacterial contamination and operation of groundwater systems, and their penalty guidance relates to those types of violations. Currently, EPD is reviewing the drinking water penalty policies to account for rule changes. As a part of that review, EPD is also identifying components of the guidance that could be improved through greater consistency and making the requisite changes."

Recommendation 3: *In response to similar concerns identified by the EPA, "EPD has implemented additional controls to ensure factors considered in the decisions are applied consistently." EPD "improved enforcement data management, including penalty tracking...updated the inspection forms to include a manager signature line to document the managerial review that all inspection reports undergo" and "updated all stormwater and wastewater calculation forms..." EPD now "includes the final penalty calculation in consent order files."*

Management

Finding 5: Improvements in data systems and data management practices are needed to ensure EPD management has adequate information for monitoring compliance and enforcement activity and assessing overall effectiveness.

Best practice research emphasizes the importance of comprehensive and reliable data to serve as a basis for management decision-making.

EPD collects compliance and enforcement information using a variety of systems and processes. Two primary data systems—SDWIS for drinking water and GAPDES for stormwater, wastewater, and safe dams—are used to document violations identified and enforcement actions taken by EPD staff. In addition, the Complaint Tracking System and various Excel spreadsheets are also used to compile and track relevant violation and enforcement information. Management also relies on meetings to monitor compliance and enforcement activity. However, as discussed below, data included in primary systems are not always accurate and complete; additionally, separately maintained systems and tracking/reporting tools do not interact with primary data systems. Given the size and the decentralized nature of the enterprise, management needs a comprehensive, complete, and accurate source of data to monitor compliance activity, assess trends, and evaluate outcomes of its efforts to bring regulated entities into compliance.

Primary Data Systems

We identified several issues related to functionality and use of GAPDES and SDWIS for compiling and tracking compliance and enforcement activity, as previously noted. Examples of the issues identified are listed below and included in **Exhibit 10**.

- **Missing data** – We found missing violation identification numbers in GAPDES, which make it difficult to link violations to a corresponding enforcement action.
- **Inconsistent data entry** – Our review identified inconsistencies in dates entered into SDWIS, which impacts EPD's ability to assess timeliness in responding to and resolving issues of noncompliance. This issue is also discussed in the finding on **page 18**.
- **Functionality** – We found GAPDES lacks a data field that allows staff to document a facility's return to compliance, as discussed in the finding on **page 18**.

Our survey of EPD staff indicated that they had not received adequate training and guidance on how to navigate these complex systems, which may have contributed to data quality and completeness issues. For example, 24 of 44 (55%) drinking water staff responding to our survey, disagreed that EPD provided adequate guidance for utilizing SDWIS. As of April 2019, EPD indicated that it had developed user instructions for GAPDES and training modules for SDWIS users. However, EPD indicated that its ability to make changes to SDWIS to improve functionality is limited by EPA.[22] In addition, EPD noted that any changes to IT resources to address

[22] SDWIS is a data system developed by the EPA used by states to compile information on public water systems, including their characteristics, monitoring and reporting information, violations, and enforcement actions taken.

limitations in existing data systems is a lower priority until electronic permitting and reporting initiatives are completed in 2020.

Exhibit 10
Improvements in Primary Systems Would Increase Usefulness of Data

Program	Data is missing/lacking:	As a result, staff/management cannot:
All Programs (except Drinking Water)	A field that clearly indicates that the entity has returned to compliance following a violation	Adequately track/evaluate if the primary goal of returning entities to compliance is being met
Construction Stormwater	Enforcement actions taken by at least one district	Monitor/track trends related to enforcement actions
Drinking Water	Complete data on system's return to compliance	Adequately track/evaluate if the primary goal of returning to compliance is being met
	Settlement amounts	Easily track settlement history of individual permittees in the event of future violations occur or monitor how settlements are applied across the range of violations
	Accurate sanitary survey frequency criteria	Easily determine how often a sanitary survey should be conducted
	Accurate status dates	Monitor timeliness of systems' return to compliance
Industrial Stormwater	All current permits due to problems linking to GEOS permitting system	Identify facilities with active permit coverage.
	Accurate violations data	Identify all noncompliant facilities and use this information to prioritize inspections
Safe Dams	Dam deficiencies	Identify the dams that may pose greatest risk to public safety
	All inspections conducted	Determine whether or not dams are being inspected according to schedule
Wastewater	Violation IDs that link enforcement actions to violation details	Identify all enforcement actions associated with a specific violation and determine if enforcement has been escalated in an appropriate and timely manner
	Consistent enforcement action closed dates (i.e., when the problem was resolved versus when the enforcement action was issued)	Determine if a problem has been resolved or evaluate the timeliness of the resolution

Source: Interviews with EPD staff and a review of GAPDES and SDWIS data

Complaint Tracking System

There is no link between the complaint data and EPD's primary data systems that track enforcement to determine the ultimate outcome of complaints. Thus, neither GAPDES nor SDWIS contain a complete history on any regulated facilitates.

Separately Managed Spreadsheets and Databases

Historically, program managers and districts have been allowed to separately track and maintain certain compliance and enforcement data, sometimes due to limitations in primary data systems. For example, annual report submissions by industrial stormwater facilities were tracked primarily through a spreadsheet due to system-generated issues in GAPDES. We also found that information on consent orders was being maintained in multiple locations, including data systems and excel spreadsheets. In addition, though GAPDES contained a module for Safe Dams

compliance and enforcement information, information on dam deficiencies had not been entered into GAPDES, nor was it tracked in any other electronic format at the time of our review. For example, if a dam inspection identified a violation that required corrective action (e.g., a pipe has a hole in it), this information would only be documented in a hard copy file. As a result, EPD cannot automatically generate a report on all dams with a deficiency.

RECOMMENDATIONS

1. EPD should improve the completeness and accuracy of the major data systems. To accomplish this, EPD should consider identifying feasible, cost-effective modifications that can be made to prevent common errors and correct linkage problems across data systems. Until then, EPD should
   - continue to expand training opportunities and guidance materials; and
   - conduct management reviews of the data to evaluate completeness and accuracy; and
   - identify common errors to be addressed in training and guidance documents.

2. EPD should consider implementing a more integrated data system that could enhance management oversight of compliance and enforcement activities and performance indicators.

Agency Response:

Recommendation 1: *EPD indicated that it "agrees that ensuring the completeness and accuracy of its data systems is important." EPD noted that it is implementing improvements to its databases in coordination with EPA where possible. In addition, "EPD is also conducting additional training and has been working with our internal IT department to develop a robust intranet repository of all relevant policies, including those for data management."*

Recommendation 2: *EPD agreed "that an enhanced data system could enhance management oversight" but noted that "such systems are costly." EPD indicated that EPA's "Enforcement and Compliance History Online (ECHO) database, which houses compliance data from all states...includes dozens of metrics used for management oversight such as numbers of enforcement actions, penalties collected, numbers of facilities with significant noncompliance and drinking water facilities with health-based violations." EPD noted that some of the performance indicators included in ECHO are tied to its EPA workplan requirements and "are discussed with EPA on a quarterly basis."*

Finding 6: With improvements in management information, establishing additional performance metrics would enhance EPD's ability to demonstrate the results of its compliance and enforcement efforts.

While EPD has performance measures, additional outcome-based measures would enhance management's ability to demonstrate its progress in protecting human health and the environment. EPD annually reports to the U.S. EPA on progress made toward

achieving annual commitments, which include benchmarks such as inspection frequencies. It also reports on the number of notices of violations issued, consent orders executed, average days to resolve complaints, and percentage of public drinking water systems meeting federal health-based standards to the Governor's Office of Planning and Budget. However, at the time of our review, EPD had not compiled a comprehensive set of outcome-based metrics to track the overall effect of its compliance and enforcement activities on compliance trends, occurrence of harmful environmental incidents, discharge trends, and water quality indicators. Such information would increase transparency and enhance management's ability to demonstrate the effectiveness of its collective efforts (e.g., inspections, investigations, enforcement), communicate enforcement priorities, and justify resource needs, including parts of the state where resources are most needed.

As shown in **Exhibit 11**, additional metrics would assess the contribution of EPD's compliance and enforcement efforts to overall compliance trends and changes in health and environmental outcomes (e.g., water quality conditions).

Exhibit 11
Examples of Metrics Useful for Monitoring Outcomes of Compliance and Enforcement Efforts

Compliance Levels	Enforcement Actions
Percent of regulated facilities in compliance	Percent of violations resolved through informal vs formal enforcement methods
Percent of complaints resulting in violation	Percent of violators returned to compliance (within specified time period)
Rate of noncompliance by geographic region	Rate of repeat violators (by violation type and within specified time period)
Percent of permits issued within specfied time period	
Harmful Incidents	**Water Quality Standards**
Rate of reduction in health-based violations	Number of square miles of watershed with surface water not meeting standards
Percent of high hazard dams with structural deficiencies	Rate of reduction in unpermitted discharges within watershed or other geographic area

Source: PAD review of EPD documents and industry literature

RECOMMENDATIONS

1. EPD should consider establishing additional performance measures, particularly outcome metrics, to communicate the results of its enforcement efforts and guide decision-making.

Agency Response:

Recommendation 1: *EPD indicated that it "tracks over fifty measures of performance as part of monitoring the efficacy of its programs and its enforcement strategy" such as" the number of facilities with NPDES permits that have undergone formal or informal enforcement, any penalties assessed, and the rate of return to compliance. These metrics reflect the best practices in performance and outcome measurement for management of environmental protection programs." EPD stated that it "uses these metrics to evaluate its programs, reports these metrics to US EPA annually, and submits biennial summary reports to US EPA as well. These reports are available to the public."*

"In addition, EPD participates in US EPA's National Compliance Initiatives, a national program setting priorities designed to improve the most serious environmental violations. As part of that process, EPD focuses its decision-making on those programs and issues that are designed to have the greatest and most positive impact on improving human health and the environment."

Auditor's Response: *While performance metrics exist, we are recommending metrics that provide more detailed information (e.g., geographic areas requiring more attention) to enhance prioritization of compliance and enforcement efforts as well as metrics in program areas not dictated by federal law, such as Safe Dams.*

Finding 7: Comprehensive, up-to-date guidance would better support EPD staff's efforts to carry out its compliance and enforcement duties.

EPD has created numerous documents to guide EPD staff's compliance and enforcement efforts for the water programs we reviewed, including division-wide manuals and separate policy memos and checklists. However, we identified opportunities for EPD to update guidance to reflect current practices, centralize and clarify relationships between multiple, similar guidance documents, document specific expectations on enforcement responses, and develop program specific guidance for safe dams. These actions are particularly important in a large, decentralized enterprise such as EPD and in program areas where turnover may be an issue and new staff are continually brought in.

- **Update division-wide guidance** – EPD's *Compliance and Enforcement Reference Guide* has not been fully updated since 2003. The document is intended to provide division-wide "guidance for EPD employees in the exercise of enforcement authority" and help staff understand EPD's compliance and enforcement principles and policies. According to district staff we spoke to, the guide is still in use. However, there is a risk that the guidance has not kept pace with changes in regulations or regulatory trends over time or is not consistent with EPD's current practices.

- **Centralize and clarify water-related guidance**– A myriad of guidance documents (including standard operating procedures, policy memos, inspection checklists, penalty rationales and worksheets, etc.) have been disseminated since 2003, but their relationship to the *Compliance and Enforcement Reference Guide* or to one another is unclear. For example, in 2017, a

standard operating procedure for NPDES compliance inspections was issued, but does not indicate whether it supersedes more detailed inspection procedures included in the *Compliance and Enforcement Reference Guide*. Similarly, a 2010 Enforcement Management Strategy for Industrial and Municipal Stormwater (which outlines enforcement actions utilized by EPD to address noncompliance) appears to duplicate guidance provided in the Compliance and Enforcement Reference Guide. Multiple documents addressing similar or the same functions causes confusion among staff about expectations.

- **Fill-in gaps** – With the exception of the Drinking Water Enforcement Response Policy Targeting Tool (ETT) designed to ensure consistency in enforcement actions taken in response to drinking water violations, neither the division-wide enforcement guide nor standard operating procedures for individual programs document management's expectations of the appropriate level of enforcement action warranted for each violation type.[23] For example, for failure to submit or delinquent discharge monitoring reports (DMRs), staff do not have access to a reference guide outlining management's expectations of the expected response to this type of violation (e.g., informal or formal). According to one district manager, without formal guidelines, individual staff decide what enforcement action to take in response to violations and the circumstances of each.

  As an example of the type of guidance that could be made available staff, Colorado's Water Quality Control Division documents expected enforcement responses for a list of violations (with varying circumstances), expected timeframes for enforcement action to occur, and responsible staff as shown in **Exhibit 12**. According to the Division's enforcement manual, deviations from the guidance may be warranted, but should be justified.

[23] The purpose of the enforcement targeting tool is to prioritize public water systems for enforcement response. EPD is given an ETT list each quarter from EPA, if a water system has achieved more than 11 points without a resolving enforcement action then it is on the list and EPA works with EPD to ensure they are taking appropriate action (an order). The branch is responsible for managing the ETT list and communicating to the district offices the facilities they are responsible for on the list.

Exhibit 12
Colorado Enforcement Response Guides Help Staff Determine Appropriate Enforcement Response to Violations

VIOLATION	CIRCUMSTANCES	RESPONSES	RESPONSIBLE STAFF	TIME CONTROL GOAL[5]
Failure to submit DMR(s) (i.e., delinquent DMR)	1st delinquent DMR	Compliance Advisory letter	Compliance and enforcement	45 days
	Failure to respond/correct violation or 2nd delinquent DMR	Compliance Advisory letter	Compliance and enforcement	45 days
	Failure to respond to previous Compliance Advisories and/or ongoing DMR delinquencies	Formal Enforcement	Enforcement	180 days[6]
DMR submitted but incomplete or inadequate (i.e., deficient DMR)	1st occurrence	Compliance Advisory letter	Compliance and enforcement	45 days
	Violation repeats in subsequent reporting period(s)	Compliance Advisory letter	Compliance and enforcement	45 days
	Failure to respond to previous Compliance Advisories and/or to correct ongoing DMR deficiencies	Formal Enforcement	Enforcement	180 days[6]

Source: Colorado Water Quality Control Division

- **Create program-specific guidance** – With the exception of the Engineer Guidelines that include guidance on dam design and the permitting process, the Safe Dams Program had not developed standard operating procedures guiding other compliance and enforcement activities conducted by EPD staff at the time of our review. For example, such procedures would clearly explain how staff should conduct dam inventory and reclassification activities and dam inspections. In addition, because EPD is now taking enforcement action against dam owners for reporting violations, the procedures should indicate how enforcement should be carried out in response to noncompliance.

RECOMMENDATIONS

1. Either through the division-wide guide or program-specific guides, EPD should provide complete and updated guidance covering key functional areas related to compliance and enforcement.

2. EPD should compile all policy memoranda, operating standards, and other guidance documents; determine which are still applicable and which are not; and organize them into a complete set of activity and management instructions either as part of the division-wide guide or another centralized location.

Agency Response:

Recommendation 1: *EPD indicated that the division-wide guide will be replaced by up-to-date program-specific guidance. According to EPD, it "anticipates that by 2021, all enforcement and compliance policies will be in one location."*

Recommendation 2: *EPD indicated that, during the course of our audit, it formed a lean six sigma work group last year "to decrease the time it takes to have a new employee competent and confident in their ability to independently complete their job task." The work group created "a new employee training document, which includes an enforcement section" and "will also serve as a reference guide for current EPD employees." According to EPD, the document will provide guidance at a high level, but will be cross-referenced to more specific information, including "templates, policy memoranda, operating standards, and other guidance documents." To ensure the document and referenced material remains relevant and up to date, the document will be reviewed annually by representatives of each EPD branch and district operations. In addition, EPD indicated it expects to centralize all of its guidance documents in a cloud-based environment accessible to all of its employees by 2021.*

EPD added that many [of its] reference documents have been updated, "including the program-specific data entry [standard operating procedures], inspection forms for all [Clean Water Act] inspections, Water Quality Penalty Assessment guidance, and the enforcement summary [procedure]." In addition, EPD noted that it is in the process of updating some safe drinking water reference documents (e.g., penalty rationale), which it estimates will be complete by September 2020.

Matters for Legislative Consideration

Finding 8: With the exception of the construction stormwater program, Georgia has not kept pace with other states in assessing permit fees for other water regulatory programs.

Currently, EPD assesses a construction stormwater fee of $80 per acre disturbed to offset the costs of permitting, enforcement, and education, but does not have a similar fee for its municipal and industrial stormwater, municipal and industrial wastewater, and drinking water programs. By comparison, six other southeastern states have fees tied to these other programs, as shown in **Exhibit 13**. However, EPD officials have indicated that they do not have legal authority to extend the collection of permit fees to other program areas. EPD collected construction stormwater fee revenue of $1.5 million in fiscal year 2017; permit fees for other regulatory programs would allow EPD to generate additional revenue to help offset the cost of permitting, compliance, and enforcement efforts.

Exhibit 13
Other Southeastern States Assess More Types of Permit Fees

	Municipal Wastewater	Industrial Wastewater	Industrial Stormwater	Municipal Stormwater	Construction Stormwater	Drinking Water
Alabama	√	√	√	√	√	√
Florida	√	√	√	√	√	√
Georgia	**X**	**X**	**X**	**X**	√	**X**
Kentucky	X	√	√	X	X	√
North Carolina	√	√	√	√	√	√
South Carolina	√	√	√	√	√	√
Tennessee	√	√	√	√	√	√
Virginia	√	√	√	√	√	√

Source: Other states' websites and interviews with state officials

Though EPD has established fees through regulation in the past[24], it may be necessary to establish permit fees for other regulatory programs in law, as other states have done. As demonstrated by the three state examples shown in **Exhibit 14**, fee structures vary by state and can be complex. In addition, as the exhibit shows, there are other factors to consider when these fees are established that may require legislative input, such as the specific uses of permit fees.

[24] At the time of our 2006 review, we found that EPD had established some fees through its enabling legislation. The legislation allowed EPD to create rules and regulations, through which certain fees were authorized, including the radioactive materials fee and emissions reduction credit application fee. (Special Examination, User Fees, Performance Audit Division, December 2006).

Exhibit 14
Other state permit fee structures established in state law

Florida	North Carolina	Virginia
How are fees authorized/established?		
Fees are authorized in state law. Fees can be changed through regulations or legislation, or approval of the state legislature.	Fees are authorized in state law. Permit fees may be updated as needed by changing legislation.	Fees are authorized in state law. Permit fees may be updated as needed by changing legislation.
What are fee amounts based on?		
The type of source, discharge flow, population served, and other factors related to the entity's complexity	The design, flow, and major/minor facility designation	The type of facility (major or minor industrial; major or minor municipal) and the flow in gallons per day.
What are the current permit fees?[1]		
Industrial Wastewater: $100-$7,500 Domestic Wastewater: $600-$7,500 Generic Domestic Wastewater: $600-$1,000 Industrial Stormwater: $1,000 Generic Industrial Stormwater: $500 Municipal Stormwater: $5,625-$11,700 Construction Stormwater: $250-$400 Generic Industrial Stormwater: $500	Major Individual: $3,440 Minor Individual: $860 Stomwater & Wastewater General: $100 Single Family Residences: $60 Recycle Systems: $360 Animal Permits: $60-$360 Nondischarge Permits:$810-$1,310	Industrial Major: $24,000 Industrial Minor: $3,300 Industrial Stormwater: $7,200 Municipal Major: $21,300 Municipal Minor: $2,000-$7,500 Industrial Stormwater General Permit: $500 Other General Permits: $600
Where is fee revenue collected?		
Permit Fee Trust Fund	Water Division/Program	Water Division/Program
What percentage of program costs is covered?		
80%	40%	40%

[1] Not an exclusive listing of all NPDES fees

Source: The Association of Clean Water Administrators' 2014 Report on State NPDES Fee Permitting Program Structures

RECOMMENDATIONS

1. The General Assembly should consider:

    a. establishing permit fees for water-related programs such as municipal and industrial stormwater, municipal and industrial wastewater, and drinking water in state law to be used to cover the cost of compliance and enforcement activities; or

    b. granting EPD the legal authority to establish fees using its rulemaking authority.

Appendix A: Table of Recommendations

Finding 1: Despite staffing increases and shifting some responsibilities to dam owners since our 2000 performance audit, some dams have not been inventoried, studied, or permitted as required. (p.8)
1. EPD should evaluate and document the risk associated with exceeding the five-year timeframe for re-inventorying Category II dams as required by law. a. If the risk is low, EPD should consider pursuing a change to §12-5-375(b) to include a timeframe that more accurately approximates the risk. b. If the risk is not low, EPD should evaluate its priorities to ensure all dams affected are classified as required by law.
2. Given the priority placed on permitting Category 1 dams and ongoing concerns about owners' ability to pay for engineering studies and dam repairs necessary to meet standards, consideration should be given to available alternatives. a. Option 1: The General Assembly could consider authorizing a fund source for the purpose of providing financial assistance (e.g., grants or low-interest loans) to private dam owners for engineering studies and dam repairs and other costly activities required for compliance. b. Option 2: The General Assembly could require EPD to re-assess the current model and examine the feasibility of transferring responsibility for visual inspections to EPD. The assessment should include any estimated increases in resources necessary to carry out this function either by EPD staff or consultants. In addition, consideration should be given to allowing EPD to assess a fee to dam owners to help offset the cost of these activities.
Finding 2: Inspection and reporting practices have limited EPD's opportunities to detect dam and stormwater violations. (p.12)
3. EPD should continue to use available compliance assistance strategies and enforcement processes (and escalate as appropriate) to ensure dam owners and industrial stormwater facilities comply with reporting requirements.
4. As a preventive measure, EPD should consider implementing automated methods (e.g., automatic dialers, robo calls) to remind regulated entities to submit required reports, similar to other states.
5. EPD should assess and document the risks of owner-led dam safety inspections and implement controls to mitigate the risks.
6. Similarly, EPD should assess and document the risk associated with municipal stormwater facilities that have never been inspected by EPD.
7. Given its limited resources, EPD should consider the feasibility of using a risk-based approach to inspections for municipal stormwater and construction stormwater. In addition, EPD should assess and document the need for additional resources to carry out its inspection responsibilities.
Finding 3: Data entry and system limitations prevent a full evaluation of the effectiveness of EPD's enforcement efforts. (p.17)
8. EPD should consider establishing additional controls to ensure enforcement actions are appropriate, consistent, and timely. These controls could include: a. establishing more specific guidelines (including enforcement response timeframes) for taking and documenting enforcement action; and b. conducting additional management review of violation and enforcement action data to ensure staff entries are timely, accurate, and complete.
9. EPD should review information systems used to track violations and enforcement activity to ensure data is complete and accurate.

10. EPD should assess the feasibility of amending the GAPDES data system to include a data field to capture return to compliance for each violation.

Finding 4: While most water programs reviewed have documented methods for assessing settlements or penalties for noncompliance, improvements are needed to ensure methods are established for all program areas, incorporate key attributes, and are up-to-date. (p.22)

11. EPD should establish settlement/penalty procedures and amounts for the Safe Dams Program.

12. EPD should periodically review and update settlement/penalty amounts and calculation methodologies. As part of this review, EPD should consider formally incorporating key components, including economic benefit of noncompliance, ability to pay, and violation history into all of its calculation methods.

13. EPD should consider implementing additional controls to ensure factors considered in the decisions are applied consistently. Documenting the calculation and rationale for any adjustments made during the negotiation process would be one such control.

Finding 5: Improvements in data systems and data management practices are needed to ensure EPD management has adequate information for monitoring compliance and enforcement activity and assessing overall effectiveness. (p.27)

14. EPD should improve the completeness and accuracy of the major data systems. To accomplish this, EPD should consider identifying feasible, cost-effective modifications that can be made to prevent common errors and correct linkage problems across data systems. Until then; EPD should
    - continue to expand training opportunities and guidance materials;
    - conduct management reviews of the data to evaluate completeness and accuracy; and
    - identify common errors to be addressed in training and guidance documents.

15. EPD should consider implementing a more integrated data system that could enhance management oversight of compliance and enforcement activities and performance indicators.

Finding 6: With improvements in management information, establishing additional performance metrics would enhance EPD's ability to demonstrate the results of its compliance and enforcement efforts. (p.29)

16. EPD should consider establishing additional performance measures, particularly outcome metrics, to communicate the results of its enforcement efforts and guide decision-making.

Finding 7: Comprehensive, up-to-date guidance would better support EPD staff's efforts to carry out its compliance and enforcement duties. (p.31)

17. Either through the division-wide guide or program-specific guides, EPD should provide complete and updated guidance covering key functional areas related to compliance and enforcement.

18. EPD should compile all policy memoranda, operating standards, and other guidance documents; determine which are still applicable and which are not; and organize them into a complete set of activity and management instructions either as part of the division-wide guide or another centralized location.

Finding 8: With the exception of the construction stormwater program, Georgia has not kept pace with other states in assessing permit fees for other water regulatory programs. (p.35)

19. The General Assembly should consider:
    a. establishing permit fees for water-related programs such as municipal and industrial stormwater, municipal and industrial wastewater, and drinking water in state law to be used to cover the cost of compliance and enforcement activities; or
    b. granting EPD the legal authority to establish fees using its rulemaking authority.

Appendix B: Objectives, Scope, and Methodology

Objectives

This report examines the Environmental Protection Division's (EPD) enforcement of select water resource and protection programs. The audit objectives are listed below.

1. Do permitting processes ensure regulated entities have up-to-date permits? Do permit fees offset the cost of enforcement?
2. Are compliance assistance, monitoring, inspections, and complaint investigation activities conducted in a timely, thorough, and strategic manner?
3. Are enforcement actions and penalty assessments appropriate to ensure entities return to compliance?
4. Are management oversight processes adequate to ensure compliance? Are enforcement activities appropriate, consistent, timely, and effective?

Scope

This audit generally covered activity related to permitting, compliance monitoring, and enforcement within eight water-related program areas administered by EPD. The scope included activities conducted from January 2016 to May 2018, with consideration of earlier or later periods when relevant. Due to the need to divert staff to other legislative directives at the end of our fieldwork, there was a delay in writing and finalizing our report. During this time, EPD began taking steps to address some of the issues identified. Updates provided by EPD have been incorporated into the report.

Information used in this report was obtained by reviewing relevant federal and state laws, rules, and regulations and EPD policies and procedures. We interviewed personnel in EPD's central office and the district offices, and conducted a survey of EPD staff with responsibility for ensuring compliance and/or enforcement for the water programs reviewed. We reviewed prior audit reports conducted by the Department of Audits and Accounts and existing studies on environmental compliance and enforcement by industry groups and other state audit and evaluation offices.

In addition to other supporting documentation, we obtained data related to permits, violations, enforcement, and complaints. We relied on data from two primary data systems—GAPDES and SDWIS—to support findings in multiple objectives.

- GAPDES – The Georgia Pollutant Discharge and Elimination System (GAPDES) holds permits, compliance and enforcement information for the wastewater and stormwater programs. In addition, the system contains a module for Safe Dams. We identified limitations to the data that prevented an assessment of enforcement outcomes (e.g., return to compliance, timeliness of enforcement actions taken). However, the data was determined to be sufficiently reliable for assessing inspection frequencies and violations identified.

- SDWIS – The Safe Drinking Water Information System (SDWIS) is used to monitor the administration and enforcement of the Safe Drinking Water Act. SDWIS includes data on inspections, sampling/monitoring, and enforcement actions. Similar to GAPDES, limitations to the data prevented an assessment

of enforcement outcomes such as return to compliance. However, the data was sufficiently reliable for documenting drinking water violations.

Government auditing standards require that we also report the scope of our work on internal control that is significant within the context of the audit objectives. All audit objectives are related to internal controls over permitting, compliance monitoring, and enforcement, as well as general management practices to support these efforts. Specific information related to the scope of our internal control work is described by objective in the methodology section below. No confidential/sensitive data has been omitted from this report.

Methodology

In order to determine whether permitting processes ensure regulated entities have up-to-date permits and permit fees offset the cost of enforcement, we considered requirements for Category I and Category II dams established in state law and EPD regulations. We analyzed records maintained by EPD's Safe Dams Program and documented the extent to which dam inventory and dam study backlogs exist. We also reviewed data to identify unpermitted Category 1 dams. We reviewed prior audit reports and data to document the history of backlogs. We interviewed EPD staff and reviewed records on dams to document any enforcement actions taken. We researched other states and industry practices to identify strategies for addressing backlogs and permitting delays.

We reviewed state laws and EPD regulations and policies and procedures related to permit fees and documented any fees assessed, fee amounts, and the purpose of fees. We reviewed financial records to determine the total amount of fees collected and compared Georgia's permit fee authority to other states.

In order to determine whether compliance assistance, monitoring, inspections, and complaint investigation activities are conducted in a timely, thorough, and strategic manner, we interviewed EPD staff and reviewed EPD regulations to document monitoring requirements. We analyzed monitoring data to determine the extent to which entities were reporting required information and doing so in a timely manner. We assessed controls over monitoring by interviewing EPD staff to understand how reported information is reviewed and how the review is documented, as well as methods for ensuring data reported by regulated entities is accurate and reliable. We interviewed other states representatives and researched other state and industry practices to identify additional strategies for ensuring compliance with monitoring requirements.

We reviewed EPD regulations, workplan agreements with the U.S. Environmental Protection Agency, and other documents to determine the required inspection frequency and inspection goals. We analyzed inspections data to determine inspection frequencies. We interviewed EPD staff and reviewed agency documents to understand controls in place to ensure that inspections are adequate, such as guidance and training, procedures manuals, checklists, and supervisory review.

We reviewed and documented EPD's policies and procedures for investigating complaints. We interviewed program staff and reviewed and analyzed relevant data from EPD's Complaint Tracking System to determine how complaints were handled from intake to resolution. The data was sufficiently reliable for analyzing complaint investigations and timeliness.

In order to determine whether EPD takes appropriate enforcement action, assesses penalties when needed, and ensures entities return to compliance when violations are detected, we reviewed and documented EPD policies and procedures for taking enforcement actions. We sought to understand the type of enforcement action appropriate for each violation type, timeframes for initiating and escalating enforcement actions, etc. We also interviewed other states regarding their enforcement practices. We interviewed EPD staff and analyzed enforcement data to identify the number and type of enforcement actions taken. We planned to analyze the extent to which enforcement actions led to compliance as well as timeframes for achieving compliance or escalation, but determined the data sources (GAPDES and SDWIS) to be unreliable for these purposes.

We reviewed and documented EPD's procedures for assessing penalties. We also interviewed other states regarding their penalty assessment processes and researched other states and industry practices to determine the extent to which EPD's penalty guidelines/matrices are reflective of best practices. We interviewed EPD management to understand how penalty decisions are documented.

In order to determine whether management oversight processes adequately ensure compliance and enforcement activities are appropriate, consistent, timely, and effective, we interviewed representatives from other states and reviewed other states' guidance documents for staff use in performing compliance and enforcement activities and we compared them to Georgia's guidance material. We also surveyed 122 EPD personnel, including Watershed Protection Branch staff who perform compliance-related work and district office staff. The survey responses helped the audit team understand staff responsibilities and their perceptions about the extent to which guidance and training was available, though the results were not heavily relied on to inform our conclusions.

We researched other states and industry practices to understand the types of performance indicators that could be useful for assessing outcomes of EPD's compliance and enforcement efforts. We reviewed EPD's performance measures and assessed the extent to which they are outcome-focused.

In addition, we interviewed other states to determine how information is maintained and utilized to inform management decisions. Through interviews and a review of documentation (e.g., data dictionaries), we determined the number and type of data systems used and the information contained for monitoring compliance and enforcement activities. Through staff interviews and our own analysis of the data, we identified specific limitations of the data systems and the impact on program operations.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix C: Related State and Federal Water Protection Laws

The U.S. Environmental Protection Agency (EPA) establishes environmental regulations and standards but can delegate implementation authority to the state. States must apply for this authority and be approved by the EPA. Authorized states then implement federal regulations by enacting state legislation, which must be at least as stringent as the national standards. This delegated authority gives states the ability to take specific actions –approving permits, providing compliance assistance, conducting inspections, and taking enforcement actions – to ensure compliance with federal and state requirements. Significant federal and state laws aimed at protecting the state's water resources are discussed below.

- Federal Clean Water Act (CWA) – The CWA establishes regulations and standards for the discharge of pollutants into waters of the United States. All discharges into the nation's waters are unlawful, unless specifically authorized by a permit. In accordance with the CWA, EPA establishes criteria for the acceptable levels of pollutants detected in surface waters. While EPA sets water quality standards, the states are delegated day-to-day authority for activities such as permitting, monitoring, and compliance and enforcement efforts.

  The Georgia Water Quality Control Act gives EPD the authority to ensure reasonable usage of state waters and treatment of sewage, industrial wastes, and other waste prior to discharge into state waters. EPD is responsible for establishing and revising standards for water purity and prescribing uniform procedures for the application, modification, revocation, and termination of permits. This act covers industrial and municipal stormwater and wastewater discharges.

- The Federal Safe Drinking Water Act (SDWA) – The SDWA authorizes EPA to set national standards for drinking water quality. EPA must establish regulations for contaminants that pose health risks and are likely present in water supplies. For each contaminant, EPA establishes a non-enforceable maximum contaminant level goal at which no known or anticipated health risks occur. EPA then establishes an enforceable standard, or maximum contaminant level, as close to the goal as feasible.

  The Georgia Safe Drinking Water Act establishes EPD's responsibility for the quality of drinking water in the state. EPD is responsible for issuing permits, conducting investigations, laboratory analyses, and inspections to ensure compliance, disseminating information related to the quality of water in the state, and taking enforcement action, as necessary.

- Georgia Erosion and Sedimentation Control Act – This Act establishes a statewide comprehensive soil erosion and sediment control program to conserve the land, water, air, and other resources of the state. Each county or municipality has the authority to adopt an ordinance governing the land disturbing activities (typically construction sites) within their jurisdiction. If the local authority does not have an ordinance of their own, EPD procedures govern the activities within the jurisdiction.

- Georgia Safe Dams Act – requires EPD to inventory and classify all dams in the state into one of two categories: Category I where failure of the dam would result in probable loss of human life, or Category II where failure of the dam would not result in probable loss of human life. EPD is responsible for permitting all Category I dams and taking enforcement action to bring dam owners into compliance. The Safe Dams Program has no federal requirements and is a solely state-run program.

The Performance Audit Division was established in 1971 to conduct in-depth reviews of state-funded programs. Our reviews determine if programs are meeting goals and objectives; measure program results and effectiveness; identify alternate methods to meet goals; evaluate efficiency of resource allocation; assess compliance with laws and regulations; and provide credible management information to decision makers. For more information, contact us at (404)656-2180 or visit our website at www.audits.ga.gov.