



INTERNAL AUDIT REPORT FOR

Water Safety and Security

Department of Water Resources

Audit Plan Year 2025

December 22, 2025

**GWINNETT COUNTY
OFFICE OF INTERNAL AUDIT**

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Background & Scope

The Department of Water Resources (DWR) provides Gwinnett County with high-quality drinking water, wastewater treatment, and stormwater services. Production facilities consist of the Lanier and Shoal Creek Filter Plants. There are three wastewater treatment facilities at F. Wayne Hill, Yellow River, and Crooked Creek that clean and return water to the environment. DWR also maintains more than 9,000 miles of pipe with over 200 pump stations and 10 booster stations. In addition to providing high-quality water and services, DWR is committed to protecting the health of approximately 700 employees and preventing injuries in a complex work environment. An employee's job responsibilities and working conditions primarily determine the likelihood of exposure to health hazards or workplace injuries, and the potential severity. Generally, plants, treatment facilities, and field operations are riskier and require safety plans specific to their operating conditions. Examples of major worksite safety concerns include exposure to chemicals, confined spaces, fire, high voltage components, and trench excavations.

DWR maintains a comprehensive Safety Program and Safety Committee, designed to avert accidents and mitigate health risks primarily through employee accountability, awareness, and safe work behavior. Program components include training, facility security, hazard identification and remediation, and safety control activities. There is also a separate Accident Review Committee made up of representatives from DWR who meet monthly to assess vehicle and injury incidents. These committees work with DWR management and teams to provide recommendations and reduce the risk of future occurrences. The audit period under review was January 1, 2024, through June 30, 2025.

Management's key control objectives for these activities are as follows:

- Protect the safety and well-being of all personnel who maintain water infrastructure.
- Secure water and wastewater facilities and respond effectively to emergencies.
- Staff and train personnel with the competence to safely perform job-related duties.

The purpose of this audit was to assess compliance with key guidelines and evaluate the adequacy and effectiveness of control activities that are designed to provide reasonable assurance of achieving the objectives. Internal Audit (IA) conducted this audit in accordance with the *Global Internal Audit Standards* (Standards). The Standards require that we plan and perform the audit to identify and evaluate sufficient information to support engagement results. We interviewed employees, observed certain control activities, and reviewed business documents on a sample basis for the audit period. We believe the evidence provided a reasonable basis for our assessment. See **Exhibit A** for a summary of our audit procedures. Drinking water quality was not in scope for this audit.

Assessment

Management's control activities were generally adequate and effective in providing reasonable assurance of achieving their control objectives. We made three recommendations. IA previously performed a Water Resources Safety and Security Program audit (published April 16, 2021). During our current review, we noted several control improvements in comparison to the previous audit. DWR maintains a robust safety program, performing multiple internal safety audits on all major facilities annually. Recommendations are improvement activities rather than significant weaknesses.

Recommendations

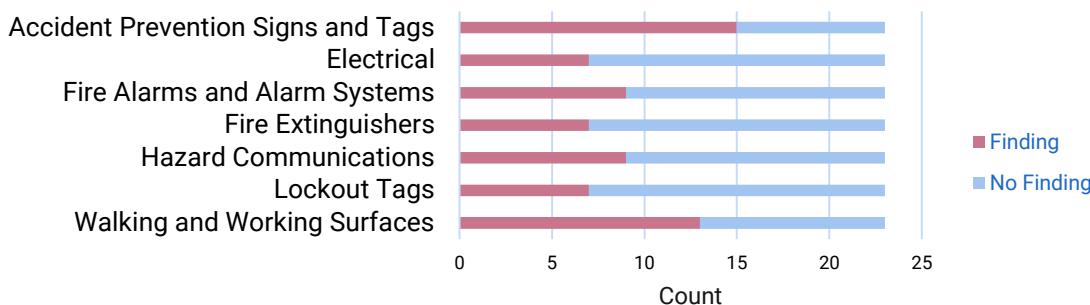
1. Some safety categories had recurring audit findings in facility audits.

The DWR Safety and Security Division (the Division) performs semi-annual audits for each of the five treatment facilities. DWR also partners with a third party and County Risk Management to conduct an additional annual facility audit for each location. Within these audits, the Division verifies safety and security conditions surrounding facility operations. The hundreds of items that are reviewed include but are not limited to: Personal Protective Equipment (PPE), lockout/tagout notices, walking surfaces, hazard communications, hazard prevention signs, machine guarding, and facility access. During the audit period, five annual Risk Management audits and 13 semi-annual DWR facility audits were conducted. In addition to these, IA walked through each of the five facilities with the Division officers to verify conditions. See **Table 1** below for the combined results across major categories with the highest error rates.

In some cases, plant managers corrected deficiencies at the time of the audit walkthroughs, while other times, safety officers verified corrective action post-audit. Our review noted an overall finding rate of approximately 20% across safety categories. While plant managers resolved most issues within two semi-annual audits, we identified 22 instances where the same safety category was deficient at the same location, but not necessarily in the same building, for at least three audits in a row (see **Exhibit B** for full results). DWR indicated that for certain categories with high exception rates, assets at each location could potentially number in the hundreds, if not thousands. If even one of those assets fails, the entire category may reflect a finding. As a result, inspection results may not always provide a meaningful view of compliance without drilling down into the details.

Table 1: Safety Audit Results by Category

Results from 23 facility audits between January 1, 2024, and August 31, 2025



Results include 13 semi-annual and five annual audits from the audit period, plus five IA walkthroughs in August 2025.

RECOMMENDATION

Plant managers should target recurring findings for remediation, prioritizing higher-risk findings. DWR should create a report of safety deficiencies occurring multiple times at the same facility and periodically provide the report to plant managers. DWR should evaluate repeated findings based on risk and communicate results to the Safety Committee and other leadership when needed. Additionally, DWR should consider revisiting how findings are defined for high-volume asset

categories so that audit results are meaningful. Rather than one non-compliant asset (out of hundreds or thousands) resulting in a category-wide finding, a number or percentage threshold may make sense. Non-compliant individual assets should still be noted and tracked for correction.

Management Response

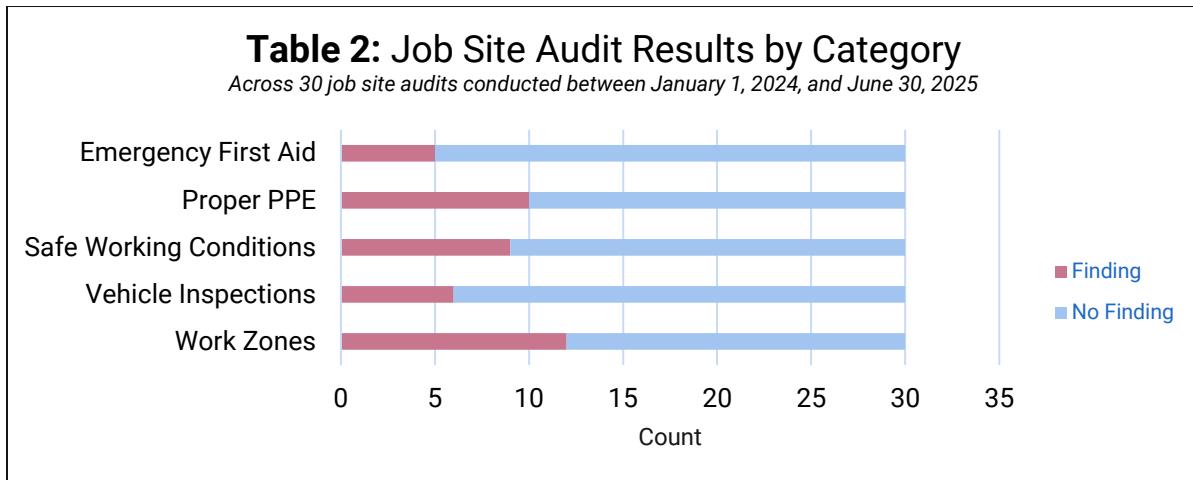
Water Resources agrees with this recommendation. Non-compliant individual assets will be noted for corrective follow-up, with the follow up period based on severity. DWR will also consider establishing a number or percentage of individual asset failures that would lead to a category failure rather than an all-or-nothing approach. Water Resources will review its current procedures and make necessary updates by June 30, 2026.

2. Adherence to safety standards for off-site work orders could be improved.

In addition to water and wastewater treatment facilities, DWR also maintains extensive infrastructure, including but not limited to water distribution pipes, sewer lines, fire hydrants, and water meters. Work orders require daily repairs at off-site field operations locations. The Division performs periodic spot checks (audits), averaging approximately two per week, at field operations job sites. Evaluations cover employee competency, equipment usage, traffic conditions, first aid, excavation requirements, and overall safety adherence. During the audit period, the Division performed 127 of these job site audits. Out of 127, IA chose a random sample of 30 audits to evaluate compliance with the safety standards outlined by DWR safety and security programs.

In the 30 sample audits reviewed, several safety standards had elevated exception rates. This included 12 exceptions for work zones and 10 exceptions for PPE. In most cases, deficiencies were corrected at the time of the audit, while other times, the safety officers verified corrective action post-audit. **Table 2** highlights the frequency of off-site findings.

Table 2: Job Site Audit Results by Category
Across 30 job site audits conducted between January 1, 2024, and June 30, 2025



RECOMMENDATION

DWR supervisors, employees, and contractors should follow applicable safety protocols when conducting off-site work. DWR should evaluate repeated issues and communicate them to Field Operations Management and the Safety Committee when appropriate (see **Recommendation 1**).

Management Response

Water Resources agrees with IA's recommendation. Each work site inspection is reviewed individually in monthly meetings between the Safety Committee and Field Operations. Water Resources will review its current procedures and establish a threshold for reporting repeat issues to management through the Safety Committee by June 30, 2026.

3. Worksite permits were incomplete.

DWR employees and contractors sometimes perform high-risk duties, such as working in confined spaces, using industrial tools, and conducting "hot work," which refers to welding or other activities that produce flames, sparks, or extreme heat. DWR management has developed safety programs for each of these high-risk work zones detailing protocols for before, during, and after the high-risk work. The Division's semi-annual facility audits include reviewing all hot work and confined space permits authorized by third party or County employee supervisors since the last audit. Each facility must maintain these permits for one year. IA visited each facility and reviewed all audits conducted during the audit period.

Facility audit results showed that permits lacked final work complete signatures or were incomplete in eight instances (32%) for hot work and five instances (20%) for confined space. The confined space DWR program states that after work is completed a final signature should be obtained on the permit by the County or vendor employees. Employees, including confined space supervisors, are responsible for adhering to the policy. DWR facility personnel should take responsibility to verify compliance and availability of completed permits for inspection.

RECOMMENDATION

Supervisors should comply with all permit requirements and keep associated documents for one year, preferably in a shared location. DWR's work order system should include permit mandatory descriptions or check boxes for high-risk work. The completion of job permits, and assignment of certified employees should be added to planning or approval workflows in the work order system or other approved location. In addition to supporting compliance, these enhancements will improve safety documentation.

Management Response

Water Resources agrees with Internal Audit's recommendation and will develop a plan by June 30, 2026, to ensure that all hot work and confined space permits are completed successfully and stored in the proper location. The Water Resources safety team works collaboratively with contract firms and employees to promote a safe workplace. While there were opportunities to improve permit completeness, all the permits documented safe conditions and had the primary signature required.

Other Considerations

IA observed opportunities to potentially improve certain business activities. The advisory comments are for consideration only, and management is not required to provide written responses.

- The Accident Review Committee investigates, reviews, and recommends corrective action for all DWR employee-reported incidents whether at fault or not. The Committee evaluates incident

documentation and uses a scoring matrix to determine potential disciplinary action. After scoring, the Committee recommends but cannot enforce disciplinary action. This is left to the supervisor of the individual(s) involved. For some instances during the audit period, the Committee did not confirm whether recommended actions had been completed, and if not, the reasoning for inaction. Management corrected this during the audit period and is now tracking this information to better evaluate their investigations and outcomes.

- DWR produces and maintains a significant number of safety programs and policies that assist with employees' everyday activities. At the time of the audit, DWR did not have a set schedule or timeline to actively review each safety program in its entirety. However, DWR modified programs when needed and documented the revision dates. A small number of the current safety programs had not required recent updates, leaving revision dates up to five years old. However, programs remained valid. DWR should consider working with the Safety Committee and senior management to develop a strategy to proactively review each of the safety programs on a recurring basis and log dates of review (**previously identified by management**).

Exhibit A: Summary of Audit Procedures

IA performed the following procedures to assess compliance with key guidelines and evaluate the adequacy and effectiveness of control activities:

- Completed walkthroughs with departmental management to confirm understanding of water safety control processes and procedures, key personnel, and safety program practices.
- Reviewed safety programs and guidelines in conjunction with the Occupational Safety and Health Administration, state and other County requirements for key compliance requirements.
- Physically toured five main water facilities, including Yellow River, Crooked Creek, F. Wayne Hill, Shoal Creek, and Lanier. Completed interviews with facility superintendents and other management.
- Reviewed 20 facility audit results in addition to five facility walkthroughs for hazard identification and key safety compliance. Reviewed a random sample of 30 excavation and PPE off-site safety audits (**Recommendation 1** and **Recommendation 2**).
- Analyzed facility risk work areas including verifying hot work and confined space permits completion to confirm substance tests (**Recommendation 3**).
- Confirmed existence and maintenance of operational safety equipment (including PPE) at each of the facilities.
- Obtained and reviewed 30 incidents for documentation support, evaluation, and disciplinary action (if applicable).
- Obtained and reviewed all 36 Committee meeting notes for completeness from January 2024 through June 2025.
- Verified completion of emergency response plans and drills conducted at DWR facilities.
- Verified latest badge access review conducted Q3 2025 for the proper disabling of separated or retired employees and personal contractor badges.
- Received complete employee listing and verified selection of training courses completed for high-risk work areas and competent persons positions.
- Confirmed the latest drug and alcohol test completed by Human Resources for DWR employees.

Exhibit B: Safety Audit Findings (On-Site)

We reviewed 100% of the audits performed on-site (production and treatment facilities) within the County during the audit period. We also conducted on-site visits with the assistance of the Safety and Security Division to review current conditions.

DWR Facility Audits			
Across a total of 23 inspections reviewed for each category			
Audit Safety and Security Category	Finding Count	Finding %	Consecutive Occurrences*
Accident Prevention Sign and Tags	15	65%	4
AEDs	-	0%	-
Chemical Fill Lines	1	4%	-
Electrical	7	30%	1
Employer Labor Postings	-	0%	-
Exit Signs and Exit Doors	5	22%	1
Eye Wash Stations	5	22%	1
Facility Access	6	26%	1
Fire Alarms/Alarm Systems	9	39%	3
Fire Extinguishers	7	30%	1
Fire Sprinkler Systems	3	13%	-
First Aid Kits	6	26%	1
Flammable Cabinets	6	26%	-
Harmful Substances Ventilation	1	4%	-
Hazard Communications	9	39%	3
Ladder Access	1	4%	-
Lockout/Tagout	7	30%	1
Machine Guarding	6	26%	1
Perimeter Fencing	-	0%	-
PPE	2	9%	-
Security Communication	-	0%	-
Security Signage	-	0%	-
Shelter in Place Emergency	-	0%	-
Walking and Working Surfaces	13	57%	4
Totals	109	20%	22

Data Source: DWR Jira AND iAuditor System as of September 1, 2025.

*Consecutive occurrences are defined as three or more consecutive deficiencies at one location.

Exhibit C: Safety Audit Findings (Off-Site)

For safety audits conducted for off-site work orders, we used sampling procedures to select audits to review. Our sampling objectives were to select representative samples of the population with the smallest sample size necessary for evaluating compliance and control effectiveness. Based on our risk assessment and engagement objectives, we used a random sampling approach. We randomly selected 30 audits from the population. We believe the sample size and selection method provided sufficient evidence for our evaluation.

DWR Off-Site Audits		
Across a total of 30 off-site audits		
Audit Safety Category	Finding Count	Finding %
All Employees Trained	-	0%
Competent Person On-Site	-	0%
First Aid Kit	5	17%
Proper PPE	10	33%
Safe Working Conditions*	9	30%
Work Zones	12	40%
Vehicle Inspections	6	20%
Totals	42	20%

Data Source: DWR Jira AND iAuditor System as of September 1, 2025.

*Safe working conditions describe employee behavior around dig sites and equipment, trenching conditions, necessary work permits, and spoil pile placement. Work zones describe utility markings, boundaries of work sites, and traffic controls.